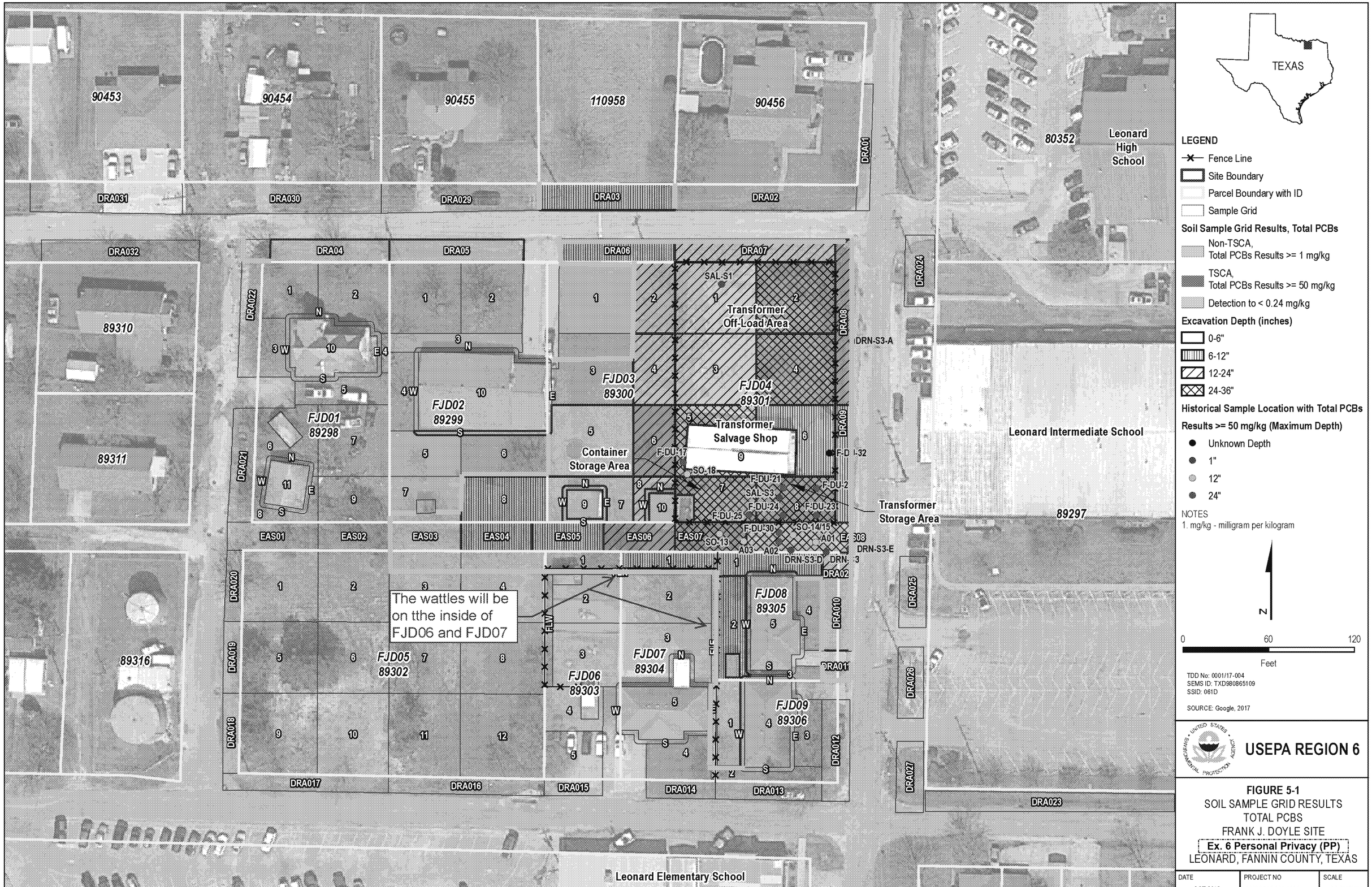

FIGURE 5-1
SOIL SAMPLE GRID RESULTS
TOTAL PCBS
FRANK J. DOYLE SITE
Ex. 6 Personal Privacy (PP)
LEONARD, FANNIN COUNTY, TEXAS

DATE	PROJECT NO	SCALE
OCT 2018	20600.012.001.1004	AS SHOWN

FILE: D:\20600_EPA_START4\FJ Doyle\mxd\Sample Grid Results Map - Total PCBs.mxd 4:02:34 PM 10/22/2018 wilderj

90087941

ED_002624_00000360-00001

Message

From: Moore, Gary [Moore.Gary@epa.gov]
Sent: 2/25/2019 8:55:46 PM
To: 'Don Edgington' [d.edgington@erllc.com]; Delgado, Paige [Delgado.Paige@epa.gov]; Brescia, Nicolas [brescia.nicolas@epa.gov]
CC: Angela Harbin [a.harbin@erllc.com]
Subject: RE: DWO
Attachments: 02.20.19 DWO No. 81 - F.J. Doyle Salvage Site - 02.20.19-signed.pdf

Don:

I added the end date of 2/28/19 on the document for the operational period. Let me know if this is incorrect. I assume that I will get another for the operational period that includes 3/1 – 31/19. **Let me know if I missed something below.**

Punchlist items:

1. 3 loads of rock to deliver to the site to fix drainage on FJD04;
2. Texas Yard Pro will fix the drainage on FJD04/FJD03 interface to allow for proper drainage utilizing rock delivered to the site;
3. Texas Yard Pro will erect fence between FJD04/FJD03;
4. Texas Yard pro will fine grade and hydroseed FJD05;
5. Place additional sod behind the eastern most shed at FJD03 and by the red shed on FJD02 (est. 75 sq feet);
6. Consult Texas Yard Pro on pooling water in the alley behind the daycare and near Ex. 6 Personal Privacy (PP)

As you mentioned, you will add the followings as pendings:

1. repair of the roadways;
2. potential repair of sewer lines at FJD08 and FJD09;
3. Make sure we have the above punch list items accounted for above.
4. If you think we are going to need some additional funding, it is better to get it to me early so that I can try to push it through. I don't really want to do this unless you think we may need some additional but you would need to detail it.

I have not heard from Ken at Texas Yard Pro so I am not sure the proposed schedule.

Thanks
Gary Moore

From: Don Edgington <d.edgington@erllc.com>
Sent: Monday, February 25, 2019 11:30 AM
To: Moore, Gary <Moore.Gary@epa.gov>; Delgado, Paige <Delgado.Paige@epa.gov>; Brescia, Nicolas <brescia.nicolas@epa.gov>
Cc: Angela Harbin <a.harbin@erllc.com>
Subject: DWO

Hi, Gary.

The attached DWO has been prepared for the period of 2/20/19 through the end of the month.

I've discussed our next draft 1900-55 with Angela and she'll prepare a new one this afternoon or in the morning.

We'll have some outstanding pending costs finalized (notably TSCA disposal with Republic – Itasca) and a new pending for installation of the privacy fencing with Texas Yard Pros. Adding this pending reduces our available funding to approximately $25,000.00 or so. I haven't asked Angela to increase the existing TYP pending until we reconcile their invoices and see what we left with their existing pending amount. This additional work would include hydro-seeding the corner lot (Grid No. FJD05), any additional grading or street sweeping options that the subcontractor has priced and submitted costs for.

Additionally, we haven't include a 1900-55 pending cost reserve for the Ex. 6 Personal Privacy (PP) rental property sewer system removal/replacement of $15,000.00 as of yet.

The Sole Source Justification form and attachments for the City street repairs was forwarded to Evan Wortman this morning for review, approvals and submittal to the CO.

Thanks,

Don

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Message

From: Don Edgington [d.edgington@erllc.com]
Sent: 2/25/2019 5:30:20 PM
To: Moore, Gary [Moore.Gary@epa.gov]; Delgado, Paige [Delgado.Paige@epa.gov]; Brescia, Nicolas [brescia.nicolas@epa.gov]
CC: Angela Harbin [a.harbin@erllc.com]
Subject: DWO
Attachments: DWO No. 81 - F.J. Doyle Salvage Site - 02.20.19.pdf

Hi, Gary.

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I've discussed our next draft 1900-55 with Angela and she'll prepare a new one this afternoon or in the morning.

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Don

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Message

From: Don Edgington [d.edgington@erllc.com]
Sent: 10/24/2018 11:44:32 AM
To: Terry McCalpin [tmccalpin@cityofleonard.net]
CC: Moore, Gary [Moore.Gary@epa.gov]; Delgado, Paige [Delgado.Paige@epa.gov]; Public Works [publicworks@cityofleonard.net]; Municipal Court [court@cityofleonard.net]
Subject: Re: Water Source

Thank you, sir. I'll contact Brandon today.

Sent from my iPhone

On Oct 24, 2018, at 4:43 AM, Terry McCalpin <tmccalpin@cityofleonard.net<mailto:tmccalpin@cityofleonard.net>> wrote:

Don,

Please call Brandon at Personal Phone / Ex. 6 to request a bulk meter. We currently have one in service near North Oak Street at US 69.

If we have another one, Brandon will get you set up with a location and our Utility Clerk, Jodi, at City Hall.

If not, you will have to piggy-back and record your pulls from our bulk meter in use.

Please advise if you have more questions.

My mobile number is Personal Phone / Ex. 6 if you need to reach me.

Terry McCalpin, PWD
111 West Collin Street
Leonard d, Texas 75452
(903) 587-3334 office

On Oct 23, 2018, at 9:35 AM, Don Edgington <d.edgington@erllc.com<mailto:d.edgington@erllc.com>> wrote:

Good morning, Terry.

I emailed you last week regarding discussing access of a fire hydrant when EPA begins work at the F.J. Doyle Salvage site on Poplar Street. I realize you are probably very busy but we would appreciate it if you could provide us the contact person or persons we would need to work with for water use during the demolition and excavation to be conducted at the property.

Thank you again for your help.

Regards,

Don

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Message

From: Terry McCalpin [tmccalpin@cityofleonard.net]
Sent: 10/24/2018 9:43:26 AM
To: Don Edgington [d.edgington@erllc.com]
CC: Moore, Gary [Moore.Gary@epa.gov]; Delgado, Paige [Delgado.Paige@epa.gov]; Public Works [publicworks@cityofleonard.net]; Municipal Court [court@cityofleonard.net]
Subject: Re: Water Source

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Terry McCalpin, PWD
111 West Collin Street
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>
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>
> Thank you again for your help.
>
> Regards,
>
> Don

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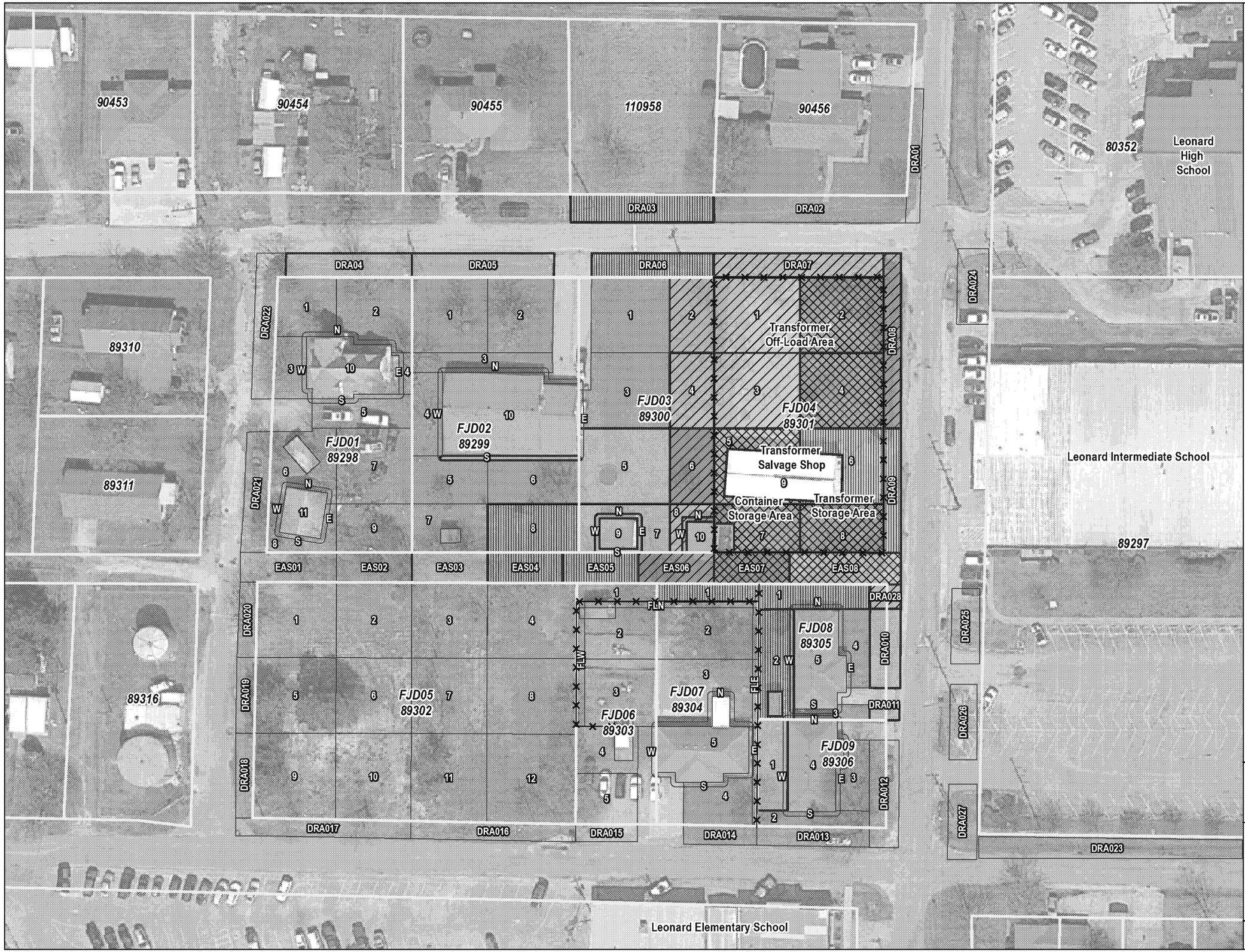

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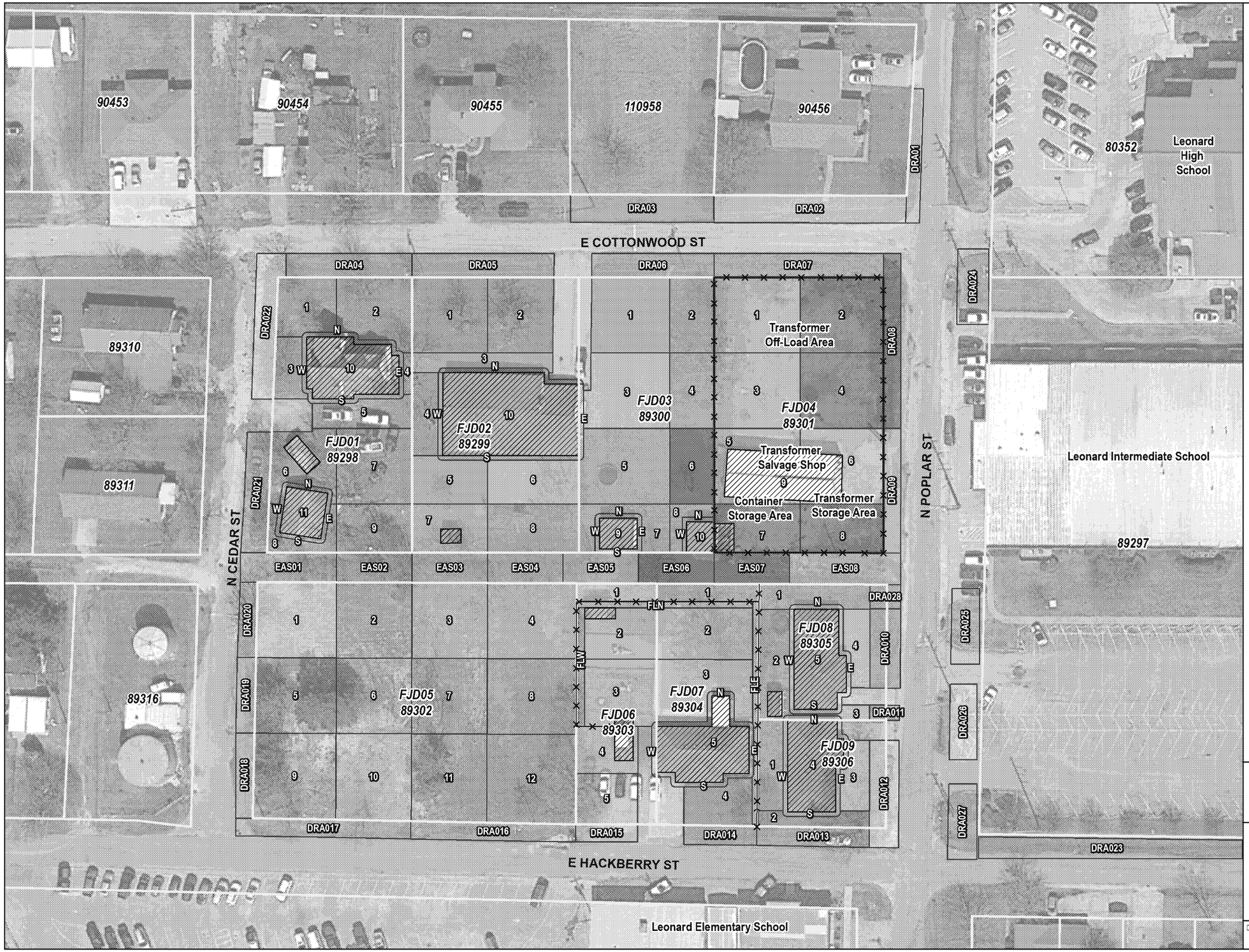

LEGEND

- Fence Line
- Site Boundary
- Parcel Boundary with ID
- Structure
- Sample Grid

Total PCBs Results

- Detection to < 0.24 mg/kg
- >= 0.24 to < 1 mg/kg
- >= 1 mg/kg to < 50 mg/kg
- >= 50 mg/kg

NOTE:
1. mg/kg - milligram per kilogram

N

0 60 120

Feet

SOURCES: © Google Imagery, 2017
TDD: 0001/17-004
SEMS: TXD980865109
SSID: 061D

USEPA REGION 6

FIGURE 5-1
SOIL SAMPLE GRID RESULTS
TOTAL PCBS
FRANK J. DOYLE SITE
Ex. 6 Personal Privacy (PP)
LEONARD, FANNIN COUNTY, TEXAS

DATE	PROJECT NO	SCALE
SEPTEMBER 2018	20600.012.001.1004	AS SHOWN

FILE: D:\20600_EPA_START4\FJ Doyle\mxd\Sample Grid Results Map - Total PCBs Breakout.mxd 9:55:55 AM 9/19/2018 wilsonj

Message

From: Moore, Gary [Moore.Gary@epa.gov]
Sent: 10/11/2018 2:58:25 AM
To: 'William Linn' [wlinn@cityofleonard.net]
CC: 'tmccalpin@cityofleonard.net' [tmccalpin@cityofleonard.net]; Delgado, Paige [Delgado.Paige@epa.gov]
Subject: F.J. Doyle Salvage Cleanup
Attachments: FJ Doyle Cleanup Map (DRAFT).pdf

Mr. Linn:

The following is a depiction of how I would like to set up the site. The things that will interest you are as follows:

1. The truck route (empty trucks will come in on N. Oak to Cottonwood and exit loaded to N. Poplar;
2. We would like to make N. Poplar from the school parking lot to Cottonwood one-way in front of the middle school to the North;
3. We would like to close Cottonwood from about the east of the driveway at Ex. 6 Personal Privacy (PP) o N. Poplar (It does not look like it will really impact anyones access to their homes);

Please let me know what you think about this request.

Thanks

Gary W. Moore (6SF-ER)
Federal On-Scene Coordinator
U.S EPA Region 6
1445 Ross Ave, Suite 1200
Dallas, TX 75202-2733
Cell: 214.789.1627
moore.gary@epa.gov

Message

From: Moore, Gary [Moore.Gary@epa.gov]
Sent: 10/10/2018 1:33:33 PM
To: Don Edgington [d.edgington@erllc.com]
CC: Angela Harbin [a.harbin@erllc.com]; Evan Wortman [e.wortman@erllc.com]; Delgado, Paige [Delgado.Paige@epa.gov]; Sean Gavlas [Sean.Gavlas@WestonSolutions.com]
Subject: Re: F.J. Doyle Removal

Hey Don,

I will text you the contact information with the guy at the City. There is a water hydrant ay the corner of hackberry and poplar at Ex. 6 Personal Privacy (PP)

You can begin those items you mentioned. We need to find out what exactly we need to do for addressing the roofing on the building. Do you know? We should be able to get ER exemption but we need to get the demo paperwork in to TDSHS.

Evan and Sean have been talking about the data and I believe it was going to be put on CD.

We are still waiting on the PCB wipes and lead paint analysis.

Call if you get a chance.

Gary Moore
2147891627

Sent from my iPhone

On Oct 10, 2018, at 7:54 AM, Don Edgington <d.edgington@erllc.com> wrote:

> Good morning, Gary.
>
> With your permission, I'd like to begin working on the following:
>
> - Prepare T&D RFQ(s) for the TSCA, non-TSCA wastes and C&D debris (from the building should it qualify, other than the areas identified in the asbestos survey);
> - Research and contact Leonard representatives re: locations of non-potable water or fire hydrants we could use; determine whether we'll need permits, etc. for filling our water truck periodically during the removal;
> - Begin populating required permits/applications with the state to demolish the building;
>
> Also, if Sean is the assigned START, I'd like to get any assessment data (including analytical reports) from Weston to get some data that we may need to include with the disposal RFQ(s). Of particular interest are any soil composites with current (within 6 months) analytical that we could use for preparing the bid packages and forwarding for pricing.
>
> Let me know if you have any comments or concerns when convenient.
>
> Regards,
>
> Don

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CHRONOLOGY OF EVENTS

F.J. DOYLE SALVAGE TRANSFORMERS

Personal Address / Ex. 6

LEONARD, FANNIN COUNTY, TEXAS

EPA CERCLIS NO. TXD980865109 / TCEQ SWR 80951
TERRA-SOLVE PROJECT NO. 09724

DATE	ACTIVITY
1974-1989	
1974	Mr. Frank Doyle began operations at the site for reclamation of electrical transformers. The wiring and scrap metal were recycled and the residual oil was used for weed killer both on site and was distributed to others within the City of Leonard. **[Note that Terra-Solve was informed by the owner the site began operations in 1976].**
1976	Mr. Doyle indicated that after this date, no transformers containing PCBs were accepted at the facility.
01/21/88	Mr. Doyle began application to the Texas Air Control Board (TACB) for a special air operating permit to allow for operation of a heat cleaning unit at the site.
03/22/88	A public hearing was held on the above air permit application.
06/27/88	TACB issued an Agreement and Stipulation of Facts in lieu of the hearing on June 28, 1988.
07/15/88	TACB issued an order so the permit could not later be challenged by its opponents.
08/23/88	TACB issued the permit
04/22/89	Mr. Doyle applied for the air operating permit
1990	
07/20/90	EPA conducted a **PCB Inspection** at the site. *No record of this work has been located by subsequent EPA contractors even as early as May 1997.*
10/12/90	Ecology & Environment Technical Assistance Team (TAT), an EPA contractor, conducted a **Site Assessment** sampling investigation. *No record of this work has been located by subsequent EPA contractors even as early as May 1997.*
1991 - 1992	
04/05/91	Texas Air Control Board (TACB) issued an air permit to allow for operation of a combustion unit at the site.
04/19/91	Ecology & Environment TAT, an EPA contractor, conducted another **Site Assessment** sampling investigation. *No record of this work has been located by subsequent EPA contractors even as early as May 1997.*

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1993-1994	
1993	Mr. Frank Doyle registered the site with TCEQ for various non-hazardous waste disposal for non-PCB oil, ash residue, plant refuse, various storage containers, and a Dumpster.
09/07/94	EPA conducted another **PCB Inspection** at the site. *No record of this work has been located by subsequent EPA contractors even as early as May 1997.*
1995-1996	
05/23-24/95	Worldwide Reclamation, a Doyle contractor, under supervision of EPA, conducted surface and subsurface **soil sampling**. *No record of this work has been located by subsequent EPA contractors even as early as May 1997.*
07/10-12/95	Ecology and Environment TAT, an EPA contractor, conducted a **Site Assessment (SA)** sampling investigation. A total of 68 samples were collected from the site, the alleyway, and the neighboring residences to the south, west, and east. Elevated levels of PCBs were found both on- and off-site. On-site levels ranged from 50.9 ppm to 2,730 ppm. Alleyway levels ranged from 5.7 ppm top 857 ppm while off-site residence levels ranged from 10.44 ppm to 37.7 ppm
07/95	Site was entered in CERCLIS database.
08/31/95	Ecology and Environment, EPA TAT, issued a **Site Assessment (SA) Report** recounting the above findings and requested a meeting with Mr. Frank Doyle at their offices no later than 09/15/95 to discuss *"removing and disposing of this contamination in an expeditious manner."*
10/4/95	Mr. Doyle met with three EPA officials as requested above. The contents of this meeting are unknown. However, files indicate calculations regarding the cubic yardage of affected materials were made by hand; these calculations show 94.21 cubic yards of on-site soil and 86.98 cubic yards of off-site soil for a total of 181.19 cubic yards would be needed to be removed presumably to meet the above requirements.
1997	
01/97	Frank Doyle retired and Gary Doyle, his son, became the operator of the site.
05/20/97	Fluor Daniel, EPA TAT, conducted a site reconnaissance. EPA issued its **Preliminary Assessment Report (PA)** later that month. This report set that groundwater and soil exposure pathways were the only exposure pathways of concern.
07/21/97	EPA Screening Site Inspection (SSI) was approved to evaluate these pathways.
12/18/97	TCEQ issued a **Screening Site Inspection (SSI) Work Plan** to allow for further evaluation of the site using the above pathways of concern.
1998 - 1999	
01/13-14/98	TCEQ personnel conducted SSI work with sampling of city water supply wells and collection of on- and off-site soil samples. The groundwater samples did not contain metals or PCBs. Analysis of soil samples from 17 locations indicated that

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	moderate levels of copper were detected at two on-site sample locations. PCBs were found on site and along drainage ditches away from the site.
09/98	TCEQ issued **SSI Report** on the above findings.
08/99	The site ceased operations.
2000-2009	
06/29/00	The Texas Department of Health (TDH), under a cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR), issued a **Health Consultation Report** which recommended that further delineation of the extent of PCB-affected soil be conducted, or that the soil be removed.
2001	Based on the above, the ATSDR chose not to enter the site into National Priorities List (NPL) for superfund sites.
07/14/06	TCEQ issued Unit Closure Request Letter to Mr. Frank J. Doyle.
10/23/06	Danny Doyle responded to the above letter noting the passing of his father earlier that year and requesting clarification on what TCEQ was specifically requesting.
01/26/07	TCEQ responded to the above letter directing that a closure report for the waste management units (WMUs) be submitted and that an **Affected Property Assessment Report (APAR)** be completed.
02/09/07	Mr. Danny Doyle emailed a response to the above letter.
09/05/08	TCEQ issued Second Request Letter reiterating the 01/26/07 letter requirements above.
08/10/09	TCEQ created a Case File Memorandum which noted that due to the lack of response to the above letters, the case was being considered for Notice of Violation (NOV) and that the 3rd letter would be the NOV.
08/24/09	Mr. Danny Doyle emailed again to TCEQ regarding the above letter in anticipation of a potential sale of the property.
09/11/09	TCEQ responded to the above email with a new point of contact, Mr. Pindy Lall.
11/05/09	A client contracted with Terra-Solve to conduct a Phase I ESA of the site.
11/20/09	Terra-Solve conducted site reconnaissance for the Phase I ESA and met with Mr. Gary Doyle at the site.
11/30/09	Terra-Solve issued Freedom of Information Act (FOIA) request to EPA.
12/04/09	EPA issued response letter to the above FOIA request and Terra-Solve issued the Phase I ESA Report to the client noting this response.
12/15/09	EPA requested an extension in response time to 12/30/10.

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01/08/10 The client faxed additional information from Mr. Doyle to Terra-Solve. This information consisted of the items above with asterisks (*) next to the dates. Terra-Solve contacted Mr. Pindy Lall of TCEQ, the latest point of contact, and he requested a few days to familiarize himself with the case file.

01/19/10 Mr. Pindy Lall of TCEQ contacted Terra-Solve to discuss the case. He indicated that the items requested in the 01/26/07 letter (WMU closure reports and APAR investigation) are still required to complete work on the site.

01/30/10 Terra-Solve received a CD-ROM from EPA with the various reports referred to in the above entries and assembled this comprehensive chronology of site events.

02/03/10 Terra-Solve submitted a proposal to the client to arrange for and attend a meeting with TCEQ to discuss

02/08/10 Terra-Solve received a copy of the Central File Registry records from TCEQ and updated this chronology.

03/22/10 Terra-Solve received authorization to send the above information to TCEQ from the client and its attorney, Abernathy Roeder.

04/14/10 Terra-Solve submitted this information to Mr. Pindy Lall of TCEQ after several weeks of attempted contacts. Mr. Lall later contacted Terra-Solve regarding the above email submissions of EPA documents and directed Terra-Solve to submit a formal letter requesting review of this information.

04/15/10 Terra-Solve submitted the above-requested letter.

06/18/10 TCEQ issued a letter to Terra-Solve which outlined a "path to closure" for the site. Specifically, the letter directed the following:

(1) Surface soils be delineated horizontally to 1.1 ppm PCBs and copper and hexachlorobenzene to their Risk-Based levels;
(2) Vertical soil delineation to method quantitation limits (MQLs) or collect groundwater samples, in which case the entire soil column is assumed to be contaminated;
(3) If the site enters the Voluntary Cleanup Program (VCP), a groundwater sample will be required;
(4) If the entire soil column is assumed to be contaminated, a control such as a parking lot that serves as impervious cover may be implemented to prevent exposure, but such a measure would require maintenance to ensure integrity of the lot, and any uncovered areas would have to be removed, decontaminated, and/or otherwise controlled; and
(5) Demonstration that the drainage ditches are not impacting surface water will be needed.

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2014	
04/24/14	Terra-Solve contacted by Abernathy Roeder regarding a possible sale of the subject property and asked to facilitate a meeting between all regulatory parties.
06/26/14	Terra-Solve and Abernathy Roeder met with Mr. James Sales of EPA Region VI at his office and also teleconferenced in Mr. Pindy Lall of TCEQ.

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Bryan W. Shaw, Ph.D., P.E., *Chairman*
Toby Baker, *Commissioner*
Jon Niermann, *Commissioner*
Richard A. Hyde, P.E., *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

January 12, 2016

Mr. Danny Doyle
F.J. Salvage
Personal Address / Ex. 6
Leonard, Texas 75452

Re: TCEQ Notice of Deficiency (NOD) to the following documents:
- *Affected Property Assessment Report*, received October 13, 2015
- *Response to TCEQ letter dated November 16, 2015*, dated December 16, 2015 *(submitted via email from Mr. Danny Doyle to the TCEQ on 12/16/2015)*

Former F. J. Doyle Salvage Transformers property located at Personal Address / Ex. 6 (905 N. Poplar Street), Leonard (Fannin County), TX;
TCEQ SWR No. 80951; EPA ID No. TXD980865109; Customer No. CN600359095;
Regulated Entity No. RN100649227

Dear Mr. Doyle:

The Texas Commission on Environmental Quality (TCEQ) is in receipt of your *Affected Property Assessment Report* (APAR) for the above referenced property. The APAR was submitted to document the assessment of contamination associated with the property on-site and to areas off-site in accordance with the requirements of 30 Texas Administrative Code (TAC) 350. The TCEQ is also in receipt of an email submitted to the TCEQ from Mr. Danny Doyle on December 16, 2015, in response to TCEQ comment letter dated November 16, 2015. The November 16, 2015 comment letter was issued in response to TCEQ review of a Unit Closure Request and Facility Registration Inactivation Request, dated May 27, 2015. The APAR (received October 13, 2015) and May 27, 2015 were also submitted in response to TCEQ letter dated March 30, 2015, requesting a remediation status update of the waste management unit closure report and issues related to the assessment and cleanup of contamination associated with the facility.

Based on our review, the October 13, 2015 APAR does not provide adequate information to document compliance with the affected property assessment requirements of 30 TAC 350.51. In addition, the December 16, 2015 response does not provide the TCEQ's requested response (i.e. *Amended Closure Report for WMU No. 001 and 002*) to support the closure of the units or request for inactivation of the industrial solid waste registration (SWR) associated with the site. As such, the TCEQ cannot approve the APAR or the December 16, 2015 response regarding the closure of WMU No. 001 and 002/inactivation of the SWR at this time. A list of the deficiencies to the above referenced documents is enclosed. Please submit a *Revised APAR* to address the enclosed deficiencies associated with the October 13, 2015 submittal. In addition, the TCEQ continues to require the submittal of the *Amended Closure Report* for WMU No. 001 and 002 as previously instructed in TCEQ's November 16, 2015 letter (as per the enclosed comments).

An original and one copy of the *Revised APAR* for the referenced property and *Amended Closure Report for WMU No. 001 and 002* must be submitted to the TCEQ Remediation

Division at the letterhead address using mail code number MC-127. An additional copy of each document should be submitted to the TCEQ Region 4 Office in Dallas/Fort Worth. The *Amended Closure Report for WMU No. 001 and 002* is required to be submitted **within thirty (30) days of the date of this letter.** The *Revised APAR* must be prepared and submitted to the TCEQ for review **within 120 days from the date of this letter.** *As a reminder, failure to submit and/or implement the required WMU Closure and TRRP assessment/cleanup actions to address the contamination associated with the property within the schedule set by the TCEQ is violation of agency regulation and potentially subject to enforcement actions under Chapter 7 of the Texas Water Code.*

Please call me at (512) 239-6542 if you need additional information or wish to discuss these comments or the due dates. Thank you for your cooperation in this matter.

Sincerely,

Eleanor T. Wehner, P.G.
Sr. Project Manager
VCP-CA Section
Remediation Division
Texas Commission on Environmental Quality

ETW/mdh

Enclosures: TCEQ Comments to *Affected Property Assessment Report*, received October 13, 2015

TCEQ Comments to *Response to TCEQ letter dated November 16, 2015*, dated December 16, 2015 (submitted via email from Mr. Danny Doyle to the TCEQ on 12/16/2015)

cc: Mr. James Sales, USEPA Region 6, 1445 Ross Avenue, Suite 1200, Mail Code: 6MM, Dallas, TX 75202-2733

Personal Address / Ex. 6 Leonard, TX 75452

Mr. Sam Barrett, Waste Section Manager, TCEQ Region 4 Office, Dallas/Fort Worth

TCEQ letter dated January 12, 2016
ENCLOSURES
TCEQ SWR No. 80951

TCEQ Comments to *Affected Property Assessment Report*, received October 13, 2015

Based on our review of the *Affected Property Assessment Report,* received October 13, 2015, the TCEQ requires the submittal of a *Revised APAR* to address the following deficiencies:

Section 1 (Conclusions and Recommendations): The APAR suggests the future planned used of the on-site portion of the property may be a parking lot for Leonard ISD. As this facility is currently considered a commercial/industrial property as defined in TRRP (and likely zoned as such), *please note the applicability of residential land use restrictions applicable to educational facilities for properties conducting assessment/cleanup pursuant to the Texas Risk Reduction Program (TRRP) rules (30 TAC 350).*

1. Section 1.2: The APAR provides a summary of a site reconnaissance and physical observations of the property conducted by representatives of Terra-Solve in November of 2009. However, based on TCEQ's review of the text and supporting photographs associated with the 2009 site reconnaissance, areas of hydrocarbon contamination, unconfirmed presence of liquids in various storage tanks/containers, a parts washer, various containers of chemicals, debris, parts, etc. were identified on the property and the supporting photographs suggest an overall lack of property management and environmental housekeeping concerns associated with the property.

   As several years has passed, the APAR is noted to lack an overall assessment of *current* environmental conditions associated with the property. The APAR should be amended to provide an updated site reconnaissance completed by a qualified environmental professional to verify current site conditions, assess current and future risk of release of contaminants associated with the property and determine areas warranting additional investigation/release verification to satisfy the source area characterization requirements of TRRP [i.e., 30 TAC 350.51(a) and (b)]. A determination of the overall physical security of the site should also be performed to ensure the site is adequately protected with regard to potential risk posed contaminants on the property to potential trespassers on the property. As the TCEQ understands the site is inactive, removal and proper disposal of existing chemicals, chemical storage containers, drums, parts washer, tanks, etc.) should also be implemented and appropriately documented (proper removal and disposal). Please provide post removal inspection and photographic documentation by a qualified environmental professional to support the removal/disposal activities and copies of supporting legal records (e.g., receipts, waste manifests, bill of lading, etc.) documenting the proper disposal of materials transported off-site.

2. Section 2.1 and Section 5-Groundwater Assessment: An active public supply well was identified within 500 feet of the property. As such, the TCEQ will require verification of the presence/absence of groundwater contamination associated with the property in order to confirm whether the soil contamination identified or suspected to have been associated with site activities (i.e., petroleum hydrocarbons, solvents, PCBs and RCRA metals) has migrated to the uppermost water bearing unit. The TCEQ recommends the installation and sampling of a minimum of one (1) upgradient and three (3) downgradient monitor wells in the uppermost water bearing unit to initially determine if groundwater is impacted with contaminants identified or suspected to have been associated with site activities (i.e., petroleum hydrocarbons, solvents, PCBs and RCRA metals) and also to verify potentiometric flow conditions in the uppermost saturated zone. Based on the analytical results of the assessment, please note that additional groundwater assessment may be required to satisfy

the lateral and vertical assessment requirements of 30 TAC 350.51(c) and (e), respectively.

In addition, please note that if initially reporting a case of groundwater contamination to the TCEQ, the TCEQ requires the concurrent submittal of a *Drinking Water Survey Report* (DWSR), as a stand-alone document. The TCEQ uses the report primarily to comply with Texas Water Code (TWC), Section 26.408. Section requires the TCEQ, within 30 days of the date the TCEQ receives notice or otherwise becomes aware of groundwater contamination, to notify owners and users of private drinking water wells that may be affected by the groundwater contamination (i.e., groundwater ingestion standards exceeded). Additional information regarding the preparation and submittal fo the DWSR and requirements of TWC Section 26.408 may be obtained at the TCEQ website at: https://www.tceq.texas.gov/remediation/twc26_408.html.

Please amend the applicable sections of the APAR to provide the supporting information documenting the results of the groundwater assessment activities (i.e., Section 2, 3, 5, and supporting appendices) and, if required, the stand alone DWSR.

3. Section 2.2 (Field Receptor Survey): The APAR must be amended to provide supporting information documenting the performance of the required 500-ft field receptor survey. Refer to Section 2.2 of the APAR instructions for clarification of the specific documentation required to be presented in the APAR.

4. Section 2.6 (Exposure Pathways): The text of the APAR is noted to convey information as to the stability/persistence of contaminants in specific media of concern (i.e., soil, sediment, air, etc.) in response to specific soil conditions; however, the APAR lacks supporting information documentation the behavior of contaminants specific to conditions at the site (e.g., site specific soil pH evaluation, site-specific leachate analytical results, etc.).

5. Section 2.5 (Groundwater Resource Classification): The APAR lacks the completion of a groundwater resource classification (Class 1, 2, or 3) of the uppermost saturated zone(s), potentially affected groundwater-bearing units, etc. Please refer to Section 2.5 of the instructions of the APAR form to properly address this issue.

6. Section 2, Attachment 2A (Tier 1 Ecological Exclusion Criteria Checklist): The APAR lacks the completion of the required Tier 1 Ecological Exclusion Criteria Checklist. Please refer to Section 2, Attachment 2A of the instructions of the APAR form to properly address this issue.

7. Section 3.2 (Assessment Strategy): All information provided in the APAR presents a summary of existing sampling performed in the 1990s and information based on a site reconnaissance conducted on November 20, 2009, as part of a Phase I Environmental Site Assessment. Although the prior areas subject to analytical sampling have been incorporated into the APAR as historic analytical data relevant to the assessment of the site, the areas previously sampled should be considered for re-assessment to confirm current levels of concentrations to support evaluation of proposed remedial actions. Please note that the collection and analysis of additional environmental samples will be required to document conformance with the analytical data usability requirements specific to the TRRP regulations applicable to assessment/response actions associated with the site. Please refer to RG-366/TRRP-13 (Review and Reporting of COC Concentration Data under TRRP), Revised May 2010 for additional guidance regarding this topic. This document can be obtained on the TCEQ's website at: *http://www.tceq.state.tx.us/remediation/trrp/guidance.html*.

8. APAR Executive Summary (tables for Assessment, and Remedy Decision), Conclusions/Recommendations, and Appendix 1 (Notifications): The APAR indicates

impacts of contamination issues associated with the property extend to off-site properties. Please note 30 TAC 350.55 (Notification Requirements) of the TRRP regulations require specific notification requirements applicable to off-site property owners during assessment/cleanup activities performed in accordance with 30 TAC 350 (TRRP). Concurrence of any proposed response action proposals related to the cleanup of off-site contamination issues must be obtained from applicable off-site property owners prior to implementation. In addition, proof of compliance with the requirements of 30 TAC 350.55(d) and/or (e) must be submitted to the TCEQ certifying the required notifications have been completed within the specified number of calendar days of the date the notices are due. Supporting documentation demonstrating compliance with the notification requirements of 30 TAC 350.55 should be captured in Appendix 1 of the APAR form.

9. Section 4 (Soil Assessment):

- Based on our review, the APAR does not provide a sufficient soil assessment demonstrating compliance with the lateral and vertical extent delineation requirements of 30 TAC 350.51(c) and (d) of TRRP, respectively, with respect to petroleum hydrocarbons, solvents, PCBs and RCRA metals. The APAR must also be amended to document assessment and demonstrate conformance to the federal requirements of 40 CFR 761, Subpart N with respect to PCBs, in particular. [The TCEQ also previously noted the extent delineation issues in comment 1 and 2 of a prior letter issued June 18, 2010 (copy of TCEQ letter provided as an attachment to the APAR)]. The APAR must be amended to provide information verifying the lateral and vertical extent delineation requirements with respect to petroleum hydrocarbons, solvents, PCBs and RCRA metals to document compliance with 30 TAC 350.51(c) and (d) of TRRP and 40 CFR 761, as applicable to PCBs.
- The APAR lacks sufficient assessment/characterization of all potential source areas of contamination on the property. The APAR must be amended to provide additional investigation and characterization of all potential source areas on the property and surface water drainage ditches with respect to petroleum hydrocarbons, solvents, PCBs and RCRA metals to document compliance with 30 TAC 350.51(b) of TRRP.
- The APAR notes that surface water runoff from the property is noted to have a potential to affect surface soils and drainage ditches (and potentially surface water) on-site and extending to off-site areas. TCEQ also indicated in comment 5 of a prior letter issued June 18, 2010, the need to demonstrate that drainage ditches are not impacting surface water (copy of TCEQ letter provided as an attachment to the APAR)]. The APAR must be amended to provide supporting assessment information to document the characterization, assessment and delineation of contamination of all media of concern (e.g., soil, sediment, surface water, etc.) present in drainage ditches on-site and extending to off-site areas with respect to petroleum hydrocarbons, solvents, PCBs and RCRA metals.

For future reference, starting January 1, 2016, the TCEQ Remediation Division requires the use of United States Environmental Protection Agency (USEPA) SW846 Method 5035A, Purge-and-Trap and Extraction for Volatile Organics in Soil and Waste Samples, as amended, for the collection and preparation of solid samples for volatile organic compound (VOC) analysis using purge-and-trap technology. The TCEQ Remediation Division guidance on Method 5035 has been updated and is available at the TCEQ's website at: https://www.tceq.texas.gov/assets/public/remediation/tceq-rem-guidance-for-epa-method-5035.pdf. In addition, please be aware that the TCEQ's Tier 1 Protective

Concentration Levels (PCLs) and supporting tables have been revised December 2015. The most current tables can be obtained from the TCEQ's website at: http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html. Please ensure the most current TCEQ PCLs are being used for comparative purposes.

TCEQ letter dated January 12, 2016
ENCLOSURES
TCEQ SWR No. 80951

TCEQ Comments to *Response to TCEQ letter dated November 16, 2015*, dated December 16, 2015 *(submitted via email from Mr. Danny Doyle to the TCEQ on 12/16/2015)*

1. The TCEQ continues to lack adequate information to document achievement of closure of registered waste management units (WMU) and industrial solid waste registration (SWR) associated with the property (SWR No. 80951). Although a unit closure request was previously submitted by representatives of F.J. Doyle to the TCEQ as recently as May 27, 2015, information documenting the regulatory closure of WMU No. 001 and 002 in accordance with the requirements of 30 TAC 335.8 continues to remain outstanding.

   Comments regarding TCEQ review of the May 27, 2015 WMU closure request were previously conveyed to representatives of F.J. Salvage on November 16, 2015. The TCEQ's November 16, 2015 letter required the submittal of an *Amended Closure Report for WMU No. 001 and 002* to the TCEQ for technical review within forty-five (45) days of the TCEQ's letter. Although the TCEQ acknowledges receipt of an email on December 16, 2015 from Mr. Danny Doyle in response to the TCEQ's November 16, 2015 letter, the email response did not provide the *Amended Closure Report* nor did the response provide a path forward/schedule for submittal of the *Amended Closure Report*. The amended report is required to document the closure of WMU No. 001 and 002 in accordance with the 30 TAC 335.8 and support the SWR inactivation request for the property.

Message

From: Moore, Gary [Moore.Gary@epa.gov]
Sent: 9/21/2018 11:35:39 PM
To: Personal Email / Ex. 6
CC: Delgado, Paige [Delgado.Paige@epa.gov]
Subject: F.J. Doyle (905 N. Poplar) Cleanup
Attachments: Figure 5-1 Sample Grid Results Map - Excavation Depths.pdf; Figure 5-1 Sample Grid Results Map - Total PCBs Breakout.pdf; FJDoyle_20180919_Table 1.pdf

Hello Citizen Name / Ex. 6

I met with Mr. Citizen Name / Ex. 6 today and received access to do a cleanup on his properties that were contaminated by the operations conducted at the former Frank J. Doyle Salvage facility. I am providing some documents to you that give you information about the location of the contamination and actions that are planned by the EPA. The EPA cleanup level is 1 mg/kg Total PCBs. The EPA did identify locations where the PCB levels were less than this amount for which we do not plan to address as part of this cleanup. Please see the attached documents.

1. Map showing all PCB detections throughout the evaluation area;
2. Map showing the areas to be excavated and the proposed depths of excavation;
3. Table with all sample results from the EPA investigation.

I have contacted the Texas Department of State Health Services (DSHS) through our EPA contact. I will provide you with the name of the person with DSHS as soon as I am able to talk with them and obtain their contact information.

The EPA anticipates beginning cleanup operations at the end of October or the beginning of November. If you have your neighbors information, please provide that to me so that I can reach out to them as well.

Thank you and if you need anything, please do not hesitate to contact me

Gary W. Moore (6SF-ER)
Federal On-Scene Coordinator
U.S EPA Region 6
1445 Ross Ave, Suite 1200
Dallas, TX 75202-2733
Cell: 214.789.1627
moore.gary@epa.gov

TCEQ Interoffice Memorandum

To: Mr. Sam Barrett, Waste Section Manager

TCEQ Region 4 Office

From: Ms. Merrie Smith, Manager

VCP-CA Section, Remediation Division

Date: November 8, 2016

Subject: **Request for Region to Investigate F.J. Doyle Salvage Facility located at** Personal Address / Ex. 6 **905 N. Poplar Street), Leonard, Fannin County, Texas**
TCEQ SWR No. 80951; EPA ID No. TXD980865109; Customer No. CN600359095; Regulated Entity No. RN100649227

Site Background

The geographic coordinates of the 0.6-acre F.J. Salvage Facility (site) are Latitude 33° 23' 23" North, Longitude 96° 14' 34" West. The site is bordered to the north by Cottonwood Street and a residential area, to the east by Poplar Street and the Leonard High School facility, to the south by an alleyway and two more residences. One of the facilities located southwest of the site is the school district day care center. The facility previously conducted salvage operations by stripping out-of-service power transmission transformers for recoverable metals starting in 1974 to 1999. The site has subsequently been used as a vehicle repair and tire shop. The facility is a registered industrial solid waste generator and transporter facility (SWR. 80951). The facility also had an air operating permit for operation of a heat cleaning unit at the site.

Sampling activities conducted in the early 1990's by the TNRCC and U.S. EPA documented releases of polychlorinated biphenyls (PCB)-contaminated soils on-site (concentrations ranging from <1.0 mg/kg to 2,300 mg/kg) and on off-site adjacent properties (concentrations of PCB's ranging from <1.0 mg/kg to 4,100 mg/kg). The sampling activities also documented metals, solvent and petroleum hydrocarbon impacts. The full extent of the contamination associated with former operations associated with the facility since the early 1990's has not been determined. The VCP-CA Section initiated entry of the case into the CA program in 2006 in response to a notice dated April 24, 2006 received by the TCEQ IHW Registration and Reporting Team, requesting the inactivation of the IHW registration associated with the facility.

Outstanding Compliance Issues (TCEQ Remediation Division, Corrective Action program)

The TCEQ issued a letter dated March 30, 2015 to representatives of F.J. Doyle Salvage and requested the submittal of the *Waste Management Unit* (WMU) *Closure Report* to support the proposed inactivation of the facility's registration, and required the submittal of an *Affected Property Assessment Report* (*APAR)* to document the assessment and cleanup of contamination associated with the facility as required by 30 TAC 350 (Texas Risk Reduction Program rules). Several prior status update letters requesting the submittal of the WMU Closure Report and APAR were issued by the TCEQ to representatives of F.J. Doyle Salvage in letters dated July 14, 2006, January 26, 2007, and September 5, 2008.

We have received an *APAR* and *WMU Closure Report* (dated May 27, 2015) on October 13, 2015 and October 12, 2015, respectively, submitted in response to TCEQ letter dated March 30, 2015. TCEQ issued a letter dated November 16, 2015 approving the closure of WMU No. 003 (Miscellaneous Storage Containers; ref. as dumpster for plant trash), but directed F.J. Salvage representatives to prepare and submit a *Revised WMU Closure Report* to provide additional information to document the closure of WMU No. 001 (Miscellaneous Storage Containers; ref. as stored on a concrete pad) and WMU No. 002 (Thermal Processing Unit). The TCEQ also issued a notice of deficiency (NOD) letter dated January 12, 2016 in response to review of the October 2015 APAR and also re-iterated the TCEQ's prior directive (TCEQ letter dated November 16, 2015) to submit a *Revised WMU Closure Report for WMU No. 001 and 002*. The January 12, 2016 TCEQ letter specifically directed representatives of F.J. Doyle Salvage to submit the previously requested *Revised WMU Closure Report* for WMU No. 001 and 002 and to submit a *Revised APAR* to document completion of the following activities:

1. Provide an updated site reconnaissance of the property to document current site conditions, and determine areas warranting investigation/release verification.
2. Assess the overall physical security of the property to ensure the site is adequately protected with regard to potential risk posed by contamination on the property to potential trespassers on the property.
3. Complete an investigation to complete the delineation of the full extent of PCB, metals, and petroleum hydrocarbon contamination.
4. Re-assess previously sampled areas to document compliance with current data usability requirements and assess current environmental conditions.
5. Complete a required field receptor survey.
6. Evaluate the behavior of contaminants in relation to drainage conditions at the site
7. Complete a groundwater assessment.
8. Evaluate the site for ecological exposure pathway.

TCEQ has been attempting to obtain the *Revised APAR* and *Revised Closure Report* for WMU No. 001 and 002, but has received nothing from Doyle family representatives since issuance of the January 12, 2016 TCEQ letter. The October 2015 *APAR* was also noted to provide only a re-submittal of the soil sampling date previously documenting in the prior 1990 TNRCC and U.S. EPA investigation report associated with the facility. The TCEQ has also been coordinating with representatives of the U.S. EPA (Mr. Jim Sales) for these past several years specific to responsible party obligations under Toxic Substances Control Act (TSCA) for the PCB contamination associated with the site.

Representatives of F.J. Doyle Salvage have the continuing obligation to ensure that municipal hazardous waste and industrial solid waste are managed in a manner which does not cause the discharge or imminent threat of discharge of waste into or adjacent to waters in the state, a nuisance, or the endangerment of the public health and welfare, as required by 30 TAC §335.4. Our review of the TCEQ files indicates that this facility has not completed closure of WMU No. 001 and 002 in accordance with the requirements of 30 TAC §335.8. The facility has also not completed the required assessment/remediation of existing contamination issues associated with former operations associated with the site in accordance with the requirements of 30 TAC §350. As such, representatives of F.J. Doyle Salvage may be in violation of the Texas Water Code § 26.121 - Unauthorized Discharges Prohibited. Section 26.121 states that "except as

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authorized by rule, permit, or order issued by the commission, no person may discharge sewage, municipal waste, recreational waste, agricultural waste, or industrial waste into or adjacent to any water in the state." F.J. Doyle Salvage's failure to submit documents and/or implement work required within the schedule set by the TCEQ is in violation of agency regulations and potentially subject to enforcement actions under Chapter 7 of the Texas Water Code.

Request for TCEQ Region 4 Assistance

The TCEQ Corrective Action program is requesting assistance from the Region 4 Office to initiate a compliance investigation of the F.J. Doyle Salvage property to document the current regulatory compliance status of the facility with the industrial solid waste and hazardous waste regulations and to ascertain if initiation of enforcement action is appropriate. Compliance investigation efforts are recommended to consist of the following activities:

1. Perform a site reconnaissance of the property (with supporting photographs) to document the following:
    - confirm status of existing waste management and operation activity,
    - confirm location and condition of WMUs associated with TCEQ SWR No. 80951,
    - determine presence/absence of waste streams associated with registration and any remaining transformers remaining on the property,
    - identify additional areas of concern warranting investigation/release verification, and
    - assess current overall physical security of the property (i.e., condition of existing fencing, locks, etc.) to ensure the site is adequately protected with regard to potential trespassers on the property.
2. Perform media sampling of the property such as the collection and analysis of shallow soil samples for target COCs (PCBs, metals, petroleum hydrocarbon), if feasible, at accessible locations surrounding former waste management units (WMU Nos. 001 and 002) and other areas of concern identified during the site reconnaissance to document the current status of environmental contamination associated with the property and supplement prior 1990's investigation data.
3. Perform file review to confirm existing outstanding issues and determine the overall regulatory compliance status of F.J. Doyle Salvage site with the industrial solid waste and hazardous waste regulations.

The contact for the F.J. Doyle Salvage facility is currently Mr. Danny Doyle, a son of deceased owner of the facility (Mr. Frank J. Doyle). The only direct contact information on file for Mr. Danny Doyle is the following email address: [HYPERLINK "mailto:Personal Email / Ex. 6 (current as of December 2015). Mailing address is Personal Address / Ex. 6 Leonard, TX 75452. Another son of the deceased owner of the facility, Mr. Gary Doyle, was the former manager of the facility (phone Personal Phone / Ex. 6 current as of 2006). Unfortunately, his whereabouts and current contact information are unknown. A review of tax records for the property (parcel ID No. 89301, 905 N. Poplar, Leonard, TX 75452) indicated payment of taxes on the property has been paid for 2016 (current assessed value of the property is $26,320. [Link to the Fannin County property search

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for the parcel is: [HYPERLINK "http://esearch.fannincad.org/Search/Result?keywords=doyle%2C%20leonard%2C%20tx"]]

A chronological record of correspondence from TCEQ to representatives of F.J. Doyle Salvage regarding efforts to secure a complete *WMU Closure Report* and *APAR* (ref. Enclosure 1), copies of the original October 2015 *APAR* and *Closure Report (ref. Enclosure 2)*, copies of the 1998 *TNRCC Screening Site Inspection Report* and May 1997 *EPA Preliminary Assessment Report* documenting the only sample investigation activities associated with the site (Enclosure 3) are attached to this IOM in hard copy and provided in electronic portable document form (pdf) on the enclosed CD. Please direct any questions regarding this request to Ms. Eleanor Wehner of my staff at (512) 239-6542, Mail Code MC-127.

_____
Merrie Smith, Manager

ETW/mdh

Enclosures: Enclosure 1-Copies of TCEQ letters dated January 12, 2016, November 16, 2015, and March 30, 2015 (including copies of prior referenced TCEQ comment and/or status update request letters dated June 18, 2010, September 5, 2008 and January 26, 2007, July 14, 2006)

Enclosure 2- Copy of October 2015 *APAR* and October 2015 *Closure Report*

Enclosure 3-Copy of *1998 TNRCC Screening Site Inspection Report* and May 1997 *EPA Preliminary Assessment Report*

Enclosure 4-CD providing PDF of correspondence provided in Enclosure 1, 2 and 3 of the November 3, 2016 IOM

cc: Mr. Sam Barrett, Waste Section Manager, TCEQ Region 4 Office, Dallas

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Enclosure 1

Copies of TCEQ letters dated January 12, 2016, November 16, 2015, and March 30, 2015 (including copies of prior referenced TCEQ comment and/or status update request letters dated June 18, 2010, September 5, 2008 and January 26, 2007, July 14, 2006)

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Enclosure 2

Copy of October 2015 *APAR* and October 2015 *Closure Report*

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Enclosure 3

Copy of *1998 TNRCC Screening Site Inspection Report* and May 1997 *EPA Preliminary Assessment Report*

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Enclosure 4

CD providing PDF of correspondence provided in Enclosure 1, 2 and 3 of the November 3, 2016 IOM

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Bryan W. Shaw, Ph.D., P.E., *Chairman*
Toby Baker, *Commissioner*
Jon Niermann, *Commissioner*
Richard A. Hyde, P.E., *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

January 12, 2016

Mr. Danny Doyle
F.J. Salvage
Personal Address / Ex. 6
Leonard, Texas 75452

Re: TCEQ Notice of Deficiency (NOD) to the following documents:
- *Affected Property Assessment Report*, received October 13, 2015
- *Response to TCEQ letter dated November 16, 2015*, dated December 16, 2015 *(submitted via email from Mr. Danny Doyle to the TCEQ on 12/16/2015)*

Former F. J. Doyle Salvage Transformers property located at Personal Address / Ex. 6 Street (Personal Address / Ex. 6), Leonard (Fannin County), TX;
TCEQ SWR No. 80951; EPA ID No. TXD980865109; Customer No. CN600359095;
Regulated Entity No. RN100649227

Dear Mr. Doyle:

The Texas Commission on Environmental Quality (TCEQ) is in receipt of your *Affected Property Assessment Report* (APAR) for the above referenced property. The APAR was submitted to document the assessment of contamination associated with the property on-site and to areas off-site in accordance with the requirements of 30 Texas Administrative Code (TAC) 350. The TCEQ is also in receipt of an email submitted to the TCEQ from Mr. Danny Doyle on December 16, 2015, in response to TCEQ comment letter dated November 16, 2015. The November 16, 2015 comment letter was issued in response to TCEQ review of a Unit Closure Request and Facility Registration Inactivation Request, dated May 27, 2015. The APAR (received October 13, 2015) and May 27, 2015 were also submitted in response to TCEQ letter dated March 30, 2015, requesting a remediation status update of the waste management unit closure report and issues related to the assessment and cleanup of contamination associated with the facility.

Based on our review, the October 13, 2015 APAR does not provide adequate information to document compliance with the affected property assessment requirements of 30 TAC 350.51. In addition, the December 16, 2015 response does not provide the TCEQ's requested response (i.e. *Amended Closure Report for WMU No. 001 and 002*) to support the closure of the units or request for inactivation of the industrial solid waste registration (SWR) associated with the site. As such, the TCEQ cannot approve the APAR or the December 16, 2015 response regarding the closure of WMU No. 001 and 002/inactivation of the SWR at this time. A list of the deficiencies to the above referenced documents is enclosed. Please submit a *Revised APAR* to address the enclosed deficiencies associated with the October 13, 2015 submittal. In addition, the TCEQ continues to require the submittal of the *Amended Closure Report* for WMU No. 001 and 002 as previously instructed in TCEQ's November 16, 2015 letter (as per the enclosed comments).

An original and one copy of the *Revised APAR* for the referenced property and *Amended Closure Report for WMU No. 001 and 002* must be submitted to the TCEQ Remediation

Division at the letterhead address using mail code number MC-127. An additional copy of each document should be submitted to the TCEQ Region 4 Office in Dallas/Fort Worth. The *Amended Closure Report for WMU No. 001 and 002* is required to be submitted **within thirty (30) days of the date of this letter.** The *Revised APAR* must be prepared and submitted to the TCEQ for review **within 120 days from the date of this letter.** *As a reminder, failure to submit and/or implement the required WMU Closure and TRRP assessment/cleanup actions to address the contamination associated with the property within the schedule set by the TCEQ is violation of agency regulation and potentially subject to enforcement actions under Chapter 7 of the Texas Water Code.*

Please call me at (512) 239-6542 if you need additional information or wish to discuss these comments or the due dates. Thank you for your cooperation in this matter.

Sincerely,

Eleanor T. Wehner, P.G.
Sr. Project Manager
VCP-CA Section
Remediation Division
Texas Commission on Environmental Quality

ETW/mdh

Enclosures: TCEQ Comments to *Affected Property Assessment Report*, received October 13, 2015

TCEQ Comments to *Response to TCEQ letter dated November 16, 2015*, dated December 16, 2015 (submitted via email from Mr. Danny Doyle to the TCEQ on 12/16/2015)

cc: Mr. James Sales, USEPA Region 6, 1445 Ross Avenue, Suite 1200, Mail Code: 6MM, Dallas, TX 75202-2733

Personal Address / Ex. 6 Leonard, TX 75452

Mr. Sam Barrett, Waste Section Manager, TCEQ Region 4 Office, Dallas/Fort Worth

TCEQ letter dated January 12, 2016
ENCLOSURES
TCEQ SWR No. 80951

TCEQ Comments to *Affected Property Assessment Report*, received October 13, 2015

Based on our review of the *Affected Property Assessment Report,* received October 13, 2015, the TCEQ requires the submittal of a *Revised APAR* to address the following deficiencies:

Section 1 (Conclusions and Recommendations): The APAR suggests the future planned used of the on-site portion of the property may be a parking lot for Leonard ISD. As this facility is currently considered a commercial/industrial property as defined in TRRP (and likely zoned as such), *please note the applicability of residential land use restrictions applicable to educational facilities for properties conducting assessment/cleanup pursuant to the Texas Risk Reduction Program (TRRP) rules (30 TAC 350).*

1. Section 1.2: The APAR provides a summary of a site reconnaissance and physical observations of the property conducted by representatives of Terra-Solve in November of 2009. However, based on TCEQ's review of the text and supporting photographs associated with the 2009 site reconnaissance, areas of hydrocarbon contamination, unconfirmed presence of liquids in various storage tanks/containers, a parts washer, various containers of chemicals, debris, parts, etc. were identified on the property and the supporting photographs suggest an overall lack of property management and environmental housekeeping concerns associated with the property.

   As several years has passed, the APAR is noted to lack an overall assessment of *current* environmental conditions associated with the property. The APAR should be amended to provide an updated site reconnaissance completed by a qualified environmental professional to verify current site conditions, assess current and future risk of release of contaminants associated with the property and determine areas warranting additional investigation/release verification to satisfy the source area characterization requirements of TRRP [i.e., 30 TAC 350.51(a) and (b)]. A determination of the overall physical security of the site should also be performed to ensure the site is adequately protected with regard to potential risk posed contaminants on the property to potential trespassers on the property. As the TCEQ understands the site is inactive, removal and proper disposal of existing chemicals, chemical storage containers, drums, parts washer, tanks, etc.) should also be implemented and appropriately documented (proper removal and disposal). Please provide post removal inspection and photographic documentation by a qualified environmental professional to support the removal/disposal activities and copies of supporting legal records (e.g., receipts, waste manifests, bill of lading, etc.) documenting the proper disposal of materials transported off-site.

2. Section 2.1 and Section 5-Groundwater Assessment: An active public supply well was identified within 500 feet of the property. As such, the TCEQ will require verification of the presence/absence of groundwater contamination associated with the property in order to confirm whether the soil contamination identified or suspected to have been associated with site activities (i.e., petroleum hydrocarbons, solvents, PCBs and RCRA metals) has migrated to the uppermost water bearing unit. The TCEQ recommends the installation and sampling of a minimum of one (1) upgradient and three (3) downgradient monitor wells in the uppermost water bearing unit to initially determine if groundwater is impacted with contaminants identified or suspected to have been associated with site activities (i.e., petroleum hydrocarbons, solvents, PCBs and RCRA metals) and also to verify potentiometric flow conditions in the uppermost saturated zone. Based on the analytical results of the assessment, please note that additional groundwater assessment may be required to satisfy

the lateral and vertical assessment requirements of 30 TAC 350.51(c) and (e), respectively.

In addition, please note that if initially reporting a case of groundwater contamination to the TCEQ, the TCEQ requires the concurrent submittal of a *Drinking Water Survey Report* (DWSR), as a stand-alone document. The TCEQ uses the report primarily to comply with Texas Water Code (TWC), Section 26.408. Section requires the TCEQ, within 30 days of the date the TCEQ receives notice or otherwise becomes aware of groundwater contamination, to notify owners and users of private drinking water wells that may be affected by the groundwater contamination (i.e., groundwater ingestion standards exceeded). Additional information regarding the preparation and submittal fo the DWSR and requirements of TWC Section 26.408 may be obtained at the TCEQ website at: https://www.tceq.texas.gov/remediation/twc26_408.html.

Please amend the applicable sections of the APAR to provide the supporting information documenting the results of the groundwater assessment activities (i.e., Section 2, 3, 5, and supporting appendices) and, if required, the stand alone DWSR.

3. Section 2.2 (Field Receptor Survey): The APAR must be amended to provide supporting information documenting the performance of the required 500-ft field receptor survey. Refer to Section 2.2 of the APAR instructions for clarification of the specific documentation required to be presented in the APAR.

4. Section 2.6 (Exposure Pathways): The text of the APAR is noted to convey information as to the stability/persistence of contaminants in specific media of concern (i.e., soil, sediment, air, etc.) in response to specific soil conditions; however, the APAR lacks supporting information documentation the behavior of contaminants specific to conditions at the site (e.g., site specific soil pH evaluation, site-specific leachate analytical results, etc.).

5. Section 2.5 (Groundwater Resource Classification): The APAR lacks the completion of a groundwater resource classification (Class 1, 2, or 3) of the uppermost saturated zone(s), potentially affected groundwater-bearing units, etc. Please refer to Section 2.5 of the instructions of the APAR form to properly address this issue.

6. Section 2, Attachment 2A (Tier 1 Ecological Exclusion Criteria Checklist): The APAR lacks the completion of the required Tier 1 Ecological Exclusion Criteria Checklist. Please refer to Section 2, Attachment 2A of the instructions of the APAR form to properly address this issue.

7. Section 3.2 (Assessment Strategy): All information provided in the APAR presents a summary of existing sampling performed in the 1990s and information based on a site reconnaissance conducted on November 20, 2009, as part of a Phase I Environmental Site Assessment. Although the prior areas subject to analytical sampling have been incorporated into the APAR as historic analytical data relevant to the assessment of the site, the areas previously sampled should be considered for re-assessment to confirm current levels of concentrations to support evaluation of proposed remedial actions. Please note that the collection and analysis of additional environmental samples will be required to document conformance with the analytical data usability requirements specific to the TRRP regulations applicable to assessment/response actions associated with the site. Please refer to RG-366/TRRP-13 (Review and Reporting of COC Concentration Data under TRRP), Revised May 2010 for additional guidance regarding this topic. This document can be obtained on the TCEQ's website at: *http://www.tceq.state.tx.us/remediation/trrp/guidance.html*.

8. APAR Executive Summary (tables for Assessment, and Remedy Decision), Conclusions/Recommendations, and Appendix 1 (Notifications): The APAR indicates

impacts of contamination issues associated with the property extend to off-site properties. Please note 30 TAC 350.55 (Notification Requirements) of the TRRP regulations require specific notification requirements applicable to off-site property owners during assessment/cleanup activities performed in accordance with 30 TAC 350 (TRRP). Concurrence of any proposed response action proposals related to the cleanup of off-site contamination issues must be obtained from applicable off-site property owners prior to implementation. In addition, proof of compliance with the requirements of 30 TAC 350.55(d) and/or (e) must be submitted to the TCEQ certifying the required notifications have been completed within the specified number of calendar days of the date the notices are due. Supporting documentation demonstrating compliance with the notification requirements of 30 TAC 350.55 should be captured in Appendix 1 of the APAR form.

9. Section 4 (Soil Assessment):

- Based on our review, the APAR does not provide a sufficient soil assessment demonstrating compliance with the lateral and vertical extent delineation requirements of 30 TAC 350.51(c) and (d) of TRRP, respectively, with respect to petroleum hydrocarbons, solvents, PCBs and RCRA metals. The APAR must also be amended to document assessment and demonstrate conformance to the federal requirements of 40 CFR 761, Subpart N with respect to PCBs, in particular. [The TCEQ also previously noted the extent delineation issues in comment 1 and 2 of a prior letter issued June 18, 2010 (copy of TCEQ letter provided as an attachment to the APAR)]. The APAR must be amended to provide information verifying the lateral and vertical extent delineation requirements with respect to petroleum hydrocarbons, solvents, PCBs and RCRA metals to document compliance with 30 TAC 350.51(c) and (d) of TRRP and 40 CFR 761, as applicable to PCBs.
- The APAR lacks sufficient assessment/characterization of all potential source areas of contamination on the property. The APAR must be amended to provide additional investigation and characterization of all potential source areas on the property and surface water drainage ditches with respect to petroleum hydrocarbons, solvents, PCBs and RCRA metals to document compliance with 30 TAC 350.51(b) of TRRP.
- The APAR notes that surface water runoff from the property is noted to have a potential to affect surface soils and drainage ditches (and potentially surface water) on-site and extending to off-site areas. TCEQ also indicated in comment 5 of a prior letter issued June 18, 2010, the need to demonstrate that drainage ditches are not impacting surface water (copy of TCEQ letter provided as an attachment to the APAR)]. The APAR must be amended to provide supporting assessment information to document the characterization, assessment and delineation of contamination of all media of concern (e.g., soil, sediment, surface water, etc.) present in drainage ditches on-site and extending to off-site areas with respect to petroleum hydrocarbons, solvents, PCBs and RCRA metals.

For future reference, starting January 1, 2016, the TCEQ Remediation Division requires the use of United States Environmental Protection Agency (USEPA) SW846 Method 5035A, Purge-and-Trap and Extraction for Volatile Organics in Soil and Waste Samples, as amended, for the collection and preparation of solid samples for volatile organic compound (VOC) analysis using purge-and-trap technology. The TCEQ Remediation Division guidance on Method 5035 has been updated and is available at the TCEQ's website at: https://www.tceq.texas.gov/assets/public/remediation/tceq-rem-guidance-for-epa-method-5035.pdf. In addition, please be aware that the TCEQ's Tier 1 Protective

Concentration Levels (PCLs) and supporting tables have been revised December 2015. The most current tables can be obtained from the TCEQ's website at: http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html. Please ensure the most current TCEQ PCLs are being used for comparative purposes.

TCEQ letter dated January 12, 2016
ENCLOSURES
TCEQ SWR No. 80951

TCEQ Comments to *Response to TCEQ letter dated November 16, 2015,* dated December 16, 2015 *(submitted via email from Mr. Danny Doyle to the TCEQ on 12/16/2015)*

1. The TCEQ continues to lack adequate information to document achievement of closure of registered waste management units (WMU) and industrial solid waste registration (SWR) associated with the property (SWR No. 80951). Although a unit closure request was previously submitted by representatives of F.J. Doyle to the TCEQ as recently as May 27, 2015, information documenting the regulatory closure of WMU No. 001 and 002 in accordance with the requirements of 30 TAC 335.8 continues to remain outstanding.

   Comments regarding TCEQ review of the May 27, 2015 WMU closure request were previously conveyed to representatives of F.J. Salvage on November 16, 2015. The TCEQ's November 16, 2015 letter required the submittal of an *Amended Closure Report for WMU No. 001 and 002* to the TCEQ for technical review within forty-five (45) days of the TCEQ's letter. Although the TCEQ acknowledges receipt of an email on December 16, 2015 from Mr. Danny Doyle in response to the TCEQ's November 16, 2015 letter, the email response did not provide the *Amended Closure Report* nor did the response provide a path forward/schedule for submittal of the *Amended Closure Report*. The amended report is required to document the closure of WMU No. 001 and 002 in accordance with the 30 TAC 335.8 and support the SWR inactivation request for the property.

Bryan W. Shaw, Ph.D., P.E., *Chairman*
Toby Baker, *Commissioner*
Jon Niermann, *Commissioner*
Richard A. Hyde, P.E., *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

November 16, 2015

Mr. Danny Doyle
F.J. Salvage
Personal Address / Ex. 6
Leonard, TX 75452

Re: TCEQ Comments to *Unit Closure Request and Facility Registration Inactivation Request*, dated May 27, 2015
Waste Management Unit No. 001, 002 and 003
Former F. J. Doyle Salvage Transformers property located at Personal Address / Ex. 6
Personal Address / Ex. 6 (905 N. Poplar Street), Leonard (Fannin County), TX;
TCEQ SWR No. 80951; EPA ID No. TXD980865109; Customer No. CN600359095;
Regulated Entity No. RN100649227

Dear Mr. Doyle:

The Texas Commission on Environmental Quality (TCEQ) is in receipt of your unit closure and facility inactivation request dated May 27, 2015. The document was received at our office on October 21, 2015, and was submitted in response to TCEQ letter dated March 30, 2015, requesting a remediation status update of the waste management unit closure report and issues related to the assessment and cleanup of contamination associated with the facility. The TCEQ is also currently in receipt of an Affected Property Assessment Report (APAR) submitted by representatives of F.J. Salvage to document the assessment of contamination associated with the property on-site and to areas off-site in accordance with the requirements of 30 Texas Administrative Code (TAC) 350. *Please note the formal technical review of the APAR will be conducted by the TCEQ shortly.*

Based on our review, the May 27, 2015 request provides adequate information to support the closure of WMU No. 003 (Miscellaneous Storage Containers). *A copy of this letter has been forwarded to the TCEQ Registration and Reporting Section to update your Notice of Registration (NOR) to reflect the closure of WMU No. 003.* For questions regarding the NOR, please contact the Registration and Reporting Section at (512) 239-6413.

The TCEQ; however, requires the submittal of additional supporting information to document closure of the WMU No. 001 (Miscellaneous Storage Containers) and 002 (Thermal Processing Unit). Please provide the following additional information to support the closure of WMU No. 001 and 002:

1. WMU No. 001: The May 27, 2015 WMU closure report does not provides supporting documentation demonstrating the removal and proper disposal of the referenced 300 gallon container and 55 gallon drums associated with the unit. The TCEQ requires additional supporting information documenting the removal/disposal of all containers/drums associated with the unit. Please ensure the photographs capture views of the interior areas of the unit. The TCEQ also notes the presence of a total of 6-55 gallon drums shown in one of the pictures referenced in the May 27, 2015 report either

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located within the concrete bermed area and also on pavement surrounding the bermed area. Please ensure all containers/drums either inside the bermed area of the unit or on the pavement adjacent to the unit have been properly removed and disposed. *Please provide post removal inspection and photographic documentation to support the removal/disposal activities and copies of supporting legal records (e.g., receipts, waste manifests, bill of lading, etc.) documenting the proper disposal of the containers/drums and any material currently stored within the containers/drums).*

2. WMU No. 002: The supporting photograph provided in the report apparently shows the floor where WMU No. 002 was previously located. The TCEQ requires additional supporting information documenting the location of the photograph with respect to physical surroundings within the building and specific details of the building construction specifications where the unit was previously located. *Please provide additional photographs showing the current conditions of the interior of the building in reference to the general location of the unit. In addition, please clarify what the floor of the building consists of and provide and provide a figure of the interior area of the building depicting the former location of the furnace in reference to the locations of your supporting photographs.*

Please submit an Amended Closure Report for WMU No. 001 and 002 addressing the above referenced comments to the TCEQ for technical review within forty-five (45) days of the date of this letter.

Questions concerning this letter should be directed to me at (512) 239-6542. When responding by mail, please submit an original and one copy of all correspondence and reports to the TCEQ Remediation Division at Mail Code MC-127 with an additional copy submitted to the local TCEQ Region Office.

Sincerely,

Eleanor T. Wehner

Eleanor T. Wehner, P.G.
Sr. Project Manager
VCP-CA Section
Remediation Division
Texas Commission on Environmental Quality

ETW/mdh

cc: [Personal Address / Ex. 6], Leonard, TX 75452
Mr. Sam Barrett, Waste Section Manager, TCEQ Region 4 Office, Dallas/Fort Worth

Bryan W. Shaw, Ph.D., P.E., *Chairman*
Toby Baker, *Commissioner*
Zak Covar, *Commissioner*
Richard A. Hyde, P.E., *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

March 30, 2015

~~CERTIFIED MAIL~~

91 7199 9991 7033 2775 5188

Mr. Danny Doyle
F.J. Salvage
Personal Address / Ex. 6
Leonard, Texas 75452

Re: *Final Request for Remediation Status Update*
Waste Management Unit Closure Report and Contamination issues associated with the former F. J. Doyle Salvage Transformers property located at Personal Address / Ex. 6 (905 N. Poplar Street), Leonard (Fannin County), TX;
TCEQ SWR No. 80951; EPA ID No. TXD980865109; Customer No. CN600359095; Regulated Entity No. RN100649227

Dear Mr. Doyle:

On January 26, 2007, the Texas Commission on Environmental Quality (TCEQ) issued a letter regarding required environmental corrective actions at the above referenced site. A second request for status update letter was also issued on September 5, 2008. Both letters referenced the need to submit a Closure Report for three (3) waste management units (WMU) listed on the above referenced registration pursuant to 30 Texas Administrative Code (TAC) 335.8. In order to close a WMU, the owner/operator must remove all waste from the WMU and demonstrate that a release from the WMU to the environment has not occurred. Additionally, the TCEQ letters provided directives requiring representatives of F.J. Salvage to assess the full nature and extent of identified contamination associated with the facility and implement required cleanup of the contamination in accordance with 30 TAC 350 of the Texas Risk Reduction Program (TRRP) rule. The TCEQ required the submittal of an Affected Property Assessment Report pursuant to 30 TAC 350.51 of TRRP to initially fully assess the contamination issues associated with the property. To date the TCEQ has not received any information or response to our letters indicating that the required actions have been implemented, performed or completed. The TCEQ has attached a copy of the TCEQ letter(s) dated January 26, 2007 and September 5, 2008 for your reference.

As owner of the above reference property, you are responsible for ensuring that documents and work are scheduled and completed within the prescribed time frames. Failure to submit and/or implement the required WMU Closure and TRRP assessment/cleanup actions to address the contamination associated with the property within the schedule set by the TCEQ is a violation of agency regulations and potentially subject to enforcement actions under Chapter 7 of the Texas Water Code. You are hereby directed to comply with all TCEQ corrective action directives and

subsequent requests previously referenced in TCEQ letter(s) dated January 26, 2007 and September 5, 2008. **Please provide a response providing a status update, schedule and workplan for submittal of the required APAR to assess the contamination associated with the property and the required Closure Report for the three waste management units associated with TCEQ Solid Waste Registration 80951 within thirty (30) days of the date of the letter.**

Failure to submit this information within thirty (30) days of the date of the letter is a violation of TCEQ regulations and may result in issuance of a Notice of Violation (NOV). Failure to comply with any of these deadlines can potentially result in a Notice of Enforcement and an Enforcement Action Referral.

An original and one copy of the above referenced response must be submitted to the TCEQ Remediation Division at the letterhead address using Mail Code MC-127. An additional copy should be submitted to the TCEQ Region 4 Office in Dallas/Fort Worth located at 2309 Gravel Drive, Fort Worth, TX 76118-6951. Your response must be submitted within thirty (30) days from the date of this letter. The facility name, location and identification number(s) in the TCEQ reference line above should be included in your response. Questions concerning this letter should be directed to me at (512) 239-6542.

Sincerely,

Eleanor T. Wehner

Eleanor T. Wehner, P.G.
Sr. Project Manager
VCP-CA Section
Remediation Division
Texas Commission on Environmental Quality

ETW/mdh

Enclosure(s): TCEQ letter directives issued to representatives of F. J. Salvage on January 26, 2007 and September 5, 2008

cc: Mr. James Sales, Regional PCB Coordinator, EPA Region 6, 1445 Ross Avenue, Suite 1200, Mail Code: 6PD, Dallas, TX 75202-2733

Mr. Sam Barrett, Waste Section Manager, TCEQ Region 4 Office, Dallas/Fort Worth

SSchrei

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Mark R. Vickery, P.G., *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

September 5, 2008

CERTIFIED MAIL
91 7108 2133 3935 1860 9979

Mr. Danny Doyle
F. J. Doyle Salvage
Personal Address / Ex. 6
Leonard, Texas 75452

Re: **Second Request for Remediation Status Update**
F. J. Doyle Salvage Transformers, TCEQ SWR No. 80951

Dear Mr. Doyle:

The Texas Commission on Environmental Quality (TCEQ) has conducted a review of our Central Records file to determine the status of environmental activities associated with the above referenced site. According to our file review, the TCEQ's letter dated January 26, 2007, requested submittal of a Unit Closure Report and an Affected Property Assessment Report. Based on our review, the TCEQ has not received either of these requested documents. The TCEQ has attached a copy of the TCEQ letter dated January 26, 2008 for your reference.

The F. J. Doyle Salvage Transformers facility is advised that failure to comply with all TCEQ corrective action directives and subsequent requests, including the specified time frames, may result in the initiation of formal enforcement action by the TCEQ. **The requested Unit Closure Report and Affected Property Assessment Report must be provided within fifteen (15) days of the date of this letter.**

An original and one copy of the above referenced response must be submitted to the TCEQ Remediation Division at the letterhead address using Mail Code MC-127. An additional copy should be submitted to the TCEQ Region 4 Office in Fort Worth, Texas. The facility name, location and identification number(s) in the TCEQ reference line above should be included in your response. Questions concerning this letter should be directed to me at (512) 239-5454.

Sincerely,

Sarah A. Schreier, P. G., Project Manager
Team 1, Environmental Cleanup Section II
Remediation Division

SAS/jhm

Enclosure: TCEQ's letter to Mr. Danny Doyle dated January 26, 2007

cc: Waste Program Manager, TCEQ Region 4 Office, Fort Worth, Texas
Mr. Danny Doyle , F. J. Doyle Salvage, P. O. Box 312, Leonard, Texas 75452-0312

Kathleen Hartnett White, *Chairman*
Larry R. Soward, *Commissioner*
Martin A. Hubert, *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

January 26, 2007

Mr. Danny Doyle
F. J. Doyle Salvage
P. O. Box 312
Leonard, Texas 75452-0312

Re: Unit Closure Request and Assessment Request
F. J. Doyle Salvage Transformers
SWR No. 80951

Dear Mr. Doyle:

The Texas Commission on Environmental Quality (TCEQ) has received your letter dated 23 October 2006 in response to our 14 July 2006 letter requesting a Unit Closure Report for three Waste Management Units still listed as active at the F. J. Doyle Salvage Transformers facility at 305 E. Cottonwood, Leonard, TX 75425. In your response, you requested additional clarification of what information needed to be submitted to the TCEQ. Specifically, you asked for clarification on what a waste management unit was, and indicated that you needed some guidance on where to find a Notice of Registration number.

Generally, a waste management unit is any area where waste is placed. Examples of waste management units include surface impoundments; waste piles; land treatment areas; landfill cells; incinerators; tanks and their associated piping and underlying containment system; and container storage areas. A container alone is not a waste management unit; the unit includes containers and the land or pad upon which they are placed.

For your reference I have attached a report containing Notice of Registration information relevant to this facility. Page 3 of the report describes what waste management units are listed as "active" at this location. Page 2 describes the wastes that were stored or managed in each waste management unit. My phone number and email are in the last paragraph of this letter; *please* contact me if you have questions about this attachment.

The Notice of Registration number is simply a reference number used assigned to each unit at a facility for ease of reference. It is typically a three digit number found on the far left of the unit description in the Notice of Registration (see page 3 of the attached report). In this case your waste management unit Notice of Registration numbers are: 001 for various storage containers on a concrete pad, 002 for the thermal process unit, and 003 for the dumpster.

Dallas/Fort Worth Office at 2309 Gravel Drive, Fort Worth, Texas, 76118-6951. Your response must be received on or before May 31, 2007. The facility name, location and identification number(s) in the reference line of this letter should be included in your response.

Please contact me at (512)239-5454, or email at sschreie@tceq.state.tx.us if you need any additional information or clarification, or if you wish to discuss the due date. I look forward to speaking with you in the near future.

Sincerely,

Sarah A. Schreier, P. G., Project Manager
Team 1, Environmental Cleanup Section 2
Remediation Division
Texas Commission on Environmental

SS/cjh

Enclosure(s): Enclosure 1 – Notice of Registration
Enclosure 2 – Health Consultation, Doyle Transformer Site, Leonard, Texas, Fannin County (June 29, 2000)

cc: Mr. Danny Doyle, Personal Address / Ex. 6 Leonard, TX 75452
Waste Program Manager, TCEQ Region 4 Office, Dallas/Fort Worth

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*** Texas Commission on Environmental Quality ***
Notice of Registration
Industrial and Hazardous Waste

Date: 03/26/2015

)51 F J DOYLE
lid Waste Registration #: 80951
mpany Name: F J DOYLE SALVAGE
ANSFORMERS
te Name: F J DOYLE
te Location:
:ONARD, TX
imary Contact: DOYLE, F J
ailing Address: PO BOX 312
LEONARD, TX, 75452-0312

EPA ID:TXD980865109
Region: 4
County: 147 FANNIN
Land Type: PRIVATE
Title: ENVIRONMENTAL MANAGER
Phone:903-587-3342

CN: CN600359095
RN: RN100649227
Initial Registration Date: 07/21/1993
Last Amendment Date: 04/24/2006
Last Update Date: 04/27/2006

egistration Status: CLOSURE REQUEST HW Permit: IW Permit: MW Permit:

Registration Type: GENERATOR,TRANSPORTER

Hazardous Waste Generation Type:

Transporter Business Type: Transport own waste only
Transport Waste Class: 1

Universal Waste Activity:
Large Quantity Handler of Universal Waste (you accumulate 5,000 kg or more):

Destination Facility for Universal Waste:
NAICS Code:
Tax ID: 0

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*** Texas Commission on Environmental Quality ***
Notice of Registration
Industrial and Hazardous Waste

80951 F J DOYLE

Owner Information

Name: F J DOYLE SALVAGE TRANSFORMERS,
Phone: 903-587-3342
Address: PO BOX 312
LEONARD, TX, 75452-0312

Operator Information

Billing Contact:

Title:

As of 04/24/2006 -

The next unassigned sequence number for WASTES is 0004.

The next unassigned sequence number for UNITS is 004.

80951 F J DOYLE

**** WASTE INFORMATION ****

Texas Waste Code	Waste Class	Status	Waste Status Code Change Date	Mixed Radioactive	TCEQ Audit Complete	Waste Update Date	Inactive Reason
****** Active Wastes ******							
00012061	1	Active		N	No	9/8/11	

Waste Description: Used oil from non-PCB Transformers being scrapped out for salvage; initial generation: 1/86
Date of Generation: 7/27/93

Texas Form Code: 206 - Waste oil

EPA Hazardous Waste Numbers: None
Current Management Units: 22 - Miscellaneous Storage Containers: 001, OFF-SITE
Origin Codes: 3 - Derived from on-site management of a nonhazardous waste
NAICS Code:
New Chemical Substance: N

00023041	1	Active		N	No	9/8/11	

Waste Description: Ash residue from furnace used to remove varnish from copper wire; initial generation: 1/86
Date of Generation: 7/27/93

Texas Form Code: 304 - Other 'dry' ash, slag or thermal residue

EPA Hazardous Waste Numbers: None
Current Management Units: 08 - Thermal Processing Unit, other than Incinerator: 002, OFF-SITE
Origin Codes: 3 - Derived from on-site management of a nonhazardous waste
NAICS Code:
New Chemical Substance: N

00039012	2	Active		N	No	9/8/11	

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80951 F J DOYLE

Texas Waste Code	Waste Class	Status	Waste Status Code Change Date	Mixed Radioactive	TCEQ Audit Complete	Waste Update Date	Inactive Reason
****** Active Wastes ******							

Waste Description: General plant refuse from office and shop
Date of Generation: 7/27/93

Texas Form Code: 901 - Plant production refuse

EPA Hazardous Waste Numbers: None
Current Management Units: 22 - Miscellaneous Storage Containers: 003, OFF-SITE
Origin Codes: 1 - Generated on-site from a product process or service activity
NAICS Code:
New Chemical Substance: N

Texas Waste Code	Waste Class	Status	Waste Status Code Change Date	Mixed Radioactive	TCEQ Audit Complete	Waste Update Date	Inactive Reason
** No Longer Generated Wastes **							

80951 F J DOYLE

**** UNITS AT THIS SITE MANAGING WASTE ****

WMU Sequence Number	Unit Capacity	Capacity UOM	Unit Status	Date of Unit Regis	Class of Waste from Offsite	UIC Permit Number	Unit Number on Permit	Unit Update Date	Deed Record Date
** 'Active', 'Closure Pending' & 'Closure Request' Units **									
001			CLOSURE REQUEST	4/24/06				9/14/11	

Unit Type: Miscellaneous Storage Containers
Unit Regulatory Status: 05 Non-Hazardous Regulated
Unit Description: Various storage containers 1 x375 gallon, 2 x 500 gallon and 55 gallon drums. Stored on concrete pad
Billing Class:
System Type Cd: 141 Storage

Wastes Currently Managed in Unit: 00012061 Used oil from non-PC
Wastes Previously Managed in Unit: None

002			CLOSURE REQUEST	4/24/06				9/14/11	

Unit Type: Thermal Processing Unit, other than Incinerator
Unit Regulatory Status: 05 Non-Hazardous Regulated
Unit Description: High temperature oven to burn varnish off copper
Billing Class:
System Type Cd: 010 Metals recovery including retorting, smelting, chemical, etc.

Wastes Currently Managed in Unit: 00023041 Ash residue from fur
Wastes Previously Managed in Unit: None

003			CLOSURE REQUEST	4/24/06				9/14/1	

00039012 2 Active

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/MU
equence
umber | Unit Capacity | Capacity UOM | Unit Status | Date of Unit Regis | Class of Waste from Offsite | UIC Permit Number | Unit Number on Permit | Unit Update Date | Deed Record Date

* 'Active', 'Closure Pending' & 'Closure Request' Units **

Unit Type: Miscellaneous Storage Containers
Init Regulatory Status: 05 Non-Hazardous Regulated
Unit Description: Dumpster, 4 yd for accumulation of plant trash
Billing Class:
System Type Cd: 141 Storage

astes Currently Managed in Unit: 00039012 General plant refuse
astes Previously Managed in Unit: None

1U
quence
nber | Unit Capacity | Capacity UOM | Unit Status | Date of Unit Regis | Class of Waste from Offsite | UIC Permit Number | Unit Number on Permit | Unit Update Date | Deed Record Date

'Inactive', 'Closed', 'Post Closure Care', 'Never Built' & 'Not Required' Units **

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nber | Unit Capacity | Capacity UOM | Unit Status | Date of Unit Regis | Class of Waste from Offsite | UIC Permit Number | Unit Number on Permit | Unit Update Date | Deed Record Date

Not Yet Built' & 'Under Construction' Units **

Enclosure 2

Health Consultation, Doyle Transformer Site, Leonard, Texas, Fannin County (June 29, 2000)

Doyle Transformer Site Consultation

BACKGROUND AND STATEMENT OF ISSUES

The Texas Natural Resource Conservation Commission (TNRCC) requested that the Texas Department of Health (TDH) evaluate the potential health risks associated with exposure to polychlorinated biphenyls (PCBs) in soil on and near the Frank J. Doyle Transformer site in Leonard, Fannin County, Texas. The site consists of approximately one-half acre surrounded by a six-foot wooden fence and is an active registered salvage yard that receives and processes used power transmission transformers for recoverable metals [1]. Polychlorinated biphenyls were widely used as coolants in transformers before they were banned in 1977 [2]. There is conflicting information as to whether transformers still are being processed on the site.

The site is bordered to the north by a residential area, to the east by Leonard High School, to the south by an alleyway and a residence, and to the west by the owner's residence. The alleyway is used infrequently and is covered by a layer of gravel. A day care center, which contains has outside play areas for children, is located southwest of the site across the alley.

As a result of residential concerns regarding exposures to PCBs in 1995 and in 1998, the Environmental Protection Agency (EPA) and TNRCC collected soil samples on and around the facility. Samples were collected on the site, in the Doyle residential yard adjacent to the site, in the alleyway, in the residential yard south of the site, in drainage ditches downgradient of the site, in the day care center yard, and in the high school yard (Table 1, Figure 1).

Surface-soil samples (0-6") from the residential yard south of the site and from the owner's residential yard contained maximum PCB concentrations of 27.9 milligrams-PCB/kilogram-soil (mg/kg) and 85 mg/kg, respectively. The maximum concentrations of PCBs in surface-soil samples from all other locations off-site ranged from non-detectable to 5.7 mg/kg. Three on-site surface soil samples contained 2.0 to 10.4 mg PCB/kg soil. Sub-surface soil samples (6-24") revealed elevated levels of PCBs on the site (maximum 2,300 mg/kg), in the alleyway (maximum 4,100 mg/kg), and in the drainage ditches downgradient from the site (maximum 37.7 mg/kg) (Figure 1).

In addition to soil samples, three groundwater samples (and one duplicate) were collected from two city of Leonard municipal water wells and one privately owned drinking water well. Samples were analyzed for pesticides, polychlorinated biphenyls (PCBs), semi-volatile and volatile organic compounds, and metals. None of the groundwater samples contained significant quantities of pesticides, PCBs, semi-volatile and volatile organic chemicals or metals.

DISCUSSION

Health Assessment Comparison Values

In order to assess the potential health risks associated with soil exposure to a specific PCB, Aroclor 1260, we compared the reported concentrations to health assessment comparison (HAC) values for non-carcinogenic and carcinogenic endpoints (see toxicological evaluation section below). Currently, there are no HAC values specifically for Aroclor 1260 [3]; therefore, we based the non-cancer comparison value for Aroclor 1260 on the Agency for Toxic Substances and Disease Registry's (ATSDR's) minimal risk level (MRL) for the structurally similar compound Aroclor 1254. The MRL is an estimate of a daily human exposure to a contaminant that is unlikely to cause adverse non-cancer health effects over a lifetime. We based the cancer risk comparison value for Aroclor 1260 on the U.S. Environmental Protection Agency's (EPA's) cancer slope factor for PCBs as a class of chemicals and an estimated excess lifetime cancer risk of one-in-one million for persons exposed for 30 years.

Based on average soil ingestion rates of 100 mg/day for 70 kg adults and 200 mg/day for 15 kg children, HAC values for adults and children (14 mg/kg and 1.5 mg/kg) were exceeded in surface soil samples from both residences (Table 1). While exceeding a HAC value does not imply that the contaminant represents a public health threat, it does suggest that site-specific exposure evaluation of the contaminant warrants further consideration.

Polychlorinated Biphenyls (PCBs)

Background

PCBs are a group of synthetic organic chemicals that contain 209 individual chlorinated biphenyl compounds (known as congeners) with varying harmful effects. They are either oily liquids or solids and are colorless, odorless, and tasteless. There were seven common types of commercially available PCB mixtures, also known as "Aroclors," which constitute 98% of PCBs sold in the United States since 1970. The name Aroclor 1254 means that the molecule contains 12 carbon atoms (first two digits) and approximately 54% chlorine by weight (second two digits). The more highly chlorinated Aroclors have been found to have greater potential for adverse health effects in humans and animals. There are no known natural sources of PCBs in the environment. Typical concentrations in soil are less than 0.01 to 0.04 mg/kg [3].

Because they don't burn easily and are good insulating materials, PCBs have been used widely as coolants and lubricants in transformers, capacitors, and other electrical equipment. The manufacture of PCBs stopped in the United States in 1977 because of evidence that they build up in the environment and cause harmful health effects. Today, PCBs can be released into the environment from poorly maintained hazardous waste sites that process used electrical transformers or by burning of organic wastes in municipal and industrial incinerators.

Environmental Fate

PCBs released into the environment bind strongly to soil and sediments and may remain there for several years to many decades. Because of the strong adherence to soil, migration of the highly

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Other effects observed in animals include increased hepatic microsomal enzyme induction, liver enlargement, fat deposition, fibrosis, and necrosis, increased cholesterol (animals), thyroid enlargement with decreased production of thyroid hormones, increased adrenal gland production reported as an adaptive response to stress, facial edema, acne, fingernail loss, loss of hair in monkeys, weight loss, and kidney damage. However, the levels necessary to produce those effects were very high and it is not known if the same effects would happen in people chronically exposed to lower levels [3].

Inhalation of PCBs by workers employed in capacitor facilities has been observed to cause upper respiratory tract or eye irritation, cough, headaches, and tightness of the chest. Hepatic effects, such as increased levels of serum liver-related enzymes may be related to inhalation of PCB particles [4].

Weak correlations between PCB exposure and depressed immunological function, specifically a reduction in natural killer (NK) cells, have been found in humans consuming PCB-contaminated fish; however, these studies are confounded by the coinciding presence of DDT, which also has been associated with affecting the immune system.

The Agency for Toxic Substances and Disease Registry (ATSDR) has established a chronic oral minimal risk level (MRL) of 0.00002 mg/kg/day for Aroclor 1254 based on a study in which a decrease in functioning of the immune system was observed in rhesus monkeys fed with the compound in a mixture of corn oil for a period of 55 months. The MRL is an estimate of daily human exposure to a contaminant that is unlikely to cause adverse health effects over a lifetime. At 55 months, there was a significant dose-related decrease in immunoglobulin titers in response to challenges with sheep red blood cell antigens. The lowest dose level tested, 0.005 mg/kg/day, was considered the lowest observable adverse effects level (LOAEL) for decreased antibody response. Uncertainty factors used in the MRL derivation include 10 for use of a LOAEL, 3 for extrapolation from animals to humans, and 10 for human variability. Studies in species other than monkeys have given inconclusive immunologic findings in that changes in some immune parameters were sporadic, generally not dose-related, or occurred at much higher levels [3].

Cancer Effects

Studies in animals show that PCBs containing 60% chlorine by weight are clearly carcinogenic and indicate differences in the carcinogenic potential of other PCB mixtures, based on the degree of chlorination. Available data suggest that the carcinogenic potency decreases with the percent chlorination. Hepatocellular (liver) carcinomas developed in rats fed an estimated dose of 5 mg/kg/day Aroclor 1260 for 21 months [3].

Animals treated intermediately or chronically with Aroclors 1254 or 1260 showed statistically increased incidences of liver adenomas and carcinomas. To investigate hepatic tumor progression after exposure has stopped, groups of rats were exposed for 52 weeks, then exposure was discontinued for an additional 52 weeks. For Aroclor 1260, the "stop-study" tumor incidences were greater than those of the lifetime study, indicating persistent biological activity after exposure stops for the more highly chlorinated Aroclors. Other cancers observed in animals include thyroid gland carcinomas, adenocarcinoma of the stomach, leukemia and lymphoma [3].

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Table 2. Exposure dose matrix for different potential exposure scenarios. Exposure based on ingestion of PCB contaminated soil at each of the two residences where PCB levels exceeded HAC values. Exposure expressed in mg/kg/day.[1]

Soil concentration = 28 mg/kg Aroclor 1260 (0-6") from the residence immediately south of the site						
		average daily soil ingestion rate				
weight (kg)	age (years)	25 mg	50 mg	100 mg	150 mg	200 mg
15	3-6	4.6x10-5	9.2x10-5	1.9x10-4	2.8x10-4	3.7x10-4
35	10-11	2x10-5	4x10-5	8x10-5	1.2x10-4	1.6x10-4
70	adult	1x10-5	2x10-5	4x10-5	6x10-5	8x10-5
Soil concentration = 85 mg/kg Aroclor 1260 (0-6") from the Doyle residence						
15	3-6	1.4x10-4	2.8x10-4	5.7x10-4	8.5x10-4	1.1x10-3
35	10-11	6.1x10-5	1.2x10-4	2.4x10-4	3.6x10-4	4.8x10-4
70	adult	3.0x10-5	6.1x10-5	1.2x10-4	1.8x10-4	2.4x10-4

[1] Shaded Areas represent scenarios where ATSDR's MRL was exceeded.

CHILD HEALTH INITIATIVE

ATSDR's Child Health Initiative recognizes that the unique vulnerabilities of infants and children demand special emphasis in communities faced with contamination of their water, soil, air, or food. Children are at greater risk than adults from certain kinds of exposures to hazardous substances emitted from waste sites and emergency events. They are more likely to be exposed because they play outdoors and they often bring food into contaminated areas. They are shorter than adults, which means they breathe dust, soil, and heavy vapors close to the ground. Children also are smaller, resulting in higher doses of chemical exposure per body weight. The developing body systems of children can sustain permanent damage if toxic exposures occur during critical growth stages. Most importantly, children depend completely on adults for risk identification and management decisions, housing decisions, and access to medical care.

We evaluated the potential for children living in the vicinity of the Doyle Transformer site to be exposed to polychlorinated biphenyls at levels of health concern. Currently children are not likely to be chronically exposed to contaminants at this site; however, infrequent contact is possible. Children living at the residence south of the site and at the owner's property could be exposed to PCBs at levels of health concern.

REFERENCES

1. Texas Natural Resource Conservation Commission, 1998. Screening Site Inspection Report for Doyle Transformer Site, Leonard, Fannin County, Texas. Prepared in cooperation with the U.S. Environmental Protection Agency. May 1998.

2. U.S. Environmental Protection Agency, Integrated Risk Information System, Adobe Acrobat Portable Format Files, 1999.

3. Agency for Toxic Substances and Disease Registry. Toxicological profile for polychorinated biphenyls, Atlanta: ATSDR, Sept. 1997.

4. Brown, D.P. Mortality of workers exposed to polychorinated biphenyls, an update. Arch. Environmental Health. 42 (6): 333-339.

5. Bertazzi, P.A., et.al., Cancer mortality of capacitor manufacturing workers. Am. J. Ind. Med. 11(2): 165-176.

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Bryan W. Shaw, Ph.D., *Chairman*
Buddy Garcia, *Commissioner*
Carlos Rubinstein, *Commissioner*
Mark R. Vickery, P.G., *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

June 18, 2010

Mr. Charles R. Robertson
Vice President
Terra-Solve, Inc.
3216 Commander Drive, Suite 103
Carrollton, Texas 75006-2518

Re: Comments to "Request for Additional Information"
Former F.J. Doyle Salvage
Personal Address / Ex. 6 (905 N. Poplar Street), Leonard, Fannin County, Texas
TCEQ SWR No. 80951; EPA CERCLIS No. TXD980865109; Customer No. CN600359095; Regulated Entity No. RN100649227

Dear Mr. Robertson:

The Texas Commission on Environmental Quality (TCEQ) has reviewed the above referenced submittal. A list of the comments is enclosed.

Please call me at (512) 239-4940 if you need additional information or wish to discuss these comments or the due date. Thank you for your cooperation in this matter.

Sincerely,

PLall

Pindy Lall, Project Manager
VCP Team 1, VCP-CA Section
Remediation Division

PSL/jdm

Enclosure: Comments

cc: Mr. Sam Barrett, Waste Program Manager, TCEQ Region 4, Dallas/Fort Worth

ED_002624_00000607-00028

TCEQ letter dated June 18, 2010
ENCLOSURE
TCEQ SWR No. 80951

Comments

1. Surface soils need to be delineated horizontally to 1.1 mg/kg for polychlorinated biphenyls (PCBs). Surface soils under Texas Risk Reduction Program (TRRP) are soils at a depth of 0-15 feet. Copper and hexachlorobenzene will also be required to be delineated horizontally.

2. Soil contamination will need to be delineated vertically.
   a. Soil vertical delineation is required to method quantitation limit (MQL) unless a groundwater sample is taken at the site.
   b. If a groundwater sample is taken, the entire soil column can be assumed to be contaminated.

3. If the site enters the Voluntary Cleanup Program (VCP), a groundwater sample will be required.

4. In situations where the entire soil column is assumed to be contaminated, a control (such as a parking lot that serves as an impervious cover) may be implemented to prevent exposure. A parking lot may be utilized as a impervious cover depending on the material used; however, maintenance of the parking lot would be required to ensure the integrity of the parking lot as a control. Any area that is not covered will be required to be removed, decontaminated, and/or controlled by other means.

5. A demonstration that the drainage ditches are not impacting surface water will be necessary.

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SSchreier

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Mark R. Vickery, P.G., *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

September 5, 2008

CERTIFIED MAIL
91 7108 2133 3935 1880 9979

Mr. Danny Doyle
F. J. Doyle Salvage
Personal Address / Ex. 6
Leonard, Texas 75452

Re: **Second Request for Remediation Status Update**
F. J. Doyle Salvage Transformers, TCEQ SWR No. 80951

Dear Mr. Doyle:

The Texas Commission on Environmental Quality (TCEQ) has conducted a review of our Central Records file to determine the status of environmental activities associated with the above referenced site. According to our file review, the TCEQ's letter dated January 26, 2007, requested submittal of a Unit Closure Report and an Affected Property Assessment Report. Based on our review, the TCEQ has not received either of these requested documents. The TCEQ has attached a copy of the TCEQ letter dated January 26, 2008 for your reference.

The F. J. Doyle Salvage Transformers facility is advised that failure to comply with all TCEQ corrective action directives and subsequent requests, including the specified time frames, may result in the initiation of formal enforcement action by the TCEQ. **The requested Unit Closure Report and Affected Property Assessment Report must be provided within fifteen (15) days of the date of this letter.**

An original and one copy of the above referenced response must be submitted to the TCEQ Remediation Division at the letterhead address using Mail Code MC-127. An additional copy should be submitted to the TCEQ Region 4 Office in Fort Worth, Texas. The facility name, location and identification number(s) in the TCEQ reference line above should be included in your response. Questions concerning this letter should be directed to me at (512) 239-5454.

Sincerely,

Sarah A. Schreier, P. G., Project Manager
Team 1, Environmental Cleanup Section II
Remediation Division

SAS/jhm

Enclosure: TCEQ's letter to Mr. Danny Doyle dated January 26, 2007

cc: Waste Program Manager, TCEQ Region 4 Office, Fort Worth, Texas
Mr. Danny Doyle , F. J. Doyle Salvage, P. O. Box 312, Leonard, Texas 75452-0312

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Kathleen Hartnett White, *Chairman*
Larry R. Soward, *Commissioner*
Martin A. Hubert, *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

January 26, 2007

Mr. Danny Doyle
F. J. Doyle Salvage
P. O. Box 312
Leonard, Texas 75452-0312

Re: Unit Closure Request and Assessment Request
F. J. Doyle Salvage Transformers
SWR No. 80951

Dear Mr. Doyle:

The Texas Commission on Environmental Quality (TCEQ) has received your letter dated 23 October 2006 in response to our 14 July 2006 letter requesting a Unit Closure Report for three Waste Management Units still listed as active at the F. J. Doyle Salvage Transformers facility at 305 E. Cottonwood, Leonard, TX 75425. In your response, you requested additional clarification of what information needed to be submitted to the TCEQ. Specifically, you asked for clarification on what a waste management unit was, and indicated that you needed some guidance on where to find a Notice of Registration number.

Generally, a waste management unit is any area where waste is placed. Examples of waste management units include surface impoundments; waste piles; land treatment areas; landfill cells; incinerators; tanks and their associated piping and underlying containment system; and container storage areas. A container alone is not a waste management unit; the unit includes containers and the land or pad upon which they are placed.

For your reference I have attached a report containing Notice of Registration information relevant to this facility. Page 3 of the report describes what waste management units are listed as "active" at this location. Page 2 describes the wastes that were stored or managed in each waste management unit. My phone number and email are in the last paragraph of this letter; *please* contact me if you have questions about this attachment.

The Notice of Registration number is simply a reference number used assigned to each unit at a facility for ease of reference. It is typically a three digit number found on the far left of the unit description in the Notice of Registration (see page 3 of the attached report). In this case your waste management unit Notice of Registration numbers are: 001 for various storage containers on a concrete pad, 002 for the thermal process unit, and 003 for the dumpster.

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Dallas/Fort Worth Office at 2309 Gravel Drive, Fort Worth, Texas, 76118-6951. Your response must be received on or before May 31, 2007. The facility name, location and identification number(s) in the reference line of this letter should be included in your response.

Please contact me at (512)239-5454, or email at sschreie@tceq.state.tx.us if you need any additional information or clarification, or if you wish to discuss the due date. I look forward to speaking with you in the near future.

Sincerely,

Sarah A. Schreier, P. G., Project Manager
Team 1, Environmental Cleanup Section 2
Remediation Division
Texas Commission on Environmental

SS/ojh

Enclosure(s): Enclosure 1 – Notice of Registration
Enclosure 2 – Health Consultation, Doyle Transformer Site, Leonard, Texas, Fannin County (June 29, 2000)

cc: Mr. Danny Doyle, Personal Address / Ex. 6 d, TX 75452
Waste Program Manager, TCEQ Region 4 Office, Dallas/Fort Worth

Report Name :
Report Progam : TRACS_EXEC_DIR/ihw_nor_report
Date : 19-jan-2007 10:05:40
User ID : csiegel

Selection Criteria

SW Regis. #s : 80951

Selected All Wastes

Sort Criteria: Registration Number

*** TEXAS COMMISSION ON ENVIRONMENTAL QUALITY ***

Notice of Registration

Industrial and Hazardous Waste

80951 F J Doyle Salvage Transformers

**** WASTE INFORMATION ****

Texas Waste Code	Waste Class	Status	Date of Status	Managed Onsite/ Offsite	Radio-active	TCEQ Audit Complete

****** Active Wastes ******

00012061 1 Active 07/27/93 On/Off No

Description from Generator: Used oil from non-PCB Transformers being scrapped out for salvage; initial generation: 1/86

Texas Form Code: 206 Waste oil

Current Management Units: Misc Store Container 001

* Origin Codes: 3 From non-haz waste mgmt

00023041 1 Active 07/27/93 On/Off No

Description from Generator: Ash residue from furnace used to remove varnish from copper wire; initial generation: 1/86

Texas Form Code: 304 Other "dry" ash, slag, or thermal inorgan. residue

Current Management Units: Thermal Process Unit 002

* Origin Codes: 3 From non-haz waste mgmt

00039012 2 Active 07/27/93 On/Off No

Description from Generator: General plant refuse from office and shop

Texas Form Code: 901 Plant production refuse

Current Management Units: Misc Store Container 003

* Origin Codes: 1 Onsite-process/service

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* The first value is considered the primary value (e.g. primary origin code).

As of 04/24/2006, the next unassigned sequence number for WASTES is 0004.

Enclosure 2

Health Consultation, Doyle Transformer Site, Leonard, Texas, Fannin County (June 29, 2000)

BACKGROUND AND STATEMENT OF ISSUES

The Texas Natural Resource Conservation Commission (TNRCC) requested that the Texas Department of Health (TDH) evaluate the potential health risks associated with exposure to polychlorinated biphenyls (PCBs) in soil on and near the Frank J. Doyle Transformer site in Leonard, Fannin County, Texas. The site consists of approximately one-half acre surrounded by a six-foot wooden fence and is an active registered salvage yard that receives and processes used power transmission transformers for recoverable metals [1]. Polychlorinated biphenyls were widely used as coolants in transformers before they were banned in 1977 [2]. There is conflicting information as to whether transformers still are being processed on the site.

The site is bordered to the north by a residential area, to the east by Leonard High School, to the south by an alleyway and a residence, and to the west by the owner's residence. The alleyway is used infrequently and is covered by a layer of gravel. A day care center, which contains has outside play areas for children, is located southwest of the site across the alley.

As a result of residential concerns regarding exposures to PCBs in 1995 and in 1998, the Environmental Protection Agency (EPA) and TNRCC collected soil samples on and around the facility. Samples were collected on the site, in the Doyle residential yard adjacent to the site, in the alleyway, in the residential yard south of the site, in drainage ditches downgradient of the site, in the day care center yard, and in the high school yard (Table 1, Figure 1).

Surface-soil samples (0-6") from the residential yard south of the site and from the owner's residential yard contained maximum PCB concentrations of 27.9 milligrams-PCB/kilogram-soil (mg/kg) and 85 mg/kg, respectively. The maximum concentrations of PCBs in surface-soil samples from all other locations off-site ranged from non-detectable to 5.7 mg/kg. Three on-site surface soil samples contained 2.0 to 10.4 mg PCB/kg soil. Sub-surface soil samples (6-24") revealed elevated levels of PCBs on the site (maximum 2,300 mg/kg), in the alleyway (maximum 4,100 mg/kg), and in the drainage ditches downgradient from the site (maximum 37.7 mg/kg) (Figure 1).

In addition to soil samples, three groundwater samples (and one duplicate) were collected from two city of Leonard municipal water wells and one privately owned drinking water well. Samples were analyzed for pesticides, polychlorinated biphenyls (PCBs), semi-volatile and volatile organic compounds, and metals. None of the groundwater samples contained significant quantities of pesticides, PCBs, semi-volatile and volatile organic chemicals or metals.

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DISCUSSION

Health Assessment Comparison Values

In order to assess the potential health risks associated with soil exposure to a specific PCB, Aroclor 1260, we compared the reported concentrations to health assessment comparison (HAC) values for non-carcinogenic and carcinogenic endpoints (see toxicological evaluation section below). Currently, there are no HAC values specifically for Aroclor 1260 [3]; therefore, we based the non-cancer comparison value for Aroclor 1260 on the Agency for Toxic Substances and Disease Registry's (ATSDR's) minimal risk level (MRL) for the structurally similar compound Aroclor 1254. The MRL is an estimate of a daily human exposure to a contaminant that is unlikely to cause adverse non-cancer health effects over a lifetime. We based the cancer risk comparison value for Aroclor 1260 on the U.S. Environmental Protection Agency's (EPA's) cancer slope factor for PCBs as a class of chemicals and an estimated excess lifetime cancer risk of one-in-one million for persons exposed for 30 years.

Based on average soil ingestion rates of 100 mg/day for 70 kg adults and 200 mg/day for 15 kg children, HAC values for adults and children (14 mg/kg and 1.5 mg/kg) were exceeded in surface soil samples from both residences (Table 1). While exceeding a HAC value does not imply that the contaminant represents a public health threat, it does suggest that site-specific exposure evaluation of the contaminant warrants further consideration.

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Background

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PCBs released into the environment bind strongly to soil and sediments and may remain there for several years to many decades. Because of the strong adherence to soil, migration of the highly

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Other effects observed in animals include increased hepatic microsomal enzyme induction, liver enlargement, fat deposition, fibrosis, and necrosis, increased cholesterol (animals), thyroid enlargement with decreased production of thyroid hormones, increased adrenal gland production reported as an adaptive response to stress, facial edema, acne, fingernail loss, loss of hair in monkeys, weight loss, and kidney damage. However, the levels necessary to produce those effects were very high and it is not known if the same effects would happen in people chronically exposed to lower levels [3].

Inhalation of PCBs by workers employed in capacitor facilities has been observed to cause upper respiratory tract or eye irritation, cough, headaches, and tightness of the chest. Hepatic effects, such as increased levels of serum liver-related enzymes may be related to inhalation of PCB particles [4].

Weak correlations between PCB exposure and depressed immunological function, specifically a reduction in natural killer (NK) cells, have been found in humans consuming PCB-contaminated fish; however, these studies are confounded by the coinciding presence of DDT, which also has been associated with affecting the immune system.

The Agency for Toxic Substances and Disease Registry (ATSDR) has established a chronic oral minimal risk level (MRL) of 0.00002 mg/kg/day for Aroclor 1254 based on a study in which a decrease in functioning of the immune system was observed in rhesus monkeys fed with the compound in a mixture of corn oil for a period of 55 months. The MRL is an estimate of daily human exposure to a contaminant that is unlikely to cause adverse health effects over a lifetime. At 55 months, there was a significant dose-related decrease in immunoglobulin titers in response to challenges with sheep red blood cell antigens. The lowest dose level tested, 0.005 mg/kg/day, was considered the lowest observable adverse effects level (LOAEL) for decreased antibody response. Uncertainty factors used in the MRL derivation include 10 for use of a LOAEL, 3 for extrapolation from animals to humans, and 10 for human variability. Studies in species other than monkeys have given inconclusive immunologic findings in that changes in some immune parameters were sporadic, generally not dose-related, or occurred at much higher levels [3].

Cancer Effects

Studies in animals show that PCBs containing 60% chlorine by weight are clearly carcinogenic and indicate differences in the carcinogenic potential of other PCB mixtures, based on the degree of chlorination. Available data suggest that the carcinogenic potency decreases with the percent chlorination. Hepatocellular (liver) carcinomas developed in rats fed an estimated dose of 5 mg/kg/day Aroclor 1260 for 21 months [3].

Animals treated intermediately or chronically with Aroclors 1254 or 1260 showed statistically increased incidences of liver adenomas and carcinomas. To investigate hepatic tumor progression after exposure has stopped, groups of rats were exposed for 52 weeks, then exposure was discontinued for an additional 52 weeks. For Aroclor 1260, the "stop-study" tumor incidences were greater than those of the lifetime study, indicating persistent biological activity after exposure stops for the more highly chlorinated Aroclors. Other cancers observed in animals include thyroid gland carcinomas, adenocarcinoma of the stomach, leukemia and lymphoma [3].

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Table 2. Exposure dose matrix for different potential exposure scenarios. Exposure based on ingestion of PCB contaminated soil at each of the two residences where PCB levels exceeded HAC values. Exposure expressed in mg/kg/day.[1]

Soil concentration = 28 mg/kg Aroclor 1260 (0-6") from the residence immediately south of the site						
		average daily soil ingestion rate				
weight (kg)	age (years)	25 mg	50 mg	100 mg	150 mg	200 mg
15	3-6	4.6x10-5	9.3x10-5	1.9x10-4	2.8x10-4	3.7x10-4
35	10-11	2x10-5	4x10-5	8x10-5	1.2x10-4	1.6x10-4
70	adult	1x10-5	2x10-5	4x10-5	6x10-5	8x10-5
Soil concentration = 85 mg/kg Aroclor 1260 (0-6") from the Doyle residence						
15	3-6	1.4x10-4	2.8x10-4	5.7x10-4	8.5x10-4	1.1x10-3
35	10-11	6.1x10-5	1.2x10-4	2.4x10-4	3.6x10-4	4.8x10-4
70	adult	3.0x10-5	6.1x10-5	1.2x10-4	1.8x10-4	2.4x10-4

[1] Shaded Areas represent scenarios where ATSDR's MRL was exceeded.

CHILD HEALTH INITIATIVE

ATSDR's Child Health Initiative recognizes that the unique vulnerabilities of infants and children demand special emphasis in communities faced with contamination of their water, soil, air, or food. Children are at greater risk than adults from certain kinds of exposures to hazardous substances emitted from waste sites and emergency events. They are more likely to be exposed because they play outdoors and they often bring food into contaminated areas. They are shorter than adults, which means they breathe dust, soil, and heavy vapors close to the ground. Children also are smaller, resulting in higher doses of chemical exposure per body weight. The developing body systems of children can sustain permanent damage if toxic exposures occur during critical growth stages. Most importantly, children depend completely on adults for risk identification and management decisions, housing decisions, and access to medical care.

We evaluated the potential for children living in the vicinity of the Doyle Transformer site to be exposed to polychlorinated biphenyls at levels of health concern. Currently children are not likely to be chronically exposed to contaminants at this site; however, infrequent contact is possible. Children living at the residence south of the site and at the owner's property could be exposed to PCBs at levels of health concern.

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REFERENCES

1. Texas Natural Resource Conservation Commission, 1998. Screening Site Inspection Report for Doyle Transformer Site, Leonard, Fannin County, Texas. Prepared in cooperation with the U.S. Environmental Protection Agency. May 1998.

2. U.S. Environmental Protection Agency, Integrated Risk Information System, Adobe Acrobat Portable Format Files, 1999.

3. Agency for Toxic Substances and Disease Registry. Toxicological profile for polychorinated biphenyls, Atlanta: ATSDR, Sept. 1997.

4. Brown, D.P. Mortality of workers exposed to polychorinated biphenyls, an update. Arch. Environmental Health. 42 (6): 333-339.

5. Bertazzi, P.A., et.al., Cancer mortality of capacitor manufacturing workers. Am. J. Ind. Med. 11(2): 165-176.

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CERTIFICATION

This Doyle Transformer Site Health Consultation was prepared by the Texas Department of Health under a cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR). It is in accordance with approved methodology and procedures existing at the time the Health Consultation was initiated.

Technical Project Officer, SPS, SSAB, DHAC, ATSDR

The Division of Health Assessment and Consultation, ATSDR, has reviewed this Health Consultation and concurs with its findings.

Chief, State Programs Section, SSAB, DHAC, ATSDR

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DO NOT SEND THIS PAGE[1]
bcc list (format revised 12/05/2006):

Central Records (MC-199)
IHWCA files (MC-127)

For data entry:

ARTS COMMUNICATION ID:	**N/A**
This letter is (Pick one):	**RESPONSE DUE/LATE LETTER**
LBB (04 or 06, and number to count):	N/A
Reply from facility needed? If so, give reply due date:	September 22, 2008
Document Review(s) Complete? (Yes/No)	yes
ARTS LEGAL PROPERTY: CAS Status value changed for entire facility (Put new status or n/a)[2]?	N/A
ARTS PHYSICAL UPDATES (n/a, if not applicable)[3]: Physical Name:	N/A
New Physical Status:	N/A
For entry into RCRAInfo: Number of units (n/a, if not applicable):	N/A
Corrective Action Codes (RFI units/areas) CA-	N/A
or	
Closure Codes (RCRA/Interim Status units) CL-	N/A

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Kathleen Hartnett White, *Chairman*
Larry R. Soward, *Commissioner*
Martin A. Hubert, *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

January 26, 2007

Mr. Danny Doyle
F. J. Doyle Salvage
P. O. Box 312
Leonard, Texas 75452-0312

Re: Unit Closure Request and Assessment Request
F. J. Doyle Salvage Transformers
SWR No. 80951

Dear Mr. Doyle:

The Texas Commission on Environmental Quality (TCEQ) has received your letter dated 23 October 2006 in response to our 14 July 2006 letter requesting a Unit Closure Report for three Waste Management Units still listed as active at the F. J. Doyle Salvage Transformers facility at 305 E. Cottonwood, Leonard, TX 75425. In your response, you requested additional clarification of what information needed to be submitted to the TCEQ. Specifically, you asked for clarification on what a waste management unit was, and indicated that you needed some guidance on where to find a Notice of Registration number.

Generally, a waste management unit is any area where waste is placed. Examples of waste management units include surface impoundments; waste piles; land treatment areas; landfill cells; incinerators; tanks and their associated piping and underlying containment system; and container storage areas. A container alone is not a waste management unit; the unit includes containers and the land or pad upon which they are placed.

For your reference I have attached a report containing Notice of Registration information relevant to this facility. Page 3 of the report describes what waste management units are listed as "active" at this location. Page 2 describes the wastes that were stored or managed in each waste management unit. My phone number and email are in the last paragraph of this letter; *please* contact me if you have questions about this attachment.

The Notice of Registration number is simply a reference number used assigned to each unit at a facility for ease of reference. It is typically a three digit number found on the far left of the unit description in the Notice of Registration (see page 3 of the attached report). In this case your waste management unit Notice of Registration numbers are: 001 for various storage containers on a concrete pad, 002 for the thermal process unit, and 003 for the dumpster.

Dallas/Fort Worth Office at 2309 Gravel Drive, Fort Worth, Texas, 76118-6951. Your response must be received on or before May 31, 2007. The facility name, location and identification number(s) in the reference line of this letter should be included in your response.

Please contact me at (512)239-5454, or email at sschreie@tceq.state.tx.us if you need any additional information or clarification, or if you wish to discuss the due date. I look forward to speaking with you in the near future.

Sincerely,

Sarah A. Schreier, P. G., Project Manager
Team 1, Environmental Cleanup Section 2
Remediation Division
Texas Commission on Environmental

SS/cjh

Enclosure(s): Enclosure 1 – Notice of Registration
Enclosure 2 – Health Consultation, Doyle Transformer Site, Leonard, Texas, Fannin County (June 29, 2000)

cc: Mr. Danny Doyle, Personal Address / Ex. 6 Leonard, TX 75452
Waste Program Manager, TCEQ Region 4 Office, Dallas/Fort Worth

ED_002624_00000607-00045

Date: 03/26/2015

*** Texas Commission on Environmental Quality ***
Notice of Registration
Industrial and Hazardous Waste

)51 F J DOYLE
lid Waste Registration #: 80951
mpany Name: F J DOYLE SALVAGE
ANSFORMERS
te Name: F J DOYLE
te Location:
:ONARD, TX
imary Contact: DOYLE, F J
ailing Address: PO BOX 312
LEONARD, TX, 75452-0312

EPA ID:TXD980865109
Region: 4
County: 147 FANNIN
Land Type: PRIVATE
Title: ENVIRONMENTAL MANAGER
Phone:903-587-3342

CN: CN600359095
RN: RN100649227
Initial Registration Date: 07/21/1993
Last Amendment Date: 04/24/2006
Last Update Date: 04/27/2006

egistration Status: CLOSURE REQUEST HW Permit: IW Permit: MW Permit:

Registration Type: GENERATOR,TRANSPORTER

Hazardous Waste Generation Type:

Transporter Business Type: Transport own waste only
Transport Waste Class: 1

Universal Waste Activity:
Large Quantity Handler of Universal Waste (you accumulate 5,000 kg or more):

Destination Facility for Universal Waste:
NAICS Code:
Tax ID: 0

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*** Texas Commission on Environmental Quality ***
Notice of Registration
Industrial and Hazardous Waste

80951 F J DOYLE

Owner Information

Name: F J DOYLE SALVAGE TRANSFORMERS,
Phone: 903-587-3342
Address: PO BOX 312
LEONARD, TX, 75452-0312

Operator Information

Billing Contact:

Title:

As of 04/24/2006 -

The next unassigned sequence number for WASTES is 0004.

The next unassigned sequence number for UNITS is 004.

80951 F J DOYLE

**** WASTE INFORMATION ****

Texas Waste Code	Waste Class	Status	Waste Status Code Change Date	Mixed Radioactive	TCEQ Audit Complete	Waste Update Date	Inactive Reason
****** Active Wastes ******							
00012061	1	Active		N	No	9/8/11	

Waste Description: Used oil from non-PCB Transformers being scrapped out for salvage; initial generation: 1/86
Date of Generation: 7/27/93

Texas Form Code: 206 - Waste oil

EPA Hazardous Waste Numbers: None
Current Management Units: 22 - Miscellaneous Storage Containers: 001, OFF-SITE
Origin Codes: 3 - Derived from on-site management of a nonhazardous waste
NAICS Code:
New Chemical Substance: N

00023041	1	Active		N	No	9/8/11	

Waste Description: Ash residue from furnace used to remove varnish from copper wire; initial generation: 1/86
Date of Generation: 7/27/93

Texas Form Code: 304 - Other 'dry' ash, slag or thermal residue

EPA Hazardous Waste Numbers: None
Current Management Units: 08 - Thermal Processing Unit, other than Incinerator: 002, OFF-SITE
Origin Codes: 3 - Derived from on-site management of a nonhazardous waste
NAICS Code:
New Chemical Substance: N

00039012	2	Active		N	No	9/8/11	

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80951 F J DOYLE

Texas Waste Code	Waste Class	Status	Waste Status Code Change Date	Mixed Radioactive	TCEQ Audit Complete	Waste Update Date	Inactive Reason
****** Active Wastes ******							

Waste Description: General plant refuse from office and shop
Date of Generation: 7/27/93

Texas Form Code: 901 - Plant production refuse

EPA Hazardous Waste Numbers: None
Current Management Units: 22 - Miscellaneous Storage Containers: 003, OFF-SITE
Origin Codes: 1 - Generated on-site from a product process or service activity
NAICS Code:
New Chemical Substance: N

Texas Waste Code	Waste Class	Status	Waste Status Code Change Date	Mixed Radioactive	TCEQ Audit Complete	Waste Update Date	Inactive Reason
** No Longer Generated Wastes **							

80951 F J DOYLE

**** UNITS AT THIS SITE MANAGING WASTE ****

WMU Sequence Number	Unit Capacity	Capacity UOM	Unit Status	Date of Unit Regis	Class of Waste from Offsite	UIC Permit Number	Unit Number on Permit	Unit Update Date	Deed Record Date
** 'Active', 'Closure Pending' & 'Closure Request' Units **									
001			CLOSURE REQUEST	4/24/06				9/14/11	

Unit Type: Miscellaneous Storage Containers
Unit Regulatory Status: 05 Non-Hazardous Regulated
Unit Description: Various storage containers 1 x375 gallon, 2 x 500 gallon and 55 gallon drums. Stored on concrete pad
Billing Class:
System Type Cd: 141 Storage

Wastes Currently Managed in Unit: 00012061 Used oil from non-PC
Wastes Previously Managed in Unit: None

002			CLOSURE REQUEST	4/24/06				9/14/11	

Unit Type: Thermal Processing Unit, other than Incinerator
Unit Regulatory Status: 05 Non-Hazardous Regulated
Unit Description: High temperature oven to burn varnish off copper
Billing Class:
System Type Cd: 010 Metals recovery including retorting, smelting, chemical, etc.

Wastes Currently Managed in Unit: 00023041 Ash residue from fur
Wastes Previously Managed in Unit: None

003			CLOSURE REQUEST	4/24/06				9/14/1	

00039012 2 Active

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0951 F J DOYLE

/MU

equence umber	Unit Capacity	Capacity UOM	Unit Status	Date of Unit Regis	Class of Waste from Offsite	UIC Permit Number	Unit Number on Permit	Unit Update Date	Deed Record Date
* 'Active', 'Closure Pending' & 'Closure Request' Units **									

Unit Type: Miscellaneous Storage Containers

Init Regulatory Status: 05 Non-Hazardous Regulated

Unit Description: Dumpster, 4 yd for accumulation of plant trash

Billing Class:

System Type Cd: 141 Storage

astes Currently Managed in Unit: 00039012 General plant refuse

astes Previously Managed in Unit: None

1U

quence nber	Unit Capacity	Capacity UOM	Unit Status	Date of Unit Regis	Class of Waste from Offsite	UIC Permit Number	Unit Number on Permit	Unit Update Date	Deed Record Date
'Inactive', 'Closed', 'Post Closure Care', 'Never Built' & 'Not Required' Units **									

U

uence nber	Unit Capacity	Capacity UOM	Unit Status	Date of Unit Regis	Class of Waste from Offsite	UIC Permit Number	Unit Number on Permit	Unit Update Date	Deed Record Date
Not Yet Built' & 'Under Construction' Units **									

Enclosure 2

Health Consultation, Doyle Transformer Site, Leonard, Texas, Fannin County (June 29, 2000)

Doyle Transformer Site Consultation

BACKGROUND AND STATEMENT OF ISSUES

The Texas Natural Resource Conservation Commission (TNRCC) requested that the Texas Department of Health (TDH) evaluate the potential health risks associated with exposure to polychlorinated biphenyls (PCBs) in soil on and near the Frank J. Doyle Transformer site in Leonard, Fannin County, Texas. The site consists of approximately one-half acre surrounded by a six-foot wooden fence and is an active registered salvage yard that receives and processes used power transmission transformers for recoverable metals [1]. Polychlorinated biphenyls were widely used as coolants in transformers before they were banned in 1977 [2]. There is conflicting information as to whether transformers still are being processed on the site.

The site is bordered to the north by a residential area, to the east by Leonard High School, to the south by an alleyway and a residence, and to the west by the owner's residence. The alleyway is used infrequently and is covered by a layer of gravel. A day care center, which contains has outside play areas for children, is located southwest of the site across the alley.

As a result of residential concerns regarding exposures to PCBs in 1995 and in 1998, the Environmental Protection Agency (EPA) and TNRCC collected soil samples on and around the facility. Samples were collected on the site, in the Doyle residential yard adjacent to the site, in the alleyway, in the residential yard south of the site, in drainage ditches downgradient of the site, in the day care center yard, and in the high school yard (Table 1, Figure 1).

Surface-soil samples (0-6") from the residential yard south of the site and from the owner's residential yard contained maximum PCB concentrations of 27.9 milligrams-PCB/kilogram-soil (mg/kg) and 85 mg/kg, respectively. The maximum concentrations of PCBs in surface-soil samples from all other locations off-site ranged from non-detectable to 5.7 mg/kg. Three on-site surface soil samples contained 2.0 to 10.4 mg PCB/kg soil. Sub-surface soil samples (6-24") revealed elevated levels of PCBs on the site (maximum 2,300 mg/kg), in the alleyway (maximum 4,100 mg/kg), and in the drainage ditches downgradient from the site (maximum 37.7 mg/kg) (Figure 1).

In addition to soil samples, three groundwater samples (and one duplicate) were collected from two city of Leonard municipal water wells and one privately owned drinking water well. Samples were analyzed for pesticides, polychlorinated biphenyls (PCBs), semi-volatile and volatile organic compounds, and metals. None of the groundwater samples contained significant quantities of pesticides, PCBs, semi-volatile and volatile organic chemicals or metals.

DISCUSSION

Health Assessment Comparison Values

In order to assess the potential health risks associated with soil exposure to a specific PCB, Aroclor 1260, we compared the reported concentrations to health assessment comparison (HAC) values for non-carcinogenic and carcinogenic endpoints (see toxicological evaluation section below). Currently, there are no HAC values specifically for Aroclor 1260 [3]; therefore, we based the non-cancer comparison value for Aroclor 1260 on the Agency for Toxic Substances and Disease Registry's (ATSDR's) minimal risk level (MRL) for the structurally similar compound Aroclor 1254. The MRL is an estimate of a daily human exposure to a contaminant that is unlikely to cause adverse non-cancer health effects over a lifetime. We based the cancer risk comparison value for Aroclor 1260 on the U.S. Environmental Protection Agency's (EPA's) cancer slope factor for PCBs as a class of chemicals and an estimated excess lifetime cancer risk of one-in-one million for persons exposed for 30 years.

Based on average soil ingestion rates of 100 mg/day for 70 kg adults and 200 mg/day for 15 kg children, HAC values for adults and children (14 mg/kg and 1.5 mg/kg) were exceeded in surface soil samples from both residences (Table 1). While exceeding a HAC value does not imply that the contaminant represents a public health threat, it does suggest that site-specific exposure evaluation of the contaminant warrants further consideration.

Polychlorinated Biphenyls (PCBs)

Background

PCBs are a group of synthetic organic chemicals that contain 209 individual chlorinated biphenyl compounds (known as congeners) with varying harmful effects. They are either oily liquids or solids and are colorless, odorless, and tasteless. There were seven common types of commercially available PCB mixtures, also known as "Aroclors," which constitute 98% of PCBs sold in the United States since 1970. The name Aroclor 1254 means that the molecule contains 12 carbon atoms (first two digits) and approximately 54% chlorine by weight (second two digits). The more highly chlorinated Aroclors have been found to have greater potential for adverse health effects in humans and animals. There are no known natural sources of PCBs in the environment. Typical concentrations in soil are less than 0.01 to 0.04 mg/kg [3].

Because they don't burn easily and are good insulating materials, PCBs have been used widely as coolants and lubricants in transformers, capacitors, and other electrical equipment. The manufacture of PCBs stopped in the United States in 1977 because of evidence that they build up in the environment and cause harmful health effects. Today, PCBs can be released into the environment from poorly maintained hazardous waste sites that process used electrical transformers or by burning of organic wastes in municipal and industrial incinerators.

Environmental Fate

PCBs released into the environment bind strongly to soil and sediments and may remain there for several years to many decades. Because of the strong adherence to soil, migration of the highly

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Other effects observed in animals include increased hepatic microsomal enzyme induction, liver enlargement, fat deposition, fibrosis, and necrosis, increased cholesterol (animals), thyroid enlargement with decreased production of thyroid hormones, increased adrenal gland production reported as an adaptive response to stress, facial edema, acne, fingernail loss, loss of hair in monkeys, weight loss, and kidney damage. However, the levels necessary to produce those effects were very high and it is not known if the same effects would happen in people chronically exposed to lower levels [3].

Inhalation of PCBs by workers employed in capacitor facilities has been observed to cause upper respiratory tract or eye irritation, cough, headaches, and tightness of the chest. Hepatic effects, such as increased levels of serum liver-related enzymes may be related to inhalation of PCB particles [4].

Weak correlations between PCB exposure and depressed immunological function, specifically a reduction in natural killer (NK) cells, have been found in humans consuming PCB-contaminated fish; however, these studies are confounded by the coinciding presence of DDT, which also has been associated with affecting the immune system.

The Agency for Toxic Substances and Disease Registry (ATSDR) has established a chronic oral minimal risk level (MRL) of 0.00002 mg/kg/day for Aroclor 1254 based on a study in which a decrease in functioning of the immune system was observed in rhesus monkeys fed with the compound in a mixture of corn oil for a period of 55 months. The MRL is an estimate of daily human exposure to a contaminant that is unlikely to cause adverse health effects over a lifetime. At 55 months, there was a significant dose-related decrease in immunoglobulin titers in response to challenges with sheep red blood cell antigens. The lowest dose level tested, 0.005 mg/kg/day, was considered the lowest observable adverse effects level (LOAEL) for decreased antibody response. Uncertainty factors used in the MRL derivation include 10 for use of a LOAEL, 3 for extrapolation from animals to humans, and 10 for human variability. Studies in species other than monkeys have given inconclusive immunologic findings in that changes in some immune parameters were sporadic, generally not dose-related, or occurred at much higher levels [3].

Cancer Effects

Studies in animals show that PCBs containing 60% chlorine by weight are clearly carcinogenic and indicate differences in the carcinogenic potential of other PCB mixtures, based on the degree of chlorination. Available data suggest that the carcinogenic potency decreases with the percent chlorination. Hepatocellular (liver) carcinomas developed in rats fed an estimated dose of 5 mg/kg/day Aroclor 1260 for 21 months [3].

Animals treated intermediately or chronically with Aroclors 1254 or 1260 showed statistically increased incidences of liver adenomas and carcinomas. To investigate hepatic tumor progression after exposure has stopped, groups of rats were exposed for 52 weeks, then exposure was discontinued for an additional 52 weeks. For Aroclor 1260, the "stop-study" tumor incidences were greater than those of the lifetime study, indicating persistent biological activity after exposure stops for the more highly chlorinated Aroclors. Other cancers observed in animals include thyroid gland carcinomas, adenocarcinoma of the stomach, leukemia and lymphoma [3].

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Table 2. Exposure dose matrix for different potential exposure scenarios. Exposure based on ingestion of PCB contaminated soil at each of the two residences where PCB levels exceeded HAC values. Exposure expressed in mg/kg/day.[1]

Soil concentration = 28 mg/kg Aroclor 1260 (0-6") from the residence immediately south of the site						
		average daily soil ingestion rate				
weight (kg)	age (years)	25 mg	50 mg	100 mg	150 mg	200 mg
15	3-6	4.6x10-5	9.2x10-5	1.9x10-4	2.8x10-4	3.7x10-4
35	10-11	2x10-5	4x10-5	8x10-5	1.2x10-4	1.6x10-4
70	adult	1x10-5	2x10-5	4x10-5	6x10-5	8x10-5
Soil concentration = 85 mg/kg Aroclor 1260 (0-6") from the Doyle residence						
15	3-6	1.4x10-4	2.8x10-4	5.7x10-4	8.5x10-4	1.1x10-3
35	10-11	6.1x10-5	1.2x10-4	2.4x10-4	3.6x10-4	4.8x10-4
70	adult	3.0x10-5	6.1x10-5	1.2x10-4	1.8x10-4	2.4x10-4

[1] Shaded Areas represent scenarios where ATSDR's MRL was exceeded.

CHILD HEALTH INITIATIVE

ATSDR's Child Health Initiative recognizes that the unique vulnerabilities of infants and children demand special emphasis in communities faced with contamination of their water, soil, air, or food. Children are at greater risk than adults from certain kinds of exposures to hazardous substances emitted from waste sites and emergency events. They are more likely to be exposed because they play outdoors and they often bring food into contaminated areas. They are shorter than adults, which means they breathe dust, soil, and heavy vapors close to the ground. Children also are smaller, resulting in higher doses of chemical exposure per body weight. The developing body systems of children can sustain permanent damage if toxic exposures occur during critical growth stages. Most importantly, children depend completely on adults for risk identification and management decisions, housing decisions, and access to medical care.

We evaluated the potential for children living in the vicinity of the Doyle Transformer site to be exposed to polychlorinated biphenyls at levels of health concern. Currently children are not likely to be chronically exposed to contaminants at this site; however, infrequent contact is possible. Children living at the residence south of the site and at the owner's property could be exposed to PCBs at levels of health concern.

REFERENCES

1. Texas Natural Resource Conservation Commission, 1998. Screening Site Inspection Report for Doyle Transformer Site, Leonard, Fannin County, Texas. Prepared in cooperation with the U.S. Environmental Protection Agency. May 1998.

2. U.S. Environmental Protection Agency, Integrated Risk Information System, Adobe Acrobat Portable Format Files, 1999.

3. Agency for Toxic Substances and Disease Registry. Toxicological profile for polychorinated biphenyls, Atlanta: ATSDR, Sept. 1997.

4. Brown, D.P. Mortality of workers exposed to polychorinated biphenyls, an update. Arch. Environmental Health. 42 (6): 333-339.

5. Bertazzi, P.A., et.al., Cancer mortality of capacitor manufacturing workers. Am. J. Ind. Med. 11(2): 165-176.

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MDS

REGISTRATION AND REPORTING
Action Request Form

T/F/IHW 80951 CO
WWC COMM# 12000388 RP
PROJ. MGR. jsirotk

TO:	~~Chris Siegel~~ OOPS! Corrective Action Section/ MC 127 Remediation Division
FROM:	CAROL GENSWEIDER, Staff Industrial and Hazardous Waste Registration Team Registration and Reporting Section Registration, Review and Reporting Division Mail Code 129 Telephone 239-6861
DATE:	4-27-06
RE:	Request to Close a Waste Management Unit (WMU) and/or Notice of Registration SWR # 80951

The Registration and Reporting Section has received the attached correspondence requesting to close a WMU or a facility. All non-closure updates have been addressed.

List of WMU(s) for Closure or R&R Staff Comments:
3 waste management units need closure.
Thanks
Carol G.

Received
MAY 02 2006
Remedial ...
Corrective ...

MA

IHW 30951 CO

April 24, 2006

Texas Commission On Environmental Quality
IHW Registration Team

To Whom It May Concern:

This is to inform you that FJ Doyle Salvage Transformers has not been in operation since 1999. I wish to also inform you that Mr. Doyle passed away on March 22nd of this year. I doubt that Mr. Doyle had filed a Solid Waste Registration form since 1999 and if he did, I feel sure he would have informed you that he had closed the business and retired. Either way, this application or registration is no longer applicable.

Received
MAY 02 2006
Remediation Division
Corrective Action Section

APR 27 2006
Registration and Reporting Section

CCG
IHW-4
1/27/06
2695

lett White, *Chairman*
ph" Marquez, *Commissioner*
R. Soward, *Commissioner*
enn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

REMINDER

F J Doyle
F J Doyle Salvage Transformers
PO Box 312
Leonard, TX 75452

April 17, 2006

Re: Solid Waste Registration No. 80951
305 E Cottonwood
Leonard, TX 75452

Dear F J Doyle:

The Texas Commission on Environmental Quality (TCEQ) is the designated agency to track industrial, hazardous and solid waste generation, treatment, storage and/or disposal in the State of Texas. A recent records review of the self-reporting system indicates that we have not received the 2005 Annual Waste Summary report concerning the disposition of solid waste for the above registration.

If you have previously submitted the report, please send us a copy for our records. If you have not submitted the report, please do so using the enclosed Annual Waste Summary form or transmit using your local STEERS program. Please send this report to the Permitting & Remediation Support Division, Registration and Reporting Section, IHW Registration Team, MC-129, Post Office Box 13087, Austin, Texas 78711-3087. We should receive the report by May 8, 2006.

The reporting requirements are contained in the industrial solid waste and municipal hazardous waste management regulations of the Texas Commission on Environmental Quality (30 Texas Administrative Code, Chapter 335.9). Failure to submit the proper report is considered a violation of this regulation and the Solid Waste Disposal Act.

Thank you for your attention to this matter. Should you have any questions, please contact the IHW Registration Team at (512) 239-6413.

Sincerely,

IHW Registration Team
Registration and Reporting Section
Permitting & Remediation Support Division

Enclosures

cc: Region Office 04

Received
MAY 02 2006
Remedia...
Cor...

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Message

From: Moore, Gary [Moore.Gary@epa.gov]
Sent: 9/21/2018 11:15:51 PM
To: Personal Email / Ex. 6
CC: Delgado, Paige [Delgado.Paige@epa.gov]
Subject: F.J. Doyle Salvage (905 N. Poplar) Cleanup - Personal Address / Ex. 6
Attachments: Figure 5-1 Sample Grid Results Map - Excavation Depths.pdf; Figure 5-1 Sample Grid Results Map - Total PCBs Breakout.pdf; FJDoyle_20180919_Table 1.pdf; Personal Address / Ex. 6 Removal Access Agreement.pdf

Hello Citizen Name / Ex. 6

I was nice talking with you and your family today. The document below include documents that I provided to your wife today in addition to a table of analytical results from the sampling performed earlier this year. I would appreciate it very much if you would sign, scan, and email me a copy of the access agreement provided to you or included within this email. The documents that I am providing are:

1. Map showing all PCB detections throughout the evaluation area;
2. Map showing the areas to be excavated and the proposed depths of excavation;
3. Table with all sample results from the EPA investigation;
4. Copy of the Access agreement that I am requesting that you sign.

I will be onsite with my contractor on September 25 to beginning the planning process for the cleanup action. I will stop by after my meeting with them to see if you have any questions and hopefully retrieve the access agreement unless you have already emailed it to me. We anticipate starting by the end of October or beginning of November.

Thank you and if you need anything, please do not hesitate to contact me

Gary W. Moore (6SF-ER)
Federal On-Scene Coordinator
U.S EPA Region 6
1445 Ross Ave, Suite 1200
Dallas, TX 75202-2733
Cell: 214.789.1627
moore.gary@epa.gov

United States Environmental Protection Agency
Region 6
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733

AGREEMENT TO ALLOW ACCESS TO PROPERTY TO CONDUCT A REMOVAL ACTION

F.J. Doyle Salvage Cleanup, Leonard, Fannin County, Texas

I/We the undersigned, as legal owner (s) of the property described below, knowingly consent and authorize the U.S. Environmental Protection Agency (EPA) and/or its authorized agents, representatives, contractors, and subcontractors to enter the property for the purpose of removing contaminated soils and for the restoration of the property to pre-removal conditions.

The activities to be implemented by EPA under this agreement are pursuant to Section 104 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. § 9604. EPA's right of access to the property is provided for in Section 104(e) of CERCLA, 42 U.S.C. § 9604(e), which provides entry for "determining the need for response, or choosing or taking any response action under this title, or otherwise enforcing the provisions of this title".

I/We understand that EPA requests access to enter the property due to elevated levels of hazardous substances on the property. The activities to be conducted on the property may include but not be limited to: sampling soil, sampling/monitoring air, excavating contaminated soils, backfilling excavated areas with clean soils, and restoring property to pre-removal conditions. Photographic and video documentation may be conducted at the property before, during, and after the removal action.

I/We agree not to interfere with any of the activities or equipment as described herein, or to take any actions that would endanger human health, welfare, or the environment, or to allow others to use the property while such cleanup actions are taking place.

PROPERTY RESTORATION GUIDELINES OF EPA

Excavated areas will be backfilled and restored to the approximate existing grade.

Backfilled areas will be restored to pre-removal conditions only, as agreed to in advance with the property owner (s). EPA is prohibited from making improvements to the property other than those that are inherent to the excavation of contaminated soils, restoration to pre-removal conditions, or to protect the EPA selected remedy.

ED_002624_00000616-00001

Fences, sidewalks, driveways, utilities, etc., if altered, will be restored to pre-removal conditions. Plants, trees, and shrubs, if removed or die as a result of EPA actions, will be replaced with similar and/or as close to similar species with container grown specimens of like size, not to exceed five (5) gallons, from a local nursery of EPA's choice.

I/We understand that EPA will not be responsible or liable for the maintenance or care of the re-grassed areas, or other restoration materials used on the property. This includes watering, fertilizing, insecticide, fungicide, mowing, and any other care required to maintain the restored property.

I/We further understand/authorize EPA and/or its authorized representatives, contractors, subcontractors, or agents to use outdoor water faucets, for the application of water, as necessary, to reduce the potential of airborne soil/dust during the excavation or restoration process.

EPA will use appropriate safety measures while conducting the sampling and removal activities as described above. Removal activities will be in compliance with CERCLA and any other relevant laws and statutes.

MISCELLANEOUS PROVISIONS

This Agreement shall not be construed as an admission or assumption of any liability by Grantor(s) for the existence of pollutants, contaminants, or hazardous substances on the below-described property.

I/We as the property owner(s) hereby certify with My/Our signature(s) below that I/We have read and understand the EPA's guidelines for removal and restoration on My/Our property. My/Our written permission is given voluntarily without threats or promises of any kind.

Signature

Date

Citizen Name / Ex. 6

Printed Name

Personal Phone / Ex. 6

Phone Number

Property Addre**Personal Address / Ex. 6**

Personal Address / Ex. 6

Mailing Address (if different from property address)

ED_002624_00000616-00002

TEXAS

LEGEND

- Fence Line
- Site Boundary
- Parcel Boundary with ID
- Structure
- Sample Grid

Soil Sample Grid Results

- Aroclor Results >= 1 mg/kg

NOTES
1. mg/kg - milligram per kilogram

N

0 60 120
Feet

TDD No: 0001/17-004
SEMS ID: TXD9606651O9
SSID: 061D

SOURCE: Google, 2017

USEPA REGION 6

FIGURE 5-1
SOIL SAMPLE GRID RESULTS
AROCLOR
FRANK J. DOYLE SITE
Ex. 6 Personal Privacy (PP)
LEONARD, FANNIN COUNTY, TEXAS

DATE	PROJECT NO	SCALE
JUL 2018	20600.012.001.1004	AS SHOWN

FILE: D:\20600_EPA_START4\FJ Doyle\mxd\Sample Grid Results Map - Aroclor.mxd 3:55:52 PM 7/23/2018 wilder

Message

From: Moore, Gary [Moore.Gary@epa.gov]
Sent: 9/21/2018 11:05:27 PM
To: Personal Email / Ex. 6
CC: Delgado, Paige [Delgado.Paige@epa.gov]
Subject: F.J. Doyle Salvage - Personal Address / Ex. 6
Attachments: FJDoyle_20180919_Table 1.pdf; 09.21.18 Personal Address / Ex. 6 Removal Access.pdf; Figure 5-1 Sample Grid Results Map - Excavation Depths.pdf; Figure 5-1 Sample Grid Results Map - Total PCBs Breakout.pdf

Citizen Name / Ex. 6

It was nice talking with you today. Attached are the electronic documents that I promised to send you when we met today. I also modified the access agreement so that we would work with the tenants on the use of the water faucets. The documents that I am providing are:

1. Map showing all PCB detections throughout the evaluation area;
2. Map showing the areas to be excavated and the proposed depths of excavation;
3. Table with all sample results from the EPA investigation;
4. Copy of the Access agreement that you signed (with my modification).

Thank you and if you need anything, please do not hesitate to contact me.

Gary W. Moore (6SF-ER)
Federal On-Scene Coordinator
U.S EPA Region 6
1445 Ross Ave, Suite 1200
Dallas, TX 75202-2733
Cell: 214.789.1627
moore.gary@epa.gov

United States Environmental Protection Agency
Region 6
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733

AGREEMENT TO ALLOW ACCESS TO PROPERTY TO CONDUCT A REMOVAL ACTION

F.J. Doyle Salvage Cleanup, Leonard, Fannin County, Texas

I/We the undersigned, as legal owner (s) of the property described below, knowingly consent and authorize the U.S. Environmental Protection Agency (EPA) and/or its authorized agents, representatives, contractors, and subcontractors to enter the property for the purpose of removing contaminated soils and for the restoration of the property to pre-removal conditions.

The activities to be implemented by EPA under this agreement are pursuant to Section 104 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. § 9604. EPA's right of access to the property is provided for in Section 104(e) of CERCLA, 42 U.S.C. § 9604(e), which provides entry for "determining the need for response, or choosing or taking any response action under this title, or otherwise enforcing the provisions of this title".

I/We understand that EPA requests access to enter the property due to elevated levels of hazardous substances on the property. The activities to be conducted on the property may include but not be limited to: sampling soil, sampling/monitoring air, excavating contaminated soils, backfilling excavated areas with clean soils, and restoring property to pre-removal conditions. Photographic and video documentation may be conducted at the property before, during, and after the removal action.

I/We agree not to interfere with any of the activities or equipment as described herein, or to take any actions that would endanger human health, welfare, or the environment, or to allow others to use the property while such cleanup actions are taking place.

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Excavated areas will be backfilled and restored to the approximate existing grade.

Backfilled areas will be restored to pre-removal conditions only, as agreed to in advance with the property owner (s). EPA is prohibited from making improvements to the property other than those that are inherent to the excavation of contaminated soils, restoration to pre-removal conditions, or to protect the EPA selected remedy.

ED_002624_00000650-00001

Fences, sidewalks, driveways, utilities, etc., if altered, will be restored to pre-removal conditions. Plants, trees, and shrubs, if removed or die as a result of EPA actions, will be replaced with similar and/or as close to similar species with container grown specimens of like size, not to exceed five (5) gallons, from a local nursery of EPA's choice.

I/We understand that EPA will not be responsible or liable for the maintenance or care of the re-grassed areas, or other restoration materials used on the property. This includes watering, fertilizing, insecticide, fungicide, mowing, and any other care required to maintain the restored property.

I/We further understand/authorize EPA and/or its authorized representatives, contractors, subcontractors, or agents to use outdoor water faucets, for the application of water, as necessary, to reduce the potential of airborne soil/dust during the excavation or restoration process. Must get approval from tenant on water usage.

EPA will use appropriate safety measures while conducting the sampling and removal activities as described above. Removal activities will be in compliance with CERCLA and any other relevant laws and statutes.

MISCELLANEOUS PROVISIONS

This Agreement shall not be construed as an admission or assumption of any liability by Grantor(s) for the existence of pollutants, contaminants, or hazardous substances on the below-described property.

I/We as the property owner(s) hereby certify with My/Our signature(s) below that I/We have read and understand the EPA's guidelines for removal and restoration on My/Our property. My/Our written permission is given voluntarily without threats or promises of any kind.

Citizen Name / Ex. 6

Signature

9-21-18
Date

Citizen Name / Ex. 6
Printed Name

Personal Phone / Ex. 6
Phone Number

Property Address **Personal Address / Ex. 6**

Personal Address / Ex. 6

s)

Personal Phone / Ex. 6

Citizen Name / Ex. 6

Construction/Rental Property
Personal Email / Ex. 6

Personal Address / Ex. 6
Leonard, TX 75452

Office:
Home: Personal Phone / Ex. 6
Cell:

Message

From: Don Edgington [d.edgington@erllc.com]
Sent: 10/8/2018 3:18:41 AM
To: Moore, Gary [Moore.Gary@epa.gov]
CC: Evan Wortman [e.wortman@erllc.com]; Angela Harbin [a.harbin@erllc.com]; Delgado, Paige [Delgado.Paige@epa.gov]
Subject: RE: FJ Doyle building
Attachments: ATT00001.txt

Thanks, Gary. I'll review and forward questions once I get up to speed.

We're fortunate to have some amount of lead time to get things well in hand.

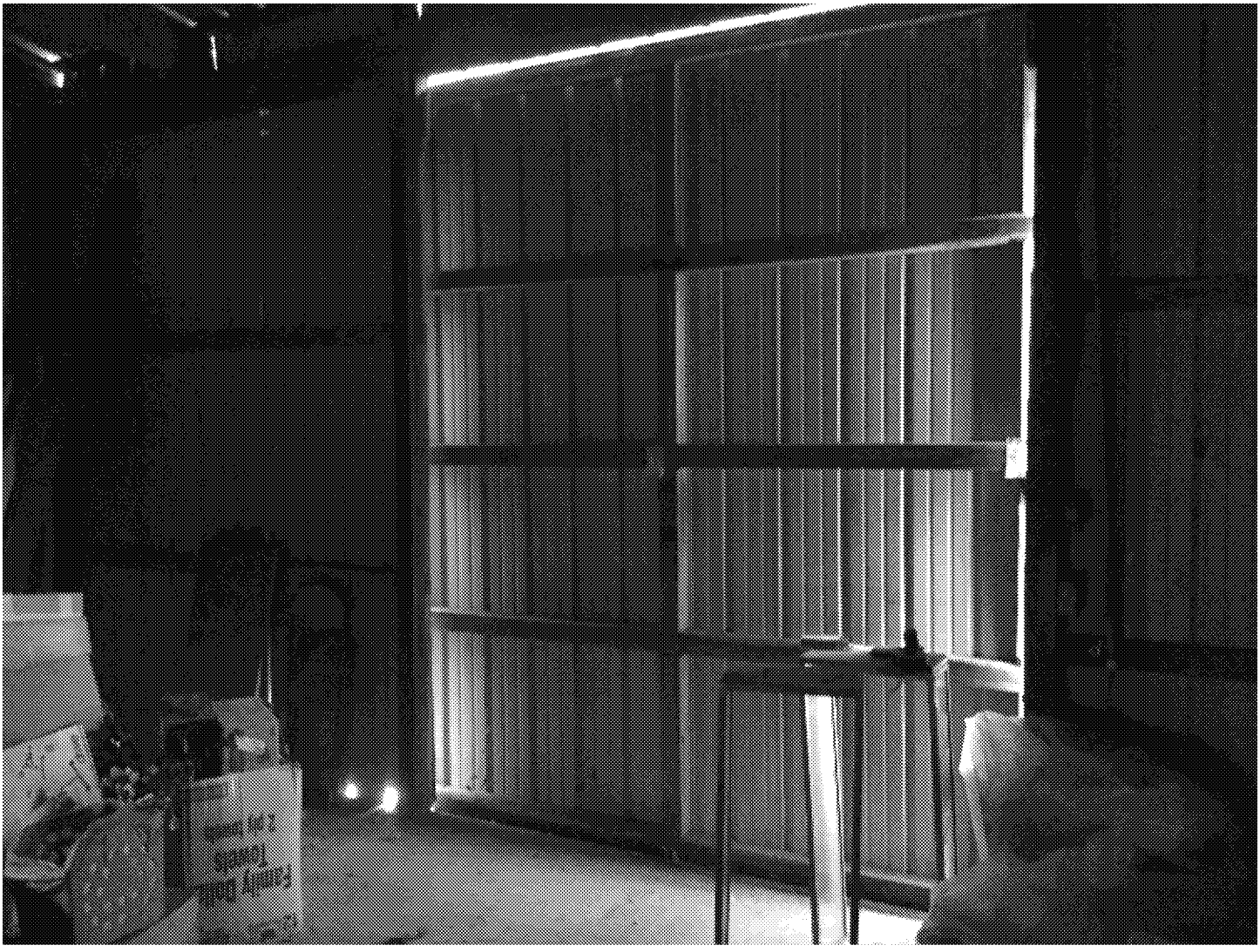
Regards,

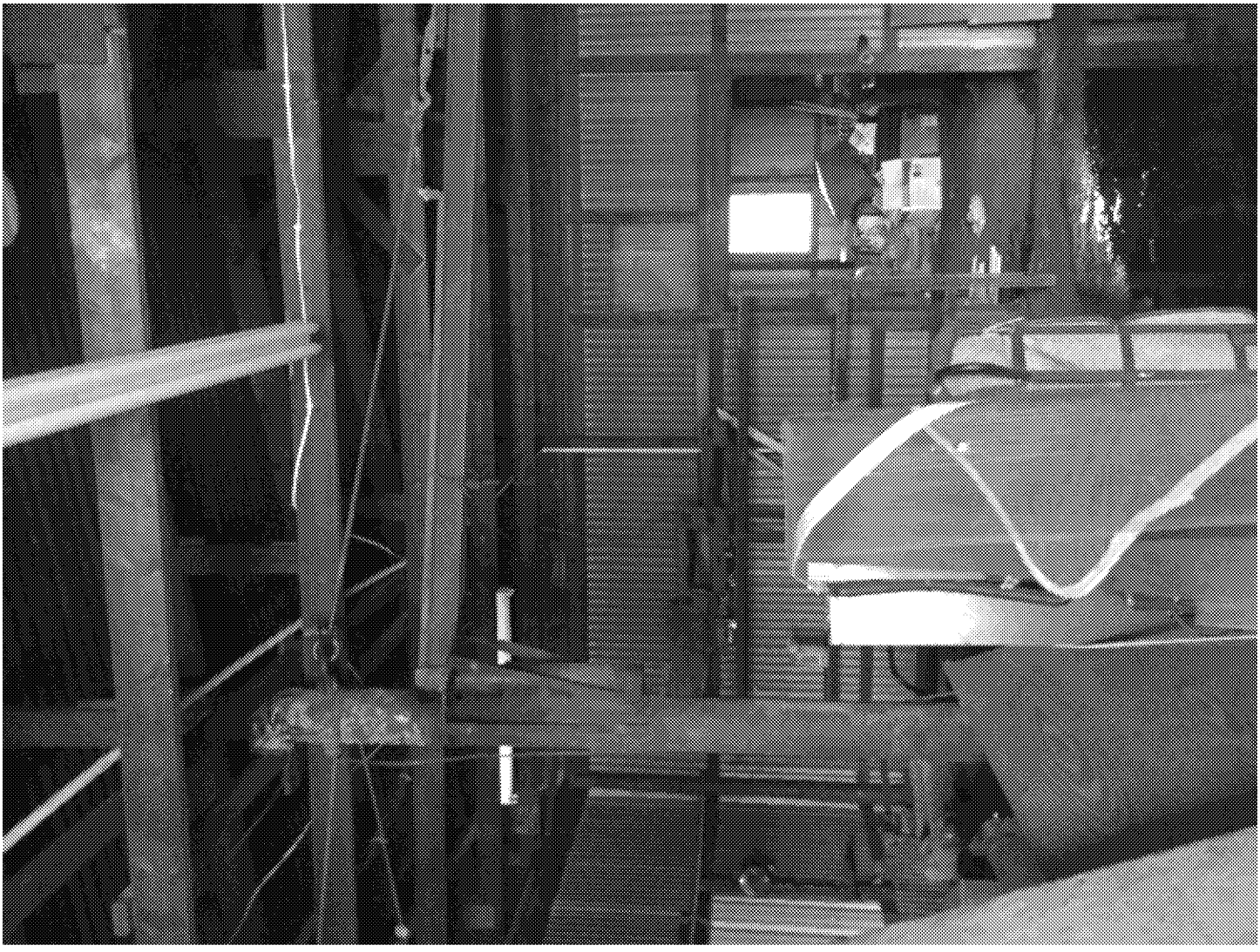
Don

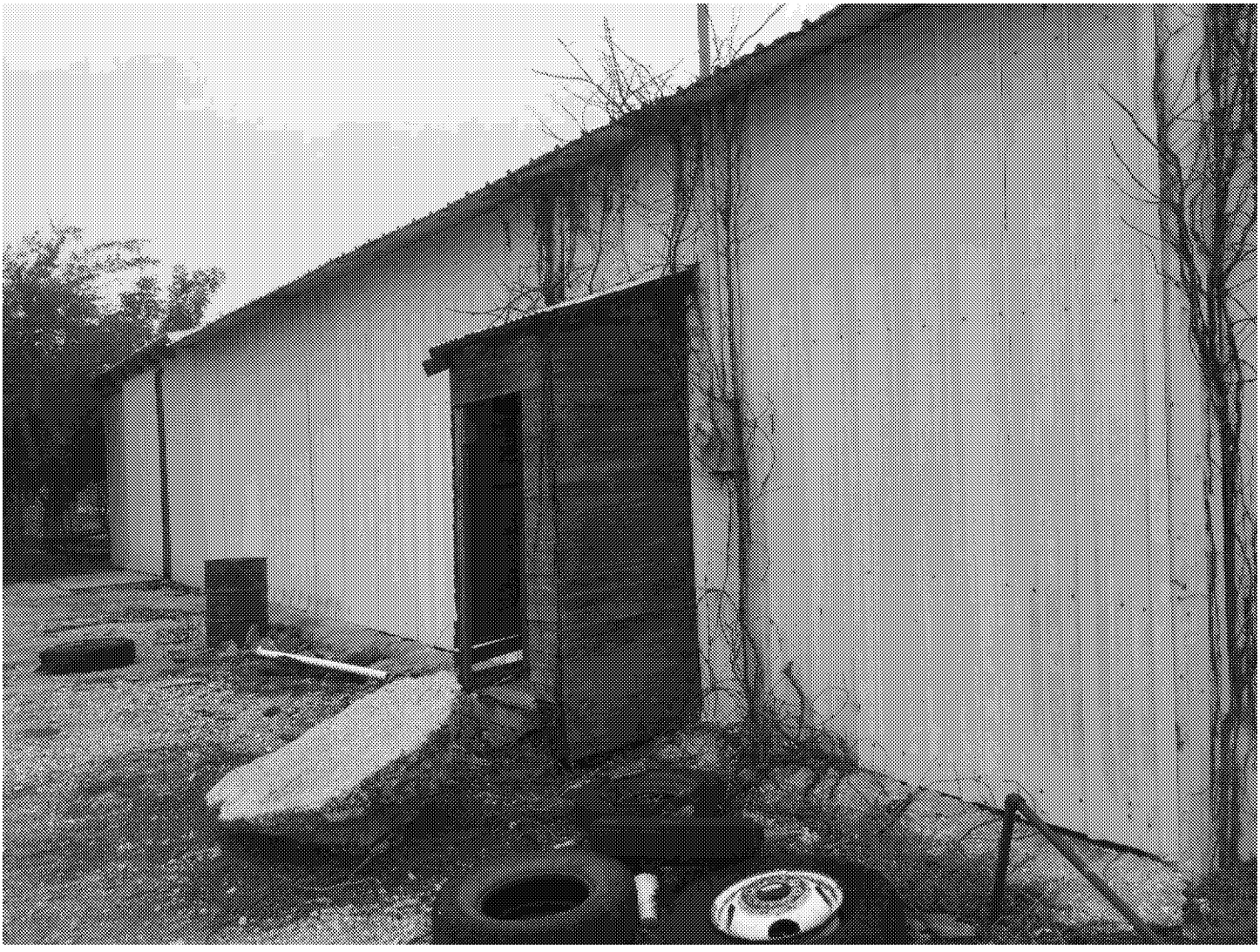
From: Moore, Gary <Moore.Gary@epa.gov>
Sent: Sunday, October 07, 2018 10:02 AM
To: Don Edgington <d.edgington@erllc.com>
Cc: Evan Wortman <e.wortman@erllc.com>; Angela Harbin <a.harbin@erllc.com>; Delgado, Paige <Delgado.Paige@epa.gov>
Subject: FJ Doyle building

Don

The building plan for demo still has electrical attached as well as floresant lamps and shop lights.







Sent from my iPhone

On Oct 6, 2018, at 5:25 PM, Moore, Gary <Moore.Gary@epa.gov> wrote:

> Don:
>
> Attached is the signed DWO.
>
> The mobilization date for this project is currently set for November 5, 2018.
>
> On another note, I met with Leonard ISD and their concern about the work to be done and what we plan for protecting the children in the daycare center as well as the students at the middle and high schools that are located across the street and across the alleyway from the industrial facility. I have informed them that we will be using water for dust suppression and will put in place fencing w/privacy (dust) screens in place so that we minimize the impact of dust while conducting this action.
>
> The daycare shares fencing along the alleyway and along the residential properties (Personal Address / Ex. 6 Personal Address / Ex. 6 and we need to make sure that soil along the fence that we will be excavating is not pushed into the daycare area by the excavation activities. We may need silt fencing/wattles in place along the fencing where we will be excavating and to prevent the migration of contaminants to other areas along drainage pathways and other grids.

Also, I have determined that we will use N. Oak to the South from the Highway, East on Cottonwood to N. Poplar (load area) and then exit to the North along N. Poplar as our truck route. This will allow us to stack up empty trucks, if need be, and then exit immediately down Poplar to the highway.

Also, we will be setting up our office (40x8 container office) on the school district parking lot and will minimize our footprint as much as possible. I do not want any contaminated tools/equipment to be moved back and forth to the office area.

This action will be very sensitive and also it is sensitive to personnel working on the project since we will be working on or near school property with these children walking in the area so you need to insure that all personnel have spotless backgrounds checks for this project.

We will be placing orange construction fence fabric or orange non-biodegradable fabric over the entire grid if we are unable to meet the cleanup criteria.

We have some areas where we may need a dump trailer (temporarily) for movement of contaminated soil to a stockpile location (ie. contamination around drip line of house of Personal Address / Ex. 6 You need to think about it and give us a solution. I want to make sure that we use a wide ditching bucket for roadside drainage cleanout. The equipment needs to be able to exchange out buckets.

The plan is to work Monday through Saturday for 10 – 12 hour days (daylight hours). Preferrably, 10 hour days but may depend on actions being taken. Time off for the holidays is being projected as the following:

1. Thanksgiving – secure site Tuesday 11/20 COB, demobe Wednesday 11/21 and remobilize Monday 11/26.
2. Christmas – secure site Friday 12/21 COB, demobe Saturday 12/22 and remobilize on Wednesday Jan 2nd.

We will be demolishing the on-site building and have just completed asbestos inspection, PCB wipe samples of the metal, and lead sampling of paint. We also completed the soil profile sampling that was requested by Evan. The only thing that we did not do was take a sample of the wood materials within the building which will have to be done when we get on-site. Once I get the asbestos inspection, I will forward to you guys. If no abatement will be needed, I will send that on to Texas Department of State Health Services. EPA does not have to wait the 10 day requirement but has to meet the substantive requirements.
Please ask questions, and also make sure you cc Paige Delgado so that we can discuss before giving you an answer.

A final note, the EPA is working on a continuing resolution through December 7, 2018. We need to be able to get as much work done as possible and be able to potentially close those areas before a possible personnel demobe. I hope that this will not be necessary as it impacts a cost effective cleanup action but we need to keep this in the back of our mind. EPA management will try to allow us to keep this project going but there is no guarantee.

Thanks
Gary Moore
2147891627

From: Don Edgington [mailto:d.edgington@erllc.com]
Sent: Saturday, October 06, 2018 10:57 AM
To: Moore, Gary <Moore.Gary@epa.gov>
Cc: Evan Wortman <e.wortman@erllc.com>; Angela Harbin <a.harbin@erllc.com>
Subject: Initial DWO

Good morning, Gary. I hope you have been well.

My apologies for the not getting this to you sooner.

The attached initial DWO is proposed to cover Evan and Angela's time involving vendor sourcing and reporting. I've demobilized from Arizona and will start getting up to speed next week.

Look forward to working with you as always.

Regards,

Don

Confidentiality Warning: This e-mail and any attachments contain information intended only for the use of the individual or entity named above. If the reader of this e-mail is not the intended recipient or the employee or agent responsible for delivering it to the intended recipient, any dissemination, publication or copying of this e-mail is strictly prohibited. Although this email has been scanned for malware, the sender does not accept any responsibility for any loss, disruption or damage to your data or computer system that may occur while using data contained in, or transmitted with, this e-mail. If you have received this e-mail in error, please immediately notify by return e-mail. Thank you.

<10.6.18 DWO No. 1 - F.J. Doyle Salvage Site-signed.pdf>

Message

From: Moore, Gary [Moore.Gary@epa.gov]
Sent: 2/19/2019 1:30:36 AM
To: Smith, Monica [smith.monica@epa.gov]
CC: Webster, Susan [webster.susan@epa.gov]; Petersen, Chris [petersen.chris@epa.gov]; Delgado, Paige [Delgado.Paige@epa.gov]; Brescia, Nicolas [brescia.nicolas@epa.gov]; Robertson, David [robertson.david@epa.gov]
Subject: FJ Doyle Salvage

Plans for 2/19/19:
The EPA Team will be on-site tomorrow (2/19/19) as we did not receive all of the rock that was necessary to complete the industrial property. We should receive 3 truck loads of rock in the morning and will have 2 personnel on-site to complete this activity and demobe equipment which we anticipate to be completed on or before noon (barring impacts from rain). Since we are only working on the rock parking lot and demobe of equipment, we do not anticipate that rainfall will impact our activities. The ERRS Contractor has not requested additional funds at this time as we anticipate having approximately $30,000 left over but should additional funds need to be added, I have $ 161,000 in contingency. I will likely need some of this for the START Contractor to finish the report.

Site Status:
The F.J. Doyle Salvage Site is a transformer dismantling facility that operated from the approximately 1976 through 1999. The activities on-site resulted in the release of PCB Transformer Oil and metals associated with metal scraping activities. The areas impacted of EPA cleanup standards include the industrial facility, 3 residential properties, adjacent alleyway and adjacent drainage ditches. As of 2/18/2019, the EPA Team has completed the bulk of the cleanup activities and will be demobilizing personnel by 2/20/19. There remains additional activities to be completed by subcontract personnel. Those activities include:

1. Fine grading and hydro-seeding a property used as a laydown yard belonging the school;
2. Fine grading and sodding approximately 100 sq. ft. of previously missed areas;
3. Re-rolling sod on one of the residential properties;
4. Re-Installation of privacy fence between industrial property and residential property;
5. Street sweeping (as appropriate) of residual soil on roadways;

The City of Leonard in cooperation with the EPA Team have identified areas where truck traffic has damaged city roadways. The City has invoiced the EPA Team for approximately $27,000 for the necessary repairs and the EPA believes that those cost are not unreasonable due to the significant number of trucks hauling waste and backfill to the site area.

The EPA Team is also evaluating the need to replace a sewer lines Ex. 6 Personal Privacy (PP) for these residential properties due the potential that our equipment compressed the sewer lines impacting gravity flow to the main city sewer line. The City indicates that the property owner of both properties continually has sewer issues and that it is unlikely that our activities impacted this situation. It is possible that our activities could have impacted the gravity flow so we may need to make funds available to dig up and relay those sewer lines with proper gravity flow as well as bring the sewer lines to meet city code. It is anticipated that this may cost approximately $ 15,000.

Final completion except for the road repair and potential sewer line issue is anticipated by 3/8/19.

Gary W. Moore (6SF-ER)
Federal On-Scene Coordinator
U.S EPA Region 6
1445 Ross Ave, Suite 1200
Dallas, TX 75202-2733
Cell: 214.789.1627
moore.gary@epa.gov

Message

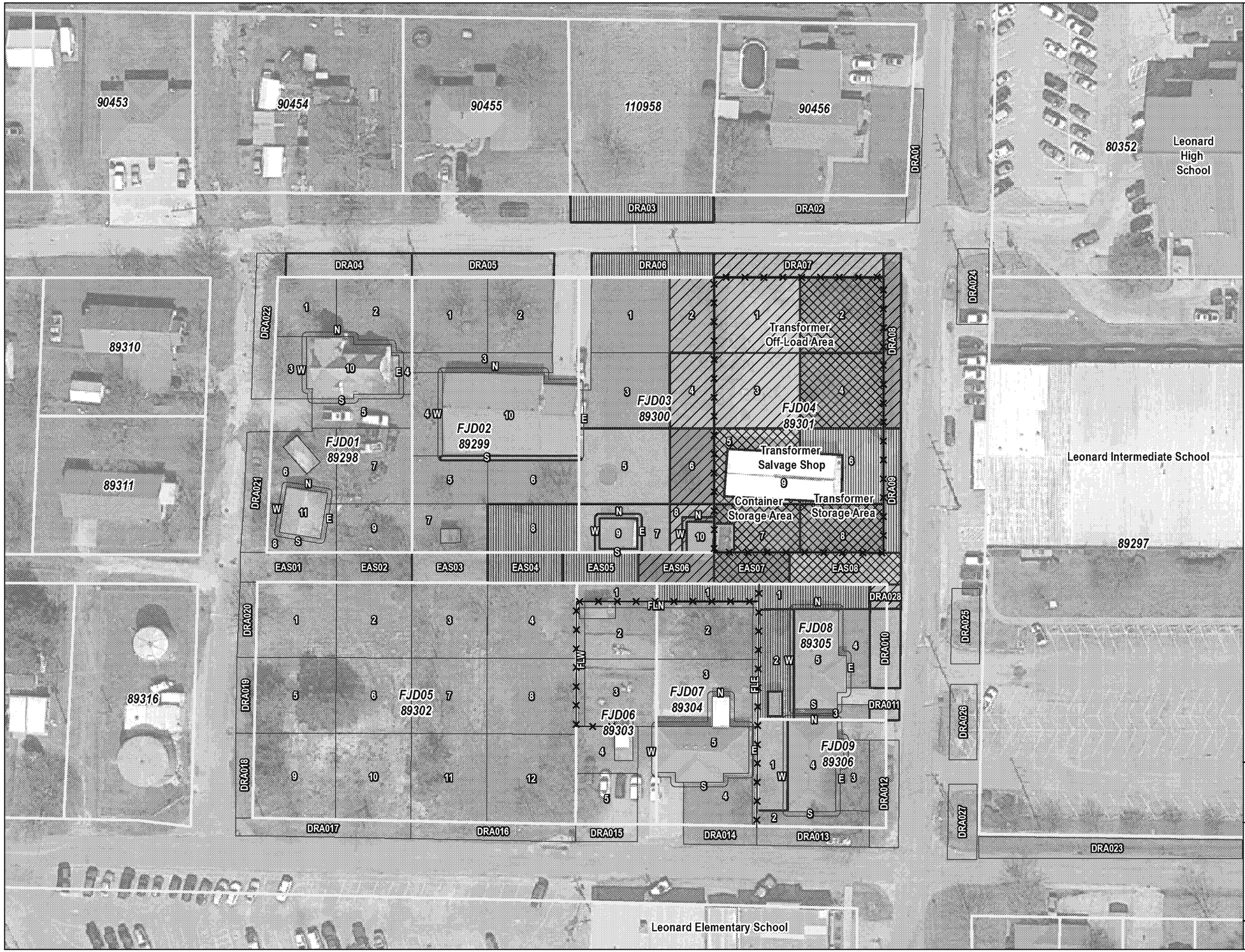
From: Moore, Gary [Moore.Gary@epa.gov]
Sent: 9/20/2018 5:59:25 PM
To: Personal Email / Ex. 6
CC:
Subject: Frank J. Doyle Salvage - EPA Cleanup Access Request
Attachments: 905 N Poplar (F.J. Doyle Salvage Property) Removal Access Agreement (DRAFT).pdf; Figure 5-1 Sample Grid Results Map - Excavation Depths.pdf; Figure 5-1 Sample Grid Results Map - Total PCBs Breakout.pdf

Mr. Doyle:

It was nice talking with you this morning. As I mentioned, I am sending you a request for access for EPA to clean-up the former Frank J. Doyle Salvage Site. Also, I am sending you some maps that show the PCB contamination throughout the area (Total PCB Breakout) and then a map which shows the areas that we anticipate cleaning up (Excavation Depths). The EPA cleanup level is less than 1 mg/kg Total PCBs. Please call if you have questions.

Thanks

Gary W. Moore (6SF-ER)
Federal On-Scene Coordinator
U.S EPA Region 6
1445 Ross Ave, Suite 1200
Dallas, TX 75202-2733
Cell: 214.789.1627
moore.gary@epa.gov



LEGEND

- Fence Line
- Site Boundary
- Parcel Boundary with ID
- Sample Grid

Soil Sample Grid Results, Total PCBs

- Non-TSCA, Total PCBs Results >= 1 mg/kg
- TSCA, Total PCBs Results >= 50 mg/kg

Excavation Depth (inches)

- 0-6
- 6-12
- 12-24
- 24-36

NOTES
1. mg/kg - milligram per kilogram

N

0 60 120
Feet

TDD No: 0001/17-004
SEMS ID: TXD980865109
SSID: 061D

SOURCE: Google, 2017

USEPA REGION 6

FIGURE 5-1
SOIL SAMPLE GRID RESULTS
TOTAL PCBS
FRANK J. DOYLE SITE
Ex. 6 Personal Privacy (PP)
LEONARD, FANNIN COUNTY, TEXAS

DATE	PROJECT NO	SCALE
AUG 2018	20600.012.001.1004	AS SHOWN

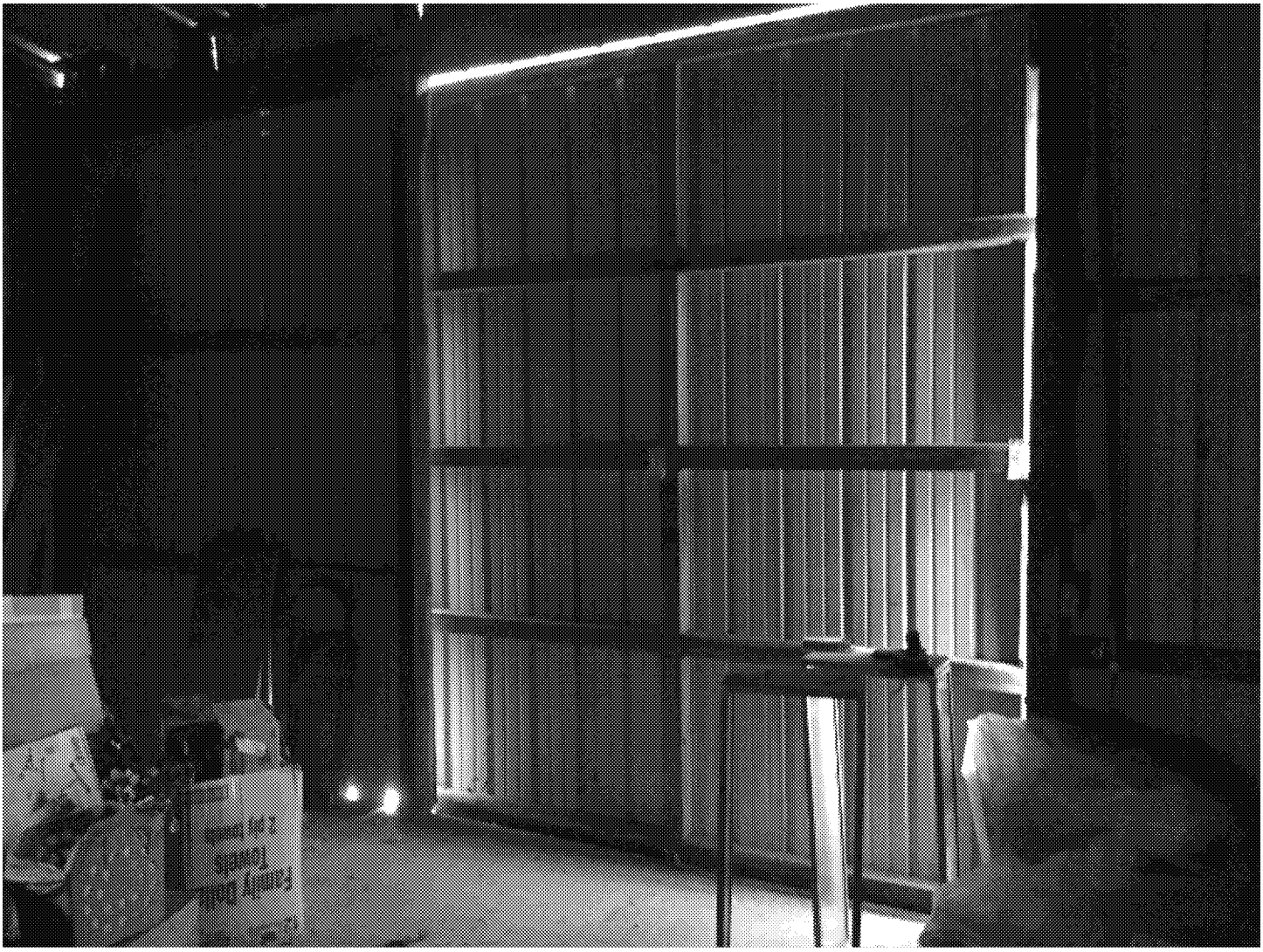
FILE: D:\20600_EPA_START4\FJ Doyle\mxd\Sample Grid Results Map - Total PCBs.mxd 2:59:06 PM 8/29/2018 wilder

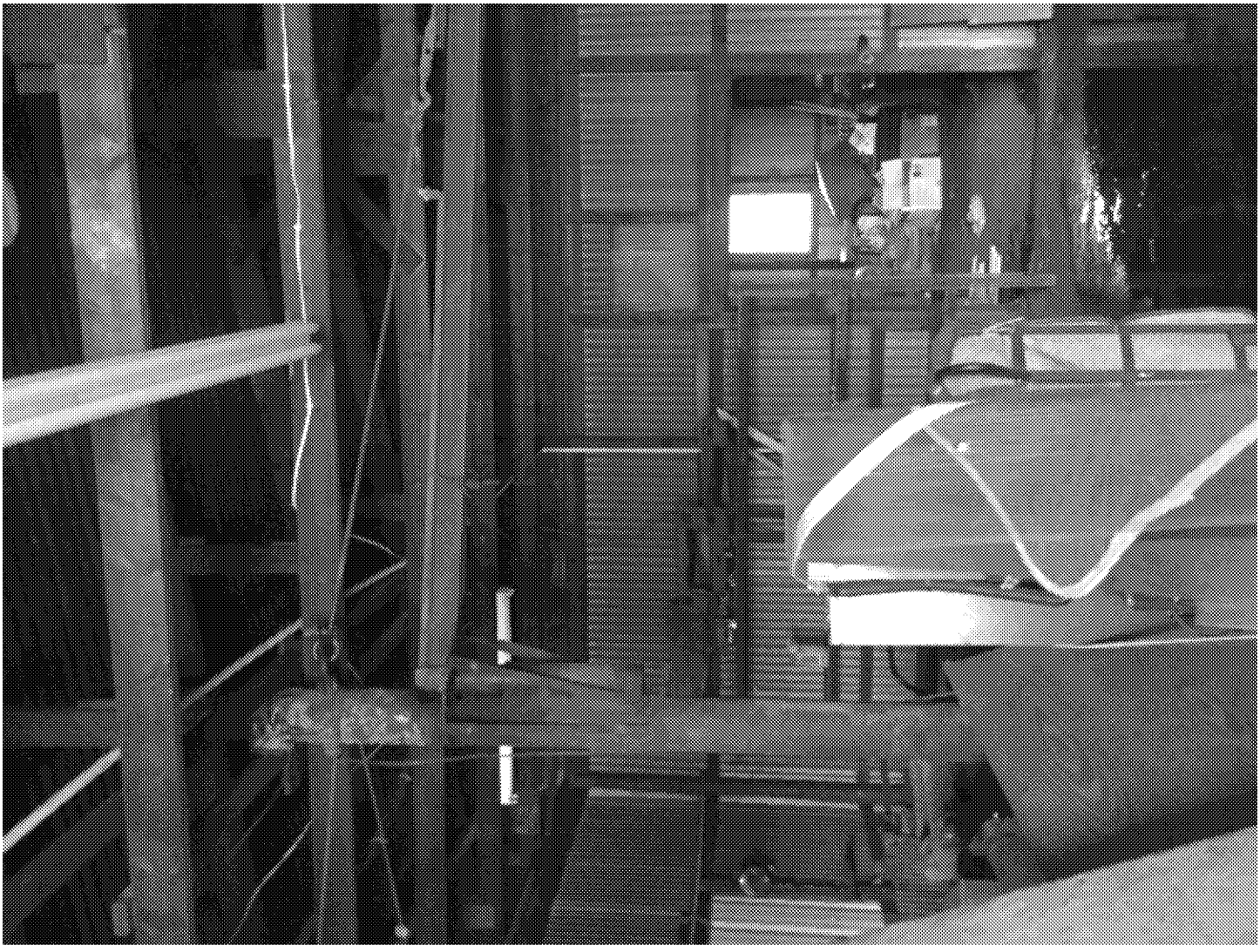
Message

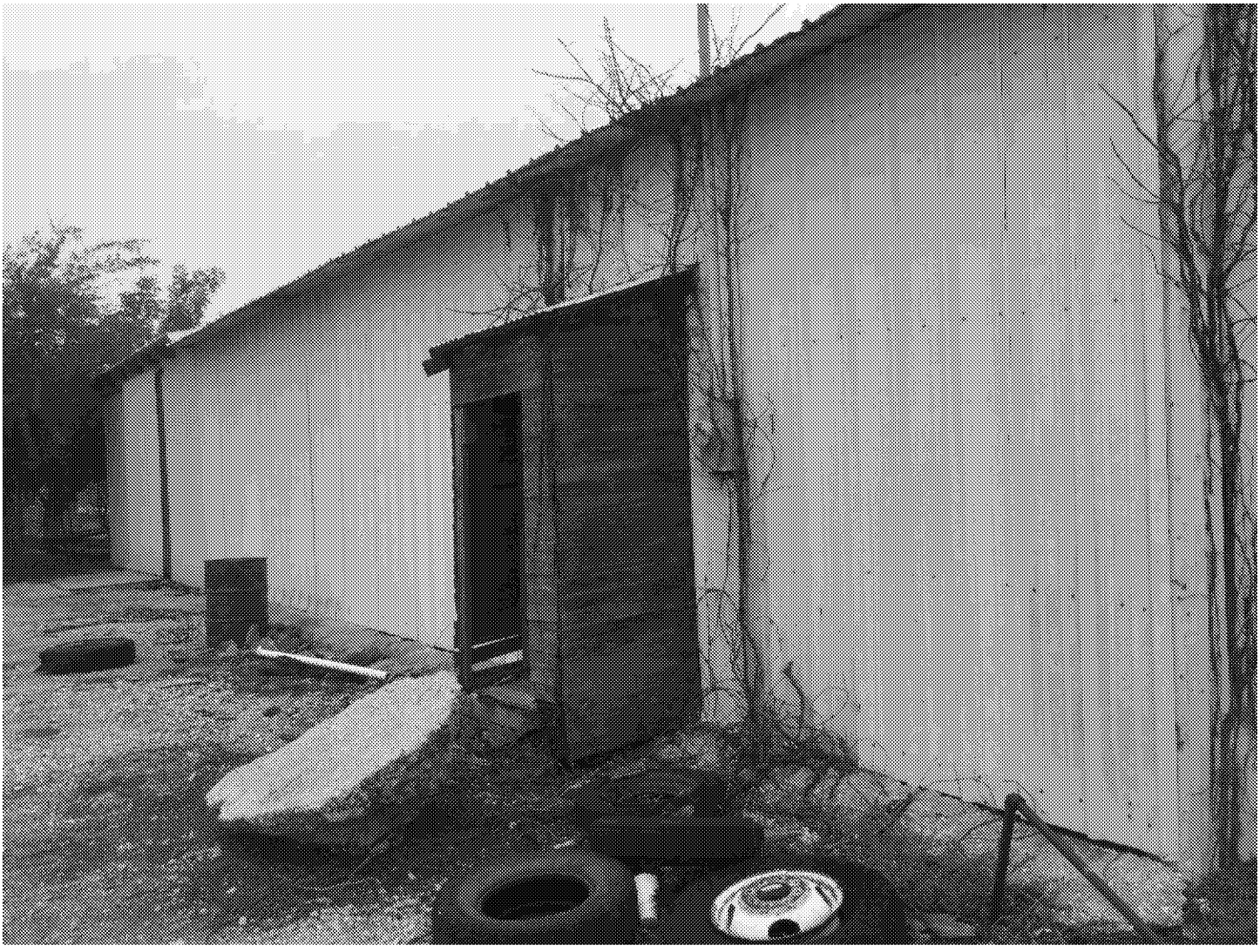
From: Moore, Gary [Moore.Gary@epa.gov]
Sent: 10/7/2018 5:01:38 PM
To: Don Edgington [d.edgington@erllc.com]
CC: Evan Wortman [e.wortman@erllc.com]; Angela Harbin [a.harbin@erllc.com]; Delgado, Paige [Delgado.Paige@epa.gov]
Subject: FJ Doyle building

Don

The building plan for demo still has electrical attached as well as floresant lamps and shop lights.







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On Oct 6, 2018, at 5:25 PM, Moore, Gary <Moore.Gary@epa.gov> wrote:

> Don:
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> Attached is the signed DWO.
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> The mobilization date for this project is currently set for November 5, 2018.
>
> On another note, I met with Leonard ISD and their concern about the work to be done and what we plan for protecting the children in the daycare center as well as the students at the middle and high schools that are located across the street and across the alleyway from the industrial facility. I have informed them that we will be using water for dust suppression and will put in place fencing w/privacy (dust) screens in place so that we minimize the impact of dust while conducting this action.
>
> The daycare shares fencing along the alleyway and along the residential properties Personal Address / Ex. 6 and we need to make sure that soil along the fence that we will be excavati[illegible] the daycare area by the excavation activities. We may need silt fencing/wattles in place along the fencing where we will be excavating and to prevent the migration of contaminants to other areas along drainage pathways and other grids.

Also, I have determined that we will use N. Oak to the South from the Highway, East on Cottonwood to N. Poplar (load area) and then exit to the North along N. Poplar as our truck route. This will allow us to stack up empty trucks, if need be, and then exit immediately down Poplar to the highway.

Also, we will be setting up our office (40x8 container office) on the school district parking lot and will minimize our footprint as much as possible. I do not want any contaminated tools/equipment to be moved back and forth to the office area.

This action will be very sensitive and also it is sensitive to personnel working on the project since we will be working on or near school property with these children walking in the area so you need to insure that all personnel have spotless backgrounds checks for this project.

We will be placing orange construction fence fabric or orange non-biodegradable fabric over the entire grid if we are unable to meet the cleanup criteria.

We have some areas where we may need a dump trailer (temporarily) for movement of contaminated soil to a stockpile location (ie. contamination around drip line of house of Personal Address / Ex. 6 . You need to think about it and give us a solution. I want to make sure that we bucket for roadside drainage cleanout. The equipment needs to be able to exchange out buckets.

The plan is to work Monday through Saturday for 10 – 12 hour days (daylight hours). Preferrably, 10 hour days but may depend on actions being taken. Time off for the holidays is being projected as the following:

- Thanksgiving – secure site Tuesday 11/20 COB, demobe Wednesday 11/21 and remobilize Monday 11/26.
- Christmas – secure site Friday 12/21 COB, demobe Saturday 12/22 and remobilize on Wednesday Jan 2nd.

We will be demolishing the on-site building and have just completed asbestos inspection, PCB wipe samples of the metal, and lead sampling of paint. We also completed the soil profile sampling that was requested by Evan. The only thing that we did not do was take a sample of the wood materials within the building which will have to be done when we get on-site. Once I get the asbestos inspection, I will forward to you guys. If no abatement will be needed, I will send that on to Texas Department of State Health Services. EPA does not have to wait the 10 day requirement but has to meet the substantive requirements.
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Thanks
Gary Moore
2147891627

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Sent: Saturday, October 06, 2018 10:57 AM
To: Moore, Gary <Moore.Gary@epa.gov>
Cc: Evan Wortman <e.wortman@erllc.com>; Angela Harbin <a.harbin@erllc.com>
Subject: Initial DWO

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Look forward to working with you as always.

Regards,

Don

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<10.6.18 DWO No. 1 - F.J. Doyle Salvage Site-signed.pdf>

Message

From: Moore, Gary [Moore.Gary@epa.gov]
Sent: 10/6/2018 10:25:54 PM
To: 'Don Edgington' [d.edgington@erllc.com]
CC: Evan Wortman [e.wortman@erllc.com]; Angela Harbin [a.harbin@erllc.com]; Delgado, Paige [Delgado.Paige@epa.gov]
Subject: RE: Initial DWO
Attachments: 10.6.18 DWO No. 1 - F.J. Doyle Salvage Site-signed.pdf

Don:

Attached is the signed DWO.

The mobilization date for this project is currently set for November 5, 2018.

On another note, I met with Leonard ISD and their concern about the work to be done and what we plan for protecting the children in the daycare center as well as the students at the middle and high schools that are located across the street and across the alleyway from the industrial facility. I have informed them that we will be using water for dust suppression and will put in place fencing w/privacy (dust) screens in place so that we minimize the impact of dust while conducting this action.

The daycare shares fencing along the alleyway and along the residential properties Personal Address / Ex. 6 and we need to make sure that soil along the fence that we will be excavating is not pushed into the daycare area by the excavation activities. We may need silt fencing/wattles in place along the fencing where we will be excavating and to prevent the migration of contaminants to other areas along drainage pathways and other grids.

Also, I have determined that we will use N. Oak to the South from the Highway, East on Cottonwood to N. Poplar (load area) and then exit to the North along N. Poplar as our truck route. This will allow us to stack up empty trucks, if need be, and then exit immediately down Poplar to the highway.

Also, we will be setting up our office (40x8 container office) on the school district parking lot and will minimize our footprint as much as possible. I do not want any contaminated tools/equipment to be moved back and forth to the office area.

This action will be very sensitive and also it is sensitive to personnel working on the project since we will be working on or near school property with these children walking in the area so you need to insure that all personnel have spotless backgrounds checks for this project.

We will be placing orange construction fence fabric or orange non-biodegradable fabric over the entire grid if we are unable to meet the cleanup criteria.

We have some areas where we may need a dump trailer (temporarily) for movement of contaminated soil to a stockpile location (ie. contamination around drip line of house of Personal Address / Ex. 6). You need to think about it and give us a solution. I want to make sure that we use a wide ditching bucket for roadside drainage cleanout. The equipment needs to be able to exchange out buckets.

The plan is to work Monday through Saturday for 10 – 12 hour days (daylight hours). Preferrably, 10 hour days but may depend on actions being taken. Time off for the holidays is being projected as the following:

- Thanksgiving – secure site Tuesday 11/20 COB, demobe Wednesday 11/21 and remobilize Monday 11/26.
- Christmas – secure site Friday 12/21 COB, demobe Saturday 12/22 and remobilize on Wednesday Jan 2nd.

We will be demolishing the on-site building and have just completed asbestos inspection, PCB wipe samples of the metal, and lead sampling of paint. We also completed the soil profile sampling that was requested by Evan. The only thing that we did not do was take a sample of the wood materials within the building which will have to be done when we get on-site. Once I get the asbestos inspection, I will forward to you guys. If no abatement will be needed, I will send that on to Texas Department of State Health Services. EPA does not have to wait the 10 day requirement but has to meet the substantive requirements.

Please ask questions, and also make sure you cc Paige Delgado so that we can discuss before giving you an answer.

A final note, the EPA is working on a continuing resolution through December 7, 2018. We need to be able to get as much work done as possible and be able to potentially close those areas before a possible personnel demobe. I hope that this will not be necessary as it impacts a cost effective cleanup action but we need to keep this in the back of our mind. EPA management will try to allow us to keep this project going but there is no guarantee.

Thanks
Gary Moore
2147891627

From: Don Edgington [mailto:d.edgington@erllc.com]
Sent: Saturday, October 06, 2018 10:57 AM
To: Moore, Gary <Moore.Gary@epa.gov>
Cc: Evan Wortman <e.wortman@erllc.com>; Angela Harbin <a.harbin@erllc.com>
Subject: Initial DWO

Good morning, Gary. I hope you have been well.

My apologies for the not getting this to you sooner.

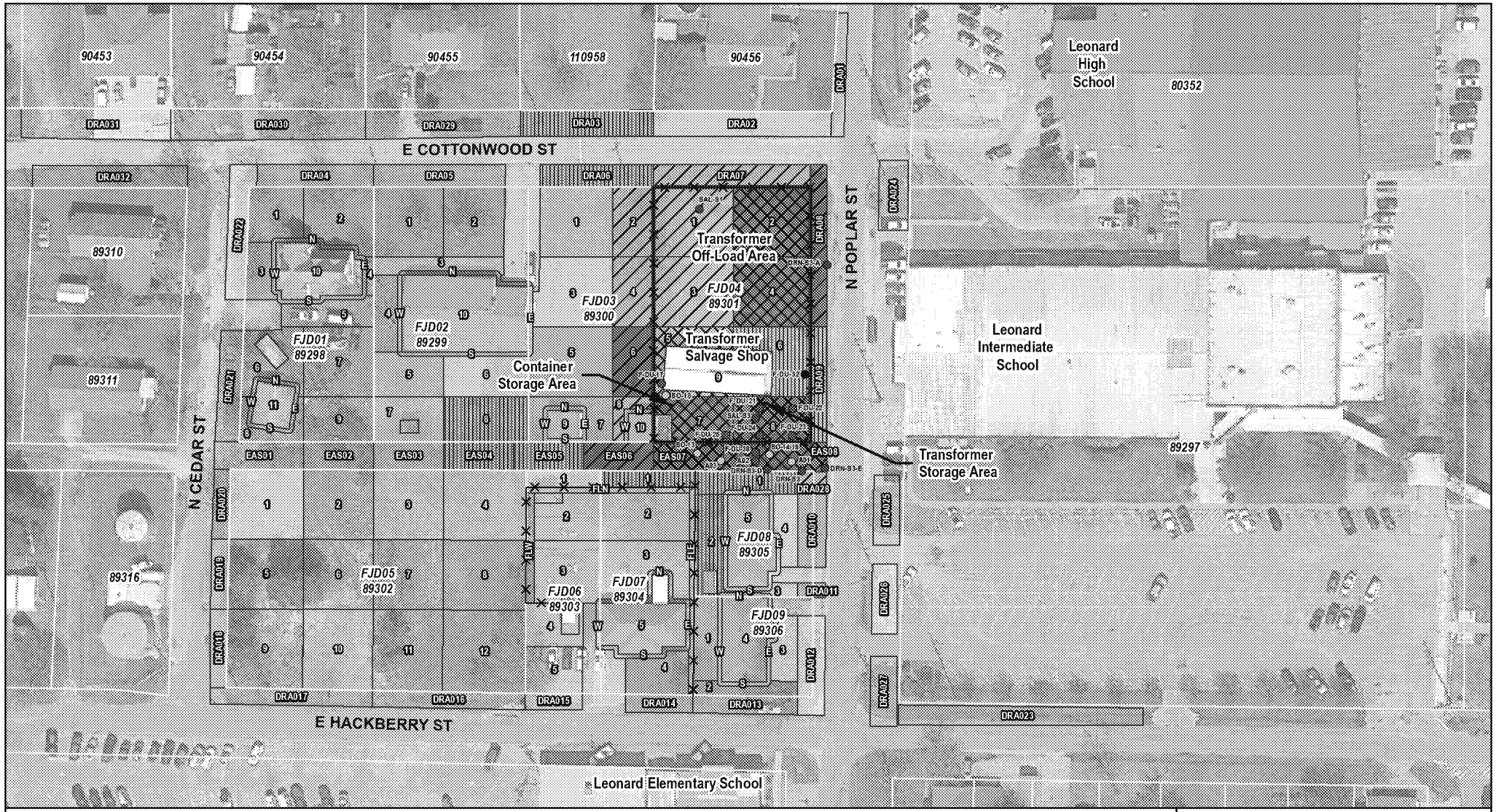
The attached initial DWO is proposed to cover Evan and Angela's time involving vendor sourcing and reporting. I've demobilized from Arizona and will start getting up to speed next week.

Look forward to working with you as always.

Regards,

Don

Confidentiality Warning: This e-mail and any attachments contain information intended only for the use of the individual or entity named above. If the reader of this e-mail is not the intended recipient or the employee or agent responsible for delivering it to the intended recipient, any dissemination, publication or copying of this e-mail is strictly prohibited. Although this email has been scanned for malware, the sender does not accept any responsibility for any loss, disruption or damage to your data or computer system that may occur while using data contained in, or transmitted with, this e-mail. If you have received this e-mail in error, please immediately notify by return e-mail. Thank you.



USEPA REGION 6

FIGURE 5-3

PROPSED EXCAVATION MAP WITH HISTORICAL PCB RESULTS ≥ 50 PPM

F.J. DOYLE SITE

Ex. 6 Personal Privacy (PP)

LEONARD, FANNIN COUNTY, TEXAS

DATE	PROJECT NO	SCALE
NOVEMBER 2018	20600.012.001.1004	AS SHOWN

FILE: D:\120600_EPA_START4\FJ Doyle\mxd\Public Meeting\Proposed Excavation Map with Historical Samples - Letter.mxd 11:29:01 AM 11/1/2018 wilder

LEGEND

- Fence Line
- Site Boundary
- Parcel Boundary with ID
- Structure
- Sample Grid

N

0 60 120

Feet

TDD No: 0001/17-004
SEMS ID: TXD980865109
SSID: 061D

SOURCE: Google, 2017

USEPA REGION 6

FIGURE 3-1
SAMPLE GRID MAP
FRANK J. DOYLE SITE
Ex. 6 Personal Privacy (PP)
LEONARD, FANNIN COUNTY, TEXAS

DATE	PROJECT NO	SCALE
JUL 2018	20600.012.001.1004	AS SHOWN

FILE: D:\20600_EPA_START4\FJ Doyle\mxd\Sample Grid Map with Driplines.mxd 4:13:42 PM 7/23/2018 wilderj

TEXAS

LEGEND

- Fence Line
- Site Boundary
- Parcel Boundary with ID
- Structure
- Sample Grid

Soil Sample Grid Results

- Aroclor Results >= 1 mg/kg

NOTES
1. mg/kg - milligram per kilogram

N

0 60 120
Feet

TDD No: 0001/17-004
SEMS ID: TXD980665109
SSID: 061D

SOURCE: Google, 2017

USEPA REGION 6

FIGURE 5-1
SOIL SAMPLE GRID RESULTS
AROCLOR
FRANK J. DOYLE SITE
Ex. 6 Personal Privacy (PP)
LEONARD, FANNIN COUNTY, TEXAS

DATE	PROJECT NO	SCALE
JUL 2018	20600.012.001.1004	AS SHOWN

FILE: D:\20600_EPA_START4\FJ Doyle\mxd\Sample Grid Results Map - Aroclor.mxd 3:55:52 PM 7/23/2018 wilderj

ATTACHMENT 2

LEGEND

- Fence Line
- Site Boundary
- Parcel Boundary with ID
- Structure

Sample Grid

- Easement Grid (n = 8)
- Site Grid (n = 8)
- Drainage Grid (n = 28)
- Residential Grid (n = 53)
- Structure (n = 7)

N

0 60 120

Feet

TDD No: 0001/17-004
SEMS ID: TXD980865109
SSID: 061D

SOURCE: Google, 2017

USEPA REGION 6

FIGURE 3-1
SAMPLE GRID MAP
FRANK J. DOYLE SITE
Ex. 6 Personal Privacy (PP)
LEONARD, FANNIN COUNTY, TEXAS

DATE	PROJECT NO	SCALE
JUL 2018	20600.012.001.1004	AS SHOWN

FILE: D:\20600_EPA_START4\FJ Doyle\mxd\Sample Grid Map.mxd 9:51:44 AM 7/19/2018 wilsenj

Message

From: Moore, Gary [Moore.Gary@epa.gov]
Sent: 2/6/2019 9:54:52 PM
To: 'Don Edgington' [d.edgington@erllc.com]
CC: Brescia, Nicolas [brescia.nicolas@epa.gov]; Delgado, Paige [Delgado.Paige@epa.gov]
Subject: RE: Fence Solicitation
Attachments: Figure 5-3 Proposed Excavation Map with Historical Samples - Letter.pdf; bufftech-full.pdf

Don:

I think we need to look at the vinyl composite fencing. I want something with longevity and maintenance free. I don't want something that they are going to have to stain every year to keep it up. It needs to be commercial grade as well. Have them bring out some samples of the vinyl composite for us to take a look at. I would like it to be 6 feet tall and have a stained cedar texture and color if possible. What do we know about getting the property boundaries. I would like it to run from the back corner of the shed by the alley to the south corner of DRA06/DRA07 (basically the redline between the site (FJD04) and the Ex. 6 Personal Privacy (PP) property (FJD03) on the attached map.

Can the fencing company determine the property line? Or do we need to get a surveyor?

https://www.vikingfencedallas.com/

The bufftech fence comes from Viking so you may want to contact them. I also think they have a office in McKinney.

Thanks
Gary Moore

From: Don Edgington <d.edgington@erllc.com>
Sent: Wednesday, February 06, 2019 10:42 AM
To: Moore, Gary <Moore.Gary@epa.gov>; Brescia, Nicolas <brescia.nicolas@epa.gov>; Delgado, Paige <Delgado.Paige@epa.gov>
Cc: Angela Harbin <a.harbin@erllc.com>
Subject: Fence Solicitation

All:

We had secured preliminary pricing for 200' of 6' tall stockade fence composed of vinyl. The vendor we solicited has subsequently failed to return calls/emails for the past 2 weeks. I asked Angela to resume a search for a fence contractor that could do the job.

In the course of her calls, she was told by one of companies she talked to (Green & Son Contracting) that the best fence for durability and longevity would be cedar, rather than the vinyl. He stated that a cedar fence would be an insect deterrent as well. He told Angela that the vinyl would degrade quickly in sun/heat and becomes brittle quite soon, within 5 to 10 years.

He will quote us cedar and composite fencing. He will provide us a quote this afternoon. The composite will be more expensive but it would carry a longer warranty.

We'll keep everyone posted on our progress.

Don

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ENVIRONMENTAL RESTORATION LLC.

Daily Work Order No. 24
U.S. EPA, Region 6

DAILY WORK ORDER

Operating Period: 12/05/18	Task Order: 0618F0308	Page 1 of 1
Project Name: F.J. Doyle Salvage Site	OSC. Gary Moore/Paige Delgado	
Location (City, State): Leonard, Texas	Shift: 1 2	Start Time: 06:30 / Stop Time: 17:30

1. Work Authorized for the Period	Work Accomplished for the Period
1) Continue/complete excavations in approved grids, specifically Grid No(s) FJD08-01 and DRA06; 2) Commence site restoration in cleared, accessible grids; 3) Commence excavations in Grid No. DRA05; 4) Commence off-site T&D of C&D debris (wooden waste stored in 30-yd. roll-off box); 5) Secure site in advance of inclement weather (cover stockpiles, install institutional controls and storm-water controls);	1) Completed: Excavations in Grid No(s) FJD08-01 and DRA06; 2) Completed: Off-site T&D of C&D debris stored in 30-yd. roll-off box; 3) In Progress: Site restoration in Grid(s) No. FJD08-02 and FJD09-01; 4) Completed. Return storage shed taken from backyard of Ex. 6 Personal Privacy (PP) Street; block and center/level; 5) Secure site (cover stockpiles; install institutional and storm-water controls).

OSC Signature:	Date:	OSC Signature:	Date:
Gary Moore	12/05/18	Gary Moore	12/05/18
RM Signature:	Date:	RM Signature:	Date:
Don Weeg for	12/05/18	Don Weeg for	12/05/18

2. Upcoming Work Authorized

Continue excavations as directed; continue restoration of cleared grids, resume off-site T&D of non-hazardous, non-regulated soils from primary site stockpile.

3. Quantity / Volume Tracking:

Description:	Current Period:	Total to Date:
2"– 3" Limestone Rock (Haul Road)		5 Truck Loads – 47.25 tons
Non-regulated, non-hazardous soils		25 Truck Loads - 651.71 tons
Select Backfill, Wolf Creek Plant (12–15 Pi)		21 Truck Loads –545.09 tons
C&D Debris (wooden portions of building stored in roll-off box)	1 Truck Load ≈ 5 tons	1 30-yd. open-top box ≈5 tons

4. Number of Personnel Authorized Current Period

Personnel Category:	Quantity:	Personnel Category:	Quantity:
Response Manager	1	Operator	2
FCA	1	Laborer	3
Foreman	1	Truck Driver/Laborer	1

5. Equipment Authorized for Current Period

Item	Qty	Used	Not Used / or Down	Item	Qty	Used	Not Used / or Down
½ ton crew-cab pickup (RM)	1	1		Portable toilets	3	3	
½ ton extended-cab	2	2		Hand-wash station	1	1	
¾ ton crew-cab flatbed w/ fuel cell	1	1		Skid steer with bucket/forks Bobcat TS90	1	1	
1-ton dump-truck	1	1		Mini-excavator (Bobcat E85)	2	2	
½ -ton extended cab (POV)	1	1		2,000-gallon Water Truck	1	1	
40' x 8' office trailer	1	1		Excavator (JD 210G)	1	1	
70 kW Generator	1	1		Telescopic Forklift (JCB)	1	1	
Passenger car, FCA	1	1		Buildozer (JD 650K-XLT)	1	1	
20' Conex Box	1	1					

6. Comments / Amendments (Include Time)

*RM, EO and FM met disposal vendor at the site at 0610 hours to affect removal of roll-off box of C&D debris.

Gary Moore	12/05/18	Don Weeg for	12/05/18
Signature of OSC	Date	Signature of RM	Date

ENVIRONMENTAL RESTORATION LLC.

Daily Work Order No. 19
U.S. EPA, Region 6

DAILY WORK ORDER

Operating Period: 11/29/18	Task Order: 0618F0306	Page 1 of 1
Project Name: F.J. Doyle Salvage Site	OSC: Gary Moore/Paige Delgado	
Location (City, State): Leonard, Texas	Shift: [1] 2	Start Time: 07:00 / Stop Time: 17:30

1. Work Authorized for the Period

1) Continue re-excavations in approved grids;
2) Commence/complete removal and staging of storage shed, located in backyard of [Ex. 6 Personal Privacy (PP)] Street; (Grid(s) No. FJD09-01 and FJD08-01);
3) Commence excavations to pre-approved depths in Grid No(s) FJD08-01 and FJD09-01;

Work Accomplished for the Period

1) Completed: Removal and staging of storage shed, placed on cribbing in Grid No. FJD05-08;
2) Completed: Re-excavations in Grid No(s): FJD05-03N, FJD05-04N and FJD09-01;
3) In Progress: Re-excavations in Grid No(s) FJD08-02; FJD02-08 and EAS04;
4) Completed: Forward revised profile and analytical to TSDF to resume approval process for C&D debris generated during structure demolition; waste stream approval on 11/29/18.

OSC Signature: Gary Moore	Date: 11/29/18	OSC Signature: Gary Moore	Date: 11/29/18
RM Signature: [illegible]	Date: 11/29/18	RM Signature: [illegible]	Date: 11/29/18

2. Upcoming Work Authorized

Continue re-excavations in pre-determined and approved grids, continue/complete excavations in Grid No(s) FJD08-02, FJD08-05S, FJD09-01 and FJD09N.

3. Quantity / Volume Tracking:

Description:	Current Period:	Total to Date:
2"– 3" Limestone Rock (Haul Road)		5 Truck Loads – 47.25 tons
Non-regulated, non-hazardous soils		25 Truck Loads - 651.71 tons

4. Number of Personnel Authorized Current Period

Personnel Category:	Quantity:	Personnel Category:	Quantity:
Response Manager	1	Operator	2
FCA	1	Laborer	3
Foreman	1	Truck Driver/Laborer	1

5. Equipment Authorized for Current Period

Item	Qty	Used	Not Used / or Down	Item	Qty	Used	Not Used / or Down
½ ton crew-cab pickup (RM)	1	1		Portable toilets	3	3	
½ ton extended-cab	2	2		Hand-wash station	1	1	
¾ ton crew-cab flatbed w/ fuel cell	1	1		Skid steer with bucket/forks Bobcat TS90	1	1	
1-ton dump-truck	1	1		Mini-excavator (Bobcat E85)	2	2	
½ -ton extended cab (POV)	1	1		2,000-gallon Water Truck	1	1	
40' x 8' office trailer	1	1		Excavator (JD 210G)	1	1	
70 kW Generator	1	1		Passenger car, FCA	1	1	
20' Conex Box	1	1		Telescopic Forklift (JCB)	1	1	

6. Comments / Amendments (Include Time)

Signature of OSC	Date	Signature of RM	Date

REPUBLIC SERVICES, INC.

Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

SPECIAL WASTE DEPARTMENT DECISION

	Waste Profile #	Expiration Date	
	34161818258	5/28/2019	

I. Decision Request: ☑ Initial ☐ Recertification ☐ Change

Disposal Facility: 3416 - Maloy Solid Waste Landfill

Generator Name: United States Environmental Protection Agency - Region 6

Generator Site Address: Ex. 6 Personal Privacy (PP)

City: Leonard **County:** **State:** TX **Zip:**

Name of Waste: Construction & Demolition Debris

Estimated Annual Volume: 150 Tons

II. Special Waste Department Decision: ☑ Approved ☐ Rejected

Management Method(s): ☑ Landfill ☐ Solidification ☐ Bioremediation ☐ Transfer Facility

Problematic Special Waste according to Republic? ☐ Yes ☑ No

If yes, which one?

Approved by Special Waste Review Committee? ☐ Yes ☐ No ☑ Not Applicable

Precautions, Conditions or Limitations on Approval

Special Waste Analyst Signature: Joseph M. Sorokach **Name (Printed):** Joseph Sorokach

Date: 11/29/2018

III. Facility Decision: ☐ Approved ☐ Rejected

Precautions, Conditions or Limitations on Approval

By signing below, the General Manager or Designee agrees that a fully executed Special Waste Service Agreement is on file for this profile and that the special waste file is complete.

General Manager or Designee: _____ **Name (Printed):** _____

Date: 11/29/2018

Muegge, Cheryl

From: Murphy, James
Sent: Thursday, November 29, 2018 3:19 PM
To: Muegge, Cheryl; Alderete, Chris
Subject: FW: United States Environmental Protection Agency 34161818258
Attachments: United States Environmental Protection Agency - Region 6 Profile 34161818258 Approval.pdf

Approved.....jwm

James Murphy
East Texas General Manager

2815 State Hwy 42 N.
Kilgore TX 75662
e JMurphy2@republicservices.com
o 903-986-5311 c 903-987-9222
w RepublicServices.com

REPUBLIC SERVICES

We'll handle it from here.

[redacted]

From: Muegge, Cheryl
Sent: Thursday, November 29, 2018 2:56 PM
To: Murphy, James <JMurphy2@republicservices.com>
Cc: Alderete, Chris <CAlderete@republicservices.com>
Subject: United States Environmental Protection Agency 34161818258

James,

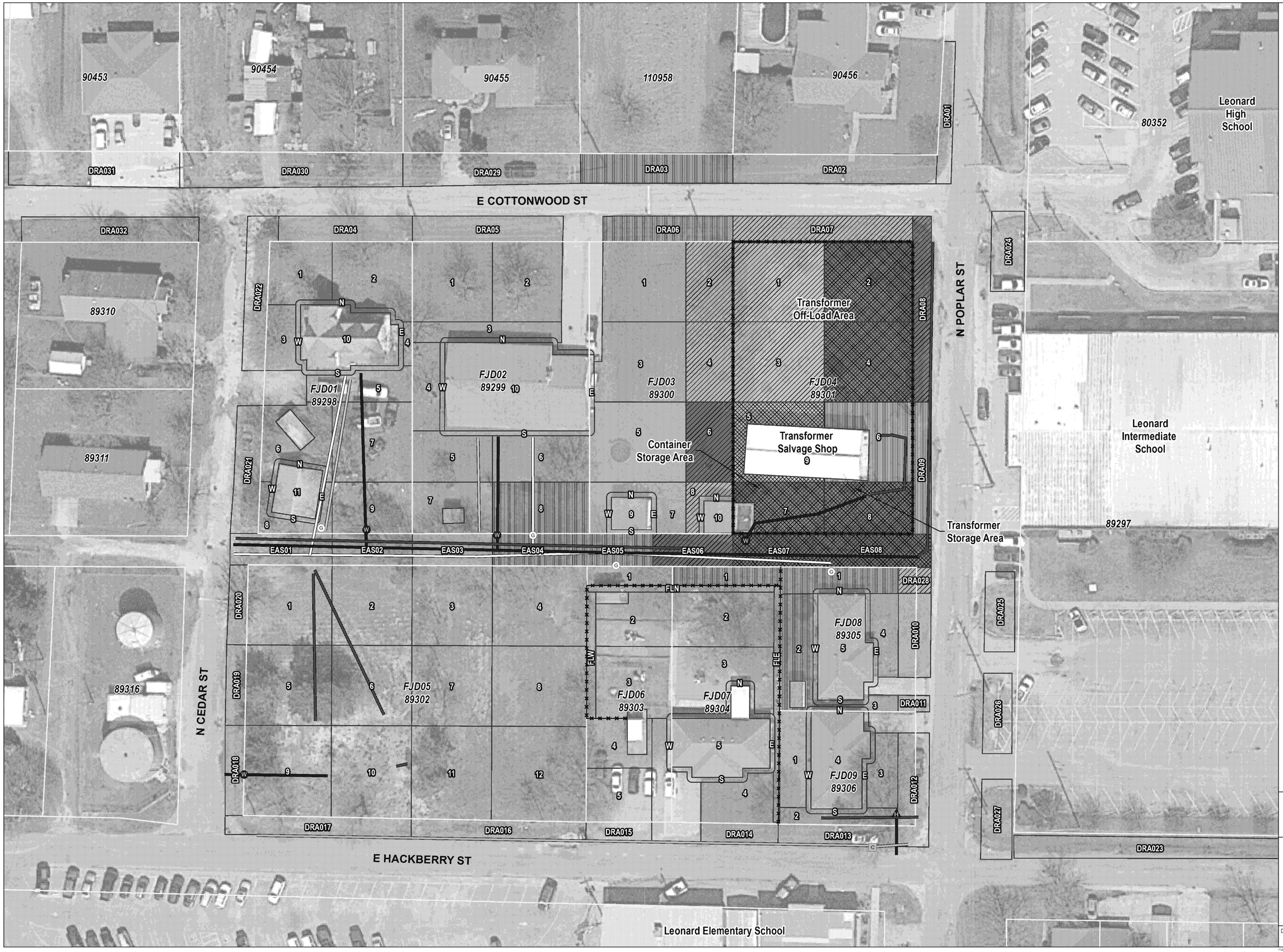
Please review and approve to process the United States Environmental Protection Agency Profile 34161818258. This is for "Construction & Demolition Debris" going to the Maloy landfill. Analytical received.

Volume: 150 tons
Rate: $28.00 per ton (Maloy hauling)

Thank you,

Cheryl Muegge
Sales Coordinator - Special Waste

ED_002624_00001052-00002



LEGEND

- Fence Line
- Site Boundary
- Parcel Boundary with ID
- Sample Grid

Soil Sample Grid Results, Total PCBs

- Non-TSCA, Total PCBs Results ≥ 1 mg/kg
- TSCA, Total PCBs Results ≥ 50 mg/kg

Excavation Depth (inches)

- 0-6"
- 6-12"
- 12-24"
- 24-36"

Utility Lines

- Communications
- Gas
- Sewer
- Water
- Unknown

Utility Locations

- Hydrant
- Water Valve
- Gas Valve
- Comms Vault

NOTE:
1. mg/kg - milligram per kilogram

N

0 25 50
FEET

SOURCE: © GOOGLE EARTH, 2017

TDD: 0001/17-004
SEMS: TXD980865109
SSID: 061D

USEPA REGION 6

FIGURE 5-4
PROPOSED EXCAVATION AND UTILITY LOCATION MAP
F.J. DOYLE SITE
Ex. 6 Personal Privacy (PP)
LEONARD, FANNIN COUNTY, TEXAS

DATE	PROJECT NO	SCALE
NOVEMBER 2018	20600.012.001.1004	AS SHOWN

FILE: D:\2018\0_EPA_STARTS\FJ Doyle\mxd\Public Meeting\Proposed Excavation and Utility Location Map - 24x36.mxd 1:03:57 PM 10/30/18 wkbeo

Road Repair Scoping

After a limited evaluation, there is some evidence that truck traffic into and out of the site may have worsened the generally poor conditions of the streets prior to the removal being conducted. I've prepared a limited estimate of the linear feet of repairs that we could consider if we wish to proceed. This would proceed once we are complete with the removal and all associated traffic into and out of the site.

I've prepared some general estimates and notes on the two primary streets we've used for truck and equipment traffic, N. Poplar and E. Cottonwood Streets. It may be argued that additional streets, or portions of these streets should be addressed as well, if we decide to undertake this project with the city. For example, N. Cedar Street was probably in the worst condition of any streets we've worked on and is also where the city recently replaced a culvert in the street. We've done some limited shoulder work on N. Cedar Street but nothing that would be considered significant.

Areas that have been generally been used for most of the traffic into/out of the site:

- **Area 1:** North Poplar Street (between E. Cottonwood running south to the parking lot):
- **Area 2**: North Poplar Street (between E. Cottonwood running north to E. Short Street);
- **Area 3**: E. Cottonwood Street (running west towards Ex. 6 Personal Privacy (PP) driveway).

Area 1 has a few areas of damage noted to the asphalt, with 2 distinct uplifts/ripples caused when a truck was perhaps turning his wheels when loading/unloading equipment or supplies. The shoulder immediately adjacent to the site should be repaved due to our excavation marks on the existing pavement. The area measured ran from the centerline intersection of N. Poplar and E. Cottonwood Streets running south to the school parking exit (closest to the school).

Linear Feet: 300' (entire length of shoulder repair on the site side (west shoulder) on N. Poplar Street); 2 potholes, possibly a few minor spot repairs.

Area 2 has the most visible damage to the asphalt/shoulder, particularly with trucks loaded and exiting the site turning on the eastern side of the street, next to the drainage ditch in front of the high school parking lot. There is a significant pothole some of our trucks probably caused on the west side on N. Poplar Street as trucks are heading north to US69. This damage looks recent and should be repaired. Most of the work would be on the eastern side/shoulder of the road next to the high school parking lot.

Linear Feet: 480' (entire length of shoulder repairs on the school side (east shoulder) on N. Poplar Street); 1 significant pothole
3 potholes, possibly a few minor spot repairs.

Area 3 has limited damage, primarily relegated to the southern street shoulder immediately adjacent to the site along E. Cottonwood Street. The area to consider would involve shoulder work and repaving from the Ex. 6 Personal Privacy (PP) residence driveway to the intersection of E. Cottonwood and N. Poplar Streets.

Linear Feet: 225' (entire length of shoulder repairs on the south side of E. Cottonwood to N. Poplar Street);
Possibly a few minor spot repairs

Total LF: 1,000'

ENVIRONMENTAL RESTORATION LLC.

Daily Work Order No. 18
U.S. EPA, Region 6

DAILY WORK ORDER

Operating Period: 11/28/18	Task Order: 0618F0308	Page 1 of 1
Project Name: F.J. Doyle Salvage Site	OSC: Gary Moore/Paige Delgado	
Location (City, State): Leonard, Texas	Shift: 1 2	Start Time: 07:00 / Stop Time: 16:00

1. Work Authorized for the Period	Work Accomplished for the Period
1) Continue re-excavations in approved grids; 2) Commence/complete removal and staging of personal property at [Ex. 6 Personal Privacy (PP)]; stage to E. Hackberry Street property; 3) Clear and grub access to storage shed; prepare shed for relocation; 4) Commence/complete removal and staging of storage shed.	1) Completed: Removal of personal property from [Personal Address / Ex. 6] stage to E. Hackberry Street property; 2) Completed: Clear and grub access to storage shed; prepare shed for relocation; 3) In Progress: Re-excavations in Grid No(s) FJD02-8, FJD05-03A and FJD05-04A; 4) In Progress: Removal and staging of storage shed located in backyard of [Ex. 6 Personal Privacy (PP)]

OSC Signature:	Date:	OSC Signature:	Date:
Gary Moore	11/29/18	Gary Moore	11/29/18
RM Signature:	Date:	RM Signature:	Date:
Don W Eaglebear	11/29/18	Don W Eaglebear	11/29/18

2. Upcoming Work Authorized

Continue re-excavations in pre-determined and approved grids; commence removal and temporary staging of storage shed, as directed. Upon removal of storage shed, commence excavations in Grid No(s) FJD08-02 and FJD09-01.

3. Quantity / Volume Tracking:

Description:	Current Period:	Total to Date:
2"– 3" Limestone Rock (Haul Road)		5 Truck Loads – 47.25 tons
Non-regulated, non-hazardous soils		25 Truck Loads - 651.71 tons

4. Number of Personnel Authorized Current Period

Personnel Category:	Quantity:	Personnel Category:	Quantity:
Response Manager	1	Operator	2
FCA	1	Laborer	4
Foreman	1	Truck Driver/Laborer	1

5. Equipment Authorized for Current Period

Item	Qty	Used	Not Used / or Down	Item	Qty	Used	Not Used / or Down
½ ton crew-cab pickup (RM)	1	1		Portable toilets	3	3	
½ ton extended-cab	2	2		Hand-wash station	1	1	
¾ ton crew-cab flatbed w/ fuel cell	1	1		Skid steer with bucket/forks Bobcat TS90	1	1	
1-ton dump-truck	1	1		Mini-excavator (Bobcat E85)	2	2	
½ -ton extended cab (POV)	1	1		2,000-gallon Water Truck	1	1	
40' x 8' office trailer	1	1		Excavator (JD 210G)	1	1	
70 kW Generator	1	1		Passenger car, FCA	1	1	
20' Conex Box	1	1		*Telescopic Forklift (JCB)	1	1	

6. Comments / Amendments (Include Time)

*Mobilized to site during current operational period.

Gary Moore	11/29/18	Don W Eaglebear	11/29/18
Signature of OSC	Date	Signature of RM	Date

ENVIRONMENTAL RESTORATION LLC.

Daily Work Order No. 18
U.S. EPA, Region 6

DAILY WORK ORDER

Operating Period: 11/28/18	Task Order: 0618F0308	Page 1 of 1	
Project Name: F.J. Doyle Salvage Site	OSC: Gary Moore/Paige Delgado		
Location (City, State): Leonard, Texas	Shift: 1 2	Start Time: 07:00	Stop Time: 16:00

1. Work Authorized for the Period

1) Continue re-excavations in approved grids;
2) Commence/complete removal and staging of personal property at Ex. 6 Personal Privacy (PP) stage to E. Hackberry Street property;
3) Clear and grub access to storage shed; prepare shed for relocation;
4) Commence/complete removal and staging of storage shed.

Work Accomplished for the Period

1) Completed: Removal of personal property from Personal Address / Ex. 6 stage to E. Hackberry Street property;
2) Completed: Clear and grub access to storage shed; prepare shed for relocation;
3) In Progress: Re-excavations in Grid No(s) FJD02-8, FJD05-03A and FJD05-04A;
4) In Progress: Removal and staging of storage shed located in backyard of Ex. 6 Personal Privacy (PP)

OSC Signature:	Date:	OSC Signature:	Date:
RM Signature: Don W Elgington	Date: 11/28/18	RM Signature: Don W Elgington	Date: 11/28/18

2. Upcoming Work Authorized

Continue re-excavations in pre-determined and approved grids; commence removal and temporary staging of storage shed, as directed. Upon removal of storage shed, commence excavations in Grid No(s) FJD08-02 and FJD09-01.

3. Quantity / Volume Tracking:

Description:	Current Period:	Total to Date:
2"– 3" Limestone Rock (Haul Road)		5 Truck Loads – 47.25 tons
Non-regulated, non-hazardous soils		25 Truck Loads - 651.71 tons

4. Number of Personnel Authorized Current Period

Personnel Category:	Quantity:	Personnel Category:	Quantity:
Response Manager	1	Operator	2
FCA	1	Laborer	4
Foreman	1	Truck Driver/Laborer	1

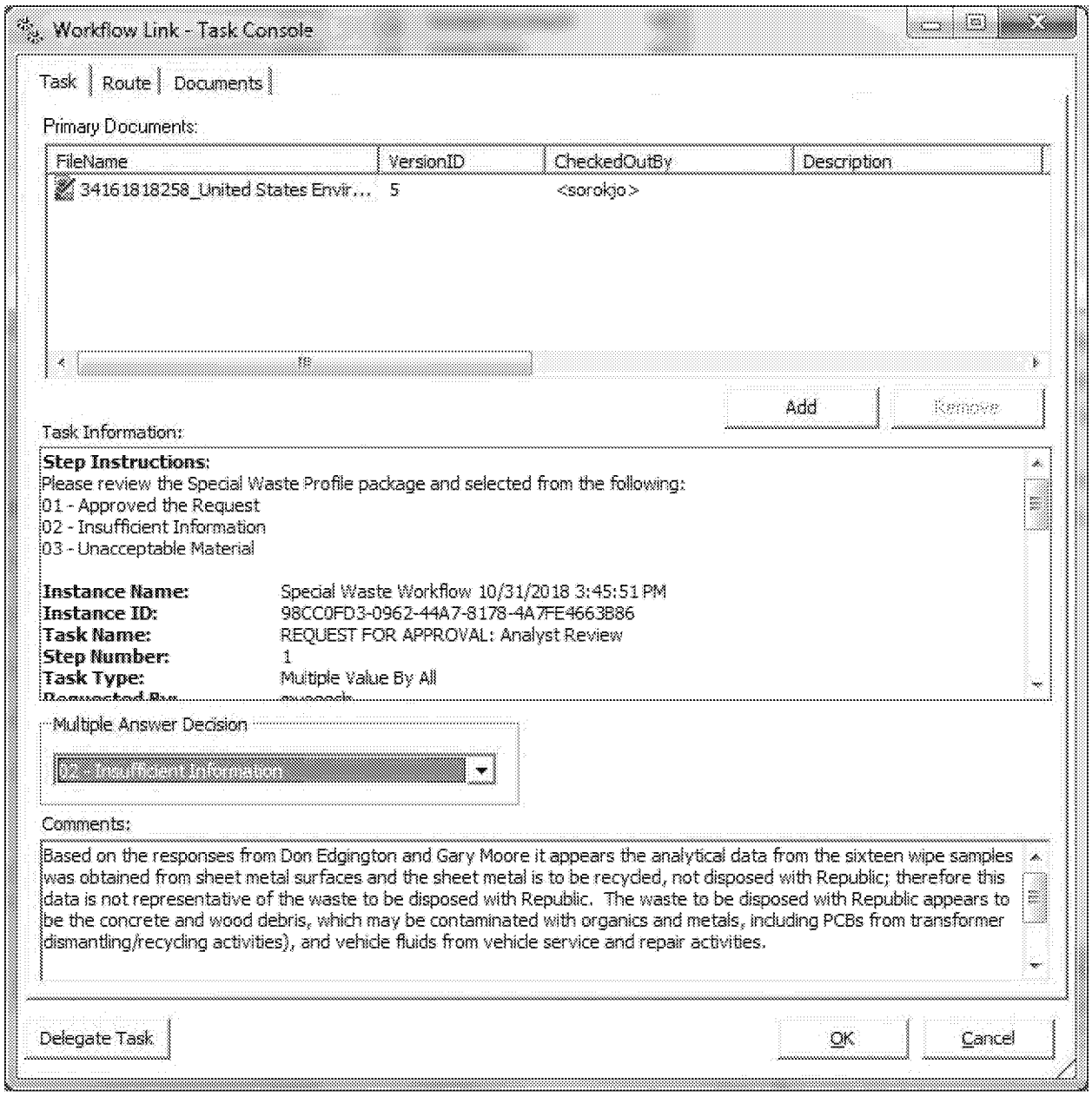
5. Equipment Authorized for Current Period

Item	Qty	Used	Not Used / or Down	Item	Qty	Used	Not Used / or Down
½ ton crew-cab pickup (RM)	1	1		Portable toilets	3	3	
½ ton extended-cab	2	2		Hand-wash station	1	1	
¾ ton crew-cab flatbed w/ fuel cell	1	1		Skid steer with bucket/forks Bobcat TS90	1	1	
1-ton dump-truck	1	1		Mini-excavator (Bobcat E85)	2	2	
½ -ton extended cab (POV)	1	1		2,000-gallon Water Truck	1	1	
40' x 8' office trailer	1	1		Excavator (JD 210G)	1	1	
70 kW Generator	1	1		Passenger car, FCA	1	1	
20' Conex Box	1	1		*Telescopic Forklift (JCB)	1	1	

6. Comments / Amendments (Include Time)

*Mobilized to site during current operational period.

		Don W Elgington	11/28/18
Signature of OSC	Date	Signature of RM	Date



Based on the responses from Don Edgington and Gary Moore it appears the analytical data from the sixteen wipe samples was obtained from sheet metal surfaces and the sheet metal is to be recycled, not disposed with Republic; therefore this data is not representative of the waste to be disposed with Republic. The waste to be disposed with Republic appears to be the concrete and wood debris, which may be contaminated with organics and metals, including PCBs from transformer dismantling/recycling activities), and vehicle fluids from vehicle service and repair activities.

Please have the generator provide analytical data from a sample representative of the concrete and wood debris that includes, at a minimum: PCBs, the 8 RCRA-regulated metals, benzene, TOX, and TPH.

REPUBLIC SERVICES

THIRD PARTY SIGNATURE AUTHORIZATION
for Special Waste Disposal

Date: 11/4/2018

This Authorization is only valid for 3 ~~years~~ months from the above date.

To Whom It May Concern:

Please be advised that the following company/individual has been appointed to work as our agent for purposes of managing waste materials that we may generate.

Name of Authorized Agent	Title
Don Edgington	Response Manager
Name of Company	Telephone Number
Environmental Restoration, LLC	251-406-0220

The above broker/individual is authorized to act as our authorized agent for the following purposes:

- ☐ Complete and sign Special Waste Profile.
- ☐ Complete and sign Special Waste Profile-Recertification.
- ☒ Authorize amendments to Special Waste Profile.
- ☐ Sign contracts to dispose and/or transport material.
- ☐ Sign certifications necessary to comply with landfill requirements.
- ☐ Sign manifests to initiate shipment to disposal facilities.

Our authorized agent will notify us prior to any action stated above, and will provide us with copies of any documents bearing our name.

Name of Company	Mailing Address
U.S. EPA Region 6	1445 Ross Ave, Suite 1200
Generator Contact (Print Name)	Title
Gary Moore (6SF-ER)	EPA OSC
Signature	Telephone Number
	214-789-1627

ED_002624_00001126-00002

Muegge, Cheryl

From: Don Edgington <d.edgington@erllc.com>
Sent: Saturday, November 03, 2018 9:18 AM
To: Muegge, Cheryl; Alderete, Chris
Cc: Moore, Gary; Delgado, Paige; Evan Wortman
Subject: C&D Profile No. 34161818258 - F.J. Doyle Salvage Site - Leonard, Texas

Note that (d.edgington@erllc.com) is an external email. Forward unfamiliar emails to infosec.phishing@republicservices.com

Good morning, Cheryl.

I've taken the liberty to correct some of my initial responses to you and your analyst with Gary Moore's comments. I was incorrect in stating that the wipe samples were taken "from all building surfaces". Actually, the wipe samples were only taken from sheet metal surfaces, which is the primary building material in question. Additionally, it is the government's intent to recycle the metals and not ship them to you.

Bottom line, we do not have any analysis for the wood or concrete surfaces. If Republic needs this data to approve Profile No. 34161818258, we'll need to have Chris arrange to drop at least 3 open-top roll-offs to place the non-metallic C&D debris in then collect samples to characterize.

Gary Moore will respond to any additional questions regarding the waste profile as the generator's representative.

Chris, please prepare a separate quotation to deliver 3 30 yd O/T roll-offs to the site for Thursday AM. Based on the outcome of any sampling that occurs, we'll have Republic take the roll-offs to Itasca, Pleasant Oaks or Maloy as appropriate.

The following is Gary's corrections and answers to the original questions from your analyst.

From Gary Moore, On-Scene Coordinator, USEPA Region 6

Hello Cheryl:

I wanted to provide some supplemental information to the information provided by Don Edgington, EPA Contractor, provided you earlier today to try to answer your questions:

1) **What purpose was the building used on site?** This building was used as FJ Doyle Salvage from approximately 1976 to 1999. I was told that the transformers were empty (contained residual transformer oil) when they came to the site. The residual transformer oil was drained into a pan on the floor of the building and then pumped into outside tanks. The transformers were then dismantled to remove the metal parts for recycling as well as recycling of the transformer carcasses. After 1999, I was told that the property was used to store old trucks and parts and then as an auto repair facility and finally just for storage.
2) **What activities or processes occurred in the building?** See information in question 1 above.
3) **What possible contaminants may have been used in it?** A reasonable assumption is that some organic materials may have been spilled (tansformer oil, auto fluids, etc. on the building floor, probable copper, lead and other minute amounts of metals from the metal salvage activities.
4) **How was it determined that no contamination exists in the materials that is to be disposed?** See attached analytical report; specifically analyses on 16 wipe samples taken from sheet metal both inside and out including

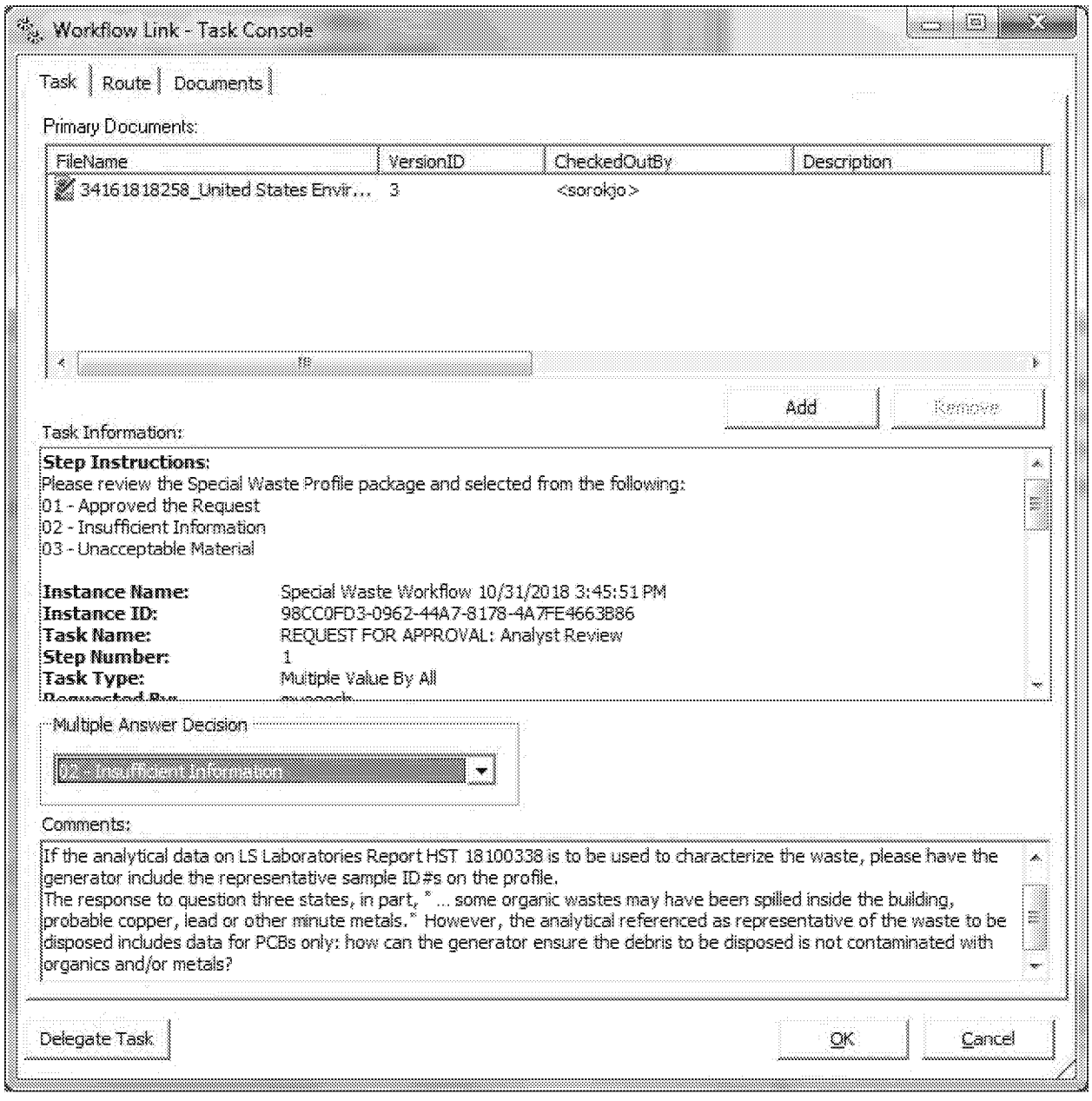
interior ceiling areas inside the structure to be demolished. The concrete and wood debris will have to be sampled to determine the appropriate waste stream.

5) **Please have the generator describe their process for ensuring no contaminated materials is designated for inclusion with C&D for disposal. Additional analytical may be required**. The building will be removed in small, discrete sections and visually assessed for any staining or abnormalities. Debris will be further segregated into metals, concrete, and wooded stockpiles and further evaluated prior to loading. Analytical is anticipated to be performed on a representative sample of the wood and concrete debris to determine the appropriate landfill. It is highly unlikely that representative sample of the debris will show the C&D material will be hazardous, or TSCA regulated.

Attachment: ALS Laboratories Final Report – HST 18100338 Final Level II.

All of the wipe samples (16) were taken from various locations on the building and were collected by Weston Solutions, Inc. representatives.

Confidentiality Warning: This e-mail and any attachments contain information intended only for the use of the individual or entity named above. If the reader of this e-mail is not the intended recipient or the employee or agent responsible for delivering it to the intended recipient, any dissemination, publication or copying of this e-mail is strictly prohibited. Although this email has been scanned for malware, the sender does not accept any responsibility for any loss, disruption or damage to your data or computer system that may occur while using data contained in, or transmitted with, this e-mail. If you have received this e-mail in error, please immediately notify by return e-mail. Thank you.



Please have the generator provide Third Party authorization for Don Degington to respond on behalf of the US EPA.

If the analytical data on LS Laboratories Report HST 18100338 is to be used to characterize the waste, please have the generator include the representative sample ID#s on the profile.

The response to question three states, in part, " … some organic wastes may have been spilled inside the building, probable copper, lead or other minute metals." However, the analytical referenced as representative of the waste to be disposed includes data for PCBs only: how can the generator ensure the debris to be disposed is not contaminated with organics and/or metals?

Muegge, Cheryl

From: Don Edgington <d.edgington@erllc.com>
Sent: Thursday, November 01, 2018 1:28 PM
To: Muegge, Cheryl
Cc: Alderete, Chris; Moore, Gary; Delgado, Paige; Evan Wortman
Subject: RE: DLWN: Special Waste Workflow 10/31/2018 3:45:51 PM/INCOMPLETE: Addt'l Information Required - US EPA - Region 6 Profile 34161818258
Attachments: HS18100338 FJ Doyle Site Final Level II. Final.PDF

Note that (d.edgington@erllc.com) is an external email. Forward unfamiliar emails to infosec.phishing@republicservices.com

Cheryl—

Answering your questions in order:

1) **What purpose was the building used on site?** The building formerly housed F.J. Doyle Salvage, which was a concern involved with recycling out-of-service power transmission transformers for recoverable metals.
2) **What activities or processes occurred in the building?** As the site has been abandoned for several years, it is our assumption that drained carcasses and commercially viable metals were stored inside and probable disassembly of the drained carcasses ensued to recycle same.
3) **What possible contaminants may have been used in it?** Again, our assumption is that some organic wastes may have been spilled inside the building's floor, probable copper, lead and other minute amounts of metals.
4) **How was it determined that no contamination exists in the materials that is to be disposed?** See attached analytical report; specifically analyses on 16 wipe samples taken from wood, metal and concrete areas inside the structure to be demolished.
5) **Please have the generator describe their process for ensuring no contaminated materials is designated for inclusion with C&D for disposal. Additional analytical may be required**. The building will be removed in small, discrete sections and visually assessed for any staining or abnormalities. Debris will be further segregated into metals, concrete, glass and wooded stockpiles and further evaluated prior to loading.

Attachment: ALS Laboratories Final Report – HST 18100338 Final Level II.

All of the wipe samples (16) were taken from various locations on the building and were collected by Weston Services, Inc. representatives.

If you have any other questions/comments, please advise.

Regards,

Don

From: Muegge, Cheryl <CMuegge@republicservices.com>
Sent: Thursday, November 01, 2018 10:57 AM
To: Don Edgington <d.edgington@erllc.com>
Cc: Alderete, Chris <CAlderete@republicservices.com>
Subject: FW: DLWN: Special Waste Workflow 10/31/2018 3:45:51 PM/INCOMPLETE: Addt'l Information Required - US EPA - Region 6 Profile 34161818258

ED 002624 00001126-00006

Don,

We have received an incomplete on the United States Environmental Protection Agency Region 6 / Construction & Demolition Debris Profile 34161818258 citing:

"Please have the generator add more details to their process generating waste: for what purpose was the building used on-site? What activities or processes occurred in the building? What possible contaminants may have been used in it? How was it determined that no contamination exists in the material that is to be disposed? Please have the generator describe their process for ensuring no contaminated material is designated for disposal. Additional analytical may be required."

"What is the metal that constitutes up to 30% of the waste? Please have the generator describe."

Thank you,

Cheryl Muegge
Sales Coordinator - Special Waste

2815 State Hwy 42 N
Kilgore, TX 75662
e cmuegge@republicservices.com
o 903-986-5337
w RepublicServices.com

We'll handle it from here.

[redacted]

From: workflow
Sent: Wednesday, October 31, 2018 9:17 AM
To: Muegge, Cheryl <CMuegge@republicservices.com>
Subject: DLWN: Special Waste Workflow 10/31/2018 3:45:51 PM/INCOMPLETE: Addt'l Information Required

REPOSITORY:	Corporate
USER:	System Admin (cssadmin)
ACTIVITY:	Notify Users

MESSAGE:
Please review the appended notes on the Special Waste Profile package for missing information. Please then email the missing information to the analyst that declined this Special Waste Profile package.

LAST COMPLETED WORKFLOW STEP:
REQUEST FOR APPROVAL: Analyst Review
COMPLETED WORKFLOW STEP:
Joseph Sorokach VOTE: 02 - Insufficient Information
No Comments

WORKFLOW DETAIL:

INSTANCE NAME:	Special Waste Workflow 10/31/2018 3:45:51 PM
ROUTE NAME:	Special Waste Workflow
STEP NAME:	INCOMPLETE: Addt'l Information Required
SUBMITTER NAME:	Cheryl Muegge

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887

October 11, 2018

Jeff Wright
Weston Solutions, Inc.
13702 Coursey Blvd.,
Bldg #7, Ste A
Baton Rouge, LA 70817

Work Order: **HS18100338**

Laboratory Results for: **FJ Doyle Site**

Dear Jeff,

ALS Environmental received 32 sample(s) on Oct 08, 2018 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: JUMOKE.LAWAL
Bernadette A. Fini
Project Manager

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Work Order: HS18100338

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS18100338-01	DRA32-20181004-12-23	Water		04-Oct-2018 11:30	08-Oct-2018 10:30	☐
HS18100338-02	DRA29-20181004-01-51	Soil		04-Oct-2018 08:42	08-Oct-2018 10:30	☐
HS18100338-03	DRA29-20181004-06-51	Soil		04-Oct-2018 08:59	08-Oct-2018 10:30	☐
HS18100338-04	DRA29-20181004-06-52	Soil		04-Oct-2018 08:59	08-Oct-2018 10:30	☐
HS18100338-05	DRA29-20181004-12-51	Soil		04-Oct-2018 09:17	08-Oct-2018 10:30	☐
HS18100338-06	DRA30-20181004-01-51	Soil		04-Oct-2018 09:31	08-Oct-2018 10:30	☐
HS18100338-07	DRA30-20181004-06-51	Soil		04-Oct-2018 09:51	08-Oct-2018 10:30	☐
HS18100338-08	DRA30-20181004-12-51	Soil		04-Oct-2018 10:05	08-Oct-2018 10:30	☐
HS18100338-09	DRA31-20181004-01-51	Soil		04-Oct-2018 10:40	08-Oct-2018 10:30	☐
HS18100338-10	DRA31-20181004-06-51	Soil		04-Oct-2018 11:05	08-Oct-2018 10:30	☐
HS18100338-11	DRA31-20181004-12-51	Soil		04-Oct-2018 11:15	08-Oct-2018 10:30	☐
HS18100338-12	DRA32-20181004-01-51	Soil		04-Oct-2018 10:45	08-Oct-2018 10:30	☐
HS18100338-13	DRA32-20181004-06-51	Soil		04-Oct-2018 10:55	08-Oct-2018 10:30	☐
HS18100338-14	DRA32-20181004-06-52	Soil		04-Oct-2018 10:55	08-Oct-2018 10:30	☐
HS18100338-15	DRA32-20181004-12-51	Soil		04-Oct-2018 11:15	08-Oct-2018 10:30	☐
HS18100338-16	FJD04-09-PCS01-20181004-81	Paint		04-Oct-2018 16:16	08-Oct-2018 10:30	☐
HS18100338-17	FJD04-09-WS01-20181004-81	Wipe		04-Oct-2018 14:11	08-Oct-2018 10:30	☐
HS18100338-18	FJD04-09-WS01-20181004-82	Wipe		04-Oct-2018 14:13	08-Oct-2018 10:30	☐
HS18100338-19	FJD04-09-WS02-20181004-81	Wipe		04-Oct-2018 14:16	08-Oct-2018 10:30	☐
HS18100338-20	FJD04-09-WS03-20181004-81	Wipe		04-Oct-2018 14:20	08-Oct-2018 10:30	☐
HS18100338-21	FJD04-09-WS04-20181004-81	Wipe		04-Oct-2018 14:26	08-Oct-2018 10:30	☐
HS18100338-22	FJD04-09-WS05-20181004-81	Wipe		04-Oct-2018 14:28	08-Oct-2018 10:30	☐
HS18100338-23	FJD04-09-WS05-20181004-82	Wipe		04-Oct-2018 14:31	08-Oct-2018 10:30	☐
HS18100338-24	FJD04-09-WS06-20181004-81	Wipe		04-Oct-2018 14:33	08-Oct-2018 10:30	☐
HS18100338-25	FJD04-09-WS07-20181004-81	Wipe		04-Oct-2018 14:36	08-Oct-2018 10:30	☐
HS18100338-26	FJD04-09-WS08-20181004-81	Wipe		04-Oct-2018 14:38	08-Oct-2018 10:30	☐

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Work Order: HS18100338

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS18100338-27	FJD04-09-WS09-20181004-81	Wipe		04-Oct-2018 14:42	08-Oct-2018 10:30	☐
HS18100338-28	FJD04-09-WS10-20181004-81	Wipe		04-Oct-2018 14:46	08-Oct-2018 10:30	☐
HS18100338-29	FJD04-09-WS11-20181004-81	Wipe		04-Oct-2018 14:54	08-Oct-2018 10:30	☐
HS18100338-30	FJD04-09-WS12-20181004-81	Wipe		04-Oct-2018 14:58	08-Oct-2018 10:30	☐
HS18100338-31	FJD04-09-WS13-20181004-81	Wipe		04-Oct-2018 15:02	08-Oct-2018 10:30	☐
HS18100338-32	FJD04-09-WS14-20181004-81	Wipe		04-Oct-2018 15:06	08-Oct-2018 10:30	☐

Client: Weston Solutions, Inc. **CASE NARRATIVE**
Project: FJ Doyle Site
Work Order: HS18100338

Work Order Comments

- Login notes:

Samples received out of temp. Per client email 10-8-18 continue with analysis.
Sample collection times differ for the following: DRA31-20181004-12-51 - COC = 11:15, Sx = 11:14. FJD04-09-WS14-20181004-81 - COC = 15:06, Sx = 14:06. Samples logged in per chain.

ECD Organics by Method SW8082

Batch ID: 133300,133307,133318,133387

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

GCMS Semivolatiles by Method SW8270

Batch ID: 133244

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Batch ID: 133297

Sample ID: DRA29-20181004-01-51 (HS18100338-02MS)

- One or more of the matrix spike compounds for the EPA 8270 analysis were recovered outside of the quality control limits due to sample matrix interferences. The LCS sample associated to this sample was within control limits.

Sample ID: DRA29-20181004-01-51 (HS18100338-02MSD)

- One or more of the matrix spike compounds for the EPA 8270 analysis were recovered outside of the quality control limits due to sample matrix interferences. The LCS sample associated to this sample was within control limits.

Metals by Method SW7471A

Batch ID: 133369

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Metals by Method SW7470

Batch ID: 133349

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Metals by Method SW6020

Batch ID: 133282

Sample ID: DRA29-20181004-01-51 (HS18100338-02MS)

- MS and MSD failed for Antimony, Chromium, Magnesium, Potassium, Vanadium, but passed in PSD

- The MS and/or MSD recovery was outside of the control; however, the result in the parent sample is greater than 4x the spike amount. Calcium, Manganese, Zinc, Iron, Barium

- Copper failed in MS and MSD, but passed in PDS

- The MS and/or MSD recovery was outside of the control; however, the result in the parent sample is greater than 4x the spike amount. Aluminum

Sample ID: DRA29-20181004-01-51 (HS18100338-02MSD)

ED_002624_00001126-00011

Client: Weston Solutions, Inc. **CASE NARRATIVE**
Project: FJ Doyle Site
Work Order: HS18100338

Metals by Method SW6020

Batch ID: 133282

- Due to non-homogeneity of the soil sample matrix the MS/MSD recoveries and RPD were outside the control limits. Barium, Zinc

Sample ID: DRA29-20181004-01-51 (HS18100338-02PDS)

- The PDS recovery was outside method control limits, however the result in the parent sample is greater than 4x the spike amount. Zinc

Sample ID: DRA29-20181004-01-51 (HS18100338-02SD)

- The percent difference between the results of the sample and the serial dilution were greater than 10%. Copper

Batch ID: 133292

Sample ID: HS18100285-02MS

- MS/MSD and DUPs are for an unrelated sample

WetChemistry by Method ASTM D2216

Batch ID: R325102

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

ED_002624_00001126-00012

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA32-20181004-12-23
Collection Date: 04-Oct-2018 11:30

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-01
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES	**Method:SW8270**				Prep:SW3510 / 08-Oct-2018		Analyst: GEY
1,1′-Biphenyl	U		0.000024	0.00020	mg/L	1	10-Oct-2018 14:40
2,4,5-Trichlorophenol	U		0.000057	0.00020	mg/L	1	10-Oct-2018 14:40
2,4,6-Trichlorophenol	U		0.000048	0.00020	mg/L	1	10-Oct-2018 14:40
2,4-Dichlorophenol	U		0.000043	0.00020	mg/L	1	10-Oct-2018 14:40
2,4-Dimethylphenol	U		0.000040	0.00020	mg/L	1	10-Oct-2018 14:40
2,4-Dinitrophenol	U		0.00010	0.0010	mg/L	1	10-Oct-2018 14:40
2,4-Dinitrotoluene	U		0.000058	0.00020	mg/L	1	10-Oct-2018 14:40
2,6-Dinitrotoluene	U		0.000042	0.00020	mg/L	1	10-Oct-2018 14:40
2-Chloronaphthalene	U		0.000021	0.00020	mg/L	1	10-Oct-2018 14:40
2-Chlorophenol	U		0.000036	0.00020	mg/L	1	10-Oct-2018 14:40
2-Methylnaphthalene	U		0.000019	0.00010	mg/L	1	10-Oct-2018 14:40
2-Methylphenol	U		0.000045	0.00020	mg/L	1	10-Oct-2018 14:40
2-Nitroaniline	U		0.000041	0.00020	mg/L	1	10-Oct-2018 14:40
2-Nitrophenol	U		0.000034	0.00020	mg/L	1	10-Oct-2018 14:40
3&4-Methylphenol	U		0.000036	0.00020	mg/L	1	10-Oct-2018 14:40
3,3′-Dichlorobenzidine	U		0.000044	0.00020	mg/L	1	10-Oct-2018 14:40
3-Nitroaniline	U		0.000049	0.00020	mg/L	1	10-Oct-2018 14:40
4,6-Dinitro-2-methylphenol	U		0.000020	0.00020	mg/L	1	10-Oct-2018 14:40
4-Bromophenyl phenyl ether	U		0.000051	0.00020	mg/L	1	10-Oct-2018 14:40
4-Chloro-3-methylphenol	U		0.000032	0.00020	mg/L	1	10-Oct-2018 14:40
4-Chloroaniline	U		0.000039	0.00020	mg/L	1	10-Oct-2018 14:40
4-Chlorophenyl phenyl ether	U		0.000044	0.00020	mg/L	1	10-Oct-2018 14:40
4-Nitroaniline	U		0.000035	0.00020	mg/L	1	10-Oct-2018 14:40
4-Nitrophenol	U		0.000047	0.0010	mg/L	1	10-Oct-2018 14:40
Acenaphthene	U		0.000027	0.00010	mg/L	1	10-Oct-2018 14:40
Acenaphthylene	U		0.000015	0.00010	mg/L	1	10-Oct-2018 14:40
Acetophenone	U		0.000024	0.00020	mg/L	1	10-Oct-2018 14:40
Anthracene	U		0.000014	0.00010	mg/L	1	10-Oct-2018 14:40
Atrazine	U		0.000033	0.00020	mg/L	1	10-Oct-2018 14:40
Benz(a)anthracene	U		0.000050	0.00010	mg/L	1	10-Oct-2018 14:40
Benzaldehyde	U	n	0.000030	0.00020	mg/L	1	10-Oct-2018 14:40
Benzo(a)pyrene	U		0.000020	0.00010	mg/L	1	10-Oct-2018 14:40
Benzo(b)fluoranthene	U		0.000023	0.00010	mg/L	1	10-Oct-2018 14:40
Benzo(g,h,i)perylene	U		0.000014	0.00010	mg/L	1	10-Oct-2018 14:40
Benzo(k)fluoranthene	U		0.000019	0.00010	mg/L	1	10-Oct-2018 14:40
Bis(2-chloro-1-methylethyl) ether	U		0.000070	0.00020	mg/L	1	10-Oct-2018 14:40
Bis(2-chloroethoxy)methane	U		0.000030	0.00020	mg/L	1	10-Oct-2018 14:40
Bis(2-chloroethyl)ether	U		0.000026	0.00020	mg/L	1	10-Oct-2018 14:40
Bis(2-ethylhexyl)phthalate	**0.00014**	J	**0.000037**	**0.00020**	**mg/L**	1	10-Oct-2018 14:40

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA32-20181004-12-23
Collection Date: 04-Oct-2018 11:30

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-01
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES	**Method:SW8270**			Prep:SW3510 / 08-Oct-2018			Analyst: GEY
Butyl benzyl phthalate	U		0.000019	0.00020	mg/L	1	10-Oct-2018 14:40
Caprolactam	**0.00027**		**0.000045**	**0.00020**	**mg/L**	1	10-Oct-2018 14:40
Carbazole	U		0.000025	0.00020	mg/L	1	10-Oct-2018 14:40
Chrysene	U		0.000021	0.00010	mg/L	1	10-Oct-2018 14:40
Dibenz(a,h)anthracene	U		0.000024	0.00010	mg/L	1	10-Oct-2018 14:40
Dibenzofuran	U		0.000020	0.00010	mg/L	1	10-Oct-2018 14:40
Diethyl phthalate	U		0.000030	0.00020	mg/L	1	10-Oct-2018 14:40
Dimethyl phthalate	U		0.000041	0.00020	mg/L	1	10-Oct-2018 14:40
Di-n-butyl phthalate	**0.00023**		**0.000020**	**0.00020**	**mg/L**	1	10-Oct-2018 14:40
Di-n-octyl phthalate	U		0.000020	0.00020	mg/L	1	10-Oct-2018 14:40
Fluoranthene	U		0.000010	0.00010	mg/L	1	10-Oct-2018 14:40
Fluorene	U		0.000030	0.00010	mg/L	1	10-Oct-2018 14:40
Hexachlorobenzene	U		0.000044	0.00020	mg/L	1	10-Oct-2018 14:40
Hexachlorobutadiene	U		0.000030	0.00020	mg/L	1	10-Oct-2018 14:40
Hexachlorocyclopentadiene	U		0.000030	0.00020	mg/L	1	10-Oct-2018 14:40
Hexachloroethane	U		0.000059	0.00020	mg/L	1	10-Oct-2018 14:40
Indeno(1,2,3-cd)pyrene	U		0.000022	0.00010	mg/L	1	10-Oct-2018 14:40
Isophorone	U		0.000025	0.00020	mg/L	1	10-Oct-2018 14:40
Naphthalene	U		0.000020	0.00010	mg/L	1	10-Oct-2018 14:40
Nitrobenzene	U		0.000024	0.00020	mg/L	1	10-Oct-2018 14:40
N-Nitrosodi-n-propylamine	U		0.000032	0.00020	mg/L	1	10-Oct-2018 14:40
N-Nitrosodiphenylamine	U		0.000025	0.00020	mg/L	1	10-Oct-2018 14:40
Pentachlorophenol	U		0.000079	0.00020	mg/L	1	10-Oct-2018 14:40
Phenanthrene	U		0.000021	0.00010	mg/L	1	10-Oct-2018 14:40
Phenol	U		0.000035	0.00020	mg/L	1	10-Oct-2018 14:40
Pyrene	U		0.000019	0.00010	mg/L	1	10-Oct-2018 14:40
Surr: 2,4,6-Tribromophenol	*69.1*			*34-129*	*%REC*	*1*	*10-Oct-2018 14:40*
Surr: 2-Fluorobiphenyl	*76.7*			*40-125*	*%REC*	*1*	*10-Oct-2018 14:40*
Surr: 2-Fluorophenol	*54.6*			*20-120*	*%REC*	*1*	*10-Oct-2018 14:40*
Surr: 4-Terphenyl-d14	*89.4*			*40-135*	*%REC*	*1*	*10-Oct-2018 14:40*
Surr: Nitrobenzene-d5	*71.5*			*41-120*	*%REC*	*1*	*10-Oct-2018 14:40*
Surr: Phenol-d6	*59.1*			*20-120*	*%REC*	*1*	*10-Oct-2018 14:40*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA32-20181004-12-23
Collection Date: 04-Oct-2018 11:30

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-01
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A		**Method:SW8082**			Prep:SW3510C/3665A / 09-Oct-2018		Analyst: JBA
Aroclor 1016	U		0.000667	0.00208	mg/L	1	10-Oct-2018 12:18
Aroclor 1221	U		0.000625	0.00208	mg/L	1	10-Oct-2018 12:18
Aroclor 1232	U		0.000625	0.00208	mg/L	1	10-Oct-2018 12:18
Aroclor 1242	U		0.000500	0.00208	mg/L	1	10-Oct-2018 12:18
Aroclor 1248	U		0.000625	0.00208	mg/L	1	10-Oct-2018 12:18
Aroclor 1254	U		0.000625	0.00208	mg/L	1	10-Oct-2018 12:18
Aroclor 1260	U		0.000833	0.00208	mg/L	1	10-Oct-2018 12:18
Surr: Decachlorobiphenyl	*113*			*54-140*	*%REC*	*1*	*10-Oct-2018 12:18*
Surr: Tetrachloro-m-xylene	*95.7*			*53-137*	*%REC*	*1*	*10-Oct-2018 12:18*
ICP-MS METALS BY SW6020A		**Method:SW6020**			Prep:SW3010A / 09-Oct-2018		Analyst: JC
Aluminum	**0.0423**		**0.00180**	**0.0100**	**mg/L**	1	11-Oct-2018 15:27
Antimony	U		0.000400	0.00200	mg/L	1	11-Oct-2018 15:27
Arsenic	U		0.000400	0.00200	mg/L	1	11-Oct-2018 15:27
Barium	**0.00453**		**0.00190**	**0.00400**	**mg/L**	1	11-Oct-2018 15:27
Beryllium	**0.000215**	J	**0.000200**	**0.00200**	**mg/L**	1	11-Oct-2018 15:27
Cadmium	U		0.000200	0.00200	mg/L	1	11-Oct-2018 15:27
Calcium	**1.81**		**0.0340**	**0.500**	**mg/L**	1	11-Oct-2018 15:27
Chromium	**0.000570**	J	**0.000400**	**0.00400**	**mg/L**	1	11-Oct-2018 15:27
Cobalt	**0.000264**	J	**0.000200**	**0.00500**	**mg/L**	1	11-Oct-2018 15:27
Copper	**0.00830**		**0.00100**	**0.00200**	**mg/L**	1	11-Oct-2018 15:27
Iron	U		0.0120	0.200	mg/L	1	11-Oct-2018 15:27
Lead	U		0.000600	0.00200	mg/L	1	11-Oct-2018 15:27
Magnesium	**0.320**		**0.0100**	**0.200**	**mg/L**	1	11-Oct-2018 15:27
Manganese	**0.0193**		**0.000700**	**0.00500**	**mg/L**	1	11-Oct-2018 15:27
Nickel	**0.000818**	J	**0.000600**	**0.00200**	**mg/L**	1	11-Oct-2018 15:27
Potassium	**0.180**	J	**0.0180**	**0.200**	**mg/L**	1	11-Oct-2018 15:27
Selenium	U		0.00110	0.00200	mg/L	1	11-Oct-2018 15:27
Silver	U		0.000200	0.00200	mg/L	1	11-Oct-2018 15:27
Sodium	**0.368**		**0.0140**	**0.200**	**mg/L**	1	11-Oct-2018 15:27
Thallium	U		0.000200	0.00200	mg/L	1	11-Oct-2018 15:27
Vanadium	U		0.000600	0.00500	mg/L	1	11-Oct-2018 15:27
Zinc	**0.00706**		**0.00200**	**0.00400**	**mg/L**	1	11-Oct-2018 15:27
MERCURY BY SW7470A		**Method:SW7470**			Prep:SW7470 / 10-Oct-2018		Analyst: JCJ
Mercury	U		0.0000300	0.000200	mg/L	1	10-Oct-2018 16:05

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA29-20181004-01-51
Collection Date: 04-Oct-2018 08:42

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-02
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**				Prep:SW3541 / 08-Oct-2018		Analyst: ACN
1,1´-Biphenyl	U		0.0021	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
2,4,5-Trichlorophenol	U		0.0031	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
2,4,6-Trichlorophenol	U		0.0021	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
2,4-Dichlorophenol	U		0.0016	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
2,4-Dimethylphenol	U		0.0041	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
2,4-Dinitrophenol	U		0.0055	0.016	mg/Kg-dry	1	10-Oct-2018 13:56
2,4-Dinitrotoluene	U		0.0011	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
2,6-Dinitrotoluene	U		0.0041	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
2-Chloronaphthalene	U		0.0016	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
2-Chlorophenol	U		0.0016	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
2-Methylnaphthalene	U		0.00062	0.0041	mg/Kg-dry	1	10-Oct-2018 13:56
2-Methylphenol	U		0.0014	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
2-Nitroaniline	U		0.0023	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
2-Nitrophenol	U		0.0031	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
3&4-Methylphenol	U		0.0012	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
3,3´-Dichlorobenzidine	U		0.0031	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
3-Nitroaniline	U		0.0023	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
4,6-Dinitro-2-methylphenol	U		0.0026	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
4-Bromophenyl phenyl ether	U		0.0020	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
4-Chloro-3-methylphenol	U		0.00086	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
4-Chloroaniline	U		0.0014	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
4-Chlorophenyl phenyl ether	U		0.0018	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
4-Nitroaniline	U		0.0027	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
4-Nitrophenol	U		0.0023	0.016	mg/Kg-dry	1	10-Oct-2018 13:56
Acenaphthene	U		0.00062	0.0041	mg/Kg-dry	1	10-Oct-2018 13:56
Acenaphthylene	U		0.0012	0.0041	mg/Kg-dry	1	10-Oct-2018 13:56
Acetophenone	U		0.00099	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
Anthracene	U		0.00062	0.0041	mg/Kg-dry	1	10-Oct-2018 13:56
Atrazine	U		0.0025	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
Benz(a)anthracene	U		0.0020	0.0041	mg/Kg-dry	1	10-Oct-2018 13:56
Benzaldehyde	U	n	0.0015	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
Benzo(a)pyrene	U		0.0012	0.0041	mg/Kg-dry	1	10-Oct-2018 13:56
Benzo(b)fluoranthene	U		0.0015	0.0041	mg/Kg-dry	1	10-Oct-2018 13:56
Benzo(g,h,i)perylene	U		0.00086	0.0041	mg/Kg-dry	1	10-Oct-2018 13:56
Benzo(k)fluoranthene	U		0.0011	0.0041	mg/Kg-dry	1	10-Oct-2018 13:56
Bis(2-chloro-1-methylethyl) ether	U		0.0017	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
Bis(2-chloroethoxy)methane	U		0.0011	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
Bis(2-chloroethyl)ether	U		0.0014	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
Bis(2-ethylhexyl)phthalate	**0.0069**	J	**0.0021**	**0.0081**	**mg/Kg-dry**	1	10-Oct-2018 13:56

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA29-20181004-01-51
Collection Date: 04-Oct-2018 08:42

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-02
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**				Prep:SW3541 / 08-Oct-2018		Analyst: ACN
Butyl benzyl phthalate	U		0.0016	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
Caprolactam	U		0.0015	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
Carbazole	U		0.0015	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
Chrysene	U		0.00099	0.0041	mg/Kg-dry	1	10-Oct-2018 13:56
Dibenz(a,h)anthracene	U		0.0020	0.0041	mg/Kg-dry	1	10-Oct-2018 13:56
Dibenzofuran	U		0.00086	0.0041	mg/Kg-dry	1	10-Oct-2018 13:56
Diethyl phthalate	U		0.0012	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
Dimethyl phthalate	U		0.00099	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
Di-n-butyl phthalate	U		0.0015	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
Di-n-octyl phthalate	U		0.0011	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
Fluoranthene	**0.0018**	J	**0.0014**	**0.0041**	**mg/Kg-dry**	1	10-Oct-2018 13:56
Fluorene	U		0.0014	0.0041	mg/Kg-dry	1	10-Oct-2018 13:56
Hexachlorobenzene	U		0.0011	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
Hexachlorobutadiene	U		0.0015	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
Hexachlorocyclopentadiene	U		0.00099	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
Hexachloroethane	U		0.0018	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
Indeno(1,2,3-cd)pyrene	U		0.00099	0.0041	mg/Kg-dry	1	10-Oct-2018 13:56
Isophorone	U		0.00099	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
Naphthalene	U		0.00074	0.0041	mg/Kg-dry	1	10-Oct-2018 13:56
Nitrobenzene	U		0.0011	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
N-Nitrosodi-n-propylamine	U		0.0014	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
N-Nitrosodiphenylamine	U		0.00086	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
Pentachlorophenol	U		0.0041	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
Phenanthrene	U		0.0018	0.0041	mg/Kg-dry	1	10-Oct-2018 13:56
Phenol	U		0.0014	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
Pyrene	**0.0031**	J	**0.00074**	**0.0041**	**mg/Kg-dry**	1	10-Oct-2018 13:56
Surr: 2,4,6-Tribromophenol	*79.4*			*36-126*	*%REC*	*1*	*10-Oct-2018 13:56*
Surr: 2-Fluorobiphenyl	*79.3*			*43-125*	*%REC*	*1*	*10-Oct-2018 13:56*
Surr: 2-Fluorophenol	*53.4*			*37-125*	*%REC*	*1*	*10-Oct-2018 13:56*
Surr: 4-Terphenyl-d14	*96.2*			*32-125*	*%REC*	*1*	*10-Oct-2018 13:56*
Surr: Nitrobenzene-d5	*70.7*			*37-125*	*%REC*	*1*	*10-Oct-2018 13:56*
Surr: Phenol-d6	*63.9*			*40-125*	*%REC*	*1*	*10-Oct-2018 13:56*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA29-20181004-01-51
Collection Date: 04-Oct-2018 08:42

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-02
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A		**Method:SW8082**			Prep:SW3541/3665A / 08-Oct-2018		Analyst: JBA
Aroclor 1016	U		0.0052	0.021	mg/Kg-dry	1	10-Oct-2018 03:24
Aroclor 1221	U		0.0069	0.021	mg/Kg-dry	1	10-Oct-2018 03:24
Aroclor 1232	U		0.0055	0.021	mg/Kg-dry	1	10-Oct-2018 03:24
Aroclor 1242	U		0.0073	0.021	mg/Kg-dry	1	10-Oct-2018 03:24
Aroclor 1248	U		0.0073	0.021	mg/Kg-dry	1	10-Oct-2018 03:24
Aroclor 1254	U		0.0058	0.021	mg/Kg-dry	1	10-Oct-2018 03:24
Aroclor 1260	U		0.0049	0.021	mg/Kg-dry	1	10-Oct-2018 03:24
Surr: Decachlorobiphenyl	*124*			*54-143*	*%REC*	*1*	*10-Oct-2018 03:24*
Surr: Tetrachloro-m-xylene	*107*			*50-140*	*%REC*	*1*	*10-Oct-2018 03:24*
METALS BY SW6020A		**Method:SW6020**			Prep:SW3050A / 08-Oct-2018		Analyst: JC
Aluminum	**12,300**		**27.5**	**237**	**mg/Kg-dry**	100	11-Oct-2018 14:32
Antimony	**0.297**	J	**0.0770**	**0.592**	**mg/Kg-dry**	1	10-Oct-2018 22:08
Arsenic	**9.25**		**0.0829**	**0.592**	**mg/Kg-dry**	1	10-Oct-2018 22:08
Barium	**122**		**0.0355**	**0.592**	**mg/Kg-dry**	1	10-Oct-2018 22:08
Beryllium	**0.599**		**0.0249**	**0.592**	**mg/Kg-dry**	1	10-Oct-2018 22:08
Cadmium	**0.502**	J	**0.0320**	**0.592**	**mg/Kg-dry**	1	10-Oct-2018 22:08
Calcium	**217,000**		**588**	**5920**	**mg/Kg-dry**	100	11-Oct-2018 14:32
Chromium	**18.0**		**0.0273**	**0.592**	**mg/Kg-dry**	1	10-Oct-2018 22:08
Cobalt	**8.04**		**0.0178**	**0.592**	**mg/Kg-dry**	1	10-Oct-2018 22:08
Copper	**31.7**		**0.0450**	**0.237**	**mg/Kg-dry**	1	11-Oct-2018 16:11
Iron	**12,100**		**2.17**	**59.2**	**mg/Kg-dry**	1	10-Oct-2018 22:08
Lead	**28.5**		**0.0154**	**0.592**	**mg/Kg-dry**	1	10-Oct-2018 22:08
Magnesium	**3,440**		**2.97**	**59.2**	**mg/Kg-dry**	1	10-Oct-2018 22:08
Manganese	**1,270**		**5.09**	**59.2**	**mg/Kg-dry**	100	11-Oct-2018 14:32
Nickel	**17.3**		**0.0569**	**0.592**	**mg/Kg-dry**	1	10-Oct-2018 22:08
Potassium	**1,610**		**7.96**	**59.2**	**mg/Kg-dry**	1	10-Oct-2018 22:08
Selenium	**0.832**		**0.108**	**0.592**	**mg/Kg-dry**	1	10-Oct-2018 22:08
Silver	**0.0820**	J	**0.0178**	**0.592**	**mg/Kg-dry**	1	10-Oct-2018 22:08
Sodium	**135**		**4.94**	**59.2**	**mg/Kg-dry**	1	10-Oct-2018 22:08
Thallium	U		0.264	0.592	mg/Kg-dry	1	10-Oct-2018 22:08
Vanadium	**43.2**		**0.0889**	**0.592**	**mg/Kg-dry**	1	10-Oct-2018 22:08
Zinc	**84.5**		**0.201**	**0.592**	**mg/Kg-dry**	1	10-Oct-2018 22:08
MERCURY BY SW7471B		**Method:SW7471A**			Prep:SW7471A / 10-Oct-2018		Analyst: JCJ
Mercury	**0.0246**		**0.000617**	**0.00436**	**mg/Kg-dry**	1	11-Oct-2018 13:10
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**19.0**		**0.0100**	**0.0100**	**wt%**	1	09-Oct-2018 09:58

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc. **ANALYTICAL REPORT**
Project: FJ Doyle Site WorkOrder:HS18100338
Sample ID: DRA29-20181004-06-51 Lab ID:HS18100338-03
Collection Date: 04-Oct-2018 08:59 Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**			Prep:SW3541 / 08-Oct-2018			Analyst: ACN
1,1´-Biphenyl	U		0.0020	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
2,4,5-Trichlorophenol	U		0.0030	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
2,4,6-Trichlorophenol	U		0.0020	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
2,4-Dichlorophenol	U		0.0016	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
2,4-Dimethylphenol	U		0.0039	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
2,4-Dinitrophenol	U		0.0054	0.016	mg/Kg-dry	1	10-Oct-2018 14:58
2,4-Dinitrotoluene	U		0.0011	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
2,6-Dinitrotoluene	U		0.0039	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
2-Chloronaphthalene	U		0.0016	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
2-Chlorophenol	U		0.0016	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
2-Methylnaphthalene	**0.0062**		**0.00060**	**0.0039**	**mg/Kg-dry**	1	10-Oct-2018 14:58
2-Methylphenol	U		0.0013	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
2-Nitroaniline	U		0.0023	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
2-Nitrophenol	U		0.0030	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
3&4-Methylphenol	U		0.0012	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
3,3´-Dichlorobenzidine	U		0.0030	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
3-Nitroaniline	U		0.0023	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
4,6-Dinitro-2-methylphenol	U		0.0025	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
4-Bromophenyl phenyl ether	U		0.0019	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
4-Chloro-3-methylphenol	U		0.00083	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
4-Chloroaniline	U		0.0013	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
4-Chlorophenyl phenyl ether	U		0.0018	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
4-Nitroaniline	U		0.0026	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
4-Nitrophenol	U		0.0023	0.016	mg/Kg-dry	1	10-Oct-2018 14:58
Acenaphthene	U		0.00060	0.0039	mg/Kg-dry	1	10-Oct-2018 14:58
Acenaphthylene	U		0.0012	0.0039	mg/Kg-dry	1	10-Oct-2018 14:58
Acetophenone	U		0.00095	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
Anthracene	U		0.00060	0.0039	mg/Kg-dry	1	10-Oct-2018 14:58
Atrazine	U		0.0024	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
Benz(a)anthracene	**0.0075**		**0.0019**	**0.0039**	**mg/Kg-dry**	1	10-Oct-2018 14:58
Benzaldehyde	U	n	0.0014	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
Benzo(a)pyrene	U		0.0012	0.0039	mg/Kg-dry	1	10-Oct-2018 14:58
Benzo(b)fluoranthene	U		0.0014	0.0039	mg/Kg-dry	1	10-Oct-2018 14:58
Benzo(g,h,i)perylene	U		0.00083	0.0039	mg/Kg-dry	1	10-Oct-2018 14:58
Benzo(k)fluoranthene	U		0.0011	0.0039	mg/Kg-dry	1	10-Oct-2018 14:58
Bis(2-chloro-1-methylethyl) ether	U		0.0017	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
Bis(2-chloroethoxy)methane	U		0.0011	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
Bis(2-chloroethyl)ether	U		0.0013	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
Bis(2-ethylhexyl)phthalate	**0.0096**		**0.0020**	**0.0079**	**mg/Kg-dry**	1	10-Oct-2018 14:58

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA29-20181004-06-51
Collection Date: 04-Oct-2018 08:59

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-03
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**				Prep:SW3541 / 08-Oct-2018		Analyst: ACN
Butyl benzyl phthalate	U		0.0016	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
Caprolactam	U		0.0014	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
Carbazole	U		0.0014	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
Chrysene	**0.0073**		**0.00095**	**0.0039**	**mg/Kg-dry**	1	10-Oct-2018 14:58
Dibenz(a,h)anthracene	U		0.0019	0.0039	mg/Kg-dry	1	10-Oct-2018 14:58
Dibenzofuran	U		0.00083	0.0039	mg/Kg-dry	1	10-Oct-2018 14:58
Diethyl phthalate	U		0.0012	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
Dimethyl phthalate	U		0.00095	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
Di-n-butyl phthalate	U		0.0014	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
Di-n-octyl phthalate	U		0.0011	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
Fluoranthene	U		0.0013	0.0039	mg/Kg-dry	1	10-Oct-2018 14:58
Fluorene	**0.0043**		**0.0013**	**0.0039**	**mg/Kg-dry**	1	10-Oct-2018 14:58
Hexachlorobenzene	U		0.0011	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
Hexachlorobutadiene	U		0.0014	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
Hexachlorocyclopentadiene	U		0.00095	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
Hexachloroethane	U		0.0018	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
Indeno(1,2,3-cd)pyrene	U		0.00095	0.0039	mg/Kg-dry	1	10-Oct-2018 14:58
Isophorone	U		0.00095	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
Naphthalene	**0.0014**	J	**0.00072**	**0.0039**	**mg/Kg-dry**	1	10-Oct-2018 14:58
Nitrobenzene	U		0.0011	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
N-Nitrosodi-n-propylamine	U		0.0013	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
N-Nitrosodiphenylamine	U		0.00083	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
Pentachlorophenol	U		0.0039	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
Phenanthrene	**0.020**		**0.0018**	**0.0039**	**mg/Kg-dry**	1	10-Oct-2018 14:58
Phenol	U		0.0013	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
Pyrene	U		0.00072	0.0039	mg/Kg-dry	1	10-Oct-2018 14:58
Surr: 2,4,6-Tribromophenol	*77.6*			*36-126*	*%REC*	*1*	*10-Oct-2018 14:58*
Surr: 2-Fluorobiphenyl	*77.4*			*43-125*	*%REC*	*1*	*10-Oct-2018 14:58*
Surr: 2-Fluorophenol	*55.3*			*37-125*	*%REC*	*1*	*10-Oct-2018 14:58*
Surr: 4-Terphenyl-d14	*82.3*			*32-125*	*%REC*	*1*	*10-Oct-2018 14:58*
Surr: Nitrobenzene-d5	*70.9*			*37-125*	*%REC*	*1*	*10-Oct-2018 14:58*
Surr: Phenol-d6	*65.8*			*40-125*	*%REC*	*1*	*10-Oct-2018 14:58*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA29-20181004-06-51
Collection Date: 04-Oct-2018 08:59

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-03
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A		**Method:SW8082**			Prep:SW3541/3665A / 08-Oct-2018		Analyst: JBA
Aroclor 1016	U		0.0050	0.020	mg/Kg-dry	1	10-Oct-2018 04:43
Aroclor 1221	U		0.0067	0.020	mg/Kg-dry	1	10-Oct-2018 04:43
Aroclor 1232	U		0.0054	0.020	mg/Kg-dry	1	10-Oct-2018 04:43
Aroclor 1242	U		0.0070	0.020	mg/Kg-dry	1	10-Oct-2018 04:43
Aroclor 1248	U		0.0070	0.020	mg/Kg-dry	1	10-Oct-2018 04:43
Aroclor 1254	U		0.0056	0.020	mg/Kg-dry	1	10-Oct-2018 04:43
Aroclor 1260	U		0.0048	0.020	mg/Kg-dry	1	10-Oct-2018 04:43
Surr: Decachlorobiphenyl	*133*			*54-143*	*%REC*	*1*	*10-Oct-2018 04:43*
Surr: Tetrachloro-m-xylene	*116*			*50-140*	*%REC*	*1*	*10-Oct-2018 04:43*
METALS BY SW6020A		**Method:SW6020**			Prep:SW3050A / 08-Oct-2018		Analyst: JC
Aluminum	**15,900**		**26.8**	**231**	**mg/Kg-dry**	100	11-Oct-2018 14:39
Antimony	**0.240**	J	**0.0750**	**0.577**	**mg/Kg-dry**	1	10-Oct-2018 22:34
Arsenic	**11.2**		**0.0808**	**0.577**	**mg/Kg-dry**	1	10-Oct-2018 22:34
Barium	**126**		**0.0346**	**0.577**	**mg/Kg-dry**	1	10-Oct-2018 22:34
Beryllium	**0.704**		**0.0242**	**0.577**	**mg/Kg-dry**	1	10-Oct-2018 22:34
Cadmium	**0.418**	J	**0.0312**	**0.577**	**mg/Kg-dry**	1	10-Oct-2018 22:34
Calcium	**225,000**		**573**	**5770**	**mg/Kg-dry**	100	11-Oct-2018 14:39
Chromium	**18.7**		**0.0265**	**0.577**	**mg/Kg-dry**	1	10-Oct-2018 22:34
Cobalt	**8.80**		**0.0173**	**0.577**	**mg/Kg-dry**	1	10-Oct-2018 22:34
Copper	**30.7**		**0.0439**	**0.231**	**mg/Kg-dry**	1	11-Oct-2018 16:22
Iron	**14,200**		**2.11**	**57.7**	**mg/Kg-dry**	1	10-Oct-2018 22:34
Lead	**26.1**		**0.0150**	**0.577**	**mg/Kg-dry**	1	10-Oct-2018 22:34
Magnesium	**3,410**		**2.90**	**57.7**	**mg/Kg-dry**	1	10-Oct-2018 22:34
Manganese	**1,500**		**4.96**	**57.7**	**mg/Kg-dry**	100	11-Oct-2018 14:39
Nickel	**21.6**		**0.0554**	**0.577**	**mg/Kg-dry**	1	11-Oct-2018 16:22
Potassium	**1,560**		**7.76**	**57.7**	**mg/Kg-dry**	1	10-Oct-2018 22:34
Selenium	**0.843**		**0.105**	**0.577**	**mg/Kg-dry**	1	11-Oct-2018 16:22
Silver	**0.0727**	J	**0.0173**	**0.577**	**mg/Kg-dry**	1	10-Oct-2018 22:34
Sodium	**137**		**4.81**	**57.7**	**mg/Kg-dry**	1	10-Oct-2018 22:34
Thallium	U		0.257	0.577	mg/Kg-dry	1	10-Oct-2018 22:34
Vanadium	**47.4**		**0.0866**	**0.577**	**mg/Kg-dry**	1	10-Oct-2018 22:34
Zinc	**61.0**		**0.196**	**0.577**	**mg/Kg-dry**	1	10-Oct-2018 22:34
MERCURY BY SW7471B		**Method:SW7471A**			Prep:SW7471A / 10-Oct-2018		Analyst: JCJ
Mercury	**0.0191**		**0.000589**	**0.00417**	**mg/Kg-dry**	1	11-Oct-2018 13:15
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**16.3**		**0.0100**	**0.0100**	**wt%**	1	09-Oct-2018 09:58

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA29-20181004-06-52
Collection Date: 04-Oct-2018 08:59

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-04
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**				Prep:SW3541 / 08-Oct-2018		Analyst: ACN
1,1´-Biphenyl	U		0.0020	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
2,4,5-Trichlorophenol	U		0.0030	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
2,4,6-Trichlorophenol	U		0.0020	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
2,4-Dichlorophenol	U		0.0016	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
2,4-Dimethylphenol	U		0.0040	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
2,4-Dinitrophenol	U		0.0054	0.016	mg/Kg-dry	1	10-Oct-2018 15:18
2,4-Dinitrotoluene	U		0.0011	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
2,6-Dinitrotoluene	U		0.0040	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
2-Chloronaphthalene	U		0.0016	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
2-Chlorophenol	U		0.0016	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
2-Methylnaphthalene	**0.0031**	J	**0.00060**	**0.0040**	**mg/Kg-dry**	1	10-Oct-2018 15:18
2-Methylphenol	U		0.0013	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
2-Nitroaniline	U		0.0023	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
2-Nitrophenol	U		0.0030	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
3&4-Methylphenol	U		0.0012	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
3,3´-Dichlorobenzidine	U		0.0030	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
3-Nitroaniline	U		0.0023	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
4,6-Dinitro-2-methylphenol	U		0.0025	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
4-Bromophenyl phenyl ether	U		0.0019	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
4-Chloro-3-methylphenol	U		0.00084	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
4-Chloroaniline	U		0.0013	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
4-Chlorophenyl phenyl ether	U		0.0018	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
4-Nitroaniline	U		0.0026	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
4-Nitrophenol	U		0.0023	0.016	mg/Kg-dry	1	10-Oct-2018 15:18
Acenaphthene	U		0.00060	0.0040	mg/Kg-dry	1	10-Oct-2018 15:18
Acenaphthylene	U		0.0012	0.0040	mg/Kg-dry	1	10-Oct-2018 15:18
Acetophenone	U		0.00096	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
Anthracene	U		0.00060	0.0040	mg/Kg-dry	1	10-Oct-2018 15:18
Atrazine	U		0.0024	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
Benz(a)anthracene	**0.0052**		**0.0019**	**0.0040**	**mg/Kg-dry**	1	10-Oct-2018 15:18
Benzaldehyde	U	n	0.0014	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
Benzo(a)pyrene	**0.0080**		**0.0012**	**0.0040**	**mg/Kg-dry**	1	10-Oct-2018 15:18
Benzo(b)fluoranthene	**0.0057**		**0.0014**	**0.0040**	**mg/Kg-dry**	1	10-Oct-2018 15:18
Benzo(g,h,i)perylene	**0.045**		**0.00084**	**0.0040**	**mg/Kg-dry**	1	10-Oct-2018 15:18
Benzo(k)fluoranthene	**0.0075**		**0.0011**	**0.0040**	**mg/Kg-dry**	1	10-Oct-2018 15:18
Bis(2-chloro-1-methylethyl) ether	U		0.0017	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
Bis(2-chloroethoxy)methane	U		0.0011	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
Bis(2-chloroethyl)ether	U		0.0013	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
Bis(2-ethylhexyl)phthalate	**0.011**		**0.0020**	**0.0079**	**mg/Kg-dry**	1	10-Oct-2018 15:18

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA29-20181004-06-52
Collection Date: 04-Oct-2018 08:59

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-04
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**			Prep:SW3541 / 08-Oct-2018			Analyst: ACN
Butyl benzyl phthalate	U		0.0016	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
Caprolactam	U		0.0014	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
Carbazole	U		0.0014	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
Chrysene	**0.0064**		**0.00096**	**0.0040**	**mg/Kg-dry**	1	10-Oct-2018 15:18
Dibenz(a,h)anthracene	**0.039**		**0.0019**	**0.0040**	**mg/Kg-dry**	1	10-Oct-2018 15:18
Dibenzofuran	U		0.00084	0.0040	mg/Kg-dry	1	10-Oct-2018 15:18
Diethyl phthalate	U		0.0012	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
Dimethyl phthalate	U		0.00096	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
Di-n-butyl phthalate	**0.0022**	J	**0.0014**	**0.0079**	**mg/Kg-dry**	1	10-Oct-2018 15:18
Di-n-octyl phthalate	U		0.0011	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
Fluoranthene	U		0.0013	0.0040	mg/Kg-dry	1	10-Oct-2018 15:18
Fluorene	U		0.0013	0.0040	mg/Kg-dry	1	10-Oct-2018 15:18
Hexachlorobenzene	U		0.0011	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
Hexachlorobutadiene	U		0.0014	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
Hexachlorocyclopentadiene	U		0.00096	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
Hexachloroethane	U		0.0018	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
Indeno(1,2,3-cd)pyrene	**0.040**		**0.00096**	**0.0040**	**mg/Kg-dry**	1	10-Oct-2018 15:18
Isophorone	U		0.00096	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
Naphthalene	U		0.00072	0.0040	mg/Kg-dry	1	10-Oct-2018 15:18
Nitrobenzene	U		0.0011	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
N-Nitrosodi-n-propylamine	U		0.0013	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
N-Nitrosodiphenylamine	U		0.00084	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
Pentachlorophenol	U		0.0040	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
Phenanthrene	**0.0069**		**0.0018**	**0.0040**	**mg/Kg-dry**	1	10-Oct-2018 15:18
Phenol	U		0.0013	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
Pyrene	U		0.00072	0.0040	mg/Kg-dry	1	10-Oct-2018 15:18
Surr: 2,4,6-Tribromophenol	*80.1*			*36-126*	*%REC*	*1*	*10-Oct-2018 15:18*
Surr: 2-Fluorobiphenyl	*77.3*			*43-125*	*%REC*	*1*	*10-Oct-2018 15:18*
Surr: 2-Fluorophenol	*52.1*			*37-125*	*%REC*	*1*	*10-Oct-2018 15:18*
Surr: 4-Terphenyl-d14	*88.9*			*32-125*	*%REC*	*1*	*10-Oct-2018 15:18*
Surr: Nitrobenzene-d5	*74.0*			*37-125*	*%REC*	*1*	*10-Oct-2018 15:18*
Surr: Phenol-d6	*64.2*			*40-125*	*%REC*	*1*	*10-Oct-2018 15:18*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA29-20181004-06-52
Collection Date: 04-Oct-2018 08:59

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-04
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A		**Method:SW8082**			Prep:SW3541/3665A / 08-Oct-2018		Analyst: JBA
Aroclor 1016	U		0.0050	0.020	mg/Kg-dry	1	10-Oct-2018 04:58
Aroclor 1221	U		0.0067	0.020	mg/Kg-dry	1	10-Oct-2018 04:58
Aroclor 1232	U		0.0054	0.020	mg/Kg-dry	1	10-Oct-2018 04:58
Aroclor 1242	U		0.0071	0.020	mg/Kg-dry	1	10-Oct-2018 04:58
Aroclor 1248	U		0.0071	0.020	mg/Kg-dry	1	10-Oct-2018 04:58
Aroclor 1254	U		0.0056	0.020	mg/Kg-dry	1	10-Oct-2018 04:58
Aroclor 1260	U		0.0048	0.020	mg/Kg-dry	1	10-Oct-2018 04:58
Surr: Decachlorobiphenyl	*124*			*54-143*	*%REC*	*1*	*10-Oct-2018 04:58*
Surr: Tetrachloro-m-xylene	*95.6*			*50-140*	*%REC*	*1*	*10-Oct-2018 04:58*
METALS BY SW6020A		**Method:SW6020**			Prep:SW3050A / 08-Oct-2018		Analyst: JC
Aluminum	**16,900**		**27.2**	**235**	**mg/Kg-dry**	100	11-Oct-2018 14:41
Antimony	**0.251**	J	**0.0763**	**0.587**	**mg/Kg-dry**	1	10-Oct-2018 22:36
Arsenic	**11.0**		**0.0822**	**0.587**	**mg/Kg-dry**	1	10-Oct-2018 22:36
Barium	**137**		**0.0352**	**0.587**	**mg/Kg-dry**	1	10-Oct-2018 22:36
Beryllium	**0.734**		**0.0247**	**0.587**	**mg/Kg-dry**	1	10-Oct-2018 22:36
Cadmium	**0.453**	J	**0.0317**	**0.587**	**mg/Kg-dry**	1	10-Oct-2018 22:36
Calcium	**186,000**		**582**	**5870**	**mg/Kg-dry**	100	11-Oct-2018 14:41
Chromium	**19.5**		**0.0270**	**0.587**	**mg/Kg-dry**	1	10-Oct-2018 22:36
Cobalt	**9.12**		**0.0176**	**0.587**	**mg/Kg-dry**	1	10-Oct-2018 22:36
Copper	**28.6**		**0.0446**	**0.235**	**mg/Kg-dry**	1	11-Oct-2018 16:24
Iron	**13,900**		**2.15**	**58.7**	**mg/Kg-dry**	1	10-Oct-2018 22:36
Lead	**25.2**		**0.0153**	**0.587**	**mg/Kg-dry**	1	10-Oct-2018 22:36
Magnesium	**2,850**		**2.95**	**58.7**	**mg/Kg-dry**	1	10-Oct-2018 22:36
Manganese	**1,500**		**5.05**	**58.7**	**mg/Kg-dry**	100	11-Oct-2018 14:41
Nickel	**22.1**		**0.0564**	**0.587**	**mg/Kg-dry**	1	11-Oct-2018 16:24
Potassium	**1,620**		**7.89**	**58.7**	**mg/Kg-dry**	1	10-Oct-2018 22:36
Selenium	**0.552**	J	**0.107**	**0.587**	**mg/Kg-dry**	1	11-Oct-2018 16:24
Silver	**0.0944**	J	**0.0176**	**0.587**	**mg/Kg-dry**	1	10-Oct-2018 22:36
Sodium	**114**		**4.90**	**58.7**	**mg/Kg-dry**	1	10-Oct-2018 22:36
Thallium	U		0.262	0.587	mg/Kg-dry	1	10-Oct-2018 22:36
Vanadium	**50.4**		**0.0881**	**0.587**	**mg/Kg-dry**	1	10-Oct-2018 22:36
Zinc	**72.7**		**0.200**	**0.587**	**mg/Kg-dry**	1	10-Oct-2018 22:36
MERCURY BY SW7471B		**Method:SW7471A**			Prep:SW7471A / 10-Oct-2018		Analyst: JCJ
Mercury	**0.0219**		**0.000602**	**0.00426**	**mg/Kg-dry**	1	11-Oct-2018 13:17
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**16.9**		**0.0100**	**0.0100**	**wt%**	1	09-Oct-2018 09:58

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA29-20181004-12-51
Collection Date: 04-Oct-2018 09:17

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-05
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**				Prep:SW3541 / 08-Oct-2018		Analyst: ACN
1,1´-Biphenyl	U		0.0021	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
2,4,5-Trichlorophenol	U		0.0030	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
2,4,6-Trichlorophenol	U		0.0021	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
2,4-Dichlorophenol	U		0.0016	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
2,4-Dimethylphenol	U		0.0040	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
2,4-Dinitrophenol	U		0.0054	0.016	mg/Kg-dry	1	10-Oct-2018 15:37
2,4-Dinitrotoluene	U		0.0011	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
2,6-Dinitrotoluene	U		0.0040	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
2-Chloronaphthalene	U		0.0016	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
2-Chlorophenol	U		0.0016	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
2-Methylnaphthalene	**0.012**		**0.00061**	**0.0040**	**mg/Kg-dry**	1	10-Oct-2018 15:37
2-Methylphenol	U		0.0013	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
2-Nitroaniline	U		0.0023	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
2-Nitrophenol	U		0.0030	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
3&4-Methylphenol	U		0.0012	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
3,3´-Dichlorobenzidine	U		0.0030	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
3-Nitroaniline	U		0.0023	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
4,6-Dinitro-2-methylphenol	U		0.0025	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
4-Bromophenyl phenyl ether	U		0.0019	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
4-Chloro-3-methylphenol	U		0.00085	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
4-Chloroaniline	U		0.0013	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
4-Chlorophenyl phenyl ether	U		0.0018	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
4-Nitroaniline	U		0.0027	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
4-Nitrophenol	U		0.0023	0.016	mg/Kg-dry	1	10-Oct-2018 15:37
Acenaphthene	U		0.00061	0.0040	mg/Kg-dry	1	10-Oct-2018 15:37
Acenaphthylene	U		0.0012	0.0040	mg/Kg-dry	1	10-Oct-2018 15:37
Acetophenone	U		0.00097	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
Anthracene	U		0.00061	0.0040	mg/Kg-dry	1	10-Oct-2018 15:37
Atrazine	U		0.0024	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
Benz(a)anthracene	U		0.0019	0.0040	mg/Kg-dry	1	10-Oct-2018 15:37
Benzaldehyde	U	n	0.0015	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
Benzo(a)pyrene	U		0.0012	0.0040	mg/Kg-dry	1	10-Oct-2018 15:37
Benzo(b)fluoranthene	U		0.0015	0.0040	mg/Kg-dry	1	10-Oct-2018 15:37
Benzo(g,h,i)perylene	U		0.00085	0.0040	mg/Kg-dry	1	10-Oct-2018 15:37
Benzo(k)fluoranthene	U		0.0011	0.0040	mg/Kg-dry	1	10-Oct-2018 15:37
Bis(2-chloro-1-methylethyl) ether	U		0.0017	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
Bis(2-chloroethoxy)methane	U		0.0011	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
Bis(2-chloroethyl)ether	U		0.0013	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
Bis(2-ethylhexyl)phthalate	U		0.0021	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA29-20181004-12-51
Collection Date: 04-Oct-2018 09:17

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-05
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**			Prep:SW3541 / 08-Oct-2018			Analyst: ACN
Butyl benzyl phthalate	U		0.0016	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
Caprolactam	U		0.0015	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
Carbazole	U		0.0015	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
Chrysene	U		0.00097	0.0040	mg/Kg-dry	1	10-Oct-2018 15:37
Dibenz(a,h)anthracene	U		0.0019	0.0040	mg/Kg-dry	1	10-Oct-2018 15:37
Dibenzofuran	U		0.00085	0.0040	mg/Kg-dry	1	10-Oct-2018 15:37
Diethyl phthalate	U		0.0012	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
Dimethyl phthalate	U		0.00097	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
Di-n-butyl phthalate	U		0.0015	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
Di-n-octyl phthalate	U		0.0011	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
Fluoranthene	U		0.0013	0.0040	mg/Kg-dry	1	10-Oct-2018 15:37
Fluorene	**0.0038**	J	**0.0013**	**0.0040**	**mg/Kg-dry**	1	10-Oct-2018 15:37
Hexachlorobenzene	U		0.0011	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
Hexachlorobutadiene	U		0.0015	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
Hexachlorocyclopentadiene	U		0.00097	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
Hexachloroethane	U		0.0018	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
Indeno(1,2,3-cd)pyrene	U		0.00097	0.0040	mg/Kg-dry	1	10-Oct-2018 15:37
Isophorone	U		0.00097	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
Naphthalene	U		0.00073	0.0040	mg/Kg-dry	1	10-Oct-2018 15:37
Nitrobenzene	U		0.0011	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
N-Nitrosodi-n-propylamine	U		0.0013	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
N-Nitrosodiphenylamine	U		0.00085	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
Pentachlorophenol	U		0.0040	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
Phenanthrene	**0.015**		**0.0018**	**0.0040**	**mg/Kg-dry**	1	10-Oct-2018 15:37
Phenol	U		0.0013	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
Pyrene	U		0.00073	0.0040	mg/Kg-dry	1	10-Oct-2018 15:37
Surr: 2,4,6-Tribromophenol	*84.3*			*36-126*	*%REC*	*1*	*10-Oct-2018 15:37*
Surr: 2-Fluorobiphenyl	*86.5*			*43-125*	*%REC*	*1*	*10-Oct-2018 15:37*
Surr: 2-Fluorophenol	*62.4*			*37-125*	*%REC*	*1*	*10-Oct-2018 15:37*
Surr: 4-Terphenyl-d14	*95.7*			*32-125*	*%REC*	*1*	*10-Oct-2018 15:37*
Surr: Nitrobenzene-d5	*84.6*			*37-125*	*%REC*	*1*	*10-Oct-2018 15:37*
Surr: Phenol-d6	*75.3*			*40-125*	*%REC*	*1*	*10-Oct-2018 15:37*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA29-20181004-12-51
Collection Date: 04-Oct-2018 09:17

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-05
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A		**Method:SW8082**			Prep:SW3541/3665A / 08-Oct-2018		Analyst: JBA
Aroclor 1016	U		0.0051	0.020	mg/Kg-dry	1	10-Oct-2018 05:14
Aroclor 1221	U		0.0068	0.020	mg/Kg-dry	1	10-Oct-2018 05:14
Aroclor 1232	U		0.0055	0.020	mg/Kg-dry	1	10-Oct-2018 05:14
Aroclor 1242	U		0.0072	0.020	mg/Kg-dry	1	10-Oct-2018 05:14
Aroclor 1248	U		0.0072	0.020	mg/Kg-dry	1	10-Oct-2018 05:14
Aroclor 1254	U		0.0057	0.020	mg/Kg-dry	1	10-Oct-2018 05:14
Aroclor 1260	U		0.0049	0.020	mg/Kg-dry	1	10-Oct-2018 05:14
Surr: Decachlorobiphenyl	*136*			*54-143*	*%REC*	*1*	*10-Oct-2018 05:14*
Surr: Tetrachloro-m-xylene	*113*			*50-140*	*%REC*	*1*	*10-Oct-2018 05:14*
METALS BY SW6020A		**Method:SW6020**			Prep:SW3050A / 08-Oct-2018		Analyst: JC
Aluminum	**16,200**		**26.2**	**226**	**mg/Kg-dry**	100	11-Oct-2018 14:43
Antimony	**0.236**	J	**0.0734**	**0.565**	**mg/Kg-dry**	1	10-Oct-2018 22:39
Arsenic	**12.1**		**0.0790**	**0.565**	**mg/Kg-dry**	1	10-Oct-2018 22:39
Barium	**150**		**0.0339**	**0.565**	**mg/Kg-dry**	1	10-Oct-2018 22:39
Beryllium	**0.681**		**0.0237**	**0.565**	**mg/Kg-dry**	1	10-Oct-2018 22:39
Cadmium	**0.457**	J	**0.0305**	**0.565**	**mg/Kg-dry**	1	10-Oct-2018 22:39
Calcium	**274,000**		**560**	**5650**	**mg/Kg-dry**	100	11-Oct-2018 14:43
Chromium	**18.1**		**0.0260**	**0.565**	**mg/Kg-dry**	1	10-Oct-2018 22:39
Cobalt	**10.0**		**0.0169**	**0.565**	**mg/Kg-dry**	1	10-Oct-2018 22:39
Copper	**15.5**		**0.0429**	**0.226**	**mg/Kg-dry**	1	11-Oct-2018 16:32
Iron	**13,900**		**2.07**	**56.5**	**mg/Kg-dry**	1	10-Oct-2018 22:39
Lead	**68.7**		**0.0147**	**0.565**	**mg/Kg-dry**	1	10-Oct-2018 22:39
Magnesium	**2,380**		**2.83**	**56.5**	**mg/Kg-dry**	1	10-Oct-2018 22:39
Manganese	**1,590**		**4.86**	**56.5**	**mg/Kg-dry**	100	11-Oct-2018 14:43
Nickel	**20.7**		**0.0542**	**0.565**	**mg/Kg-dry**	1	11-Oct-2018 16:32
Potassium	**1,510**		**7.59**	**56.5**	**mg/Kg-dry**	1	10-Oct-2018 22:39
Selenium	**1.43**		**0.103**	**0.565**	**mg/Kg-dry**	1	11-Oct-2018 16:32
Silver	**0.0743**	J	**0.0169**	**0.565**	**mg/Kg-dry**	1	10-Oct-2018 22:39
Sodium	**171**		**4.71**	**56.5**	**mg/Kg-dry**	1	10-Oct-2018 22:39
Thallium	U		0.252	0.565	mg/Kg-dry	1	10-Oct-2018 22:39
Vanadium	**50.9**		**0.0847**	**0.565**	**mg/Kg-dry**	1	10-Oct-2018 22:39
Zinc	**69.9**		**0.192**	**0.565**	**mg/Kg-dry**	1	10-Oct-2018 22:39
MERCURY BY SW7471B		**Method:SW7471A**			Prep:SW7471A / 10-Oct-2018		Analyst: JCJ
Mercury	**0.0251**		**0.000605**	**0.00428**	**mg/Kg-dry**	1	11-Oct-2018 13:19
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**17.9**		**0.0100**	**0.0100**	**wt%**	1	09-Oct-2018 09:58

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA30-20181004-01-51
Collection Date: 04-Oct-2018 09:31

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-06
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**				Prep:SW3541 / 08-Oct-2018		Analyst: ACN
1,1´-Biphenyl	U		0.0023	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
2,4,5-Trichlorophenol	U		0.0034	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
2,4,6-Trichlorophenol	U		0.0023	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
2,4-Dichlorophenol	U		0.0017	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
2,4-Dimethylphenol	U		0.0044	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
2,4-Dinitrophenol	U		0.0061	0.018	mg/Kg-dry	1	10-Oct-2018 15:57
2,4-Dinitrotoluene	U		0.0012	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
2,6-Dinitrotoluene	U		0.0044	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
2-Chloronaphthalene	U		0.0017	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
2-Chlorophenol	U		0.0017	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
2-Methylnaphthalene	**0.0035**	J	**0.00067**	**0.0044**	**mg/Kg-dry**	1	10-Oct-2018 15:57
2-Methylphenol	U		0.0015	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
2-Nitroaniline	U		0.0026	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
2-Nitrophenol	U		0.0034	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
3&4-Methylphenol	U		0.0013	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
3,3´-Dichlorobenzidine	U		0.0034	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
3-Nitroaniline	U		0.0026	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
4,6-Dinitro-2-methylphenol	U		0.0028	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
4-Bromophenyl phenyl ether	U		0.0022	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
4-Chloro-3-methylphenol	U		0.00094	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
4-Chloroaniline	U		0.0015	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
4-Chlorophenyl phenyl ether	U		0.0020	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
4-Nitroaniline	U		0.0030	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
4-Nitrophenol	U		0.0026	0.018	mg/Kg-dry	1	10-Oct-2018 15:57
Acenaphthene	U		0.00067	0.0044	mg/Kg-dry	1	10-Oct-2018 15:57
Acenaphthylene	U		0.0013	0.0044	mg/Kg-dry	1	10-Oct-2018 15:57
Acetophenone	U		0.0011	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
Anthracene	U		0.00067	0.0044	mg/Kg-dry	1	10-Oct-2018 15:57
Atrazine	U		0.0027	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
Benz(a)anthracene	**0.0034**	J	**0.0022**	**0.0044**	**mg/Kg-dry**	1	10-Oct-2018 15:57
Benzaldehyde	U	n	0.0016	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
Benzo(a)pyrene	U		0.0013	0.0044	mg/Kg-dry	1	10-Oct-2018 15:57
Benzo(b)fluoranthene	U		0.0016	0.0044	mg/Kg-dry	1	10-Oct-2018 15:57
Benzo(g,h,i)perylene	U		0.00094	0.0044	mg/Kg-dry	1	10-Oct-2018 15:57
Benzo(k)fluoranthene	U		0.0012	0.0044	mg/Kg-dry	1	10-Oct-2018 15:57
Bis(2-chloro-1-methylethyl) ether	U		0.0019	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
Bis(2-chloroethoxy)methane	U		0.0012	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
Bis(2-chloroethyl)ether	U		0.0015	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
Bis(2-ethylhexyl)phthalate	**0.0068**	J	**0.0023**	**0.0089**	**mg/Kg-dry**	1	10-Oct-2018 15:57

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA30-20181004-01-51
Collection Date: 04-Oct-2018 09:31

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-06
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**				Prep:SW3541 / 08-Oct-2018		Analyst: ACN
Butyl benzyl phthalate	U		0.0017	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
Caprolactam	U		0.0016	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
Carbazole	U		0.0016	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
Chrysene	**0.0032**	J	**0.0011**	**0.0044**	**mg/Kg-dry**	1	10-Oct-2018 15:57
Dibenz(a,h)anthracene	U		0.0022	0.0044	mg/Kg-dry	1	10-Oct-2018 15:57
Dibenzofuran	U		0.00094	0.0044	mg/Kg-dry	1	10-Oct-2018 15:57
Diethyl phthalate	U		0.0013	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
Dimethyl phthalate	U		0.0011	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
Di-n-butyl phthalate	U		0.0016	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
Di-n-octyl phthalate	U		0.0012	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
Fluoranthene	U		0.0015	0.0044	mg/Kg-dry	1	10-Oct-2018 15:57
Fluorene	U		0.0015	0.0044	mg/Kg-dry	1	10-Oct-2018 15:57
Hexachlorobenzene	U		0.0012	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
Hexachlorobutadiene	U		0.0016	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
Hexachlorocyclopentadiene	U		0.0011	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
Hexachloroethane	U		0.0020	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
Indeno(1,2,3-cd)pyrene	U		0.0011	0.0044	mg/Kg-dry	1	10-Oct-2018 15:57
Isophorone	U		0.0011	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
Naphthalene	U		0.00081	0.0044	mg/Kg-dry	1	10-Oct-2018 15:57
Nitrobenzene	U		0.0012	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
N-Nitrosodi-n-propylamine	U		0.0015	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
N-Nitrosodiphenylamine	U		0.00094	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
Pentachlorophenol	U		0.0044	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
Phenanthrene	**0.012**		**0.0020**	**0.0044**	**mg/Kg-dry**	1	10-Oct-2018 15:57
Phenol	U		0.0015	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
Pyrene	U		0.00081	0.0044	mg/Kg-dry	1	10-Oct-2018 15:57
Surr: 2,4,6-Tribromophenol	*74.8*			*36-126*	*%REC*	*1*	*10-Oct-2018 15:57*
Surr: 2-Fluorobiphenyl	*76.8*			*43-125*	*%REC*	*1*	*10-Oct-2018 15:57*
Surr: 2-Fluorophenol	*55.5*			*37-125*	*%REC*	*1*	*10-Oct-2018 15:57*
Surr: 4-Terphenyl-d14	*87.8*			*32-125*	*%REC*	*1*	*10-Oct-2018 15:57*
Surr: Nitrobenzene-d5	*76.3*			*37-125*	*%REC*	*1*	*10-Oct-2018 15:57*
Surr: Phenol-d6	*65.4*			*40-125*	*%REC*	*1*	*10-Oct-2018 15:57*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA30-20181004-01-51
Collection Date: 04-Oct-2018 09:31

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-06
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A		**Method:SW8082**			Prep:SW3541/3665A / 08-Oct-2018		Analyst: JBA
Aroclor 1016	U		0.0056	0.022	mg/Kg-dry	1	10-Oct-2018 06:48
Aroclor 1221	U		0.0075	0.022	mg/Kg-dry	1	10-Oct-2018 06:48
Aroclor 1232	U		0.0060	0.022	mg/Kg-dry	1	10-Oct-2018 06:48
Aroclor 1242	U		0.0079	0.022	mg/Kg-dry	1	10-Oct-2018 06:48
Aroclor 1248	U		0.0079	0.022	mg/Kg-dry	1	10-Oct-2018 06:48
Aroclor 1254	U		0.0063	0.022	mg/Kg-dry	1	10-Oct-2018 06:48
Aroclor 1260	U		0.0054	0.022	mg/Kg-dry	1	10-Oct-2018 06:48
Surr: Decachlorobiphenyl	*136*			*54-143*	*%REC*	*1*	*10-Oct-2018 06:48*
Surr: Tetrachloro-m-xylene	*115*			*50-140*	*%REC*	*1*	*10-Oct-2018 06:48*
METALS BY SW6020A		**Method:SW6020**			Prep:SW3050A / 08-Oct-2018		Analyst: JC
Aluminum	**9,320**		**29.5**	**255**	**mg/Kg-dry**	100	11-Oct-2018 14:45
Antimony	**0.289**	J	**0.0827**	**0.636**	**mg/Kg-dry**	1	10-Oct-2018 22:41
Arsenic	**11.5**		**0.0891**	**0.636**	**mg/Kg-dry**	1	10-Oct-2018 22:41
Barium	**100**		**0.0382**	**0.636**	**mg/Kg-dry**	1	10-Oct-2018 22:41
Beryllium	**0.557**	J	**0.0267**	**0.636**	**mg/Kg-dry**	1	10-Oct-2018 22:41
Cadmium	**0.507**	J	**0.0344**	**0.636**	**mg/Kg-dry**	1	10-Oct-2018 22:41
Calcium	**219,000**		**631**	**6360**	**mg/Kg-dry**	100	11-Oct-2018 14:45
Chromium	**13.8**		**0.0293**	**0.636**	**mg/Kg-dry**	1	10-Oct-2018 22:41
Cobalt	**6.56**		**0.0191**	**0.636**	**mg/Kg-dry**	1	10-Oct-2018 22:41
Copper	**19.7**		**0.0484**	**0.255**	**mg/Kg-dry**	1	11-Oct-2018 16:34
Iron	**11,400**		**2.33**	**63.6**	**mg/Kg-dry**	1	10-Oct-2018 22:41
Lead	**32.4**		**0.0165**	**0.636**	**mg/Kg-dry**	1	10-Oct-2018 22:41
Magnesium	**3,410**		**3.20**	**63.6**	**mg/Kg-dry**	1	10-Oct-2018 22:41
Manganese	**1,070**		**5.47**	**63.6**	**mg/Kg-dry**	100	11-Oct-2018 14:45
Nickel	**16.8**		**0.0611**	**0.636**	**mg/Kg-dry**	1	11-Oct-2018 16:34
Potassium	**1,450**		**8.55**	**63.6**	**mg/Kg-dry**	1	10-Oct-2018 22:41
Selenium	**0.878**		**0.116**	**0.636**	**mg/Kg-dry**	1	11-Oct-2018 16:34
Silver	**0.0831**	J	**0.0191**	**0.636**	**mg/Kg-dry**	1	10-Oct-2018 22:41
Sodium	**308**		**5.31**	**63.6**	**mg/Kg-dry**	1	10-Oct-2018 22:41
Thallium	U		0.284	0.636	mg/Kg-dry	1	10-Oct-2018 22:41
Vanadium	**34.9**		**0.0955**	**0.636**	**mg/Kg-dry**	1	10-Oct-2018 22:41
Zinc	**81.2**		**0.216**	**0.636**	**mg/Kg-dry**	1	10-Oct-2018 22:41
MERCURY BY SW7471B		**Method:SW7471A**			Prep:SW7471A / 10-Oct-2018		Analyst: JCJ
Mercury	**0.0299**		**0.000658**	**0.00465**	**mg/Kg-dry**	1	11-Oct-2018 13:21
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**26.0**		**0.0100**	**0.0100**	**wt%**	1	09-Oct-2018 09:58

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA30-20181004-06-51
Collection Date: 04-Oct-2018 09:51

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-07
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**				Prep:SW3541 / 08-Oct-2018		Analyst: ACN
1,1′-Biphenyl	U		0.0021	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
2,4,5-Trichlorophenol	U		0.0031	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
2,4,6-Trichlorophenol	U		0.0021	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
2,4-Dichlorophenol	U		0.0016	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
2,4-Dimethylphenol	U		0.0041	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
2,4-Dinitrophenol	U		0.0055	0.016	mg/Kg-dry	1	10-Oct-2018 16:17
2,4-Dinitrotoluene	U		0.0011	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
2,6-Dinitrotoluene	U		0.0041	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
2-Chloronaphthalene	U		0.0016	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
2-Chlorophenol	U		0.0016	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
2-Methylnaphthalene	**0.0021**	J	**0.00061**	**0.0041**	**mg/Kg-dry**	1	10-Oct-2018 16:17
2-Methylphenol	U		0.0014	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
2-Nitroaniline	U		0.0023	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
2-Nitrophenol	U		0.0031	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
3&4-Methylphenol	U		0.0012	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
3,3′-Dichlorobenzidine	U		0.0031	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
3-Nitroaniline	U		0.0023	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
4,6-Dinitro-2-methylphenol	U		0.0026	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
4-Bromophenyl phenyl ether	U		0.0020	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
4-Chloro-3-methylphenol	U		0.00086	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
4-Chloroaniline	U		0.0014	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
4-Chlorophenyl phenyl ether	U		0.0018	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
4-Nitroaniline	U		0.0027	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
4-Nitrophenol	U		0.0023	0.016	mg/Kg-dry	1	10-Oct-2018 16:17
Acenaphthene	U		0.00061	0.0041	mg/Kg-dry	1	10-Oct-2018 16:17
Acenaphthylene	U		0.0012	0.0041	mg/Kg-dry	1	10-Oct-2018 16:17
Acetophenone	U		0.00098	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
Anthracene	U		0.00061	0.0041	mg/Kg-dry	1	10-Oct-2018 16:17
Atrazine	U		0.0025	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
Benz(a)anthracene	**0.0041**		**0.0020**	**0.0041**	**mg/Kg-dry**	1	10-Oct-2018 16:17
Benzaldehyde	U	n	0.0015	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
Benzo(a)pyrene	**0.011**		**0.0012**	**0.0041**	**mg/Kg-dry**	1	10-Oct-2018 16:17
Benzo(b)fluoranthene	**0.0099**		**0.0015**	**0.0041**	**mg/Kg-dry**	1	10-Oct-2018 16:17
Benzo(g,h,i)perylene	**0.019**		**0.00086**	**0.0041**	**mg/Kg-dry**	1	10-Oct-2018 16:17
Benzo(k)fluoranthene	**0.011**		**0.0011**	**0.0041**	**mg/Kg-dry**	1	10-Oct-2018 16:17
Bis(2-chloro-1-methylethyl) ether	U		0.0017	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
Bis(2-chloroethoxy)methane	U		0.0011	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
Bis(2-chloroethyl)ether	U		0.0014	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
Bis(2-ethylhexyl)phthalate	**0.022**		**0.0021**	**0.0081**	**mg/Kg-dry**	1	10-Oct-2018 16:17

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA30-20181004-06-51
Collection Date: 04-Oct-2018 09:51

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-07
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**			Prep:SW3541 / 08-Oct-2018			Analyst: ACN
Butyl benzyl phthalate	U		0.0016	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
Caprolactam	U		0.0015	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
Carbazole	U		0.0015	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
Chrysene	**0.0090**		**0.00098**	**0.0041**	**mg/Kg-dry**	1	10-Oct-2018 16:17
Dibenz(a,h)anthracene	**0.017**		**0.0020**	**0.0041**	**mg/Kg-dry**	1	10-Oct-2018 16:17
Dibenzofuran	U		0.00086	0.0041	mg/Kg-dry	1	10-Oct-2018 16:17
Diethyl phthalate	U		0.0012	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
Dimethyl phthalate	U		0.00098	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
Di-n-butyl phthalate	U		0.0015	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
Di-n-octyl phthalate	**0.021**		**0.0011**	**0.0081**	**mg/Kg-dry**	1	10-Oct-2018 16:17
Fluoranthene	U		0.0014	0.0041	mg/Kg-dry	1	10-Oct-2018 16:17
Fluorene	U		0.0014	0.0041	mg/Kg-dry	1	10-Oct-2018 16:17
Hexachlorobenzene	U		0.0011	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
Hexachlorobutadiene	U		0.0015	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
Hexachlorocyclopentadiene	U		0.00098	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
Hexachloroethane	U		0.0018	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
Indeno(1,2,3-cd)pyrene	**0.020**		**0.00098**	**0.0041**	**mg/Kg-dry**	1	10-Oct-2018 16:17
Isophorone	U		0.00098	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
Naphthalene	U		0.00074	0.0041	mg/Kg-dry	1	10-Oct-2018 16:17
Nitrobenzene	U		0.0011	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
N-Nitrosodi-n-propylamine	U		0.0014	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
N-Nitrosodiphenylamine	U		0.00086	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
Pentachlorophenol	U		0.0041	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
Phenanthrene	**0.0075**		**0.0018**	**0.0041**	**mg/Kg-dry**	1	10-Oct-2018 16:17
Phenol	U		0.0014	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
Pyrene	U		0.00074	0.0041	mg/Kg-dry	1	10-Oct-2018 16:17
Surr: 2,4,6-Tribromophenol	*75.0*			*36-126*	*%REC*	*1*	*10-Oct-2018 16:17*
Surr: 2-Fluorobiphenyl	*65.9*			*43-125*	*%REC*	*1*	*10-Oct-2018 16:17*
Surr: 2-Fluorophenol	*50.1*			*37-125*	*%REC*	*1*	*10-Oct-2018 16:17*
Surr: 4-Terphenyl-d14	*87.7*			*32-125*	*%REC*	*1*	*10-Oct-2018 16:17*
Surr: Nitrobenzene-d5	*58.4*			*37-125*	*%REC*	*1*	*10-Oct-2018 16:17*
Surr: Phenol-d6	*54.1*			*40-125*	*%REC*	*1*	*10-Oct-2018 16:17*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA30-20181004-06-51
Collection Date: 04-Oct-2018 09:51

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-07
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A		**Method:SW8082**			Prep:SW3541/3665A / 08-Oct-2018		Analyst: JBA
Aroclor 1016	U		0.0051	0.020	mg/Kg-dry	1	10-Oct-2018 07:04
Aroclor 1221	U		0.0069	0.020	mg/Kg-dry	1	10-Oct-2018 07:04
Aroclor 1232	U		0.0055	0.020	mg/Kg-dry	1	10-Oct-2018 07:04
Aroclor 1242	U		0.0072	0.020	mg/Kg-dry	1	10-Oct-2018 07:04
Aroclor 1248	U		0.0072	0.020	mg/Kg-dry	1	10-Oct-2018 07:04
Aroclor 1254	U		0.0058	0.020	mg/Kg-dry	1	10-Oct-2018 07:04
Aroclor 1260	U		0.0049	0.020	mg/Kg-dry	1	10-Oct-2018 07:04
Surr: Decachlorobiphenyl	*128*			*54-143*	*%REC*	*1*	*10-Oct-2018 07:04*
Surr: Tetrachloro-m-xylene	*109*			*50-140*	*%REC*	*1*	*10-Oct-2018 07:04*
METALS BY SW6020A		**Method:SW6020**			Prep:SW3050A / 08-Oct-2018		Analyst: JC
Aluminum	**12,400**		**26.2**	**226**	**mg/Kg-dry**	100	11-Oct-2018 14:48
Antimony	**0.389**	J	**0.0735**	**0.566**	**mg/Kg-dry**	1	10-Oct-2018 22:43
Arsenic	**53.6**		**0.0792**	**0.566**	**mg/Kg-dry**	1	10-Oct-2018 22:43
Barium	**101**		**0.0339**	**0.566**	**mg/Kg-dry**	1	10-Oct-2018 22:43
Beryllium	**0.564**	J	**0.0238**	**0.566**	**mg/Kg-dry**	1	10-Oct-2018 22:43
Cadmium	**0.512**	J	**0.0305**	**0.566**	**mg/Kg-dry**	1	10-Oct-2018 22:43
Calcium	**248,000**		**561**	**5660**	**mg/Kg-dry**	100	11-Oct-2018 14:48
Chromium	**14.3**		**0.0260**	**0.566**	**mg/Kg-dry**	1	10-Oct-2018 22:43
Cobalt	**6.35**		**0.0170**	**0.566**	**mg/Kg-dry**	1	10-Oct-2018 22:43
Copper	**16.6**		**0.0430**	**0.226**	**mg/Kg-dry**	1	11-Oct-2018 16:36
Iron	**11,000**		**2.07**	**56.6**	**mg/Kg-dry**	1	10-Oct-2018 22:43
Lead	**60.1**		**0.0147**	**0.566**	**mg/Kg-dry**	1	10-Oct-2018 22:43
Magnesium	**2,520**		**2.84**	**56.6**	**mg/Kg-dry**	1	10-Oct-2018 22:43
Manganese	**1,160**		**4.86**	**56.6**	**mg/Kg-dry**	100	11-Oct-2018 14:48
Nickel	**17.4**		**0.0543**	**0.566**	**mg/Kg-dry**	1	11-Oct-2018 16:36
Potassium	**1,190**		**7.60**	**56.6**	**mg/Kg-dry**	1	10-Oct-2018 22:43
Selenium	**0.613**		**0.103**	**0.566**	**mg/Kg-dry**	1	11-Oct-2018 16:36
Silver	**0.0760**	J	**0.0170**	**0.566**	**mg/Kg-dry**	1	10-Oct-2018 22:43
Sodium	**318**		**4.72**	**56.6**	**mg/Kg-dry**	1	10-Oct-2018 22:43
Thallium	U		0.252	0.566	mg/Kg-dry	1	10-Oct-2018 22:43
Vanadium	**37.8**		**0.0848**	**0.566**	**mg/Kg-dry**	1	10-Oct-2018 22:43
Zinc	**63.8**		**0.192**	**0.566**	**mg/Kg-dry**	1	10-Oct-2018 22:43
MERCURY BY SW7471B		**Method:SW7471A**			Prep:SW7471A / 10-Oct-2018		Analyst: JCJ
Mercury	**0.0278**		**0.000606**	**0.00429**	**mg/Kg-dry**	1	11-Oct-2018 13:22
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**18.7**		**0.0100**	**0.0100**	**wt%**	1	09-Oct-2018 09:58

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc. **ANALYTICAL REPORT**
Project: FJ Doyle Site WorkOrder:HS18100338
Sample ID: DRA30-20181004-12-51 Lab ID:HS18100338-08
Collection Date: 04-Oct-2018 10:05 Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**			Prep:SW3541 / 08-Oct-2018			Analyst: ACN
1,1´-Biphenyl	U		0.0021	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
2,4,5-Trichlorophenol	U		0.0031	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
2,4,6-Trichlorophenol	U		0.0021	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
2,4-Dichlorophenol	U		0.0016	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
2,4-Dimethylphenol	U		0.0041	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
2,4-Dinitrophenol	U		0.0055	0.016	mg/Kg-dry	1	10-Oct-2018 16:36
2,4-Dinitrotoluene	U		0.0011	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
2,6-Dinitrotoluene	U		0.0041	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
2-Chloronaphthalene	U		0.0016	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
2-Chlorophenol	U		0.0016	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
2-Methylnaphthalene	**0.0060**		**0.00061**	**0.0041**	**mg/Kg-dry**	1	10-Oct-2018 16:36
2-Methylphenol	U		0.0014	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
2-Nitroaniline	U		0.0023	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
2-Nitrophenol	U		0.0031	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
3&4-Methylphenol	U		0.0012	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
3,3´-Dichlorobenzidine	U		0.0031	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
3-Nitroaniline	U		0.0023	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
4,6-Dinitro-2-methylphenol	U		0.0026	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
4-Bromophenyl phenyl ether	U		0.0020	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
4-Chloro-3-methylphenol	U		0.00086	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
4-Chloroaniline	U		0.0014	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
4-Chlorophenyl phenyl ether	U		0.0018	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
4-Nitroaniline	U		0.0027	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
4-Nitrophenol	U		0.0023	0.016	mg/Kg-dry	1	10-Oct-2018 16:36
Acenaphthene	U		0.00061	0.0041	mg/Kg-dry	1	10-Oct-2018 16:36
Acenaphthylene	U		0.0012	0.0041	mg/Kg-dry	1	10-Oct-2018 16:36
Acetophenone	U		0.00098	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
Anthracene	U		0.00061	0.0041	mg/Kg-dry	1	10-Oct-2018 16:36
Atrazine	U		0.0025	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
Benz(a)anthracene	**0.0033**	J	**0.0020**	**0.0041**	**mg/Kg-dry**	1	10-Oct-2018 16:36
Benzaldehyde	U	n	0.0015	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
Benzo(a)pyrene	**0.0030**	J	**0.0012**	**0.0041**	**mg/Kg-dry**	1	10-Oct-2018 16:36
Benzo(b)fluoranthene	**0.0043**		**0.0015**	**0.0041**	**mg/Kg-dry**	1	10-Oct-2018 16:36
Benzo(g,h,i)perylene	**0.019**		**0.00086**	**0.0041**	**mg/Kg-dry**	1	10-Oct-2018 16:36
Benzo(k)fluoranthene	**0.0027**	J	**0.0011**	**0.0041**	**mg/Kg-dry**	1	10-Oct-2018 16:36
Bis(2-chloro-1-methylethyl) ether	U		0.0017	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
Bis(2-chloroethoxy)methane	U		0.0011	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
Bis(2-chloroethyl)ether	U		0.0014	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
Bis(2-ethylhexyl)phthalate	**0.024**		**0.0021**	**0.0081**	**mg/Kg-dry**	1	10-Oct-2018 16:36

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA30-20181004-12-51
Collection Date: 04-Oct-2018 10:05

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-08
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**			Prep:SW3541 / 08-Oct-2018			Analyst: ACN
Butyl benzyl phthalate	U		0.0016	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
Caprolactam	U		0.0015	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
Carbazole	U		0.0015	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
Chrysene	**0.015**		**0.00098**	**0.0041**	**mg/Kg-dry**	1	10-Oct-2018 16:36
Dibenz(a,h)anthracene	**0.018**		**0.0020**	**0.0041**	**mg/Kg-dry**	1	10-Oct-2018 16:36
Dibenzofuran	U		0.00086	0.0041	mg/Kg-dry	1	10-Oct-2018 16:36
Diethyl phthalate	U		0.0012	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
Dimethyl phthalate	U		0.00098	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
Di-n-butyl phthalate	U		0.0015	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
Di-n-octyl phthalate	**0.026**		**0.0011**	**0.0081**	**mg/Kg-dry**	1	10-Oct-2018 16:36
Fluoranthene	U		0.0014	0.0041	mg/Kg-dry	1	10-Oct-2018 16:36
Fluorene	U		0.0014	0.0041	mg/Kg-dry	1	10-Oct-2018 16:36
Hexachlorobenzene	U		0.0011	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
Hexachlorobutadiene	U		0.0015	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
Hexachlorocyclopentadiene	U		0.00098	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
Hexachloroethane	U		0.0018	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
Indeno(1,2,3-cd)pyrene	**0.016**		**0.00098**	**0.0041**	**mg/Kg-dry**	1	10-Oct-2018 16:36
Isophorone	U		0.00098	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
Naphthalene	U		0.00074	0.0041	mg/Kg-dry	1	10-Oct-2018 16:36
Nitrobenzene	U		0.0011	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
N-Nitrosodi-n-propylamine	U		0.0014	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
N-Nitrosodiphenylamine	U		0.00086	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
Pentachlorophenol	U		0.0041	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
Phenanthrene	**0.018**		**0.0018**	**0.0041**	**mg/Kg-dry**	1	10-Oct-2018 16:36
Phenol	U		0.0014	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
Pyrene	U		0.00074	0.0041	mg/Kg-dry	1	10-Oct-2018 16:36
Surr: 2,4,6-Tribromophenol	*72.4*			*36-126*	*%REC*	*1*	*10-Oct-2018 16:36*
Surr: 2-Fluorobiphenyl	*71.1*			*43-125*	*%REC*	*1*	*10-Oct-2018 16:36*
Surr: 2-Fluorophenol	*53.3*			*37-125*	*%REC*	*1*	*10-Oct-2018 16:36*
Surr: 4-Terphenyl-d14	*85.7*			*32-125*	*%REC*	*1*	*10-Oct-2018 16:36*
Surr: Nitrobenzene-d5	*69.7*			*37-125*	*%REC*	*1*	*10-Oct-2018 16:36*
Surr: Phenol-d6	*60.7*			*40-125*	*%REC*	*1*	*10-Oct-2018 16:36*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA30-20181004-12-51
Collection Date: 04-Oct-2018 10:05

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-08
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A		**Method:SW8082**			Prep:SW3541/3665A / 08-Oct-2018		Analyst: JBA
Aroclor 1016	U		0.0052	0.021	mg/Kg-dry	1	10-Oct-2018 07:20
Aroclor 1221	U		0.0069	0.021	mg/Kg-dry	1	10-Oct-2018 07:20
Aroclor 1232	U		0.0055	0.021	mg/Kg-dry	1	10-Oct-2018 07:20
Aroclor 1242	U		0.0073	0.021	mg/Kg-dry	1	10-Oct-2018 07:20
Aroclor 1248	U		0.0073	0.021	mg/Kg-dry	1	10-Oct-2018 07:20
Aroclor 1254	U		0.0058	0.021	mg/Kg-dry	1	10-Oct-2018 07:20
Aroclor 1260	U		0.0049	0.021	mg/Kg-dry	1	10-Oct-2018 07:20
Surr: Decachlorobiphenyl	*137*			*54-143*	*%REC*	*1*	*10-Oct-2018 07:20*
Surr: Tetrachloro-m-xylene	*111*			*50-140*	*%REC*	*1*	*10-Oct-2018 07:20*
METALS BY SW6020A		**Method:SW6020**			Prep:SW3050A / 08-Oct-2018		Analyst: JC
Aluminum	**14,900**		**26.2**	**226**	**mg/Kg-dry**	100	11-Oct-2018 14:57
Antimony	**0.228**	J	**0.0733**	**0.564**	**mg/Kg-dry**	1	10-Oct-2018 22:45
Arsenic	**33.9**		**0.0789**	**0.564**	**mg/Kg-dry**	1	10-Oct-2018 22:45
Barium	**113**		**0.0338**	**0.564**	**mg/Kg-dry**	1	10-Oct-2018 22:45
Beryllium	**0.622**		**0.0237**	**0.564**	**mg/Kg-dry**	1	10-Oct-2018 22:45
Cadmium	**0.394**	J	**0.0304**	**0.564**	**mg/Kg-dry**	1	10-Oct-2018 22:45
Calcium	**237,000**		**559**	**5640**	**mg/Kg-dry**	100	11-Oct-2018 14:57
Chromium	**17.7**		**0.0259**	**0.564**	**mg/Kg-dry**	1	10-Oct-2018 22:45
Cobalt	**7.12**		**0.0169**	**0.564**	**mg/Kg-dry**	1	10-Oct-2018 22:45
Copper	**13.4**		**0.0429**	**0.226**	**mg/Kg-dry**	1	11-Oct-2018 16:38
Iron	**11,700**		**2.06**	**56.4**	**mg/Kg-dry**	1	10-Oct-2018 22:45
Lead	**31.6**		**0.0147**	**0.564**	**mg/Kg-dry**	1	10-Oct-2018 22:45
Magnesium	**2,470**		**2.83**	**56.4**	**mg/Kg-dry**	1	10-Oct-2018 22:45
Manganese	**1,270**		**4.85**	**56.4**	**mg/Kg-dry**	100	11-Oct-2018 14:57
Nickel	**20.2**		**0.0541**	**0.564**	**mg/Kg-dry**	1	11-Oct-2018 16:38
Potassium	**1,370**		**7.58**	**56.4**	**mg/Kg-dry**	1	10-Oct-2018 22:45
Selenium	**0.590**		**0.103**	**0.564**	**mg/Kg-dry**	1	11-Oct-2018 16:38
Silver	**0.0774**	J	**0.0169**	**0.564**	**mg/Kg-dry**	1	10-Oct-2018 22:45
Sodium	**435**		**4.70**	**56.4**	**mg/Kg-dry**	1	10-Oct-2018 22:45
Thallium	U		0.251	0.564	mg/Kg-dry	1	10-Oct-2018 22:45
Vanadium	**47.2**		**0.0846**	**0.564**	**mg/Kg-dry**	1	10-Oct-2018 22:45
Zinc	**50.9**		**0.192**	**0.564**	**mg/Kg-dry**	1	10-Oct-2018 22:45
MERCURY BY SW7471B		**Method:SW7471A**			Prep:SW7471A / 10-Oct-2018		Analyst: JCJ
Mercury	**0.0273**		**0.000610**	**0.00432**	**mg/Kg-dry**	1	11-Oct-2018 13:24
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**18.8**		**0.0100**	**0.0100**	**wt%**	1	09-Oct-2018 09:58

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc. **ANALYTICAL REPORT**
Project: FJ Doyle Site WorkOrder:HS18100338
Sample ID: DRA31-20181004-01-51 Lab ID:HS18100338-09
Collection Date: 04-Oct-2018 10:40 Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**				Prep:SW3541 / 08-Oct-2018		Analyst: ACN
1,1´-Biphenyl	U		0.0020	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
2,4,5-Trichlorophenol	U		0.0030	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
2,4,6-Trichlorophenol	U		0.0020	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
2,4-Dichlorophenol	U		0.0016	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
2,4-Dimethylphenol	U		0.0039	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
2,4-Dinitrophenol	U		0.0054	0.016	mg/Kg-dry	1	10-Oct-2018 16:56
2,4-Dinitrotoluene	U		0.0011	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
2,6-Dinitrotoluene	U		0.0039	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
2-Chloronaphthalene	U		0.0016	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
2-Chlorophenol	U		0.0016	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
2-Methylnaphthalene	**0.0025**	J	**0.00060**	**0.0039**	**mg/Kg-dry**	1	10-Oct-2018 16:56
2-Methylphenol	U		0.0013	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
2-Nitroaniline	U		0.0023	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
2-Nitrophenol	U		0.0030	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
3&4-Methylphenol	U		0.0012	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
3,3´-Dichlorobenzidine	U		0.0030	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
3-Nitroaniline	U		0.0023	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
4,6-Dinitro-2-methylphenol	U		0.0025	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
4-Bromophenyl phenyl ether	U		0.0019	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
4-Chloro-3-methylphenol	U		0.00084	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
4-Chloroaniline	U		0.0013	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
4-Chlorophenyl phenyl ether	U		0.0018	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
4-Nitroaniline	U		0.0026	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
4-Nitrophenol	U		0.0023	0.016	mg/Kg-dry	1	10-Oct-2018 16:56
Acenaphthene	U		0.00060	0.0039	mg/Kg-dry	1	10-Oct-2018 16:56
Acenaphthylene	U		0.0012	0.0039	mg/Kg-dry	1	10-Oct-2018 16:56
Acetophenone	U		0.00096	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
Anthracene	U		0.00060	0.0039	mg/Kg-dry	1	10-Oct-2018 16:56
Atrazine	U		0.0024	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
Benz(a)anthracene	**0.0038**	J	**0.0019**	**0.0039**	**mg/Kg-dry**	1	10-Oct-2018 16:56
Benzaldehyde	U	n	0.0014	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
Benzo(a)pyrene	U		0.0012	0.0039	mg/Kg-dry	1	10-Oct-2018 16:56
Benzo(b)fluoranthene	U		0.0014	0.0039	mg/Kg-dry	1	10-Oct-2018 16:56
Benzo(g,h,i)perylene	U		0.00084	0.0039	mg/Kg-dry	1	10-Oct-2018 16:56
Benzo(k)fluoranthene	U		0.0011	0.0039	mg/Kg-dry	1	10-Oct-2018 16:56
Bis(2-chloro-1-methylethyl) ether	U		0.0017	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
Bis(2-chloroethoxy)methane	U		0.0011	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
Bis(2-chloroethyl)ether	U		0.0013	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
Bis(2-ethylhexyl)phthalate	**0.0081**		**0.0020**	**0.0079**	**mg/Kg-dry**	1	10-Oct-2018 16:56

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA31-20181004-01-51
Collection Date: 04-Oct-2018 10:40

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-09
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**				Prep:SW3541 / 08-Oct-2018		Analyst: ACN
Butyl benzyl phthalate	U		0.0016	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
Caprolactam	U		0.0014	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
Carbazole	U		0.0014	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
Chrysene	**0.0031**	J	**0.00096**	**0.0039**	**mg/Kg-dry**	1	10-Oct-2018 16:56
Dibenz(a,h)anthracene	U		0.0019	0.0039	mg/Kg-dry	1	10-Oct-2018 16:56
Dibenzofuran	U		0.00084	0.0039	mg/Kg-dry	1	10-Oct-2018 16:56
Diethyl phthalate	U		0.0012	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
Dimethyl phthalate	U		0.00096	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
Di-n-butyl phthalate	U		0.0014	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
Di-n-octyl phthalate	U		0.0011	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
Fluoranthene	U		0.0013	0.0039	mg/Kg-dry	1	10-Oct-2018 16:56
Fluorene	U		0.0013	0.0039	mg/Kg-dry	1	10-Oct-2018 16:56
Hexachlorobenzene	U		0.0011	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
Hexachlorobutadiene	U		0.0014	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
Hexachlorocyclopentadiene	U		0.00096	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
Hexachloroethane	U		0.0018	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
Indeno(1,2,3-cd)pyrene	U		0.00096	0.0039	mg/Kg-dry	1	10-Oct-2018 16:56
Isophorone	U		0.00096	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
Naphthalene	U		0.00072	0.0039	mg/Kg-dry	1	10-Oct-2018 16:56
Nitrobenzene	U		0.0011	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
N-Nitrosodi-n-propylamine	U		0.0013	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
N-Nitrosodiphenylamine	U		0.00084	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
Pentachlorophenol	U		0.0039	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
Phenanthrene	**0.0081**		**0.0018**	**0.0039**	**mg/Kg-dry**	1	10-Oct-2018 16:56
Phenol	U		0.0013	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
Pyrene	U		0.00072	0.0039	mg/Kg-dry	1	10-Oct-2018 16:56
Surr: 2,4,6-Tribromophenol	*65.0*			*36-126*	*%REC*	*1*	*10-Oct-2018 16:56*
Surr: 2-Fluorobiphenyl	*61.9*			*43-125*	*%REC*	*1*	*10-Oct-2018 16:56*
Surr: 2-Fluorophenol	*49.3*			*37-125*	*%REC*	*1*	*10-Oct-2018 16:56*
Surr: 4-Terphenyl-d14	*78.6*			*32-125*	*%REC*	*1*	*10-Oct-2018 16:56*
Surr: Nitrobenzene-d5	*62.2*			*37-125*	*%REC*	*1*	*10-Oct-2018 16:56*
Surr: Phenol-d6	*55.8*			*40-125*	*%REC*	*1*	*10-Oct-2018 16:56*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA31-20181004-01-51
Collection Date: 04-Oct-2018 10:40

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-09
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A		**Method:SW8082**			Prep:SW3541/3665A / 08-Oct-2018		Analyst: JBA
Aroclor 1016	U		0.0050	0.020	mg/Kg-dry	1	10-Oct-2018 07:35
Aroclor 1221	U		0.0067	0.020	mg/Kg-dry	1	10-Oct-2018 07:35
Aroclor 1232	U		0.0054	0.020	mg/Kg-dry	1	10-Oct-2018 07:35
Aroclor 1242	U		0.0070	0.020	mg/Kg-dry	1	10-Oct-2018 07:35
Aroclor 1248	U		0.0070	0.020	mg/Kg-dry	1	10-Oct-2018 07:35
Aroclor 1254	U		0.0056	0.020	mg/Kg-dry	1	10-Oct-2018 07:35
Aroclor 1260	U		0.0048	0.020	mg/Kg-dry	1	10-Oct-2018 07:35
Surr: Decachlorobiphenyl	*137*			*54-143*	*%REC*	*1*	*10-Oct-2018 07:35*
Surr: Tetrachloro-m-xylene	*118*			*50-140*	*%REC*	*1*	*10-Oct-2018 07:35*
METALS BY SW6020A		**Method:SW6020**			Prep:SW3050A / 08-Oct-2018		Analyst: JC
Aluminum	**10,900**		**26.4**	**227**	**mg/Kg-dry**	100	11-Oct-2018 14:59
Antimony	**0.108**	J	**0.0738**	**0.568**	**mg/Kg-dry**	1	10-Oct-2018 22:47
Arsenic	**3.34**		**0.0795**	**0.568**	**mg/Kg-dry**	1	10-Oct-2018 22:47
Barium	**102**		**0.0341**	**0.568**	**mg/Kg-dry**	1	10-Oct-2018 22:47
Beryllium	**0.540**	J	**0.0239**	**0.568**	**mg/Kg-dry**	1	10-Oct-2018 22:47
Cadmium	**0.111**	J	**0.0307**	**0.568**	**mg/Kg-dry**	1	10-Oct-2018 22:47
Calcium	**54,100**		**563**	**5680**	**mg/Kg-dry**	100	11-Oct-2018 14:59
Chromium	**12.7**		**0.0261**	**0.568**	**mg/Kg-dry**	1	10-Oct-2018 22:47
Cobalt	**4.15**		**0.0170**	**0.568**	**mg/Kg-dry**	1	10-Oct-2018 22:47
Copper	**8.81**		**0.0432**	**0.227**	**mg/Kg-dry**	1	11-Oct-2018 16:40
Iron	**9,860**		**2.08**	**56.8**	**mg/Kg-dry**	1	10-Oct-2018 22:47
Lead	**9.57**		**0.0148**	**0.568**	**mg/Kg-dry**	1	10-Oct-2018 22:47
Magnesium	**6,020**		**2.85**	**56.8**	**mg/Kg-dry**	1	10-Oct-2018 22:47
Manganese	**372**		**4.88**	**56.8**	**mg/Kg-dry**	100	11-Oct-2018 14:59
Nickel	**10.8**		**0.0545**	**0.568**	**mg/Kg-dry**	1	11-Oct-2018 16:40
Potassium	**2,440**		**7.63**	**56.8**	**mg/Kg-dry**	1	10-Oct-2018 22:47
Selenium	**0.455**	J	**0.103**	**0.568**	**mg/Kg-dry**	1	11-Oct-2018 16:40
Silver	**0.0366**	J	**0.0170**	**0.568**	**mg/Kg-dry**	1	10-Oct-2018 22:47
Sodium	**89.6**		**4.74**	**56.8**	**mg/Kg-dry**	1	10-Oct-2018 22:47
Thallium	U		0.253	0.568	mg/Kg-dry	1	10-Oct-2018 22:47
Vanadium	**20.3**		**0.0852**	**0.568**	**mg/Kg-dry**	1	10-Oct-2018 22:47
Zinc	**34.3**		**0.193**	**0.568**	**mg/Kg-dry**	1	10-Oct-2018 22:47
MERCURY BY SW7471B		**Method:SW7471A**			Prep:SW7471A / 10-Oct-2018		Analyst: JCJ
Mercury	**0.0119**		**0.000604**	**0.00428**	**mg/Kg-dry**	1	11-Oct-2018 13:26
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**16.5**		**0.0100**	**0.0100**	**wt%**	1	09-Oct-2018 09:58

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA31-20181004-06-51
Collection Date: 04-Oct-2018 11:05

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-10
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**				Prep:SW3541 / 08-Oct-2018		Analyst: ACN
1,1′-Biphenyl	U		0.0020	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
2,4,5-Trichlorophenol	U		0.0030	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
2,4,6-Trichlorophenol	U		0.0020	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
2,4-Dichlorophenol	U		0.0016	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
2,4-Dimethylphenol	U		0.0040	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
2,4-Dinitrophenol	U		0.0054	0.016	mg/Kg-dry	1	10-Oct-2018 17:15
2,4-Dinitrotoluene	U		0.0011	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
2,6-Dinitrotoluene	U		0.0040	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
2-Chloronaphthalene	U		0.0016	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
2-Chlorophenol	U		0.0016	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
2-Methylnaphthalene	**0.018**		**0.00060**	**0.0040**	**mg/Kg-dry**	1	10-Oct-2018 17:15
2-Methylphenol	U		0.0013	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
2-Nitroaniline	U		0.0023	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
2-Nitrophenol	U		0.0030	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
3&4-Methylphenol	U		0.0012	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
3,3′-Dichlorobenzidine	U		0.0030	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
3-Nitroaniline	U		0.0023	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
4,6-Dinitro-2-methylphenol	U		0.0025	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
4-Bromophenyl phenyl ether	U		0.0019	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
4-Chloro-3-methylphenol	U		0.00084	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
4-Chloroaniline	U		0.0013	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
4-Chlorophenyl phenyl ether	U		0.0018	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
4-Nitroaniline	U		0.0026	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
4-Nitrophenol	U		0.0023	0.016	mg/Kg-dry	1	10-Oct-2018 17:15
Acenaphthene	U		0.00060	0.0040	mg/Kg-dry	1	10-Oct-2018 17:15
Acenaphthylene	U		0.0012	0.0040	mg/Kg-dry	1	10-Oct-2018 17:15
Acetophenone	U		0.00096	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
Anthracene	U		0.00060	0.0040	mg/Kg-dry	1	10-Oct-2018 17:15
Atrazine	U		0.0024	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
Benz(a)anthracene	**0.0026**	J	**0.0019**	**0.0040**	**mg/Kg-dry**	1	10-Oct-2018 17:15
Benzaldehyde	U	n	0.0014	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
Benzo(a)pyrene	U		0.0012	0.0040	mg/Kg-dry	1	10-Oct-2018 17:15
Benzo(b)fluoranthene	U		0.0014	0.0040	mg/Kg-dry	1	10-Oct-2018 17:15
Benzo(g,h,i)perylene	U		0.00084	0.0040	mg/Kg-dry	1	10-Oct-2018 17:15
Benzo(k)fluoranthene	U		0.0011	0.0040	mg/Kg-dry	1	10-Oct-2018 17:15
Bis(2-chloro-1-methylethyl) ether	U		0.0017	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
Bis(2-chloroethoxy)methane	U		0.0011	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
Bis(2-chloroethyl)ether	U		0.0013	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
Bis(2-ethylhexyl)phthalate	**0.0091**		**0.0020**	**0.0079**	**mg/Kg-dry**	1	10-Oct-2018 17:15

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA31-20181004-06-51
Collection Date: 04-Oct-2018 11:05

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-10
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**			Prep:SW3541 / 08-Oct-2018			Analyst: ACN
Butyl benzyl phthalate	U		0.0016	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
Caprolactam	U		0.0014	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
Carbazole	U		0.0014	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
Chrysene	**0.012**		**0.00096**	**0.0040**	**mg/Kg-dry**	1	10-Oct-2018 17:15
Dibenz(a,h)anthracene	U		0.0019	0.0040	mg/Kg-dry	1	10-Oct-2018 17:15
Dibenzofuran	U		0.00084	0.0040	mg/Kg-dry	1	10-Oct-2018 17:15
Diethyl phthalate	U		0.0012	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
Dimethyl phthalate	U		0.00096	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
Di-n-butyl phthalate	U		0.0014	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
Di-n-octyl phthalate	U		0.0011	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
Fluoranthene	U		0.0013	0.0040	mg/Kg-dry	1	10-Oct-2018 17:15
Fluorene	U		0.0013	0.0040	mg/Kg-dry	1	10-Oct-2018 17:15
Hexachlorobenzene	U		0.0011	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
Hexachlorobutadiene	U		0.0014	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
Hexachlorocyclopentadiene	U		0.00096	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
Hexachloroethane	U		0.0018	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
Indeno(1,2,3-cd)pyrene	U		0.00096	0.0040	mg/Kg-dry	1	10-Oct-2018 17:15
Isophorone	U		0.00096	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
Naphthalene	U		0.00072	0.0040	mg/Kg-dry	1	10-Oct-2018 17:15
Nitrobenzene	U		0.0011	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
N-Nitrosodi-n-propylamine	U		0.0013	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
N-Nitrosodiphenylamine	U		0.00084	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
Pentachlorophenol	U		0.0040	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
Phenanthrene	**0.024**		**0.0018**	**0.0040**	**mg/Kg-dry**	1	10-Oct-2018 17:15
Phenol	U		0.0013	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
Pyrene	U		0.00072	0.0040	mg/Kg-dry	1	10-Oct-2018 17:15
Surr: 2,4,6-Tribromophenol	*77.0*			*36-126*	*%REC*	*1*	*10-Oct-2018 17:15*
Surr: 2-Fluorobiphenyl	*77.6*			*43-125*	*%REC*	*1*	*10-Oct-2018 17:15*
Surr: 2-Fluorophenol	*62.5*			*37-125*	*%REC*	*1*	*10-Oct-2018 17:15*
Surr: 4-Terphenyl-d14	*87.6*			*32-125*	*%REC*	*1*	*10-Oct-2018 17:15*
Surr: Nitrobenzene-d5	*77.8*			*37-125*	*%REC*	*1*	*10-Oct-2018 17:15*
Surr: Phenol-d6	*69.3*			*40-125*	*%REC*	*1*	*10-Oct-2018 17:15*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA31-20181004-06-51
Collection Date: 04-Oct-2018 11:05

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-10
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A	**Method:SW8082**				Prep:SW3541/3665A / 08-Oct-2018		Analyst: JBA
Aroclor 1016	U		0.0050	0.020	mg/Kg-dry	1	10-Oct-2018 07:51
Aroclor 1221	U		0.0067	0.020	mg/Kg-dry	1	10-Oct-2018 07:51
Aroclor 1232	U		0.0054	0.020	mg/Kg-dry	1	10-Oct-2018 07:51
Aroclor 1242	U		0.0071	0.020	mg/Kg-dry	1	10-Oct-2018 07:51
Aroclor 1248	U		0.0071	0.020	mg/Kg-dry	1	10-Oct-2018 07:51
Aroclor 1254	U		0.0056	0.020	mg/Kg-dry	1	10-Oct-2018 07:51
Aroclor 1260	U		0.0048	0.020	mg/Kg-dry	1	10-Oct-2018 07:51
Surr: Decachlorobiphenyl	*130*			*54-143*	*%REC*	*1*	*10-Oct-2018 07:51*
Surr: Tetrachloro-m-xylene	*131*			*50-140*	*%REC*	*1*	*10-Oct-2018 07:51*
METALS BY SW6020A	**Method:SW6020**				Prep:SW3050A / 08-Oct-2018		Analyst: JDE
Aluminum	**19,900**		**135**	**1160**	**mg/Kg-dry**	500	11-Oct-2018 16:37
Antimony	**0.200**	J	**0.0757**	**0.582**	**mg/Kg-dry**	1	11-Oct-2018 16:43
Arsenic	**7.83**		**0.0815**	**0.582**	**mg/Kg-dry**	1	10-Oct-2018 22:54
Barium	**148**		**0.0349**	**0.582**	**mg/Kg-dry**	1	10-Oct-2018 22:54
Beryllium	**0.833**		**0.0244**	**0.582**	**mg/Kg-dry**	1	11-Oct-2018 16:43
Cadmium	**0.285**	J	**0.0314**	**0.582**	**mg/Kg-dry**	1	10-Oct-2018 22:54
Calcium	**125,000**		**577**	**5820**	**mg/Kg-dry**	100	11-Oct-2018 15:01
Chromium	**25.3**		**0.0268**	**0.582**	**mg/Kg-dry**	1	11-Oct-2018 16:43
Cobalt	**6.41**		**0.0175**	**0.582**	**mg/Kg-dry**	1	10-Oct-2018 22:54
Copper	**17.5**		**0.0442**	**0.233**	**mg/Kg-dry**	1	11-Oct-2018 16:43
Iron	**14,800**		**2.13**	**58.2**	**mg/Kg-dry**	1	10-Oct-2018 22:54
Lead	**24.4**		**0.0151**	**0.582**	**mg/Kg-dry**	1	10-Oct-2018 22:54
Magnesium	**4,450**		**2.92**	**58.2**	**mg/Kg-dry**	1	11-Oct-2018 16:43
Manganese	**755**		**5.01**	**58.2**	**mg/Kg-dry**	100	11-Oct-2018 15:01
Nickel	**18.3**		**0.0559**	**0.582**	**mg/Kg-dry**	1	11-Oct-2018 16:43
Potassium	**2,310**		**7.82**	**58.2**	**mg/Kg-dry**	1	11-Oct-2018 16:43
Selenium	**0.678**		**0.106**	**0.582**	**mg/Kg-dry**	1	11-Oct-2018 16:43
Silver	**0.0661**	J	**0.0175**	**0.582**	**mg/Kg-dry**	1	10-Oct-2018 22:54
Sodium	**113**		**4.85**	**58.2**	**mg/Kg-dry**	1	11-Oct-2018 16:43
Thallium	U		0.260	0.582	mg/Kg-dry	1	10-Oct-2018 22:54
Vanadium	**43.9**		**0.0873**	**0.582**	**mg/Kg-dry**	1	10-Oct-2018 22:54
Zinc	**59.0**		**0.198**	**0.582**	**mg/Kg-dry**	1	10-Oct-2018 22:54
MERCURY BY SW7471B	**Method:SW7471A**				Prep:SW7471A / 10-Oct-2018		Analyst: JCJ
Mercury	**0.0113**		**0.000603**	**0.00427**	**mg/Kg-dry**	1	11-Oct-2018 13:36
MOISTURE - ASTM D2216	**Method:ASTM D2216**						Analyst: DFF
Percent Moisture	**17.2**		**0.0100**	**0.0100**	**wt%**	1	09-Oct-2018 09:58

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA31-20181004-12-51
Collection Date: 04-Oct-2018 11:15

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-11
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**				Prep:SW3541 / 08-Oct-2018		Analyst: ACN
1,1´-Biphenyl	U		0.0022	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
2,4,5-Trichlorophenol	U		0.0033	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
2,4,6-Trichlorophenol	U		0.0022	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
2,4-Dichlorophenol	U		0.0017	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
2,4-Dimethylphenol	U		0.0043	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
2,4-Dinitrophenol	U		0.0059	0.017	mg/Kg-dry	1	10-Oct-2018 17:35
2,4-Dinitrotoluene	U		0.0012	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
2,6-Dinitrotoluene	U		0.0043	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
2-Chloronaphthalene	U		0.0017	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
2-Chlorophenol	U		0.0017	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
2-Methylnaphthalene	**0.0064**		**0.00065**	**0.0043**	**mg/Kg-dry**	1	10-Oct-2018 17:35
2-Methylphenol	U		0.0014	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
2-Nitroaniline	U		0.0025	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
2-Nitrophenol	U		0.0033	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
3&4-Methylphenol	U		0.0013	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
3,3´-Dichlorobenzidine	U		0.0033	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
3-Nitroaniline	U		0.0025	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
4,6-Dinitro-2-methylphenol	U		0.0027	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
4-Bromophenyl phenyl ether	U		0.0021	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
4-Chloro-3-methylphenol	U		0.00092	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
4-Chloroaniline	U		0.0014	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
4-Chlorophenyl phenyl ether	U		0.0020	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
4-Nitroaniline	U		0.0029	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
4-Nitrophenol	U		0.0025	0.017	mg/Kg-dry	1	10-Oct-2018 17:35
Acenaphthene	U		0.00065	0.0043	mg/Kg-dry	1	10-Oct-2018 17:35
Acenaphthylene	U		0.0013	0.0043	mg/Kg-dry	1	10-Oct-2018 17:35
Acetophenone	U		0.0010	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
Anthracene	U		0.00065	0.0043	mg/Kg-dry	1	10-Oct-2018 17:35
Atrazine	U		0.0026	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
Benz(a)anthracene	**0.0091**		**0.0021**	**0.0043**	**mg/Kg-dry**	1	10-Oct-2018 17:35
Benzaldehyde	U	n	0.0016	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
Benzo(a)pyrene	U		0.0013	0.0043	mg/Kg-dry	1	10-Oct-2018 17:35
Benzo(b)fluoranthene	U		0.0016	0.0043	mg/Kg-dry	1	10-Oct-2018 17:35
Benzo(g,h,i)perylene	U		0.00092	0.0043	mg/Kg-dry	1	10-Oct-2018 17:35
Benzo(k)fluoranthene	U		0.0012	0.0043	mg/Kg-dry	1	10-Oct-2018 17:35
Bis(2-chloro-1-methylethyl) ether	U		0.0018	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
Bis(2-chloroethoxy)methane	U		0.0012	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
Bis(2-chloroethyl)ether	U		0.0014	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
Bis(2-ethylhexyl)phthalate	U		0.0022	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA31-20181004-12-51
Collection Date: 04-Oct-2018 11:15

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-11
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**			Prep:SW3541 / 08-Oct-2018			Analyst: ACN
Butyl benzyl phthalate	U		0.0017	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
Caprolactam	U		0.0016	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
Carbazole	U		0.0016	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
Chrysene	**0.0048**		**0.0010**	**0.0043**	**mg/Kg-dry**	1	10-Oct-2018 17:35
Dibenz(a,h)anthracene	U		0.0021	0.0043	mg/Kg-dry	1	10-Oct-2018 17:35
Dibenzofuran	U		0.00092	0.0043	mg/Kg-dry	1	10-Oct-2018 17:35
Diethyl phthalate	U		0.0013	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
Dimethyl phthalate	U		0.0010	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
Di-n-butyl phthalate	U		0.0016	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
Di-n-octyl phthalate	U		0.0012	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
Fluoranthene	U		0.0014	0.0043	mg/Kg-dry	1	10-Oct-2018 17:35
Fluorene	U		0.0014	0.0043	mg/Kg-dry	1	10-Oct-2018 17:35
Hexachlorobenzene	U		0.0012	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
Hexachlorobutadiene	U		0.0016	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
Hexachlorocyclopentadiene	U		0.0010	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
Hexachloroethane	U		0.0020	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
Indeno(1,2,3-cd)pyrene	U		0.0010	0.0043	mg/Kg-dry	1	10-Oct-2018 17:35
Isophorone	U		0.0010	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
Naphthalene	U		0.00078	0.0043	mg/Kg-dry	1	10-Oct-2018 17:35
Nitrobenzene	U		0.0012	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
N-Nitrosodi-n-propylamine	U		0.0014	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
N-Nitrosodiphenylamine	U		0.00092	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
Pentachlorophenol	U		0.0043	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
Phenanthrene	**0.019**		**0.0020**	**0.0043**	**mg/Kg-dry**	1	10-Oct-2018 17:35
Phenol	U		0.0014	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
Pyrene	U		0.00078	0.0043	mg/Kg-dry	1	10-Oct-2018 17:35
Surr: 2,4,6-Tribromophenol	*77.0*			*36-126*	*%REC*	*1*	*10-Oct-2018 17:35*
Surr: 2-Fluorobiphenyl	*72.9*			*43-125*	*%REC*	*1*	*10-Oct-2018 17:35*
Surr: 2-Fluorophenol	*48.3*			*37-125*	*%REC*	*1*	*10-Oct-2018 17:35*
Surr: 4-Terphenyl-d14	*87.1*			*32-125*	*%REC*	*1*	*10-Oct-2018 17:35*
Surr: Nitrobenzene-d5	*68.3*			*37-125*	*%REC*	*1*	*10-Oct-2018 17:35*
Surr: Phenol-d6	*60.6*			*40-125*	*%REC*	*1*	*10-Oct-2018 17:35*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA31-20181004-12-51
Collection Date: 04-Oct-2018 11:15

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-11
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A		**Method:SW8082**			Prep:SW3541/3665A / 08-Oct-2018		Analyst: JBA
Aroclor 1016	U		0.0055	0.022	mg/Kg-dry	1	10-Oct-2018 08:07
Aroclor 1221	U		0.0073	0.022	mg/Kg-dry	1	10-Oct-2018 08:07
Aroclor 1232	U		0.0059	0.022	mg/Kg-dry	1	10-Oct-2018 08:07
Aroclor 1242	U		0.0077	0.022	mg/Kg-dry	1	10-Oct-2018 08:07
Aroclor 1248	U		0.0077	0.022	mg/Kg-dry	1	10-Oct-2018 08:07
Aroclor 1254	U		0.0061	0.022	mg/Kg-dry	1	10-Oct-2018 08:07
Aroclor 1260	U		0.0052	0.022	mg/Kg-dry	1	10-Oct-2018 08:07
Surr: Decachlorobiphenyl	*134*			*54-143*	*%REC*	*1*	*10-Oct-2018 08:07*
Surr: Tetrachloro-m-xylene	*115*			*50-140*	*%REC*	*1*	*10-Oct-2018 08:07*
METALS BY SW6020A		**Method:SW6020**			Prep:SW3050A / 08-Oct-2018		Analyst: JDE
Aluminum	**28,800**		**140**	**1210**	**mg/Kg-dry**	500	11-Oct-2018 16:39
Antimony	**0.129**	J	**0.0786**	**0.605**	**mg/Kg-dry**	1	11-Oct-2018 16:45
Arsenic	**5.07**		**0.0847**	**0.605**	**mg/Kg-dry**	1	10-Oct-2018 22:56
Barium	**225**		**3.63**	**60.5**	**mg/Kg-dry**	100	11-Oct-2018 15:04
Beryllium	**1.31**		**0.0254**	**0.605**	**mg/Kg-dry**	1	11-Oct-2018 16:45
Cadmium	**0.299**	J	**0.0327**	**0.605**	**mg/Kg-dry**	1	10-Oct-2018 22:56
Calcium	**62,700**		**600**	**6050**	**mg/Kg-dry**	100	11-Oct-2018 15:04
Chromium	**36.1**		**0.0278**	**0.605**	**mg/Kg-dry**	1	11-Oct-2018 16:45
Cobalt	**7.34**		**0.0181**	**0.605**	**mg/Kg-dry**	1	10-Oct-2018 22:56
Copper	**14.1**		**0.0460**	**0.242**	**mg/Kg-dry**	1	11-Oct-2018 16:45
Iron	**21,400**		**2.21**	**60.5**	**mg/Kg-dry**	1	10-Oct-2018 22:56
Lead	**20.1**		**0.0157**	**0.605**	**mg/Kg-dry**	1	10-Oct-2018 22:56
Magnesium	**4,800**		**3.04**	**60.5**	**mg/Kg-dry**	1	11-Oct-2018 16:45
Manganese	**711**		**5.20**	**60.5**	**mg/Kg-dry**	100	11-Oct-2018 15:04
Nickel	**23.8**		**0.0580**	**0.605**	**mg/Kg-dry**	1	11-Oct-2018 16:45
Potassium	**2,670**		**8.13**	**60.5**	**mg/Kg-dry**	1	11-Oct-2018 16:45
Selenium	**0.606**		**0.110**	**0.605**	**mg/Kg-dry**	1	11-Oct-2018 16:45
Silver	**0.123**	J	**0.0181**	**0.605**	**mg/Kg-dry**	1	10-Oct-2018 22:56
Sodium	**78.7**		**5.04**	**60.5**	**mg/Kg-dry**	1	11-Oct-2018 16:45
Thallium	U		0.270	0.605	mg/Kg-dry	1	10-Oct-2018 22:56
Vanadium	**58.9**		**0.0907**	**0.605**	**mg/Kg-dry**	1	10-Oct-2018 22:56
Zinc	**62.7**		**0.206**	**0.605**	**mg/Kg-dry**	1	10-Oct-2018 22:56
MERCURY BY SW7471B		**Method:SW7471A**			Prep:SW7471A / 10-Oct-2018		Analyst: JCJ
Mercury	**0.0292**		**0.000646**	**0.00457**	**mg/Kg-dry**	1	11-Oct-2018 13:38
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**24.0**		**0.0100**	**0.0100**	**wt%**	1	09-Oct-2018 09:58

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA32-20181004-01-51
Collection Date: 04-Oct-2018 10:45

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-12
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**				Prep:SW3541 / 08-Oct-2018		Analyst: ACN
1,1′-Biphenyl	U		0.0022	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
2,4,5-Trichlorophenol	U		0.0032	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
2,4,6-Trichlorophenol	U		0.0022	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
2,4-Dichlorophenol	U		0.0017	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
2,4-Dimethylphenol	U		0.0043	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
2,4-Dinitrophenol	U		0.0058	0.017	mg/Kg-dry	1	10-Oct-2018 17:55
2,4-Dinitrotoluene	U		0.0012	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
2,6-Dinitrotoluene	U		0.0043	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
2-Chloronaphthalene	U		0.0017	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
2-Chlorophenol	U		0.0017	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
2-Methylnaphthalene	**0.011**		**0.00065**	**0.0043**	**mg/Kg-dry**	1	10-Oct-2018 17:55
2-Methylphenol	U		0.0014	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
2-Nitroaniline	U		0.0025	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
2-Nitrophenol	U		0.0032	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
3&4-Methylphenol	U		0.0013	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
3,3′-Dichlorobenzidine	U		0.0032	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
3-Nitroaniline	U		0.0025	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
4,6-Dinitro-2-methylphenol	U		0.0027	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
4-Bromophenyl phenyl ether	U		0.0021	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
4-Chloro-3-methylphenol	U		0.00091	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
4-Chloroaniline	U		0.0014	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
4-Chlorophenyl phenyl ether	U		0.0019	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
4-Nitroaniline	U		0.0029	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
4-Nitrophenol	U		0.0025	0.017	mg/Kg-dry	1	10-Oct-2018 17:55
Acenaphthene	U		0.00065	0.0043	mg/Kg-dry	1	10-Oct-2018 17:55
Acenaphthylene	U		0.0013	0.0043	mg/Kg-dry	1	10-Oct-2018 17:55
Acetophenone	U		0.0010	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
Anthracene	U		0.00065	0.0043	mg/Kg-dry	1	10-Oct-2018 17:55
Atrazine	U		0.0026	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
Benz(a)anthracene	**0.015**		**0.0021**	**0.0043**	**mg/Kg-dry**	1	10-Oct-2018 17:55
Benzaldehyde	U	n	0.0016	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
Benzo(a)pyrene	U		0.0013	0.0043	mg/Kg-dry	1	10-Oct-2018 17:55
Benzo(b)fluoranthene	**0.0021**	J	**0.0016**	**0.0043**	**mg/Kg-dry**	1	10-Oct-2018 17:55
Benzo(g,h,i)perylene	U		0.00091	0.0043	mg/Kg-dry	1	10-Oct-2018 17:55
Benzo(k)fluoranthene	U		0.0012	0.0043	mg/Kg-dry	1	10-Oct-2018 17:55
Bis(2-chloro-1-methylethyl) ether	U		0.0018	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
Bis(2-chloroethoxy)methane	U		0.0012	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
Bis(2-chloroethyl)ether	U		0.0014	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
Bis(2-ethylhexyl)phthalate	U		0.0022	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA32-20181004-01-51
Collection Date: 04-Oct-2018 10:45

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-12
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**				Prep:SW3541 / 08-Oct-2018		Analyst: ACN
Butyl benzyl phthalate	U		0.0017	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
Caprolactam	U		0.0016	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
Carbazole	U		0.0016	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
Chrysene	**0.0099**		**0.0010**	**0.0043**	**mg/Kg-dry**	1	10-Oct-2018 17:55
Dibenz(a,h)anthracene	U		0.0021	0.0043	mg/Kg-dry	1	10-Oct-2018 17:55
Dibenzofuran	U		0.00091	0.0043	mg/Kg-dry	1	10-Oct-2018 17:55
Diethyl phthalate	U		0.0013	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
Dimethyl phthalate	U		0.0010	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
Di-n-butyl phthalate	U		0.0016	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
Di-n-octyl phthalate	U		0.0012	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
Fluoranthene	U		0.0014	0.0043	mg/Kg-dry	1	10-Oct-2018 17:55
Fluorene	U		0.0014	0.0043	mg/Kg-dry	1	10-Oct-2018 17:55
Hexachlorobenzene	U		0.0012	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
Hexachlorobutadiene	U		0.0016	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
Hexachlorocyclopentadiene	U		0.0010	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
Hexachloroethane	U		0.0019	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
Indeno(1,2,3-cd)pyrene	U		0.0010	0.0043	mg/Kg-dry	1	10-Oct-2018 17:55
Isophorone	U		0.0010	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
Naphthalene	**0.0026**	J	**0.00078**	**0.0043**	**mg/Kg-dry**	1	10-Oct-2018 17:55
Nitrobenzene	U		0.0012	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
N-Nitrosodi-n-propylamine	U		0.0014	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
N-Nitrosodiphenylamine	U		0.00091	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
Pentachlorophenol	U		0.0043	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
Phenanthrene	**0.045**		**0.0019**	**0.0043**	**mg/Kg-dry**	1	10-Oct-2018 17:55
Phenol	U		0.0014	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
Pyrene	U		0.00078	0.0043	mg/Kg-dry	1	10-Oct-2018 17:55
Surr: 2,4,6-Tribromophenol	*86.1*			*36-126*	*%REC*	*1*	*10-Oct-2018 17:55*
Surr: 2-Fluorobiphenyl	*80.4*			*43-125*	*%REC*	*1*	*10-Oct-2018 17:55*
Surr: 2-Fluorophenol	*60.9*			*37-125*	*%REC*	*1*	*10-Oct-2018 17:55*
Surr: 4-Terphenyl-d14	*91.1*			*32-125*	*%REC*	*1*	*10-Oct-2018 17:55*
Surr: Nitrobenzene-d5	*78.4*			*37-125*	*%REC*	*1*	*10-Oct-2018 17:55*
Surr: Phenol-d6	*69.5*			*40-125*	*%REC*	*1*	*10-Oct-2018 17:55*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA32-20181004-01-51
Collection Date: 04-Oct-2018 10:45

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-12
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A		**Method:SW8082**			Prep:SW3541/3665A / 08-Oct-2018		Analyst: JBA
Aroclor 1016	U		0.0054	0.022	mg/Kg-dry	1	10-Oct-2018 08:22
Aroclor 1221	U		0.0073	0.022	mg/Kg-dry	1	10-Oct-2018 08:22
Aroclor 1232	U		0.0058	0.022	mg/Kg-dry	1	10-Oct-2018 08:22
Aroclor 1242	U		0.0077	0.022	mg/Kg-dry	1	10-Oct-2018 08:22
Aroclor 1248	U		0.0077	0.022	mg/Kg-dry	1	10-Oct-2018 08:22
Aroclor 1254	U		0.0061	0.022	mg/Kg-dry	1	10-Oct-2018 08:22
Aroclor 1260	U		0.0052	0.022	mg/Kg-dry	1	10-Oct-2018 08:22
Surr: Decachlorobiphenyl	*124*			*54-143*	*%REC*	*1*	*10-Oct-2018 08:22*
Surr: Tetrachloro-m-xylene	*91.5*			*50-140*	*%REC*	*1*	*10-Oct-2018 08:22*
METALS BY SW6020A		**Method:SW6020**			Prep:SW3050A / 08-Oct-2018		Analyst: JC
Aluminum	**7,330**		**29.2**	**252**	**mg/Kg-dry**	100	11-Oct-2018 15:06
Antimony	**0.227**	J	**0.0818**	**0.629**	**mg/Kg-dry**	1	11-Oct-2018 16:47
Arsenic	**6.04**		**0.0881**	**0.629**	**mg/Kg-dry**	1	10-Oct-2018 22:58
Barium	**105**		**0.0378**	**0.629**	**mg/Kg-dry**	1	10-Oct-2018 22:58
Beryllium	**0.403**	J	**0.0264**	**0.629**	**mg/Kg-dry**	1	11-Oct-2018 16:47
Cadmium	**0.518**	J	**0.0340**	**0.629**	**mg/Kg-dry**	1	10-Oct-2018 22:58
Calcium	**213,000**		**624**	**6290**	**mg/Kg-dry**	100	11-Oct-2018 15:06
Chromium	**13.6**		**0.0289**	**0.629**	**mg/Kg-dry**	1	11-Oct-2018 16:47
Cobalt	**5.30**		**0.0189**	**0.629**	**mg/Kg-dry**	1	10-Oct-2018 22:58
Copper	**34.2**		**0.0478**	**0.252**	**mg/Kg-dry**	1	11-Oct-2018 16:47
Iron	**9,160**		**2.30**	**62.9**	**mg/Kg-dry**	1	10-Oct-2018 22:58
Lead	**34.4**		**0.0164**	**0.629**	**mg/Kg-dry**	1	10-Oct-2018 22:58
Magnesium	**4,070**		**3.16**	**62.9**	**mg/Kg-dry**	1	11-Oct-2018 16:47
Manganese	**785**		**5.41**	**62.9**	**mg/Kg-dry**	100	11-Oct-2018 15:06
Nickel	**12.9**		**0.0604**	**0.629**	**mg/Kg-dry**	1	11-Oct-2018 16:47
Potassium	**2,040**		**8.46**	**62.9**	**mg/Kg-dry**	1	11-Oct-2018 16:47
Selenium	**0.529**	J	**0.115**	**0.629**	**mg/Kg-dry**	1	11-Oct-2018 16:47
Silver	**0.0642**	J	**0.0189**	**0.629**	**mg/Kg-dry**	1	10-Oct-2018 22:58
Sodium	**232**		**5.25**	**62.9**	**mg/Kg-dry**	1	11-Oct-2018 16:47
Thallium	U		0.281	0.629	mg/Kg-dry	1	10-Oct-2018 22:58
Vanadium	**26.3**		**0.0944**	**0.629**	**mg/Kg-dry**	1	10-Oct-2018 22:58
Zinc	**107**		**0.214**	**0.629**	**mg/Kg-dry**	1	10-Oct-2018 22:58
MERCURY BY SW7471B		**Method:SW7471A**			Prep:SW7471A / 10-Oct-2018		Analyst: JCJ
Mercury	**0.0317**		**0.000648**	**0.00458**	**mg/Kg-dry**	1	11-Oct-2018 13:40
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**23.2**		**0.0100**	**0.0100**	**wt%**	1	09-Oct-2018 09:58

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA32-20181004-06-51
Collection Date: 04-Oct-2018 10:55

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-13
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**				Prep:SW3541 / 08-Oct-2018		Analyst: ACN
1,1′-Biphenyl	U		0.0023	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
2,4,5-Trichlorophenol	U		0.0033	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
2,4,6-Trichlorophenol	U		0.0023	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
2,4-Dichlorophenol	U		0.0017	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
2,4-Dimethylphenol	U		0.0044	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
2,4-Dinitrophenol	U		0.0060	0.018	mg/Kg-dry	1	10-Oct-2018 18:14
2,4-Dinitrotoluene	U		0.0012	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
2,6-Dinitrotoluene	U		0.0044	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
2-Chloronaphthalene	U		0.0017	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
2-Chlorophenol	U		0.0017	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
2-Methylnaphthalene	**0.0058**		**0.00067**	**0.0044**	**mg/Kg-dry**	1	10-Oct-2018 18:14
2-Methylphenol	U		0.0015	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
2-Nitroaniline	U		0.0025	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
2-Nitrophenol	U		0.0033	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
3&4-Methylphenol	U		0.0013	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
3,3′-Dichlorobenzidine	U		0.0033	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
3-Nitroaniline	U		0.0025	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
4,6-Dinitro-2-methylphenol	U		0.0028	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
4-Bromophenyl phenyl ether	U		0.0021	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
4-Chloro-3-methylphenol	U		0.00093	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
4-Chloroaniline	U		0.0015	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
4-Chlorophenyl phenyl ether	U		0.0020	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
4-Nitroaniline	U		0.0029	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
4-Nitrophenol	U		0.0025	0.018	mg/Kg-dry	1	10-Oct-2018 18:14
Acenaphthene	U		0.00067	0.0044	mg/Kg-dry	1	10-Oct-2018 18:14
Acenaphthylene	**0.0022**	J	**0.0013**	**0.0044**	**mg/Kg-dry**	1	10-Oct-2018 18:14
Acetophenone	U		0.0011	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
Anthracene	U		0.00067	0.0044	mg/Kg-dry	1	10-Oct-2018 18:14
Atrazine	U		0.0027	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
Benz(a)anthracene	U		0.0021	0.0044	mg/Kg-dry	1	10-Oct-2018 18:14
Benzaldehyde	U	n	0.0016	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
Benzo(a)pyrene	U		0.0013	0.0044	mg/Kg-dry	1	10-Oct-2018 18:14
Benzo(b)fluoranthene	U		0.0016	0.0044	mg/Kg-dry	1	10-Oct-2018 18:14
Benzo(g,h,i)perylene	U		0.00093	0.0044	mg/Kg-dry	1	10-Oct-2018 18:14
Benzo(k)fluoranthene	U		0.0012	0.0044	mg/Kg-dry	1	10-Oct-2018 18:14
Bis(2-chloro-1-methylethyl) ether	U		0.0019	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
Bis(2-chloroethoxy)methane	U		0.0012	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
Bis(2-chloroethyl)ether	U		0.0015	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
Bis(2-ethylhexyl)phthalate	**0.0069**	J	**0.0023**	**0.0088**	**mg/Kg-dry**	1	10-Oct-2018 18:14

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA32-20181004-06-51
Collection Date: 04-Oct-2018 10:55

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-13
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**				Prep:SW3541 / 08-Oct-2018		Analyst: ACN
Butyl benzyl phthalate	U		0.0017	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
Caprolactam	U		0.0016	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
Carbazole	U		0.0016	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
Chrysene	U		0.0011	0.0044	mg/Kg-dry	1	10-Oct-2018 18:14
Dibenz(a,h)anthracene	U		0.0021	0.0044	mg/Kg-dry	1	10-Oct-2018 18:14
Dibenzofuran	U		0.00093	0.0044	mg/Kg-dry	1	10-Oct-2018 18:14
Diethyl phthalate	U		0.0013	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
Dimethyl phthalate	U		0.0011	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
Di-n-butyl phthalate	U		0.0016	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
Di-n-octyl phthalate	U		0.0012	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
Fluoranthene	U		0.0015	0.0044	mg/Kg-dry	1	10-Oct-2018 18:14
Fluorene	U		0.0015	0.0044	mg/Kg-dry	1	10-Oct-2018 18:14
Hexachlorobenzene	U		0.0012	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
Hexachlorobutadiene	U		0.0016	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
Hexachlorocyclopentadiene	U		0.0011	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
Hexachloroethane	U		0.0020	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
Indeno(1,2,3-cd)pyrene	U		0.0011	0.0044	mg/Kg-dry	1	10-Oct-2018 18:14
Isophorone	U		0.0011	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
Naphthalene	U		0.00080	0.0044	mg/Kg-dry	1	10-Oct-2018 18:14
Nitrobenzene	U		0.0012	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
N-Nitrosodi-n-propylamine	U		0.0015	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
N-Nitrosodiphenylamine	U		0.00093	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
Pentachlorophenol	U		0.0044	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
Phenanthrene	**0.0042**	J	**0.0020**	**0.0044**	**mg/Kg-dry**	1	10-Oct-2018 18:14
Phenol	U		0.0015	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
Pyrene	U		0.00080	0.0044	mg/Kg-dry	1	10-Oct-2018 18:14
Surr: 2,4,6-Tribromophenol	*60.4*			*36-126*	*%REC*	*1*	*10-Oct-2018 18:14*
Surr: 2-Fluorobiphenyl	*73.0*			*43-125*	*%REC*	*1*	*10-Oct-2018 18:14*
Surr: 2-Fluorophenol	*52.4*			*37-125*	*%REC*	*1*	*10-Oct-2018 18:14*
Surr: 4-Terphenyl-d14	*76.5*			*32-125*	*%REC*	*1*	*10-Oct-2018 18:14*
Surr: Nitrobenzene-d5	*68.4*			*37-125*	*%REC*	*1*	*10-Oct-2018 18:14*
Surr: Phenol-d6	*66.5*			*40-125*	*%REC*	*1*	*10-Oct-2018 18:14*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA32-20181004-06-51
Collection Date: 04-Oct-2018 10:55

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-13
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A		**Method:SW8082**			Prep:SW3541/3665A / 08-Oct-2018		Analyst: JBA
Aroclor 1016	U		0.0056	0.022	mg/Kg-dry	1	10-Oct-2018 08:38
Aroclor 1221	U		0.0074	0.022	mg/Kg-dry	1	10-Oct-2018 08:38
Aroclor 1232	U		0.0060	0.022	mg/Kg-dry	1	10-Oct-2018 08:38
Aroclor 1242	U		0.0078	0.022	mg/Kg-dry	1	10-Oct-2018 08:38
Aroclor 1248	U		0.0078	0.022	mg/Kg-dry	1	10-Oct-2018 08:38
Aroclor 1254	U		0.0063	0.022	mg/Kg-dry	1	10-Oct-2018 08:38
Aroclor 1260	U		0.0053	0.022	mg/Kg-dry	1	10-Oct-2018 08:38
Surr: Decachlorobiphenyl	*117*			*54-143*	*%REC*	*1*	*10-Oct-2018 08:38*
Surr: Tetrachloro-m-xylene	*84.4*			*50-140*	*%REC*	*1*	*10-Oct-2018 08:38*
METALS BY SW6020A		**Method:SW6020**			Prep:SW3050A / 08-Oct-2018		Analyst: JC
Aluminum	**8,930**		**29.2**	**252**	**mg/Kg-dry**	100	11-Oct-2018 15:08
Antimony	**0.258**	J	**0.0819**	**0.630**	**mg/Kg-dry**	1	11-Oct-2018 16:49
Arsenic	**12.3**		**0.0882**	**0.630**	**mg/Kg-dry**	1	10-Oct-2018 23:01
Barium	**90.8**		**0.0378**	**0.630**	**mg/Kg-dry**	1	10-Oct-2018 23:01
Beryllium	**0.520**	J	**0.0264**	**0.630**	**mg/Kg-dry**	1	11-Oct-2018 16:49
Cadmium	**0.563**	J	**0.0340**	**0.630**	**mg/Kg-dry**	1	10-Oct-2018 23:01
Calcium	**225,000**		**625**	**6300**	**mg/Kg-dry**	100	11-Oct-2018 15:08
Chromium	**17.4**		**0.0290**	**0.630**	**mg/Kg-dry**	1	11-Oct-2018 16:49
Cobalt	**5.76**		**0.0189**	**0.630**	**mg/Kg-dry**	1	10-Oct-2018 23:01
Copper	**27.7**		**0.0479**	**0.252**	**mg/Kg-dry**	1	11-Oct-2018 16:49
Iron	**10,600**		**2.30**	**63.0**	**mg/Kg-dry**	1	10-Oct-2018 23:01
Lead	**56.1**		**0.0164**	**0.630**	**mg/Kg-dry**	1	10-Oct-2018 23:01
Magnesium	**4,640**		**3.16**	**63.0**	**mg/Kg-dry**	1	11-Oct-2018 16:49
Manganese	**878**		**5.41**	**63.0**	**mg/Kg-dry**	100	11-Oct-2018 15:08
Nickel	**16.2**		**0.0604**	**0.630**	**mg/Kg-dry**	1	11-Oct-2018 16:49
Potassium	**1,750**		**8.46**	**63.0**	**mg/Kg-dry**	1	11-Oct-2018 16:49
Selenium	**0.745**		**0.115**	**0.630**	**mg/Kg-dry**	1	11-Oct-2018 16:49
Silver	**0.0835**	J	**0.0189**	**0.630**	**mg/Kg-dry**	1	10-Oct-2018 23:01
Sodium	**181**		**5.25**	**63.0**	**mg/Kg-dry**	1	11-Oct-2018 16:49
Thallium	U		0.281	0.630	mg/Kg-dry	1	10-Oct-2018 23:01
Vanadium	**31.5**		**0.0944**	**0.630**	**mg/Kg-dry**	1	10-Oct-2018 23:01
Zinc	**126**		**0.214**	**0.630**	**mg/Kg-dry**	1	10-Oct-2018 23:01
MERCURY BY SW7471B		**Method:SW7471A**			Prep:SW7471A / 10-Oct-2018		Analyst: JCJ
Mercury	**0.0415**		**0.000667**	**0.00472**	**mg/Kg-dry**	1	11-Oct-2018 13:42
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**25.0**		**0.0100**	**0.0100**	**wt%**	1	09-Oct-2018 09:58

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA32-20181004-06-52
Collection Date: 04-Oct-2018 10:55

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-14
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**				Prep:SW3541 / 08-Oct-2018		Analyst: ACN
1,1′-Biphenyl	U		0.0022	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
2,4,5-Trichlorophenol	U		0.0033	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
2,4,6-Trichlorophenol	U		0.0022	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
2,4-Dichlorophenol	U		0.0017	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
2,4-Dimethylphenol	U		0.0043	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
2,4-Dinitrophenol	U		0.0059	0.017	mg/Kg-dry	1	10-Oct-2018 18:34
2,4-Dinitrotoluene	U		0.0012	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
2,6-Dinitrotoluene	U		0.0043	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
2-Chloronaphthalene	U		0.0017	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
2-Chlorophenol	U		0.0017	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
2-Methylnaphthalene	**0.0024**	J	**0.00066**	**0.0043**	**mg/Kg-dry**	1	10-Oct-2018 18:34
2-Methylphenol	U		0.0014	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
2-Nitroaniline	U		0.0025	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
2-Nitrophenol	U		0.0033	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
3&4-Methylphenol	U		0.0013	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
3,3′-Dichlorobenzidine	U		0.0033	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
3-Nitroaniline	U		0.0025	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
4,6-Dinitro-2-methylphenol	U		0.0028	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
4-Bromophenyl phenyl ether	U		0.0021	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
4-Chloro-3-methylphenol	U		0.00092	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
4-Chloroaniline	U		0.0014	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
4-Chlorophenyl phenyl ether	U		0.0020	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
4-Nitroaniline	U		0.0029	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
4-Nitrophenol	U		0.0025	0.017	mg/Kg-dry	1	10-Oct-2018 18:34
Acenaphthene	U		0.00066	0.0043	mg/Kg-dry	1	10-Oct-2018 18:34
Acenaphthylene	U		0.0013	0.0043	mg/Kg-dry	1	10-Oct-2018 18:34
Acetophenone	U		0.0011	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
Anthracene	U		0.00066	0.0043	mg/Kg-dry	1	10-Oct-2018 18:34
Atrazine	U		0.0026	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
Benz(a)anthracene	U		0.0021	0.0043	mg/Kg-dry	1	10-Oct-2018 18:34
Benzaldehyde	U	n	0.0016	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
Benzo(a)pyrene	U		0.0013	0.0043	mg/Kg-dry	1	10-Oct-2018 18:34
Benzo(b)fluoranthene	U		0.0016	0.0043	mg/Kg-dry	1	10-Oct-2018 18:34
Benzo(g,h,i)perylene	U		0.00092	0.0043	mg/Kg-dry	1	10-Oct-2018 18:34
Benzo(k)fluoranthene	U		0.0012	0.0043	mg/Kg-dry	1	10-Oct-2018 18:34
Bis(2-chloro-1-methylethyl) ether	U		0.0018	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
Bis(2-chloroethoxy)methane	U		0.0012	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
Bis(2-chloroethyl)ether	U		0.0014	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
Bis(2-ethylhexyl)phthalate	**0.0077**	J	**0.0022**	**0.0087**	**mg/Kg-dry**	1	10-Oct-2018 18:34

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA32-20181004-06-52
Collection Date: 04-Oct-2018 10:55

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-14
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**				Prep:SW3541 / 08-Oct-2018		Analyst: ACN
Butyl benzyl phthalate	U		0.0017	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
Caprolactam	U		0.0016	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
Carbazole	U		0.0016	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
Chrysene	U		0.0011	0.0043	mg/Kg-dry	1	10-Oct-2018 18:34
Dibenz(a,h)anthracene	U		0.0021	0.0043	mg/Kg-dry	1	10-Oct-2018 18:34
Dibenzofuran	U		0.00092	0.0043	mg/Kg-dry	1	10-Oct-2018 18:34
Diethyl phthalate	U		0.0013	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
Dimethyl phthalate	U		0.0011	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
Di-n-butyl phthalate	U		0.0016	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
Di-n-octyl phthalate	U		0.0012	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
Fluoranthene	**0.0016**	J	**0.0014**	**0.0043**	**mg/Kg-dry**	1	10-Oct-2018 18:34
Fluorene	U		0.0014	0.0043	mg/Kg-dry	1	10-Oct-2018 18:34
Hexachlorobenzene	U		0.0012	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
Hexachlorobutadiene	U		0.0016	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
Hexachlorocyclopentadiene	U		0.0011	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
Hexachloroethane	U		0.0020	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
Indeno(1,2,3-cd)pyrene	U		0.0011	0.0043	mg/Kg-dry	1	10-Oct-2018 18:34
Isophorone	U		0.0011	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
Naphthalene	U		0.00079	0.0043	mg/Kg-dry	1	10-Oct-2018 18:34
Nitrobenzene	U		0.0012	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
N-Nitrosodi-n-propylamine	U		0.0014	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
N-Nitrosodiphenylamine	U		0.00092	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
Pentachlorophenol	U		0.0043	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
Phenanthrene	**0.0030**	J	**0.0020**	**0.0043**	**mg/Kg-dry**	1	10-Oct-2018 18:34
Phenol	U		0.0014	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
Pyrene	**0.0011**	J	**0.00079**	**0.0043**	**mg/Kg-dry**	1	10-Oct-2018 18:34
Surr: 2,4,6-Tribromophenol	*80.8*			*36-126*	*%REC*	*1*	*10-Oct-2018 18:34*
Surr: 2-Fluorobiphenyl	*75.3*			*43-125*	*%REC*	*1*	*10-Oct-2018 18:34*
Surr: 2-Fluorophenol	*63.0*			*37-125*	*%REC*	*1*	*10-Oct-2018 18:34*
Surr: 4-Terphenyl-d14	*91.9*			*32-125*	*%REC*	*1*	*10-Oct-2018 18:34*
Surr: Nitrobenzene-d5	*71.9*			*37-125*	*%REC*	*1*	*10-Oct-2018 18:34*
Surr: Phenol-d6	*64.7*			*40-125*	*%REC*	*1*	*10-Oct-2018 18:34*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA32-20181004-06-52
Collection Date: 04-Oct-2018 10:55

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-14
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A		**Method:SW8082**			Prep:SW3541/3665A / 08-Oct-2018		Analyst: JBA
Aroclor 1016	U		0.0055	0.022	mg/Kg-dry	1	10-Oct-2018 08:54
Aroclor 1221	U		0.0074	0.022	mg/Kg-dry	1	10-Oct-2018 08:54
Aroclor 1232	U		0.0059	0.022	mg/Kg-dry	1	10-Oct-2018 08:54
Aroclor 1242	U		0.0078	0.022	mg/Kg-dry	1	10-Oct-2018 08:54
Aroclor 1248	U		0.0078	0.022	mg/Kg-dry	1	10-Oct-2018 08:54
Aroclor 1254	U		0.0062	0.022	mg/Kg-dry	1	10-Oct-2018 08:54
Aroclor 1260	U		0.0053	0.022	mg/Kg-dry	1	10-Oct-2018 08:54
Surr: Decachlorobiphenyl	*138*			*54-143*	*%REC*	*1*	*10-Oct-2018 08:54*
Surr: Tetrachloro-m-xylene	*89.9*			*50-140*	*%REC*	*1*	*10-Oct-2018 08:54*
METALS BY SW6020A		**Method:SW6020**			Prep:SW3050A / 08-Oct-2018		Analyst: JC
Aluminum	**10,100**		**29.6**	**255**	**mg/Kg-dry**	100	11-Oct-2018 15:10
Antimony	**0.372**	J	**0.0828**	**0.637**	**mg/Kg-dry**	1	11-Oct-2018 16:51
Arsenic	**7.36**		**0.0892**	**0.637**	**mg/Kg-dry**	1	10-Oct-2018 23:03
Barium	**93.1**		**0.0382**	**0.637**	**mg/Kg-dry**	1	10-Oct-2018 23:03
Beryllium	**0.547**	J	**0.0267**	**0.637**	**mg/Kg-dry**	1	11-Oct-2018 16:51
Cadmium	**0.621**	J	**0.0344**	**0.637**	**mg/Kg-dry**	1	10-Oct-2018 23:03
Calcium	**259,000**		**632**	**6370**	**mg/Kg-dry**	100	11-Oct-2018 15:10
Chromium	**17.7**		**0.0293**	**0.637**	**mg/Kg-dry**	1	11-Oct-2018 16:51
Cobalt	**6.29**		**0.0191**	**0.637**	**mg/Kg-dry**	1	10-Oct-2018 23:03
Copper	**29.7**		**0.0484**	**0.255**	**mg/Kg-dry**	1	11-Oct-2018 16:51
Iron	**12,000**		**2.33**	**63.7**	**mg/Kg-dry**	1	10-Oct-2018 23:03
Lead	**52.3**		**0.0166**	**0.637**	**mg/Kg-dry**	1	10-Oct-2018 23:03
Magnesium	**4,560**		**3.20**	**63.7**	**mg/Kg-dry**	1	11-Oct-2018 16:51
Manganese	**1,070**		**5.48**	**63.7**	**mg/Kg-dry**	100	11-Oct-2018 15:10
Nickel	**16.9**		**0.0611**	**0.637**	**mg/Kg-dry**	1	11-Oct-2018 16:51
Potassium	**1,710**		**8.56**	**63.7**	**mg/Kg-dry**	1	11-Oct-2018 16:51
Selenium	**1.12**		**0.116**	**0.637**	**mg/Kg-dry**	1	11-Oct-2018 16:51
Silver	**0.0638**	J	**0.0191**	**0.637**	**mg/Kg-dry**	1	10-Oct-2018 23:03
Sodium	**183**		**5.31**	**63.7**	**mg/Kg-dry**	1	11-Oct-2018 16:51
Thallium	U		0.284	0.637	mg/Kg-dry	1	10-Oct-2018 23:03
Vanadium	**34.1**		**0.0955**	**0.637**	**mg/Kg-dry**	1	10-Oct-2018 23:03
Zinc	**126**		**0.217**	**0.637**	**mg/Kg-dry**	1	10-Oct-2018 23:03
MERCURY BY SW7471B		**Method:SW7471A**			Prep:SW7471A / 10-Oct-2018		Analyst: JCJ
Mercury	**0.0463**		**0.000644**	**0.00456**	**mg/Kg-dry**	1	11-Oct-2018 13:43
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**24.1**		**0.0100**	**0.0100**	**wt%**	1	09-Oct-2018 09:58

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA32-20181004-12-51
Collection Date: 04-Oct-2018 11:15

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-15
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**				Prep:SW3541 / 08-Oct-2018		Analyst: ACN
1,1´-Biphenyl	U		0.0021	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
2,4,5-Trichlorophenol	U		0.0031	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
2,4,6-Trichlorophenol	U		0.0021	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
2,4-Dichlorophenol	U		0.0016	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
2,4-Dimethylphenol	U		0.0041	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
2,4-Dinitrophenol	U		0.0055	0.016	mg/Kg-dry	1	10-Oct-2018 18:53
2,4-Dinitrotoluene	U		0.0011	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
2,6-Dinitrotoluene	U		0.0041	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
2-Chloronaphthalene	U		0.0016	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
2-Chlorophenol	U		0.0016	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
2-Methylnaphthalene	U		0.00061	0.0041	mg/Kg-dry	1	10-Oct-2018 18:53
2-Methylphenol	U		0.0014	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
2-Nitroaniline	U		0.0023	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
2-Nitrophenol	U		0.0031	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
3&4-Methylphenol	U		0.0012	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
3,3´-Dichlorobenzidine	U		0.0031	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
3-Nitroaniline	U		0.0023	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
4,6-Dinitro-2-methylphenol	U		0.0026	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
4-Bromophenyl phenyl ether	U		0.0020	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
4-Chloro-3-methylphenol	U		0.00086	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
4-Chloroaniline	U		0.0014	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
4-Chlorophenyl phenyl ether	U		0.0018	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
4-Nitroaniline	U		0.0027	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
4-Nitrophenol	U		0.0023	0.016	mg/Kg-dry	1	10-Oct-2018 18:53
Acenaphthene	U		0.00061	0.0041	mg/Kg-dry	1	10-Oct-2018 18:53
Acenaphthylene	U		0.0012	0.0041	mg/Kg-dry	1	10-Oct-2018 18:53
Acetophenone	U		0.00098	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
Anthracene	U		0.00061	0.0041	mg/Kg-dry	1	10-Oct-2018 18:53
Atrazine	U		0.0025	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
Benz(a)anthracene	U		0.0020	0.0041	mg/Kg-dry	1	10-Oct-2018 18:53
Benzaldehyde	U	n	0.0015	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
Benzo(a)pyrene	U		0.0012	0.0041	mg/Kg-dry	1	10-Oct-2018 18:53
Benzo(b)fluoranthene	U		0.0015	0.0041	mg/Kg-dry	1	10-Oct-2018 18:53
Benzo(g,h,i)perylene	U		0.00086	0.0041	mg/Kg-dry	1	10-Oct-2018 18:53
Benzo(k)fluoranthene	U		0.0011	0.0041	mg/Kg-dry	1	10-Oct-2018 18:53
Bis(2-chloro-1-methylethyl) ether	U		0.0017	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
Bis(2-chloroethoxy)methane	U		0.0011	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
Bis(2-chloroethyl)ether	U		0.0014	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
Bis(2-ethylhexyl)phthalate	**0.022**		**0.0021**	**0.0081**	**mg/Kg-dry**	1	10-Oct-2018 18:53

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA32-20181004-12-51
Collection Date: 04-Oct-2018 11:15

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-15
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**			Prep:SW3541 / 08-Oct-2018			Analyst: ACN
Butyl benzyl phthalate		U	0.0016	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
Caprolactam		U	0.0015	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
Carbazole		U	0.0015	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
Chrysene		U	0.00098	0.0041	mg/Kg-dry	1	10-Oct-2018 18:53
Dibenz(a,h)anthracene		U	0.0020	0.0041	mg/Kg-dry	1	10-Oct-2018 18:53
Dibenzofuran		U	0.00086	0.0041	mg/Kg-dry	1	10-Oct-2018 18:53
Diethyl phthalate		U	0.0012	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
Dimethyl phthalate		U	0.00098	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
Di-n-butyl phthalate		U	0.0015	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
Di-n-octyl phthalate		U	0.0011	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
Fluoranthene		U	0.0014	0.0041	mg/Kg-dry	1	10-Oct-2018 18:53
Fluorene		U	0.0014	0.0041	mg/Kg-dry	1	10-Oct-2018 18:53
Hexachlorobenzene		U	0.0011	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
Hexachlorobutadiene		U	0.0015	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
Hexachlorocyclopentadiene		U	0.00098	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
Hexachloroethane		U	0.0018	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
Indeno(1,2,3-cd)pyrene		U	0.00098	0.0041	mg/Kg-dry	1	10-Oct-2018 18:53
Isophorone		U	0.00098	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
Naphthalene		U	0.00074	0.0041	mg/Kg-dry	1	10-Oct-2018 18:53
Nitrobenzene		U	0.0011	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
N-Nitrosodi-n-propylamine		U	0.0014	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
N-Nitrosodiphenylamine		U	0.00086	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
Pentachlorophenol		U	0.0041	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
Phenanthrene		U	0.0018	0.0041	mg/Kg-dry	1	10-Oct-2018 18:53
Phenol		U	0.0014	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
Pyrene		U	0.00074	0.0041	mg/Kg-dry	1	10-Oct-2018 18:53
Surr: 2,4,6-Tribromophenol	*60.5*			*36-126*	*%REC*	*1*	*10-Oct-2018 18:53*
Surr: 2-Fluorobiphenyl	*52.2*			*43-125*	*%REC*	*1*	*10-Oct-2018 18:53*
Surr: 2-Fluorophenol	*45.6*			*37-125*	*%REC*	*1*	*10-Oct-2018 18:53*
Surr: 4-Terphenyl-d14	*74.1*			*32-125*	*%REC*	*1*	*10-Oct-2018 18:53*
Surr: Nitrobenzene-d5	*50.9*			*37-125*	*%REC*	*1*	*10-Oct-2018 18:53*
Surr: Phenol-d6	*47.7*			*40-125*	*%REC*	*1*	*10-Oct-2018 18:53*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA32-20181004-12-51
Collection Date: 04-Oct-2018 11:15

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-15
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A		**Method:SW8082**			Prep:SW3541/3665A / 08-Oct-2018		Analyst: JBA
Aroclor 1016	U		0.0052	0.021	mg/Kg-dry	1	10-Oct-2018 09:09
Aroclor 1221	U		0.0069	0.021	mg/Kg-dry	1	10-Oct-2018 09:09
Aroclor 1232	U		0.0055	0.021	mg/Kg-dry	1	10-Oct-2018 09:09
Aroclor 1242	U		0.0073	0.021	mg/Kg-dry	1	10-Oct-2018 09:09
Aroclor 1248	U		0.0073	0.021	mg/Kg-dry	1	10-Oct-2018 09:09
Aroclor 1254	U		0.0058	0.021	mg/Kg-dry	1	10-Oct-2018 09:09
Aroclor 1260	U		0.0049	0.021	mg/Kg-dry	1	10-Oct-2018 09:09
Surr: Decachlorobiphenyl	*133*			*54-143*	*%REC*	*1*	*10-Oct-2018 09:09*
Surr: Tetrachloro-m-xylene	*103*			*50-140*	*%REC*	*1*	*10-Oct-2018 09:09*
METALS BY SW6020A		**Method:SW6020**			Prep:SW3050A / 08-Oct-2018		Analyst: JC
Aluminum	**6,740**		**27.3**	**235**	**mg/Kg-dry**	100	11-Oct-2018 15:13
Antimony	**0.252**	J	**0.0765**	**0.588**	**mg/Kg-dry**	1	11-Oct-2018 16:59
Arsenic	**7.82**		**0.0824**	**0.588**	**mg/Kg-dry**	1	10-Oct-2018 23:05
Barium	**61.1**		**0.0353**	**0.588**	**mg/Kg-dry**	1	10-Oct-2018 23:05
Beryllium	**0.421**	J	**0.0247**	**0.588**	**mg/Kg-dry**	1	11-Oct-2018 16:59
Cadmium	**0.502**	J	**0.0318**	**0.588**	**mg/Kg-dry**	1	10-Oct-2018 23:05
Calcium	**252,000**		**584**	**5880**	**mg/Kg-dry**	100	11-Oct-2018 15:13
Chromium	**13.8**		**0.0271**	**0.588**	**mg/Kg-dry**	1	11-Oct-2018 16:59
Cobalt	**5.64**		**0.0177**	**0.588**	**mg/Kg-dry**	1	10-Oct-2018 23:05
Copper	**11.2**		**0.0447**	**0.235**	**mg/Kg-dry**	1	11-Oct-2018 16:59
Iron	**8,460**		**2.15**	**58.8**	**mg/Kg-dry**	1	10-Oct-2018 23:05
Lead	**119**		**0.0153**	**0.588**	**mg/Kg-dry**	1	10-Oct-2018 23:05
Magnesium	**2,590**		**2.95**	**58.8**	**mg/Kg-dry**	1	11-Oct-2018 16:59
Manganese	**858**		**5.06**	**58.8**	**mg/Kg-dry**	100	11-Oct-2018 15:13
Nickel	**15.0**		**0.0565**	**0.588**	**mg/Kg-dry**	1	11-Oct-2018 16:59
Potassium	**1,750**		**7.91**	**58.8**	**mg/Kg-dry**	1	11-Oct-2018 16:59
Selenium	**1.09**		**0.107**	**0.588**	**mg/Kg-dry**	1	11-Oct-2018 16:59
Silver	**0.0514**	J	**0.0177**	**0.588**	**mg/Kg-dry**	1	10-Oct-2018 23:05
Sodium	**255**		**4.91**	**58.8**	**mg/Kg-dry**	1	11-Oct-2018 16:59
Thallium	U		0.262	0.588	mg/Kg-dry	1	10-Oct-2018 23:05
Vanadium	**29.3**		**0.0883**	**0.588**	**mg/Kg-dry**	1	10-Oct-2018 23:05
Zinc	**63.4**		**0.200**	**0.588**	**mg/Kg-dry**	1	10-Oct-2018 23:05
MERCURY BY SW7471B		**Method:SW7471A**			Prep:SW7471A / 10-Oct-2018		Analyst: JCJ
Mercury	**0.0552**		**0.000591**	**0.00418**	**mg/Kg-dry**	1	11-Oct-2018 13:45
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**19.0**		**0.0100**	**0.0100**	**wt%**	1	09-Oct-2018 09:58

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: FJD04-09-PCS01-20181004-81
Collection Date: 04-Oct-2018 16:16

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-16
Matrix:Paint

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A		**Method:SW8082**			Prep:CLP4_PEST / 10-Oct-2018		Analyst: JBA
Aroclor 1268	U	n	0.033	0.033	mg/Kg	1	11-Oct-2018 01:36
Surr: Tetrachloro-m-xylene	*89.2*			*55-150*	*%REC*	*1*	*11-Oct-2018 01:36*
LEAD IN PAINT BY SW6020A		**Method:SW6020**			Prep:SW3050A / 08-Oct-2018		Analyst: JC
Lead	**151**		**1.24**	**47.7**	**mg/Kg**	100	10-Oct-2018 23:07

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: FJD04-09-WS01-20181004-81
Collection Date: 04-Oct-2018 14:11

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-17
Matrix:Wipe

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A	**Method:SW8082**			Prep:SW3541C/3665A / 09-Oct-2018		Analyst: JBA	
Aroclor 1016	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:04
Aroclor 1221	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:04
Aroclor 1232	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:04
Aroclor 1242	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:04
Aroclor 1248	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:04
Aroclor 1254	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:04
Aroclor 1260	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:04
Surr: Decachlorobiphenyl	*121*			*30-150*	*%REC*	*1*	*09-Oct-2018 20:04*
Surr: Tetrachloro-m-xylene	*113*			*30-150*	*%REC*	*1*	*09-Oct-2018 20:04*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: FJD04-09-WS01-20181004-82
Collection Date: 04-Oct-2018 14:13

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-18
Matrix:Wipe

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A	**Method:SW8082**			Prep:SW3541C/3665A / 09-Oct-2018		Analyst: JBA	
Aroclor 1016	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:20
Aroclor 1221	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:20
Aroclor 1232	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:20
Aroclor 1242	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:20
Aroclor 1248	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:20
Aroclor 1254	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:20
Aroclor 1260	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:20
Surr: Decachlorobiphenyl	*117*			*30-150*	*%REC*	*1*	*09-Oct-2018 20:20*
Surr: Tetrachloro-m-xylene	*110*			*30-150*	*%REC*	*1*	*09-Oct-2018 20:20*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: FJD04-09-WS02-20181004-81
Collection Date: 04-Oct-2018 14:16

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-19
Matrix:Wipe

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A	**Method:SW8082**			Prep:SW3541C/3665A / 09-Oct-2018		Analyst: JBA	
Aroclor 1016	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:36
Aroclor 1221	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:36
Aroclor 1232	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:36
Aroclor 1242	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:36
Aroclor 1248	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:36
Aroclor 1254	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:36
Aroclor 1260	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:36
Surr: Decachlorobiphenyl	*132*			*30-150*	*%REC*	*1*	*09-Oct-2018 20:36*
Surr: Tetrachloro-m-xylene	*99.7*			*30-150*	*%REC*	*1*	*09-Oct-2018 20:36*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: FJD04-09-WS03-20181004-81
Collection Date: 04-Oct-2018 14:20

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-20
Matrix:Wipe

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A	**Method:SW8082**			Prep:SW3541C/3665A / 09-Oct-2018		Analyst: JBA	
Aroclor 1016	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:51
Aroclor 1221	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:51
Aroclor 1232	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:51
Aroclor 1242	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:51
Aroclor 1248	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:51
Aroclor 1254	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:51
Aroclor 1260	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:51
Surr: Decachlorobiphenyl	*127*			*30-150*	*%REC*	*1*	*09-Oct-2018 20:51*
Surr: Tetrachloro-m-xylene	*118*			*30-150*	*%REC*	*1*	*09-Oct-2018 20:51*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: FJD04-09-WS04-20181004-81
Collection Date: 04-Oct-2018 14:26

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-21
Matrix:Wipe

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A	**Method:SW8082**			Prep:SW3541C/3665A / 09-Oct-2018		Analyst: JBA	
Aroclor 1016	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 21:07
Aroclor 1221	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 21:07
Aroclor 1232	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 21:07
Aroclor 1242	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 21:07
Aroclor 1248	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 21:07
Aroclor 1254	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 21:07
Aroclor 1260	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 21:07
Surr: Decachlorobiphenyl	*134*			*30-150*	*%REC*	*1*	*09-Oct-2018 21:07*
Surr: Tetrachloro-m-xylene	*107*			*30-150*	*%REC*	*1*	*09-Oct-2018 21:07*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: FJD04-09-WS05-20181004-81
Collection Date: 04-Oct-2018 14:28

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-22
Matrix:Wipe

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A	**Method:SW8082**				Prep:SW3541C/3665A / 09-Oct-2018		Analyst: JBA
Aroclor 1016	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 21:23
Aroclor 1221	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 21:23
Aroclor 1232	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 21:23
Aroclor 1242	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 21:23
Aroclor 1248	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 21:23
Aroclor 1254	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 21:23
Aroclor 1260	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 21:23
Surr: Decachlorobiphenyl	*130*			*30-150*	*%REC*	*1*	*09-Oct-2018 21:23*
Surr: Tetrachloro-m-xylene	*117*			*30-150*	*%REC*	*1*	*09-Oct-2018 21:23*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: FJD04-09-WS05-20181004-82
Collection Date: 04-Oct-2018 14:31

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-23
Matrix:Wipe

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A	**Method:SW8082**			Prep:SW3541C/3665A / 09-Oct-2018		Analyst: JBA	
Aroclor 1016	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 22:57
Aroclor 1221	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 22:57
Aroclor 1232	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 22:57
Aroclor 1242	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 22:57
Aroclor 1248	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 22:57
Aroclor 1254	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 22:57
Aroclor 1260	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 22:57
Surr: Decachlorobiphenyl	*129*			*30-150*	*%REC*	*1*	*09-Oct-2018 22:57*
Surr: Tetrachloro-m-xylene	*113*			*30-150*	*%REC*	*1*	*09-Oct-2018 22:57*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: FJD04-09-WS06-20181004-81
Collection Date: 04-Oct-2018 14:33

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-24
Matrix:Wipe

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A	**Method:SW8082**			Prep:SW3541C/3665A / 09-Oct-2018		Analyst: JBA	
Aroclor 1016	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 23:13
Aroclor 1221	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 23:13
Aroclor 1232	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 23:13
Aroclor 1242	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 23:13
Aroclor 1248	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 23:13
Aroclor 1254	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 23:13
Aroclor 1260	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 23:13
Surr: Decachlorobiphenyl	*108*			*30-150*	*%REC*	*1*	*09-Oct-2018 23:13*
Surr: Tetrachloro-m-xylene	*97.8*			*30-150*	*%REC*	*1*	*09-Oct-2018 23:13*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: FJD04-09-WS07-20181004-81
Collection Date: 04-Oct-2018 14:36

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-25
Matrix:Wipe

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A	**Method:SW8082**			Prep:SW3541C/3665A / 09-Oct-2018		Analyst: JBA	
Aroclor 1016	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 23:28
Aroclor 1221	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 23:28
Aroclor 1232	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 23:28
Aroclor 1242	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 23:28
Aroclor 1248	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 23:28
Aroclor 1254	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 23:28
Aroclor 1260	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 23:28
Surr: Decachlorobiphenyl	*130*			*30-150*	*%REC*	*1*	*09-Oct-2018 23:28*
Surr: Tetrachloro-m-xylene	*120*			*30-150*	*%REC*	*1*	*09-Oct-2018 23:28*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: FJD04-09-WS08-20181004-81
Collection Date: 04-Oct-2018 14:38

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-26
Matrix:Wipe

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A	**Method:SW8082**			Prep:SW3541C/3665A / 09-Oct-2018		Analyst: JBA	
Aroclor 1016	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 23:44
Aroclor 1221	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 23:44
Aroclor 1232	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 23:44
Aroclor 1242	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 23:44
Aroclor 1248	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 23:44
Aroclor 1254	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 23:44
Aroclor 1260	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 23:44
Surr: Decachlorobiphenyl	*131*			*30-150*	*%REC*	*1*	*09-Oct-2018 23:44*
Surr: Tetrachloro-m-xylene	*107*			*30-150*	*%REC*	*1*	*09-Oct-2018 23:44*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: FJD04-09-WS09-20181004-81
Collection Date: 04-Oct-2018 14:42

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-27
Matrix:Wipe

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A	**Method:SW8082**			Prep:SW3541C/3665A / 09-Oct-2018		Analyst: JBA	
Aroclor 1016	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:00
Aroclor 1221	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:00
Aroclor 1232	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:00
Aroclor 1242	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:00
Aroclor 1248	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:00
Aroclor 1254	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:00
Aroclor 1260	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:00
Surr: Decachlorobiphenyl	*136*			*30-150*	*%REC*	*1*	*10-Oct-2018 00:00*
Surr: Tetrachloro-m-xylene	*120*			*30-150*	*%REC*	*1*	*10-Oct-2018 00:00*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: FJD04-09-WS10-20181004-81
Collection Date: 04-Oct-2018 14:46

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-28
Matrix:Wipe

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A	**Method:SW8082**			Prep:SW3541C/3665A / 09-Oct-2018		Analyst: JBA	
Aroclor 1016	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:16
Aroclor 1221	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:16
Aroclor 1232	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:16
Aroclor 1242	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:16
Aroclor 1248	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:16
Aroclor 1254	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:16
Aroclor 1260	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:16
Surr: Decachlorobiphenyl	*112*			*30-150*	*%REC*	*1*	*10-Oct-2018 00:16*
Surr: Tetrachloro-m-xylene	*95.6*			*30-150*	*%REC*	*1*	*10-Oct-2018 00:16*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: FJD04-09-WS11-20181004-81
Collection Date: 04-Oct-2018 14:54

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-29
Matrix:Wipe

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A	**Method:SW8082**			Prep:SW3541C/3665A / 09-Oct-2018		Analyst: JBA	
Aroclor 1016	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:31
Aroclor 1221	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:31
Aroclor 1232	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:31
Aroclor 1242	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:31
Aroclor 1248	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:31
Aroclor 1254	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:31
Aroclor 1260	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:31
Surr: Decachlorobiphenyl	*129*			*30-150*	*%REC*	*1*	*10-Oct-2018 00:31*
Surr: Tetrachloro-m-xylene	*115*			*30-150*	*%REC*	*1*	*10-Oct-2018 00:31*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: FJD04-09-WS12-20181004-81
Collection Date: 04-Oct-2018 14:58

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-30
Matrix:Wipe

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A	**Method:SW8082**				Prep:SW3541C/3665A / 09-Oct-2018		Analyst: JBA
Aroclor 1016	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:47
Aroclor 1221	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:47
Aroclor 1232	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:47
Aroclor 1242	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:47
Aroclor 1248	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:47
Aroclor 1254	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:47
Aroclor 1260	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:47
Surr: Decachlorobiphenyl	*128*			*30-150*	*%REC*	*1*	*10-Oct-2018 00:47*
Surr: Tetrachloro-m-xylene	*114*			*30-150*	*%REC*	*1*	*10-Oct-2018 00:47*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: FJD04-09-WS13-20181004-81
Collection Date: 04-Oct-2018 15:02

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-31
Matrix:Wipe

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A	**Method:SW8082**			Prep:SW3541C/3665A / 09-Oct-2018		Analyst: JBA	
Aroclor 1016	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 01:03
Aroclor 1221	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 01:03
Aroclor 1232	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 01:03
Aroclor 1242	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 01:03
Aroclor 1248	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 01:03
Aroclor 1254	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 01:03
Aroclor 1260	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 01:03
Surr: Decachlorobiphenyl	*125*			*30-150*	*%REC*	*1*	*10-Oct-2018 01:03*
Surr: Tetrachloro-m-xylene	*102*			*30-150*	*%REC*	*1*	*10-Oct-2018 01:03*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: FJD04-09-WS14-20181004-81
Collection Date: 04-Oct-2018 15:06

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-32
Matrix:Wipe

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A	**Method:SW8082**			Prep:SW3541C/3665A / 09-Oct-2018		Analyst: JBA	
Aroclor 1016	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 01:18
Aroclor 1221	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 01:18
Aroclor 1232	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 01:18
Aroclor 1242	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 01:18
Aroclor 1248	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 01:18
Aroclor 1254	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 01:18
Aroclor 1260	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 01:18
Surr: Decachlorobiphenyl	*111*			*30-150*	*%REC*	*1*	*10-Oct-2018 01:18*
Surr: Tetrachloro-m-xylene	*94.8*			*30-150*	*%REC*	*1*	*10-Oct-2018 01:18*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

WEIGHT LOG

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

Batch ID: 133244 **Method:** LOW-LEVEL SEMIVOLATILES **Prep:** 3510_B_LOW

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18100338-01	1	1000	1 (mL)	0.001

Batch ID: 133282 **Method:** LEAD IN PAINT BY SW6020A **Prep:** 3050_I_LOW

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18100338-16	1	0.5244	50 (mL)	95.35
HS18100338-02	1	0.521	50 (mL)	95.97
HS18100338-03	1	0.5175	50 (mL)	96.62
HS18100338-04	1	0.5125	50 (mL)	97.56
HS18100338-05	1	0.5393	50 (mL)	92.71
HS18100338-06	1	0.5308	50 (mL)	94.2
HS18100338-07	1	0.5437	50 (mL)	91.96
HS18100338-08	1	0.546	50 (mL)	91.58
HS18100338-09	1	0.5272	50 (mL)	94.84
HS18100338-10	1	0.5187	50 (mL)	96.39
HS18100338-11	1	0.544	50 (mL)	91.91
HS18100338-12	1	0.5173	50 (mL)	96.66
HS18100338-13	1	0.5294	50 (mL)	94.45
HS18100338-14	1	0.5172	50 (mL)	96.67
HS18100338-15	1	0.5246	50 (mL)	95.31

Batch ID: 133292 **Method:** ICP-MS METALS BY SW6020A **Prep:** 3010A

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18100338-01	1	10	10 (mL)	1

Batch ID: 133297 **Method:** LOW-LEVEL SEMIVOLATILES BY 8270D **Prep:** 3541_B_LOW

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18100338-02	1	30.07	1 (mL)	0.03326
HS18100338-03	1	30.05	1 (mL)	0.03328
HS18100338-04	1	30.12	1 (mL)	0.0332
HS18100338-05	1	30.18	1 (mL)	0.03313
HS18100338-06	1	30.15	1 (mL)	0.03317
HS18100338-07	1	30.06	1 (mL)	0.03327
HS18100338-08	1	30.09	1 (mL)	0.03323
HS18100338-09	1	30.02	1 (mL)	0.03331
HS18100338-10	1	30.17	1 (mL)	0.03315
HS18100338-11	1	30.19	1 (mL)	0.03312
HS18100338-12	1	30.12	1 (mL)	0.0332
HS18100338-13	1	30.03	1 (mL)	0.0333
HS18100338-14	1	30.04	1 (mL)	0.03329
HS18100338-15	1	30.15	1 (mL)	0.03317

WEIGHT LOG

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

Batch ID: 133300 **Method:** PCBS BY SW8082A **Prep:** PCBPR_SOX

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18100338-02	1	30.06	10 (mL)	0.3327
HS18100338-03	1	30.02	10 (mL)	0.3331
HS18100338-04	1	30.05	10 (mL)	0.3328
HS18100338-05	1	30.13	10 (mL)	0.3319
HS18100338-06	1	30.19	10 (mL)	0.3312
HS18100338-07	1	30.15	10 (mL)	0.3317
HS18100338-08	1	30.03	10 (mL)	0.333
HS18100338-09	1	30.11	10 (mL)	0.3321
HS18100338-10	1	30.16	10 (mL)	0.3316
HS18100338-11	1	30.18	10 (mL)	0.3313
HS18100338-12	1	30.12	10 (mL)	0.332
HS18100338-13	1	30.08	10 (mL)	0.3324
HS18100338-14	1	30.07	10 (mL)	0.3326
HS18100338-15	1	30.14	10 (mL)	0.3318

Batch ID: 133307 **Method:** PCBS BY SW8082A **Prep:** PCBWIPEPR_SOX

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18100338-17	1	1	10 (mL)	10
HS18100338-18	1	1	10 (mL)	10
HS18100338-19	1	1	10 (mL)	10
HS18100338-20	1	1	10 (mL)	10
HS18100338-21	1	1	10 (mL)	10
HS18100338-22	1	1	10 (mL)	10
HS18100338-23	1	1	10 (mL)	10
HS18100338-24	1	1	10 (mL)	10
HS18100338-25	1	1	10 (mL)	10
HS18100338-26	1	1	10 (mL)	10
HS18100338-27	1	1	10 (mL)	10
HS18100338-28	1	1	10 (mL)	10
HS18100338-29	1	1	10 (mL)	10
HS18100338-30	1	1	10 (mL)	10
HS18100338-31	1	1	10 (mL)	10
HS18100338-32	1	1	10 (mL)	10

Batch ID: 133318 **Method:** PCBS BY SW8082A **Prep:** 3510_PCB

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18100338-01	1	240	10 (mL)	0.04167

Batch ID: 133349 **Method:** MERCURY BY SW7470A **Prep:** HG_WPR

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18100338-01	1	10 (mL)	10 (mL)	1

WEIGHT LOG

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

Batch ID: 133369 **Method:** MERCURY BY SW7471B **Prep:** HG_S_LOWPR

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18100338-02	1	0.5646	40 (mL)	70.85
HS18100338-03	1	0.5721	40 (mL)	69.92
HS18100338-04	1	0.564	40 (mL)	70.92
HS18100338-05	1	0.5678	40 (mL)	70.45
HS18100338-06	1	0.5793	40 (mL)	69.05
HS18100338-07	1	0.5722	40 (mL)	69.91
HS18100338-08	1	0.5692	40 (mL)	70.27
HS18100338-09	1	0.5587	40 (mL)	71.59
HS18100338-10	1	0.5645	40 (mL)	70.86
HS18100338-11	1	0.574	40 (mL)	69.69
HS18100338-12	1	0.5669	40 (mL)	70.56
HS18100338-13	1	0.5638	40 (mL)	70.95
HS18100338-14	1	0.5766	40 (mL)	69.37
HS18100338-15	1	0.5886	40 (mL)	67.96

Batch ID: 133387 **Method:** PCBS BY SW8082A **Prep:** PEST/PCB PR_SOX

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18100338-16	1	15.06	10 (mL)	0.664

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 133244	**Test Name :** LOW-LEVEL SEMIVOLATILES			**Matrix:** Water		
HS18100338-01	DRA32-20181004-12-23	04 Oct 2018 11:30		08 Oct 2018 09:09	10 Oct 2018 14:40	1
Batch ID 133282	**Test Name :** LEAD IN PAINT BY SW6020A			**Matrix:** Paint		
HS18100338-16	FJD04-09-PCS01-20181004-81	04 Oct 2018 16:16		08 Oct 2018 15:23	10 Oct 2018 23:07	100

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 133282	**Test Name :** METALS BY SW6020A			**Matrix:** Soil		
HS18100338-02	DRA29-20181004-01-51	04 Oct 2018 08:42		08 Oct 2018 15:23	11 Oct 2018 16:11	1
HS18100338-02	DRA29-20181004-01-51	04 Oct 2018 08:42		08 Oct 2018 15:23	11 Oct 2018 14:32	100
HS18100338-02	DRA29-20181004-01-51	04 Oct 2018 08:42		08 Oct 2018 15:23	10 Oct 2018 22:08	1
HS18100338-03	DRA29-20181004-06-51	04 Oct 2018 08:59		08 Oct 2018 15:23	11 Oct 2018 16:22	1
HS18100338-03	DRA29-20181004-06-51	04 Oct 2018 08:59		08 Oct 2018 15:23	11 Oct 2018 14:39	100
HS18100338-03	DRA29-20181004-06-51	04 Oct 2018 08:59		08 Oct 2018 15:23	10 Oct 2018 22:34	1
HS18100338-04	DRA29-20181004-06-52	04 Oct 2018 08:59		08 Oct 2018 15:23	11 Oct 2018 16:24	1
HS18100338-04	DRA29-20181004-06-52	04 Oct 2018 08:59		08 Oct 2018 15:23	11 Oct 2018 14:41	100
HS18100338-04	DRA29-20181004-06-52	04 Oct 2018 08:59		08 Oct 2018 15:23	10 Oct 2018 22:36	1
HS18100338-05	DRA29-20181004-12-51	04 Oct 2018 09:17		08 Oct 2018 15:23	11 Oct 2018 16:32	1
HS18100338-05	DRA29-20181004-12-51	04 Oct 2018 09:17		08 Oct 2018 15:23	11 Oct 2018 14:43	100
HS18100338-05	DRA29-20181004-12-51	04 Oct 2018 09:17		08 Oct 2018 15:23	10 Oct 2018 22:39	1
HS18100338-06	DRA30-20181004-01-51	04 Oct 2018 09:31		08 Oct 2018 15:23	11 Oct 2018 16:34	1
HS18100338-06	DRA30-20181004-01-51	04 Oct 2018 09:31		08 Oct 2018 15:23	11 Oct 2018 14:45	100
HS18100338-06	DRA30-20181004-01-51	04 Oct 2018 09:31		08 Oct 2018 15:23	10 Oct 2018 22:41	1
HS18100338-07	DRA30-20181004-06-51	04 Oct 2018 09:51		08 Oct 2018 15:23	11 Oct 2018 16:36	1
HS18100338-07	DRA30-20181004-06-51	04 Oct 2018 09:51		08 Oct 2018 15:23	11 Oct 2018 14:48	100
HS18100338-07	DRA30-20181004-06-51	04 Oct 2018 09:51		08 Oct 2018 15:23	10 Oct 2018 22:43	1
HS18100338-08	DRA30-20181004-12-51	04 Oct 2018 10:05		08 Oct 2018 15:23	11 Oct 2018 16:38	1
HS18100338-08	DRA30-20181004-12-51	04 Oct 2018 10:05		08 Oct 2018 15:23	11 Oct 2018 14:57	100
HS18100338-08	DRA30-20181004-12-51	04 Oct 2018 10:05		08 Oct 2018 15:23	10 Oct 2018 22:45	1
HS18100338-09	DRA31-20181004-01-51	04 Oct 2018 10:40		08 Oct 2018 15:23	11 Oct 2018 16:40	1
HS18100338-09	DRA31-20181004-01-51	04 Oct 2018 10:40		08 Oct 2018 15:23	11 Oct 2018 14:59	100
HS18100338-09	DRA31-20181004-01-51	04 Oct 2018 10:40		08 Oct 2018 15:23	10 Oct 2018 22:47	1
HS18100338-10	DRA31-20181004-06-51	04 Oct 2018 11:05		08 Oct 2018 15:23	11 Oct 2018 16:37	500
HS18100338-10	DRA31-20181004-06-51	04 Oct 2018 11:05		08 Oct 2018 15:23	11 Oct 2018 16:43	1
HS18100338-10	DRA31-20181004-06-51	04 Oct 2018 11:05		08 Oct 2018 15:23	11 Oct 2018 15:01	100
HS18100338-10	DRA31-20181004-06-51	04 Oct 2018 11:05		08 Oct 2018 15:23	10 Oct 2018 22:54	1
HS18100338-11	DRA31-20181004-12-51	04 Oct 2018 11:15		08 Oct 2018 15:23	11 Oct 2018 16:45	1
HS18100338-11	DRA31-20181004-12-51	04 Oct 2018 11:15		08 Oct 2018 15:23	11 Oct 2018 16:39	500
HS18100338-11	DRA31-20181004-12-51	04 Oct 2018 11:15		08 Oct 2018 15:23	11 Oct 2018 15:04	100
HS18100338-11	DRA31-20181004-12-51	04 Oct 2018 11:15		08 Oct 2018 15:23	10 Oct 2018 22:56	1
HS18100338-12	DRA32-20181004-01-51	04 Oct 2018 10:45		08 Oct 2018 15:23	11 Oct 2018 16:47	1
HS18100338-12	DRA32-20181004-01-51	04 Oct 2018 10:45		08 Oct 2018 15:23	11 Oct 2018 15:06	100
HS18100338-12	DRA32-20181004-01-51	04 Oct 2018 10:45		08 Oct 2018 15:23	10 Oct 2018 22:58	1
HS18100338-13	DRA32-20181004-06-51	04 Oct 2018 10:55		08 Oct 2018 15:23	11 Oct 2018 16:49	1
HS18100338-13	DRA32-20181004-06-51	04 Oct 2018 10:55		08 Oct 2018 15:23	11 Oct 2018 15:08	100
HS18100338-13	DRA32-20181004-06-51	04 Oct 2018 10:55		08 Oct 2018 15:23	10 Oct 2018 23:01	1
HS18100338-14	DRA32-20181004-06-52	04 Oct 2018 10:55		08 Oct 2018 15:23	11 Oct 2018 16:51	1

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
HS18100338-14	DRA32-20181004-06-52	04 Oct 2018 10:55		08 Oct 2018 15:23	11 Oct 2018 15:10	100
HS18100338-14	DRA32-20181004-06-52	04 Oct 2018 10:55		08 Oct 2018 15:23	10 Oct 2018 23:03	1
HS18100338-15	DRA32-20181004-12-51	04 Oct 2018 11:15		08 Oct 2018 15:23	11 Oct 2018 16:59	1
HS18100338-15	DRA32-20181004-12-51	04 Oct 2018 11:15		08 Oct 2018 15:23	11 Oct 2018 15:13	100
HS18100338-15	DRA32-20181004-12-51	04 Oct 2018 11:15		08 Oct 2018 15:23	10 Oct 2018 23:05	1
Batch ID 133292	**Test Name :** ICP-MS METALS BY SW6020A			**Matrix:** Water		
HS18100338-01	DRA32-20181004-12-23	04 Oct 2018 11:30		09 Oct 2018 11:00	11 Oct 2018 15:27	1
Batch ID 133297	**Test Name :** LOW-LEVEL SEMIVOLATILES BY 8270D			**Matrix:** Soil		
HS18100338-02	DRA29-20181004-01-51	04 Oct 2018 08:42		08 Oct 2018 17:00	10 Oct 2018 13:56	1
HS18100338-03	DRA29-20181004-06-51	04 Oct 2018 08:59		08 Oct 2018 17:00	10 Oct 2018 14:58	1
HS18100338-04	DRA29-20181004-06-52	04 Oct 2018 08:59		08 Oct 2018 17:00	10 Oct 2018 15:18	1
HS18100338-05	DRA29-20181004-12-51	04 Oct 2018 09:17		08 Oct 2018 17:00	10 Oct 2018 15:37	1
HS18100338-06	DRA30-20181004-01-51	04 Oct 2018 09:31		08 Oct 2018 17:00	10 Oct 2018 15:57	1
HS18100338-07	DRA30-20181004-06-51	04 Oct 2018 09:51		08 Oct 2018 17:00	10 Oct 2018 16:17	1
HS18100338-08	DRA30-20181004-12-51	04 Oct 2018 10:05		08 Oct 2018 17:00	10 Oct 2018 16:36	1
HS18100338-09	DRA31-20181004-01-51	04 Oct 2018 10:40		08 Oct 2018 17:00	10 Oct 2018 16:56	1
HS18100338-10	DRA31-20181004-06-51	04 Oct 2018 11:05		08 Oct 2018 17:00	10 Oct 2018 17:15	1
HS18100338-11	DRA31-20181004-12-51	04 Oct 2018 11:15		08 Oct 2018 17:00	10 Oct 2018 17:35	1
HS18100338-12	DRA32-20181004-01-51	04 Oct 2018 10:45		08 Oct 2018 17:00	10 Oct 2018 17:55	1
HS18100338-13	DRA32-20181004-06-51	04 Oct 2018 10:55		08 Oct 2018 17:00	10 Oct 2018 18:14	1
HS18100338-14	DRA32-20181004-06-52	04 Oct 2018 10:55		08 Oct 2018 17:00	10 Oct 2018 18:34	1
HS18100338-15	DRA32-20181004-12-51	04 Oct 2018 11:15		08 Oct 2018 17:00	10 Oct 2018 18:53	1
Batch ID 133300	**Test Name :** PCBS BY SW8082A			**Matrix:** Soil		
HS18100338-02	DRA29-20181004-01-51	04 Oct 2018 08:42		08 Oct 2018 18:00	10 Oct 2018 03:24	1
HS18100338-03	DRA29-20181004-06-51	04 Oct 2018 08:59		08 Oct 2018 18:00	10 Oct 2018 04:43	1
HS18100338-04	DRA29-20181004-06-52	04 Oct 2018 08:59		08 Oct 2018 18:00	10 Oct 2018 04:58	1
HS18100338-05	DRA29-20181004-12-51	04 Oct 2018 09:17		08 Oct 2018 18:00	10 Oct 2018 05:14	1
HS18100338-06	DRA30-20181004-01-51	04 Oct 2018 09:31		08 Oct 2018 18:00	10 Oct 2018 06:48	1
HS18100338-07	DRA30-20181004-06-51	04 Oct 2018 09:51		08 Oct 2018 18:00	10 Oct 2018 07:04	1
HS18100338-08	DRA30-20181004-12-51	04 Oct 2018 10:05		08 Oct 2018 18:00	10 Oct 2018 07:20	1
HS18100338-09	DRA31-20181004-01-51	04 Oct 2018 10:40		08 Oct 2018 18:00	10 Oct 2018 07:35	1
HS18100338-10	DRA31-20181004-06-51	04 Oct 2018 11:05		08 Oct 2018 18:00	10 Oct 2018 07:51	1
HS18100338-11	DRA31-20181004-12-51	04 Oct 2018 11:15		08 Oct 2018 18:00	10 Oct 2018 08:07	1
HS18100338-12	DRA32-20181004-01-51	04 Oct 2018 10:45		08 Oct 2018 18:00	10 Oct 2018 08:22	1
HS18100338-13	DRA32-20181004-06-51	04 Oct 2018 10:55		08 Oct 2018 18:00	10 Oct 2018 08:38	1
HS18100338-14	DRA32-20181004-06-52	04 Oct 2018 10:55		08 Oct 2018 18:00	10 Oct 2018 08:54	1
HS18100338-15	DRA32-20181004-12-51	04 Oct 2018 11:15		08 Oct 2018 18:00	10 Oct 2018 09:09	1

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 133307	**Test Name :** PCBS BY SW8082A			**Matrix:** Wipe		
HS18100338-17	FJD04-09-WS01-20181004-81	04 Oct 2018 14:11		09 Oct 2018 11:00	09 Oct 2018 20:04	1
HS18100338-18	FJD04-09-WS01-20181004-82	04 Oct 2018 14:13		09 Oct 2018 11:00	09 Oct 2018 20:20	1
HS18100338-19	FJD04-09-WS02-20181004-81	04 Oct 2018 14:16		09 Oct 2018 11:00	09 Oct 2018 20:36	1
HS18100338-20	FJD04-09-WS03-20181004-81	04 Oct 2018 14:20		09 Oct 2018 11:00	09 Oct 2018 20:51	1
HS18100338-21	FJD04-09-WS04-20181004-81	04 Oct 2018 14:26		09 Oct 2018 11:00	09 Oct 2018 21:07	1
HS18100338-22	FJD04-09-WS05-20181004-81	04 Oct 2018 14:28		09 Oct 2018 11:00	09 Oct 2018 21:23	1
HS18100338-23	FJD04-09-WS05-20181004-82	04 Oct 2018 14:31		09 Oct 2018 11:00	09 Oct 2018 22:57	1
HS18100338-24	FJD04-09-WS06-20181004-81	04 Oct 2018 14:33		09 Oct 2018 11:00	09 Oct 2018 23:13	1
HS18100338-25	FJD04-09-WS07-20181004-81	04 Oct 2018 14:36		09 Oct 2018 11:00	09 Oct 2018 23:28	1
HS18100338-26	FJD04-09-WS08-20181004-81	04 Oct 2018 14:38		09 Oct 2018 11:00	09 Oct 2018 23:44	1
HS18100338-27	FJD04-09-WS09-20181004-81	04 Oct 2018 14:42		09 Oct 2018 11:00	10 Oct 2018 00:00	1
HS18100338-28	FJD04-09-WS10-20181004-81	04 Oct 2018 14:46		09 Oct 2018 11:00	10 Oct 2018 00:16	1
HS18100338-29	FJD04-09-WS11-20181004-81	04 Oct 2018 14:54		09 Oct 2018 11:00	10 Oct 2018 00:31	1
HS18100338-30	FJD04-09-WS12-20181004-81	04 Oct 2018 14:58		09 Oct 2018 11:00	10 Oct 2018 00:47	1
HS18100338-31	FJD04-09-WS13-20181004-81	04 Oct 2018 15:02		09 Oct 2018 11:00	10 Oct 2018 01:03	1
HS18100338-32	FJD04-09-WS14-20181004-81	04 Oct 2018 15:06		09 Oct 2018 11:00	10 Oct 2018 01:18	1
Batch ID 133318	**Test Name :** PCBS BY SW8082A			**Matrix:** Water		
HS18100338-01	DRA32-20181004-12-23	04 Oct 2018 11:30		09 Oct 2018 13:44	10 Oct 2018 12:18	1
Batch ID 133349	**Test Name :** MERCURY BY SW7470A			**Matrix:** Water		
HS18100338-01	DRA32-20181004-12-23	04 Oct 2018 11:30		10 Oct 2018 09:00	10 Oct 2018 16:05	1

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 133369	**Test Name :** MERCURY BY SW7471B			**Matrix:** Soil		
HS18100338-02	DRA29-20181004-01-51	04 Oct 2018 08:42		10 Oct 2018 13:47	11 Oct 2018 13:10	1
HS18100338-03	DRA29-20181004-06-51	04 Oct 2018 08:59		10 Oct 2018 13:47	11 Oct 2018 13:15	1
HS18100338-04	DRA29-20181004-06-52	04 Oct 2018 08:59		10 Oct 2018 13:47	11 Oct 2018 13:17	1
HS18100338-05	DRA29-20181004-12-51	04 Oct 2018 09:17		10 Oct 2018 13:47	11 Oct 2018 13:19	1
HS18100338-06	DRA30-20181004-01-51	04 Oct 2018 09:31		10 Oct 2018 13:47	11 Oct 2018 13:21	1
HS18100338-07	DRA30-20181004-06-51	04 Oct 2018 09:51		10 Oct 2018 13:47	11 Oct 2018 13:22	1
HS18100338-08	DRA30-20181004-12-51	04 Oct 2018 10:05		10 Oct 2018 13:47	11 Oct 2018 13:24	1
HS18100338-09	DRA31-20181004-01-51	04 Oct 2018 10:40		10 Oct 2018 13:47	11 Oct 2018 13:26	1
HS18100338-10	DRA31-20181004-06-51	04 Oct 2018 11:05		10 Oct 2018 13:47	11 Oct 2018 13:36	1
HS18100338-11	DRA31-20181004-12-51	04 Oct 2018 11:15		10 Oct 2018 13:47	11 Oct 2018 13:38	1
HS18100338-12	DRA32-20181004-01-51	04 Oct 2018 10:45		10 Oct 2018 13:47	11 Oct 2018 13:40	1
HS18100338-13	DRA32-20181004-06-51	04 Oct 2018 10:55		10 Oct 2018 13:47	11 Oct 2018 13:42	1
HS18100338-14	DRA32-20181004-06-52	04 Oct 2018 10:55		10 Oct 2018 13:47	11 Oct 2018 13:43	1
HS18100338-15	DRA32-20181004-12-51	04 Oct 2018 11:15		10 Oct 2018 13:47	11 Oct 2018 13:45	1
Batch ID 133387	**Test Name :** PCBS BY SW8082A			**Matrix:** Paint		
HS18100338-16	FJD04-09-PCS01-20181004-81	04 Oct 2018 16:16		10 Oct 2018 14:30	11 Oct 2018 01:36	1
Batch ID R325102	**Test Name :** MOISTURE - ASTM D2216			**Matrix:** Soil		
HS18100338-02	DRA29-20181004-01-51	04 Oct 2018 08:42			09 Oct 2018 09:58	1
HS18100338-03	DRA29-20181004-06-51	04 Oct 2018 08:59			09 Oct 2018 09:58	1
HS18100338-04	DRA29-20181004-06-52	04 Oct 2018 08:59			09 Oct 2018 09:58	1
HS18100338-05	DRA29-20181004-12-51	04 Oct 2018 09:17			09 Oct 2018 09:58	1
HS18100338-06	DRA30-20181004-01-51	04 Oct 2018 09:31			09 Oct 2018 09:58	1
HS18100338-07	DRA30-20181004-06-51	04 Oct 2018 09:51			09 Oct 2018 09:58	1
HS18100338-08	DRA30-20181004-12-51	04 Oct 2018 10:05			09 Oct 2018 09:58	1
HS18100338-09	DRA31-20181004-01-51	04 Oct 2018 10:40			09 Oct 2018 09:58	1
HS18100338-10	DRA31-20181004-06-51	04 Oct 2018 11:05			09 Oct 2018 09:58	1
HS18100338-11	DRA31-20181004-12-51	04 Oct 2018 11:15			09 Oct 2018 09:58	1
HS18100338-12	DRA32-20181004-01-51	04 Oct 2018 10:45			09 Oct 2018 09:58	1
HS18100338-13	DRA32-20181004-06-51	04 Oct 2018 10:55			09 Oct 2018 09:58	1
HS18100338-14	DRA32-20181004-06-52	04 Oct 2018 10:55			09 Oct 2018 09:58	1
HS18100338-15	DRA32-20181004-12-51	04 Oct 2018 11:15			09 Oct 2018 09:58	1

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133300 **Instrument: ECD_7** **Method: SW8082**

MBLK Sample ID: **MBLK-133300** Units: **ug/Kg** Analysis Date: **10-Oct-2018 02:53**
Client ID: Run ID: **ECD_7_325204** SeqNo: **4767788** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	U	17								
Aroclor 1260	U	17								
Surr: Decachlorobiphenyl	*7.565*	*1.6*	*6.667*	*0*	*113*	*54 - 143*				
Surr: Tetrachloro-m-xylene	*6.796*	*1.6*	*6.667*	*0*	*102*	*50 - 140*				

LCS Sample ID: **LCS-133300** Units: **ug/Kg** Analysis Date: **10-Oct-2018 03:08**
Client ID: Run ID: **ECD_7_325204** SeqNo: **4767789** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	186	17	166.7	0	112	53 - 135				
Aroclor 1260	219	17	166.7	0	131	54 - 137				
Surr: Decachlorobiphenyl	*8.03*	*1.6*	*6.667*	*0*	*120*	*54 - 143*				
Surr: Tetrachloro-m-xylene	*6.917*	*1.6*	*6.667*	*0*	*104*	*50 - 140*				

MS Sample ID: **HS18100338-02MS** Units: **ug/Kg** Analysis Date: **10-Oct-2018 03:40**
Client ID: **DRA29-20181004-01-51** Run ID: **ECD_7_325204** SeqNo: **4767791** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	176.1	17	166.2	0	106	53 - 135				
Aroclor 1260	206	17	166.2	0	124	54 - 137				
Surr: Decachlorobiphenyl	*7.59*	*1.6*	*6.647*	*0*	*114*	*54 - 143*				
Surr: Tetrachloro-m-xylene	*6.516*	*1.6*	*6.647*	*0*	*98.0*	*50 - 140*				

MSD Sample ID: **HS18100338-02MSD** Units: **ug/Kg** Analysis Date: **10-Oct-2018 03:56**
Client ID: **DRA29-20181004-01-51** Run ID: **ECD_7_325204** SeqNo: **4767792** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	181.2	17	166.3	0	109	53 - 135	176.1	2.83	30	
Aroclor 1260	204.9	17	166.3	0	123	54 - 137	206	0.524	30	
Surr: Decachlorobiphenyl	*8.148*	*1.6*	*6.651*	*0*	*122*	*54 - 143*	*7.59*	*7.09*	*30*	
Surr: Tetrachloro-m-xylene	*6.822*	*1.6*	*6.651*	*0*	*103*	*50 - 140*	*6.516*	*4.59*	*30*	

The following samples were analyzed in this batch:

HS18100338-02	HS18100338-03	HS18100338-04	HS18100338-05
HS18100338-06	HS18100338-07	HS18100338-08	HS18100338-09
HS18100338-10	HS18100338-11	HS18100338-12	HS18100338-13
HS18100338-14	HS18100338-15		

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133307 **Instrument: ECD_7** **Method: SW8082**

MBLK Sample ID: **MBLK-133307** Units: **ng, Total** Analysis Date: **09-Oct-2018 19:17**
Client ID: Run ID: **ECD_7_325200** SeqNo: **4767741** PrepDate: **09-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	U	500								
Aroclor 1260	U	500								
Surr: Decachlorobiphenyl	*231*	*0*	*200*	*0*	*115*	*30 - 150*				
Surr: Tetrachloro-m-xylene	*200.5*	*0*	*200*	*0*	*100*	*30 - 150*				

LCS Sample ID: **LCS-133307** Units: **ng, Total** Analysis Date: **09-Oct-2018 19:33**
Client ID: Run ID: **ECD_7_325200** SeqNo: **4767742** PrepDate: **09-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	4995	500	5000	0	99.9	50 - 130				
Aroclor 1260	5362	500	5000	0	107	50 - 130				
Surr: Decachlorobiphenyl	*196*	*0*	*200*	*0*	*98.0*	*30 - 150*				
Surr: Tetrachloro-m-xylene	*190.4*	*0*	*200*	*0*	*95.2*	*30 - 150*				

LCSD Sample ID: **LCSD-133307** Units: **ng, Total** Analysis Date: **09-Oct-2018 19:48**
Client ID: Run ID: **ECD_7_325200** SeqNo: **4767743** PrepDate: **09-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	5365	500	5000	0	107	50 - 130	4995	7.14	30	
Aroclor 1260	6073	500	5000	0	121	50 - 130	5362	12.4	30	
Surr: Decachlorobiphenyl	*243.1*	*0*	*200*	*0*	*122*	*30 - 150*	*196*	*21.5*	*30*	
Surr: Tetrachloro-m-xylene	*206*	*0*	*200*	*0*	*103*	*30 - 150*	*190.4*	*7.9*	*30*	

The following samples were analyzed in this batch:

HS18100338-17	HS18100338-18	HS18100338-19	HS18100338-20
HS18100338-21	HS18100338-22	HS18100338-23	HS18100338-24
HS18100338-25	HS18100338-26	HS18100338-27	HS18100338-28
HS18100338-29	HS18100338-30	HS18100338-31	HS18100338-32

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133318 **Instrument: ECD_7** **Method: SW8082**

MBLK Sample ID: **MBLK-133318** Units: **ug/L** Analysis Date: **10-Oct-2018 11:15**
Client ID: Run ID: **ECD_7_325212** SeqNo: **4767918** PrepDate: **09-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	U	0.500								
Aroclor 1260	U	0.500								
Surr: Decachlorobiphenyl	*0.2222*	*0.0500*	*0.2*	*0*	*111*	*54 - 140*				
Surr: Tetrachloro-m-xylene	*0.2044*	*0.0500*	*0.2*	*0*	*102*	*53 - 137*				

LCS Sample ID: **LCS-133318** Units: **ug/L** Analysis Date: **10-Oct-2018 11:31**
Client ID: Run ID: **ECD_7_325212** SeqNo: **4767919** PrepDate: **09-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	4.928	0.500	5	0	98.6	54 - 138				
Aroclor 1260	5.42	0.500	5	0	108	57 - 136				
Surr: Decachlorobiphenyl	*0.2046*	*0.0500*	*0.2*	*0*	*102*	*54 - 140*				
Surr: Tetrachloro-m-xylene	*0.1882*	*0.0500*	*0.2*	*0*	*94.1*	*53 - 137*				

LCSD Sample ID: **LCSD-133318** Units: **ug/L** Analysis Date: **10-Oct-2018 11:46**
Client ID: Run ID: **ECD_7_325212** SeqNo: **4767920** PrepDate: **09-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	4.923	0.500	5	0	98.5	54 - 138	4.928	0.101	20	
Aroclor 1260	5.346	0.500	5	0	107	57 - 136	5.42	1.37	20	
Surr: Decachlorobiphenyl	*0.1905*	*0.0500*	*0.2*	*0*	*95.2*	*54 - 140*	*0.2046*	*7.11*	*20*	
Surr: Tetrachloro-m-xylene	*0.1888*	*0.0500*	*0.2*	*0*	*94.4*	*53 - 137*	*0.1882*	*0.313*	*20*	

The following samples were analyzed in this batch: HS18100338-01

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133387 **Instrument: ECD_7** **Method: SW8082**

MBLK Sample ID: **MBLK-133387** Units: **ug/Kg** Analysis Date: **10-Oct-2018 21:56**
Client ID: Run ID: **ECD_7_325216** SeqNo: **4768024** PrepDate: **10-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1268	U	17								
Surr: Tetrachloro-m-xylene	*7.177*	*0*	*6.67*	*0*	*108*	*55 - 137*				

LCS Sample ID: **LCS-133387 1268** Units: **ug/Kg** Analysis Date: **10-Oct-2018 22:43**
Client ID: Run ID: **ECD_7_325216** SeqNo: **4768025** PrepDate: **10-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1268	164.5	17	166.7	0	98.7	50 - 150				

LCSD Sample ID: **LCSD-133387 1268** Units: **ug/Kg** Analysis Date: **10-Oct-2018 22:59**
Client ID: Run ID: **ECD_7_325216** SeqNo: **4768026** PrepDate: **10-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1268	163.2	17	166.7	0	97.9	50 - 150	164.5	0.818	30	

The following samples were analyzed in this batch: HS18100338-16

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133282 **Instrument: ICPMS04** **Method: SW6020**

MBLK Sample ID: **MBLK-133282** Units: **mg/Kg** Analysis Date: **11-Oct-2018 14:30**
Client ID: Run ID: **ICPMS04_325213** SeqNo: **4768178** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.6721	2.00								J
Antimony	U	0.500								
Arsenic	U	0.500								
Barium	0.1029	0.500								J
Beryllium	U	0.500								
Cadmium	U	0.500								
Calcium	U	50.0								
Chromium	U	0.500								
Cobalt	U	0.500								
Copper	U	0.200								
Iron	U	50.0								
Lead	U	0.500								
Magnesium	U	50.0								
Manganese	U	0.500								
Nickel	U	0.500								
Potassium	U	50.0								
Selenium	U	0.500								
Silver	U	0.500								
Sodium	U	50.0								
Thallium	U	0.500								
Vanadium	0.0896	0.500								J
Zinc	U	0.500								

LCS Sample ID: **LCS-133282** Units: **mg/Kg** Analysis Date: **11-Oct-2018 13:55**
Client ID: Run ID: **ICPMS04_325213** SeqNo: **4768488** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	62.33	2.00	60	0	104	80 - 120				
Copper	10.75	0.200	10	0	108	80 - 120				

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133282 **Instrument: ICPMS04** **Method: SW6020**

LCS Sample ID: **LCS-133282** Units: **mg/Kg** Analysis Date: **10-Oct-2018 22:06**
Client ID: Run ID: **ICPMS04_325162** SeqNo: **4767536** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	9.985	0.500	10	0	99.8	80 - 120				
Arsenic	9.757	0.500	10	0	97.6	80 - 120				
Barium	10.57	0.500	10	0	106	80 - 120				
Beryllium	10.9	0.500	10	0	109	80 - 120				
Cadmium	10.01	0.500	10	0	100	80 - 120				
Calcium	989.7	50.0	1000	0	99.0	80 - 120				
Chromium	9.758	0.500	10	0	97.6	80 - 120				
Cobalt	9.67	0.500	10	0	96.7	80 - 120				
Iron	975.4	50.0	1000	0	97.5	80 - 120				
Lead	10	0.500	10	0	100	80 - 120				
Magnesium	1020	50.0	1000	0	102	80 - 120				
Manganese	9.603	0.500	10	0	96.0	80 - 120				
Nickel	9.377	0.500	10	0	93.8	80 - 120				
Potassium	968.6	50.0	1000	0	96.9	80 - 120				
Selenium	10.02	0.500	10	0	100	80 - 120				
Silver	9.912	0.500	10	0	99.1	80 - 120				
Sodium	980.6	50.0	1000	0	98.1	80 - 120				
Thallium	10.19	0.500	10	0	102	80 - 120				
Vanadium	9.911	0.500	10	0	99.1	80 - 120				
Zinc	9.226	0.500	10	0	92.3	80 - 120				

MS Sample ID: **HS18100338-02MS** Units: **mg/Kg** Analysis Date: **11-Oct-2018 16:15**
Client ID: **DRA29-20181004-01-51** Run ID: **ICPMS04_325213** SeqNo: **4768921** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	14410	1.90	57.12	9134	9240	75 - 125				SEO
Copper	43.26	0.190	9.52	25.66	185	75 - 125				S

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133282 **Instrument: ICPMS04** **Method: SW6020**

MS Sample ID: **HS18100338-02MS** Units: **mg/Kg** Analysis Date: **10-Oct-2018 22:12**
Client ID: **DRA29-20181004-01-51** Run ID: **ICPMS04_325162** SeqNo: **4767539** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	5.453	0.476	9.52	0.2402	54.8	75 - 125				S
Arsenic	16.1	0.476	9.52	7.491	90.4	75 - 125				
Barium	108.7	0.476	9.52	98.69	105	75 - 125				O
Beryllium	10.18	0.476	9.52	0.4854	102	75 - 125				
Cadmium	9.947	0.476	9.52	0.4067	100	75 - 125				
Calcium	151200	47.6	952	161600	-1090	75 - 125				SEO
Chromium	26.91	0.476	9.52	14.56	130	75 - 125				S
Cobalt	14.85	0.476	9.52	6.51	87.6	75 - 125				
Iron	10910	47.6	952	9833	113	75 - 125				O
Lead	31.76	0.476	9.52	23.07	91.3	75 - 125				
Magnesium	4199	47.6	952	2785	148	75 - 125				S
Manganese	792.5	0.476	9.52	910.1	-1230	75 - 125				SEO
Nickel	22.53	0.476	9.52	14	89.6	75 - 125				
Potassium	3104	47.6	952	1300	189	75 - 125				S
Selenium	10.28	0.476	9.52	0.6737	101	75 - 125				
Silver	8.922	0.476	9.52	0.06641	93.0	75 - 125				
Sodium	1079	47.6	952	109.5	102	75 - 125				
Thallium	9.887	0.476	9.52	0.132	102	75 - 125				
Vanadium	47.64	0.476	9.52	35.02	133	75 - 125				S
Zinc	105.1	0.476	9.52	68.49	385	75 - 125				SO

MSD Sample ID: **HS18100338-02MSD** Units: **mg/Kg** Analysis Date: **11-Oct-2018 16:18**
Client ID: **DRA29-20181004-01-51** Run ID: **ICPMS04_325213** SeqNo: **4768922** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	13510	1.93	57.85	9134	7560	75 - 125	14410	6.5	20	SEO
Copper	38.87	0.193	9.641	25.66	137	75 - 125	43.26	10.7	20	S

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133282 **Instrument: ICPMS04** **Method: SW6020**

MSD Sample ID: **HS18100338-02MSD** Units: **mg/Kg** Analysis Date: **10-Oct-2018 22:14**
Client ID: **DRA29-20181004-01-51** Run ID: **ICPMS04_325162** SeqNo: **4767540** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	6.016	0.482	9.641	0.2402	59.9	75 - 125	5.453	9.82	20	S
Arsenic	16.68	0.482	9.641	7.491	95.3	75 - 125	16.1	3.56	20	
Barium	143.1	0.482	9.641	98.69	461	75 - 125	108.7	27.4	20	SRO
Beryllium	10.23	0.482	9.641	0.4854	101	75 - 125	10.18	0.476	20	
Cadmium	10.28	0.482	9.641	0.4067	102	75 - 125	9.947	3.34	20	
Calcium	156700	48.2	964.1	161600	-516	75 - 125	151200	3.53	20	SEO
Chromium	26.25	0.482	9.641	14.56	121	75 - 125	26.91	2.48	20	
Cobalt	15.96	0.482	9.641	6.51	98.0	75 - 125	14.85	7.2	20	
Iron	11870	48.2	964.1	9833	212	75 - 125	10910	8.44	20	SO
Lead	33.92	0.482	9.641	23.07	113	75 - 125	31.76	6.59	20	
Magnesium	3743	48.2	964.1	2785	99.4	75 - 125	4199	11.5	20	
Manganese	938	0.482	9.641	910.1	290	75 - 125	792.5	16.8	20	SEO
Nickel	23.45	0.482	9.641	14	97.9	75 - 125	22.53	3.99	20	
Potassium	2850	48.2	964.1	1300	161	75 - 125	3104	8.55	20	S
Selenium	10.1	0.482	9.641	0.6737	97.8	75 - 125	10.28	1.74	20	
Silver	9.177	0.482	9.641	0.06641	94.5	75 - 125	8.922	2.82	20	
Sodium	1075	48.2	964.1	109.5	100	75 - 125	1079	0.43	20	
Thallium	10.21	0.482	9.641	0.132	104	75 - 125	9.887	3.17	20	
Vanadium	48.9	0.482	9.641	35.02	144	75 - 125	47.64	2.61	20	S
Zinc	77.91	0.482	9.641	68.49	97.8	75 - 125	105.1	29.7	20	RO

PDS Sample ID: **HS18100338-02PDS** Units: **mg/Kg** Analysis Date: **11-Oct-2018 14:36**
Client ID: **DRA29-20181004-01-51** Run ID: **ICPMS04_325213** SeqNo: **4768212** PrepDate: **08-Oct-2018** DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	10750	192	959.7	9954	83.4	75 - 125				O
Calcium	272400	4800	95970	175400	101	75 - 125				
Manganese	1974	48.0	959.7	1026	98.8	75 - 125				

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133282 **Instrument: ICPMS04** **Method: SW6020**

PDS Sample ID: **HS18100338-02PDS** Units: **mg/Kg** Analysis Date: **10-Oct-2018 22:17**
Client ID: **DRA29-20181004-01-51** Run ID: **ICPMS04_325162** SeqNo: **4767541** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	9.916	0.480	9.597	0.2402	101	75 - 125				
Arsenic	16.55	0.480	9.597	7.491	94.4	75 - 125				
Barium	106.4	0.480	9.597	98.69	80.7	75 - 125				O
Beryllium	10.72	0.480	9.597	0.4854	107	75 - 125				
Cadmium	10.12	0.480	9.597	0.4067	101	75 - 125				
Chromium	22.77	0.480	9.597	14.56	85.5	75 - 125				
Cobalt	15.83	0.480	9.597	6.51	97.1	75 - 125				
Iron	10880	48.0	959.7	9833	109	75 - 125				O
Lead	32.03	0.480	9.597	23.07	93.4	75 - 125				
Magnesium	3505	48.0	959.7	2785	75.1	75 - 125				
Nickel	21.93	0.480	9.597	14	82.6	75 - 125				
Potassium	2303	48.0	959.7	1300	104	75 - 125				
Selenium	10.35	0.480	9.597	0.6737	101	75 - 125				
Silver	8.77	0.480	9.597	0.06641	90.7	75 - 125				
Sodium	1049	48.0	959.7	109.5	97.9	75 - 125				
Thallium	9.726	0.480	9.597	0.132	100.0	75 - 125				
Vanadium	42.48	0.480	9.597	35.02	77.7	75 - 125				
Zinc	73.46	0.480	9.597	68.49	51.9	75 - 125				SO

PDS Sample ID: **HS18100338-02PDS** Units: **mg/Kg** Analysis Date: **11-Oct-2018 16:20**
Client ID: **DRA29-20181004-01-51** Run ID: **ICPMS04_325213** SeqNo: **4768923** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	35.99	0.192	9.597	25.66	108	75 - 125				

SD Sample ID: **HS18100338-02SD** Units: **mg/Kg** Analysis Date: **11-Oct-2018 14:34**
Client ID: **DRA29-20181004-01-51** Run ID: **ICPMS04_325213** SeqNo: **4768211** PrepDate: **08-Oct-2018** DF: **500**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Aluminum	9900	960					9954	0.535	10	
Calcium	169700	24000					175400	3.24	10	
Manganese	1068	240					1026	4.01	10	

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133282 **Instrument: ICPMS04** **Method: SW6020**

SD Sample ID: **HS18100338-02SD** Units: **mg/Kg** Analysis Date: **10-Oct-2018 22:10**
Client ID: **DRA29-20181004-01-51** Run ID: **ICPMS04_325162** SeqNo: **4767538** PrepDate: **08-Oct-2018** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Antimony	U	2.40					0.2402	0	10	
Arsenic	7.545	2.40					7.491	0.716	10	
Barium	96.8	2.40					98.69	1.91	10	
Beryllium	0.5095	2.40					0.4854	0	10	J
Cadmium	0.3605	2.40					0.4067	0	10	J
Chromium	14.33	2.40					14.56	1.56	10	
Cobalt	6.81	2.40					6.51	4.6	10	
Iron	10230	240					9833	3.99	10	
Lead	23.11	2.40					23.07	0.188	10	
Magnesium	2814	240					2785	1.03	10	
Nickel	13.97	2.40					14	0.224	10	
Potassium	1257	240					1300	3.34	10	
Selenium	1.478	2.40					0.6737	0	10	J
Silver	U	2.40					0.06641	0	10	
Sodium	93.66	240					109.5	0	10	J
Thallium	U	2.40					0.132	0	10	
Vanadium	34.52	2.40					35.02	1.44	10	
Zinc	70.78	2.40					68.49	3.35	10	

SD Sample ID: **HS18100338-02SD** Units: **mg/Kg** Analysis Date: **11-Oct-2018 16:13**
Client ID: **DRA29-20181004-01-51** Run ID: **ICPMS04_325213** SeqNo: **4768920** PrepDate: **08-Oct-2018** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Copper	28.63	0.960					25.66	11.6	10	R

The following samples were analyzed in this batch:

HS18100338-02	HS18100338-03	HS18100338-04	HS18100338-05
HS18100338-06	HS18100338-07	HS18100338-08	HS18100338-09
HS18100338-10	HS18100338-11	HS18100338-12	HS18100338-13
HS18100338-14	HS18100338-15	HS18100338-16	

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133292 **Instrument: ICPMS05** **Method: SW6020**

MBLK Sample ID: **MBLK-133292** Units: **mg/L** Analysis Date: **11-Oct-2018 16:29**
Client ID: Run ID: **ICPMS05_325198** SeqNo: **4768961** PrepDate: **09-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.003291	0.0100								J

MBLK Sample ID: **MBLK-133292** Units: **mg/L** Analysis Date: **11-Oct-2018 15:22**
Client ID: Run ID: **ICPMS04_325213** SeqNo: **4768617** PrepDate: **09-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	U	0.00200								
Arsenic	U	0.00200								
Barium	U	0.00400								
Beryllium	U	0.00200								
Cadmium	U	0.00200								
Calcium	0.0396	0.500								J
Chromium	U	0.00400								
Cobalt	U	0.00500								
Copper	U	0.00200								
Iron	U	0.200								
Lead	U	0.00200								
Magnesium	0.02144	0.200								J
Manganese	0.000982	0.00500								J
Nickel	U	0.00200								
Potassium	U	0.200								
Selenium	U	0.00200								
Silver	U	0.00200								
Sodium	U	0.200								
Thallium	U	0.00200								
Vanadium	U	0.00500								
Zinc	U	0.00400								

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133292 **Instrument: ICPMS05** **Method: SW6020**

LCS Sample ID: **LCS-133292** Units: **mg/L** Analysis Date: **11-Oct-2018 15:25**
Client ID: Run ID: **ICPMS04_325213** SeqNo: **4768618** PrepDate: **09-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1085	0.0100	0.1	0	108	80 - 120				
Antimony	0.05079	0.00200	0.05	0	102	80 - 120				
Arsenic	0.05156	0.00200	0.05	0	103	80 - 120				
Barium	0.04667	0.00400	0.05	0	93.3	80 - 120				
Beryllium	0.05041	0.00200	0.05	0	101	80 - 120				
Cadmium	0.05052	0.00200	0.05	0	101	80 - 120				
Calcium	5.149	0.500	5	0	103	80 - 120				
Chromium	0.05144	0.00400	0.05	0	103	80 - 120				
Cobalt	0.05047	0.00500	0.05	0	101	80 - 120				
Copper	0.05235	0.00200	0.05	0	105	80 - 120				
Iron	5.117	0.200	5	0	102	80 - 120				
Lead	0.05075	0.00200	0.05	0	101	80 - 120				
Magnesium	5.172	0.200	5	0	103	80 - 120				
Manganese	0.05391	0.00500	0.05	0	108	80 - 120				
Nickel	0.05208	0.00200	0.05	0	104	80 - 120				
Potassium	5.162	0.200	5	0	103	80 - 120				
Selenium	0.04893	0.00200	0.05	0	97.9	80 - 120				
Silver	0.05056	0.00200	0.05	0	101	80 - 120				
Sodium	5.187	0.200	5	0	104	80 - 120				
Thallium	0.04726	0.00200	0.05	0	94.5	80 - 120				
Vanadium	0.04932	0.00500	0.05	0	98.6	80 - 120				
Zinc	0.05327	0.00400	0.05	0	107	80 - 120				

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133292 **Instrument: ICPMS05** **Method: SW6020**

MS Sample ID: **HS18100285-02MS** Units: **mg/L** Analysis Date: **11-Oct-2018 15:34**
Client ID: Run ID: **ICPMS04_325213** SeqNo: **4768622** PrepDate: **09-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1136	0.0100	0.1	0.009067	105	80 - 120				
Antimony	0.05299	0.00200	0.05	0.000073	106	80 - 120				
Arsenic	0.05709	0.00200	0.05	0.000593	113	80 - 120				
Barium	0.6156	0.00400	0.05	0.5537	124	80 - 120				SO
Beryllium	0.05544	0.00200	0.05	0.000083	111	80 - 120				
Cadmium	0.05436	0.00200	0.05	0.000107	109	80 - 120				
Calcium	184.2	0.500	5	172.6	232	80 - 120				SEO
Chromium	0.05452	0.00400	0.05	0.000394	108	80 - 120				
Cobalt	0.05357	0.00500	0.05	0.000998	105	80 - 120				
Copper	0.052	0.00200	0.05	-0.001133	106	80 - 120				
Iron	14.22	0.200	5	8.783	109	80 - 120				
Lead	0.05265	0.00200	0.05	-0.000086	105	80 - 120				
Magnesium	21.66	0.200	5	15.82	117	80 - 120				
Manganese	0.6722	0.00500	0.05	0.5992	146	80 - 120				SO
Nickel	0.05433	0.00200	0.05	0.001022	107	80 - 120				
Potassium	9.598	0.200	5	4.267	107	80 - 120				
Selenium	0.05688	0.00200	0.05	-0.000615	115	80 - 120				
Silver	0.05404	0.00200	0.05	0.000034	108	80 - 120				
Sodium	38.13	0.200	5	31.68	129	80 - 120				SO
Thallium	0.05076	0.00200	0.05	0.000009	102	80 - 120				
Vanadium	0.05569	0.00500	0.05	-0.000391	112	80 - 120				
Zinc	0.05688	0.00400	0.05	0.003186	107	80 - 120				

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133292 **Instrument: ICPMS05** **Method: SW6020**

MSD Sample ID: **HS18100285-02MSD** Units: **mg/L** Analysis Date: **11-Oct-2018 15:36**
Client ID: Run ID: **ICPMS04_325213** SeqNo: **4768623** PrepDate: **09-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1102	0.0100	0.1	0.009067	101	80 - 120	0.1136	2.97	20	
Antimony	0.05167	0.00200	0.05	0.000073	103	80 - 120	0.05299	2.52	20	
Arsenic	0.05351	0.00200	0.05	0.000593	106	80 - 120	0.05709	6.48	20	
Barium	0.6133	0.00400	0.05	0.5537	119	80 - 120	0.6156	0.367	20	O
Beryllium	0.05253	0.00200	0.05	0.000083	105	80 - 120	0.05544	5.39	20	
Cadmium	0.0499	0.00200	0.05	0.000107	99.6	80 - 120	0.05436	8.56	20	
Calcium	180.9	0.500	5	172.6	166	80 - 120	184.2	1.8	20	SEO
Chromium	0.05041	0.00400	0.05	0.000394	100	80 - 120	0.05452	7.83	20	
Cobalt	0.05118	0.00500	0.05	0.000998	100	80 - 120	0.05357	4.55	20	
Copper	0.04884	0.00200	0.05	-0.001133	99.9	80 - 120	0.052	6.28	20	
Iron	14.16	0.200	5	8.783	108	80 - 120	14.22	0.413	20	
Lead	0.0513	0.00200	0.05	-0.000086	103	80 - 120	0.05265	2.58	20	
Magnesium	21.25	0.200	5	15.82	108	80 - 120	21.66	1.93	20	
Manganese	0.6504	0.00500	0.05	0.5992	102	80 - 120	0.6722	3.3	20	O
Nickel	0.05202	0.00200	0.05	0.001022	102	80 - 120	0.05433	4.34	20	
Potassium	9.651	0.200	5	4.267	108	80 - 120	9.598	0.553	20	
Selenium	0.05687	0.00200	0.05	-0.000615	115	80 - 120	0.05688	0.0176	20	
Silver	0.05072	0.00200	0.05	0.000034	101	80 - 120	0.05404	6.35	20	
Sodium	37.37	0.200	5	31.68	114	80 - 120	38.13	2.02	20	O
Thallium	0.05103	0.00200	0.05	0.000009	102	80 - 120	0.05076	0.527	20	
Vanadium	0.05098	0.00500	0.05	-0.000391	103	80 - 120	0.05569	8.83	20	
Zinc	0.04918	0.00400	0.05	0.003186	92.0	80 - 120	0.05688	14.5	20	

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133292 **Instrument: ICPMS05** **Method: SW6020**

PDS Sample ID: **HS18100285-02PDS** Units: **mg/L** Analysis Date: **11-Oct-2018 15:38**
Client ID: Run ID: **ICPMS04_325213** SeqNo: **4768624** PrepDate: **09-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1097	0.0100	0.1	0.009067	101	75 - 125				
Antimony	0.09672	0.00200	0.1	0.000073	96.6	75 - 125				
Arsenic	0.1006	0.00200	0.1	0.000593	100	75 - 125				
Barium	0.6697	0.00400	0.1	0.5537	116	75 - 125				O
Beryllium	0.11	0.00200	0.1	0.000083	110	75 - 125				
Cadmium	0.1046	0.00200	0.1	0.000107	105	75 - 125				
Chromium	0.09899	0.00400	0.1	0.000394	98.6	75 - 125				
Cobalt	0.1025	0.00500	0.1	0.000998	101	75 - 125				
Copper	0.09662	0.00200	0.1	-0.001133	97.8	75 - 125				
Iron	18.99	0.200	10	8.783	102	75 - 125				
Lead	0.1025	0.00200	0.1	-0.000086	103	75 - 125				
Magnesium	25.85	0.200	10	15.82	100	75 - 125				
Manganese	0.6799	0.00500	0.1	0.5992	80.7	75 - 125				O
Nickel	0.09661	0.00200	0.1	0.001022	95.6	75 - 125				
Potassium	14.84	0.200	10	4.267	106	75 - 125				
Selenium	0.1041	0.00200	0.1	-0.000615	105	75 - 125				
Silver	0.09533	0.00200	0.1	0.000034	95.3	75 - 125				
Sodium	40.94	0.200	10	31.68	92.7	75 - 125				
Thallium	0.1006	0.00200	0.1	0.000009	101	75 - 125				
Vanadium	0.1016	0.00500	0.1	-0.000391	102	75 - 125				
Zinc	0.09786	0.00400	0.1	0.003186	94.7	75 - 125				

PDS Sample ID: **HS18100285-02PDS** Units: **mg/L** Analysis Date: **11-Oct-2018 16:35**
Client ID: Run ID: **ICPMS05_325198** SeqNo: **4768964** PrepDate: **09-Oct-2018** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	186.7	5.00	100	164.1	22.5	75 - 125				S

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133292 **Instrument: ICPMS05** **Method: SW6020**

SD Sample ID: **HS18100285-02SD** Units: **mg/L** Analysis Date: **11-Oct-2018 15:31**
Client ID: Run ID: **ICPMS04_325213** SeqNo: **4768621** PrepDate: **09-Oct-2018** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Aluminum	0.02411	0.0500					0.009067	0	10	J
Antimony	U	0.0100					0.000073	0	10	
Arsenic	0.00546	0.0100					0.000593	0	10	J
Barium	0.5776	0.0200					0.5537	4.33	10	
Beryllium	U	0.0100					0.000083	0	10	
Cadmium	U	0.0100					0.000107	0	10	
Chromium	U	0.0200					0.000394	0	10	
Cobalt	0.001508	0.0250					0.000998	0	10	J
Copper	U	0.0100					-0.001133	0	10	
Iron	9.46	1.00					8.783	7.7	10	
Lead	U	0.0100					-0.000086	0	10	
Magnesium	16.14	1.00					15.82	2.02	10	
Manganese	0.6337	0.0250					0.5992	5.75	10	
Nickel	U	0.0100					0.001022	0	10	
Potassium	4.487	1.00					4.267	5.15	10	
Selenium	U	0.0100					-0.000615	0	10	
Silver	U	0.0100					0.000034	0	10	
Sodium	34.37	1.00					31.68	8.49	10	
Thallium	U	0.0100					0.000009	0	10	
Vanadium	0.004408	0.0250					-0.000391	0	10	J
Zinc	U	0.0200					0.003186	0	10	

SD Sample ID: **HS18100285-02SD** Units: **mg/L** Analysis Date: **11-Oct-2018 16:33**
Client ID: Run ID: **ICPMS05_325198** SeqNo: **4768963** PrepDate: **09-Oct-2018** DF: **50**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Calcium	158.9	25.0					164.1	3.19	10	

The following samples were analyzed in this batch: HS18100338-01

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133349 **Instrument: HG03** **Method: SW7470**

MBLK Sample ID: **MBLK-133349** Units: **mg/L** Analysis Date: **10-Oct-2018 15:11**
Client ID: Run ID: **HG03_325131** SeqNo: **4766461** PrepDate: **10-Oct-2018** DF: **1**

Analyte	Result		PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury		U	0.000200								

LCS Sample ID: **LCS-133349** Units: **mg/L** Analysis Date: **10-Oct-2018 15:13**
Client ID: Run ID: **HG03_325131** SeqNo: **4766462** PrepDate: **10-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00494	0.000200	0.005	0	98.8	80 - 120				

MS Sample ID: **HS18100338-01MS** Units: **mg/L** Analysis Date: **10-Oct-2018 16:07**
Client ID: **DRA32-20181004-12-23** Run ID: **HG03_325131** SeqNo: **4766557** PrepDate: **10-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00498	0.000200	0.005	0.000002	99.6	75 - 125				

MSD Sample ID: **HS18100338-01MSD** Units: **mg/L** Analysis Date: **10-Oct-2018 16:12**
Client ID: **DRA32-20181004-12-23** Run ID: **HG03_325131** SeqNo: **4766558** PrepDate: **10-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00496	0.000200	0.005	0.000002	99.2	75 - 125	0.00498	0.402	20	

The following samples were analyzed in this batch: HS18100338-01

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133369 **Instrument: HG03** **Method: SW7471A**

MBLK Sample ID: **MBLK-133369** Units: **ug/Kg** Analysis Date: **11-Oct-2018 12:59**
Client ID: Run ID: **HG03_325218** SeqNo: **4768081** PrepDate: **10-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	U	3.32								

LCS Sample ID: **LCS-133369** Units: **ug/Kg** Analysis Date: **11-Oct-2018 13:01**
Client ID: Run ID: **HG03_325218** SeqNo: **4768082** PrepDate: **10-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	320.7	3.32	333.3	0	96.2	80 - 120				

MS Sample ID: **HS18100338-02MS** Units: **ug/Kg** Analysis Date: **11-Oct-2018 13:12**
Client ID: **DRA29-20181004-01-51** Run ID: **HG03_325218** SeqNo: **4768087** PrepDate: **10-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	357.5	3.55	356.1	19.91	94.8	80 - 120				

MSD Sample ID: **HS18100338-02MSD** Units: **ug/Kg** Analysis Date: **11-Oct-2018 13:14**
Client ID: **DRA29-20181004-01-51** Run ID: **HG03_325218** SeqNo: **4768088** PrepDate: **10-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	361	3.55	356.1	19.91	95.8	80 - 120	357.5	0.991	20	

The following samples were analyzed in this batch:

HS18100338-02	HS18100338-03	HS18100338-04	HS18100338-05
HS18100338-06	HS18100338-07	HS18100338-08	HS18100338-09
HS18100338-10	HS18100338-11	HS18100338-12	HS18100338-13
HS18100338-14	HS18100338-15		

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133244 **Instrument: SV-7** **Method: SW8270**

MBLK Sample ID: **MBLK-133244** Units: **ug/L** Analysis Date: **10-Oct-2018 13:41**
Client ID: Run ID: **SV-7_325184** SeqNo: **4767492** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1´-Biphenyl	U	0.20								
2,4,5-Trichlorophenol	U	0.20								
2,4,6-Trichlorophenol	U	0.20								
2,4-Dichlorophenol	U	0.20								
2,4-Dimethylphenol	U	0.20								
2,4-Dinitrophenol	U	1.0								
2,4-Dinitrotoluene	U	0.20								
2,6-Dinitrotoluene	U	0.20								
2-Chloronaphthalene	U	0.20								
2-Chlorophenol	U	0.20								
2-Methylnaphthalene	U	0.10								
2-Methylphenol	U	0.20								
2-Nitroaniline	U	0.20								
2-Nitrophenol	U	0.20								
3&4-Methylphenol	U	0.20								
3,3´-Dichlorobenzidine	U	0.20								
3-Nitroaniline	U	0.20								
4,6-Dinitro-2-methylphenol	U	0.20								
4-Bromophenyl phenyl ether	U	0.20								
4-Chloro-3-methylphenol	U	0.20								
4-Chloroaniline	U	0.20								
4-Chlorophenyl phenyl ether	U	0.20								
4-Nitroaniline	U	0.20								
4-Nitrophenol	U	1.0								
Acenaphthene	U	0.10								
Acenaphthylene	U	0.10								
Acetophenone	U	0.20								
Anthracene	U	0.10								
Atrazine	U	0.20								
Benz(a)anthracene	U	0.10								
Benzaldehyde	U	0.20								
Benzo(a)pyrene	U	0.10								
Benzo(b)fluoranthene	U	0.10								
Benzo(g,h,i)perylene	U	0.10								

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133244 **Instrument: SV-7** **Method: SW8270**

MBLK Sample ID: **MBLK-133244** Units: **ug/L** Analysis Date: **10-Oct-2018 13:41**
Client ID: Run ID: **SV-7_325184** SeqNo: **4767492** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzo(k)fluoranthene	U	0.10								
Bis(2-chloro-1-methylethyl) ether	U	0.20								
Bis(2-chloroethoxy)methane	U	0.20								
Bis(2-chloroethyl)ether	U	0.20								
Bis(2-ethylhexyl)phthalate	U	0.20								
Butyl benzyl phthalate	U	0.20								
Caprolactam	U	0.20								
Carbazole	U	0.20								
Chrysene	U	0.10								
Dibenz(a,h)anthracene	U	0.10								
Dibenzofuran	U	0.10								
Diethyl phthalate	U	0.20								
Dimethyl phthalate	U	0.20								
Di-n-butyl phthalate	U	0.20								
Di-n-octyl phthalate	U	0.20								
Fluoranthene	U	0.10								
Fluorene	U	0.10								
Hexachlorobenzene	U	0.20								
Hexachlorobutadiene	U	0.20								
Hexachlorocyclopentadiene	U	0.20								
Hexachloroethane	U	0.20								
Indeno(1,2,3-cd)pyrene	U	0.10								
Isophorone	U	0.20								
Naphthalene	U	0.10								
Nitrobenzene	U	0.20								
N-Nitrosodi-n-propylamine	U	0.20								
N-Nitrosodiphenylamine	U	0.20								
Pentachlorophenol	U	0.20								
Phenanthrene	U	0.10								
Phenol	U	0.20								
Pyrene	U	0.10								
Surr: 2,4,6-Tribromophenol	*4.002*	*0.20*	*5*	*0*	*80.0*	*34 - 129*				
Surr: 2-Fluorobiphenyl	*4.441*	*0.20*	*5*	*0*	*88.8*	*40 - 125*				
Surr: 2-Fluorophenol	*3.02*	*0.20*	*5*	*0*	*60.4*	*20 - 120*				

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133244 **Instrument: SV-7** **Method: SW8270**

MBLK Sample ID: **MBLK-133244** Units: **ug/L** Analysis Date: **10-Oct-2018 13:41**
Client ID: Run ID: **SV-7_325184** SeqNo: **4767492** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: 4-Terphenyl-d14	*4.664*	*0.20*	*5*	*0*	*93.3*	*40 - 135*				
Surr: Nitrobenzene-d5	*3.574*	*0.20*	*5*	*0*	*71.5*	*41 - 120*				
Surr: Phenol-d6	*3.427*	*0.20*	*5*	*0*	*68.5*	*20 - 120*				

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133244 **Instrument: SV-7** **Method: SW8270**

LCS Sample ID: **LCS-133244** Units: **ug/L** Analysis Date: **10-Oct-2018 14:00**
Client ID: Run ID: **SV-7_325184** SeqNo: **4767493** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1´-Biphenyl	3.635	0.20	5	0	72.7	45 - 125				
2,4,5-Trichlorophenol	4.397	0.20	5	0	87.9	46 - 120				
2,4,6-Trichlorophenol	4.403	0.20	5	0	88.1	42 - 120				
2,4-Dichlorophenol	4.545	0.20	5	0	90.9	49 - 120				
2,4-Dimethylphenol	3.763	0.20	5	0	75.3	35 - 120				
2,4-Dinitrophenol	3.656	1.0	5	0	73.1	15 - 120				
2,4-Dinitrotoluene	4.238	0.20	5	0	84.8	50 - 122				
2,6-Dinitrotoluene	4.428	0.20	5	0	88.6	50 - 120				
2-Chloronaphthalene	4.427	0.20	5	0	88.5	50 - 120				
2-Chlorophenol	3.984	0.20	5	0	79.7	40 - 120				
2-Methylnaphthalene	4.378	0.10	5	0	87.6	50 - 120				
2-Methylphenol	4.06	0.20	5	0	81.2	45 - 120				
2-Nitroaniline	4.644	0.20	5	0	92.9	28 - 139				
2-Nitrophenol	3.932	0.20	5	0	78.6	40 - 120				
3&4-Methylphenol	4.086	0.20	5	0	81.7	35 - 120				
3,3´-Dichlorobenzidine	4.17	0.20	5	0	83.4	15 - 120				
3-Nitroaniline	4.352	0.20	5	0	87.0	30 - 120				
4,6-Dinitro-2-methylphenol	4.408	0.20	5	0	88.2	25 - 121				
4-Bromophenyl phenyl ether	4.421	0.20	5	0	88.4	45 - 120				
4-Chloro-3-methylphenol	4.117	0.20	5	0	82.3	47 - 120				
4-Chloroaniline	4.095	0.20	5	0	81.9	20 - 120				
4-Chlorophenyl phenyl ether	4.568	0.20	5	0	91.4	50 - 120				
4-Nitroaniline	4.087	0.20	5	0	81.7	30 - 133				
4-Nitrophenol	4.407	1.0	5	0	88.1	30 - 130				
Acenaphthene	4.032	0.10	5	0	80.6	45 - 120				
Acenaphthylene	4.295	0.10	5	0	85.9	47 - 120				
Acetophenone	3.244	0.20	5	0	64.9	40 - 120				
Anthracene	4.345	0.10	5	0	86.9	45 - 120				
Atrazine	4.101	0.20	5	0	82.0	40 - 130				
Benz(a)anthracene	4.621	0.10	5	0	92.4	40 - 120				
Benzaldehyde	0.8978	0.20	5	0	18.0	15 - 120				
Benzo(a)pyrene	4.609	0.10	5	0	92.2	45 - 120				
Benzo(b)fluoranthene	5.072	0.10	5	0	101	50 - 120				
Benzo(g,h,i)perylene	4.151	0.10	5	0	83.0	42 - 127				

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133244 **Instrument: SV-7** **Method: SW8270**

LCS Sample ID: **LCS-133244** Units: **ug/L** Analysis Date: **10-Oct-2018 14:00**
Client ID: Run ID: **SV-7_325184** SeqNo: **4767493** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzo(k)fluoranthene	4.36	0.10	5	0	87.2	45 - 127				
Bis(2-chloro-1-methylethyl) ether	3.353	0.20	5	0	67.1	40 - 120				
Bis(2-chloroethoxy)methane	3.516	0.20	5	0	70.3	45 - 120				
Bis(2-chloroethyl)ether	3.508	0.20	5	0	70.2	37 - 121				
Bis(2-ethylhexyl)phthalate	4.181	0.20	5	0	83.6	40 - 139				
Butyl benzyl phthalate	4.207	0.20	5	0	84.1	47 - 123				
Caprolactam	3.033	0.20	5	0	60.7	35 - 134				
Carbazole	4.446	0.20	5	0	88.9	42 - 128				
Chrysene	4.402	0.10	5	0	88.0	43 - 120				
Dibenz(a,h)anthracene	4.108	0.10	5	0	82.2	45 - 125				
Dibenzofuran	4.41	0.10	5	0	88.2	50 - 120				
Diethyl phthalate	4.407	0.20	5	0	88.1	41 - 120				
Dimethyl phthalate	4.252	0.20	5	0	85.0	40 - 122				
Di-n-butyl phthalate	4.453	0.20	5	0	89.1	45 - 123				
Di-n-octyl phthalate	4.704	0.20	5	0	94.1	45 - 129				
Fluoranthene	4.878	0.10	5	0	97.6	45 - 125				
Fluorene	4.464	0.10	5	0	89.3	49 - 120				
Hexachlorobenzene	4.65	0.20	5	0	93.0	48 - 120				
Hexachlorobutadiene	4.43	0.20	5	0	88.6	40 - 120				
Hexachlorocyclopentadiene	3.202	0.20	5	0	64.0	34 - 136				
Hexachloroethane	4.089	0.20	5	0	81.8	40 - 120				
Indeno(1,2,3-cd)pyrene	4.773	0.10	5	0	95.5	41 - 128				
Isophorone	3.498	0.20	5	0	70.0	40 - 121				
Naphthalene	4.085	0.10	5	0	81.7	45 - 120				
Nitrobenzene	3.471	0.20	5	0	69.4	44 - 120				
N-Nitrosodi-n-propylamine	3.861	0.20	5	0	77.2	40 - 120				
N-Nitrosodiphenylamine	4.151	0.20	5	0	83.0	40 - 125				
Pentachlorophenol	4.104	0.20	5	0	82.1	19 - 121				
Phenanthrene	4.318	0.10	5	0	86.4	45 - 121				
Phenol	3.854	0.20	5	0	77.1	20 - 124				
Pyrene	4.595	0.10	5	0	91.9	40 - 130				
Surr: 2,4,6-Tribromophenol	*4.319*	*0.20*	*5*	*0*	*86.4*	*34 - 129*				
Surr: 2-Fluorobiphenyl	*4.392*	*0.20*	*5*	*0*	*87.8*	*40 - 125*				
Surr: 2-Fluorophenol	*3.076*	*0.20*	*5*	*0*	*61.5*	*20 - 120*				

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133244 **Instrument: SV-7** **Method: SW8270**

LCS Sample ID: **LCS-133244** Units: **ug/L** Analysis Date: **10-Oct-2018 14:00**
Client ID: Run ID: **SV-7_325184** SeqNo: **4767493** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: 4-Terphenyl-d14	*4.693*	*0.20*	*5*	*0*	*93.9*	*40 - 135*				
Surr: Nitrobenzene-d5	*3.486*	*0.20*	*5*	*0*	*69.7*	*41 - 120*				
Surr: Phenol-d6	*3.435*	*0.20*	*5*	*0*	*68.7*	*20 - 120*				

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133244 **Instrument: SV-7** **Method: SW8270**

LCSD Sample ID: **LCSD-133244** Units: **ug/L** Analysis Date: **10-Oct-2018 14:20**
Client ID: Run ID: **SV-7_325184** SeqNo: **4767494** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1´-Biphenyl	3.438	0.20	5	0	68.8	45 - 125	3.635	5.58	20	
2,4,5-Trichlorophenol	4.186	0.20	5	0	83.7	46 - 120	4.397	4.91	20	
2,4,6-Trichlorophenol	4.108	0.20	5	0	82.2	42 - 120	4.403	6.94	20	
2,4-Dichlorophenol	4.301	0.20	5	0	86.0	49 - 120	4.545	5.51	20	
2,4-Dimethylphenol	3.496	0.20	5	0	69.9	35 - 120	3.763	7.37	20	
2,4-Dinitrophenol	3.813	1.0	5	0	76.3	15 - 120	3.656	4.22	50	
2,4-Dinitrotoluene	4.447	0.20	5	0	88.9	50 - 122	4.238	4.81	20	
2,6-Dinitrotoluene	4.377	0.20	5	0	87.5	50 - 120	4.428	1.16	20	
2-Chloronaphthalene	4.097	0.20	5	0	81.9	50 - 120	4.427	7.73	20	
2-Chlorophenol	3.622	0.20	5	0	72.4	40 - 120	3.984	9.53	20	
2-Methylnaphthalene	4.263	0.10	5	0	85.3	50 - 120	4.378	2.67	20	
2-Methylphenol	3.696	0.20	5	0	73.9	45 - 120	4.06	9.4	20	
2-Nitroaniline	4.396	0.20	5	0	87.9	28 - 139	4.644	5.49	20	
2-Nitrophenol	3.831	0.20	5	0	76.6	40 - 120	3.932	2.6	20	
3&4-Methylphenol	3.71	0.20	5	0	74.2	35 - 120	4.086	9.67	20	
3,3´-Dichlorobenzidine	3.77	0.20	5	0	75.4	15 - 120	4.17	10.1	20	
3-Nitroaniline	4.185	0.20	5	0	83.7	30 - 120	4.352	3.91	20	
4,6-Dinitro-2-methylphenol	4.418	0.20	5	0	88.4	25 - 121	4.408	0.22	30	
4-Bromophenyl phenyl ether	4.204	0.20	5	0	84.1	45 - 120	4.421	5.03	20	
4-Chloro-3-methylphenol	3.874	0.20	5	0	77.5	47 - 120	4.117	6.08	20	
4-Chloroaniline	4.032	0.20	5	0	80.6	20 - 120	4.095	1.54	20	
4-Chlorophenyl phenyl ether	4.539	0.20	5	0	90.8	50 - 120	4.568	0.64	20	
4-Nitroaniline	4.155	0.20	5	0	83.1	30 - 133	4.087	1.64	20	
4-Nitrophenol	4.324	1.0	5	0	86.5	30 - 130	4.407	1.9	20	
Acenaphthene	3.586	0.10	5	0	71.7	45 - 120	4.032	11.7	20	
Acenaphthylene	4.081	0.10	5	0	81.6	47 - 120	4.295	5.12	20	
Acetophenone	3.087	0.20	5	0	61.7	40 - 120	3.244	4.96	20	
Anthracene	4.35	0.10	5	0	87.0	45 - 120	4.345	0.108	20	
Atrazine	3.983	0.20	5	0	79.7	40 - 130	4.101	2.92	20	
Benz(a)anthracene	4.275	0.10	5	0	85.5	40 - 120	4.621	7.76	20	
Benzaldehyde	0.8695	0.20	5	0	17.4	15 - 120	0.8978	3.21	30	
Benzo(a)pyrene	4.318	0.10	5	0	86.4	45 - 120	4.609	6.52	20	
Benzo(b)fluoranthene	4.634	0.10	5	0	92.7	50 - 120	5.072	9.02	20	
Benzo(g,h,i)perylene	3.853	0.10	5	0	77.1	42 - 127	4.151	7.43	20	

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133244 **Instrument: SV-7** **Method: SW8270**

LCSD Sample ID: **LCSD-133244** Units: **ug/L** Analysis Date: **10-Oct-2018 14:20**
Client ID: Run ID: **SV-7_325184** SeqNo: **4767494** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Benzo(k)fluoranthene	4.207	0.10	5	0	84.1	45 - 127	4.36	3.55	20	
Bis(2-chloro-1-methylethyl) ether	3.09	0.20	5	0	61.8	40 - 120	3.353	8.18	20	
Bis(2-chloroethoxy)methane	3.385	0.20	5	0	67.7	45 - 120	3.516	3.81	20	
Bis(2-chloroethyl)ether	3.211	0.20	5	0	64.2	37 - 121	3.508	8.84	20	
Bis(2-ethylhexyl)phthalate	3.978	0.20	5	0	79.6	40 - 139	4.181	4.98	20	
Butyl benzyl phthalate	3.963	0.20	5	0	79.3	47 - 123	4.207	5.97	20	
Caprolactam	3.272	0.20	5	0	65.4	35 - 134	3.033	7.59	20	
Carbazole	4.119	0.20	5	0	82.4	42 - 128	4.446	7.64	20	
Chrysene	4.112	0.10	5	0	82.2	43 - 120	4.402	6.81	20	
Dibenz(a,h)anthracene	3.916	0.10	5	0	78.3	45 - 125	4.108	4.77	20	
Dibenzofuran	4.149	0.10	5	0	83.0	50 - 120	4.41	6.11	20	
Diethyl phthalate	4.302	0.20	5	0	86.0	41 - 120	4.407	2.41	20	
Dimethyl phthalate	4.176	0.20	5	0	83.5	40 - 122	4.252	1.81	20	
Di-n-butyl phthalate	4.374	0.20	5	0	87.5	45 - 123	4.453	1.81	20	
Di-n-octyl phthalate	4.246	0.20	5	0	84.9	45 - 129	4.704	10.2	20	
Fluoranthene	4.622	0.10	5	0	92.4	45 - 125	4.878	5.4	20	
Fluorene	4.414	0.10	5	0	88.3	49 - 120	4.464	1.12	20	
Hexachlorobenzene	4.299	0.20	5	0	86.0	48 - 120	4.65	7.84	20	
Hexachlorobutadiene	4.192	0.20	5	0	83.8	40 - 120	4.43	5.52	20	
Hexachlorocyclopentadiene	3.121	0.20	5	0	62.4	34 - 136	3.202	2.57	20	
Hexachloroethane	3.419	0.20	5	0	68.4	40 - 120	4.089	17.9	20	
Indeno(1,2,3-cd)pyrene	4.296	0.10	5	0	85.9	41 - 128	4.773	10.5	20	
Isophorone	3.345	0.20	5	0	66.9	40 - 121	3.498	4.47	20	
Naphthalene	3.825	0.10	5	0	76.5	45 - 120	4.085	6.6	20	
Nitrobenzene	3.43	0.20	5	0	68.6	44 - 120	3.471	1.21	20	
N-Nitrosodi-n-propylamine	3.624	0.20	5	0	72.5	40 - 120	3.861	6.34	20	
N-Nitrosodiphenylamine	4.076	0.20	5	0	81.5	40 - 125	4.151	1.81	20	
Pentachlorophenol	3.725	0.20	5	0	74.5	19 - 121	4.104	9.69	20	
Phenanthrene	4.149	0.10	5	0	83.0	45 - 121	4.318	3.99	20	
Phenol	3.594	0.20	5	0	71.9	20 - 124	3.854	6.99	20	
Pyrene	4.141	0.10	5	0	82.8	40 - 130	4.595	10.4	20	
Surr: 2,4,6-Tribromophenol	*4.131*	*0.20*	*5*	*0*	*82.6*	*34 - 129*	*4.319*	*4.43*	*20*	
Surr: 2-Fluorobiphenyl	*4.019*	*0.20*	*5*	*0*	*80.4*	*40 - 125*	*4.392*	*8.85*	*20*	
Surr: 2-Fluorophenol	*2.705*	*0.20*	*5*	*0*	*54.1*	*20 - 120*	*3.076*	*12.9*	*20*	

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133244 **Instrument: SV-7** **Method: SW8270**

LCSD Sample ID: **LCSD-133244** Units: **ug/L** Analysis Date: **10-Oct-2018 14:20**
Client ID: Run ID: **SV-7_325184** SeqNo: **4767494** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: 4-Terphenyl-d14	*4.303*	*0.20*	*5*	*0*	*86.1*	*40 - 135*	*4.693*	*8.67*	*20*	
Surr: Nitrobenzene-d5	*3.533*	*0.20*	*5*	*0*	*70.7*	*41 - 120*	*3.486*	*1.33*	*20*	
Surr: Phenol-d6	*3.145*	*0.20*	*5*	*0*	*62.9*	*20 - 120*	*3.435*	*8.8*	*20*	

The following samples were analyzed in this batch: HS18100338-01

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133297 **Instrument: SV-6** **Method: SW8270**

MBLK Sample ID: **MBLK-133297** Units: **ug/Kg** Analysis Date: **10-Oct-2018 11:29**
Client ID: Run ID: **SV-6_325120** SeqNo: **4766071** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1´-Biphenyl	U	6.6								
2,4,5-Trichlorophenol	U	6.6								
2,4,6-Trichlorophenol	U	6.6								
2,4-Dichlorophenol	U	6.6								
2,4-Dimethylphenol	U	6.6								
2,4-Dinitrophenol	U	13								
2,4-Dinitrotoluene	U	6.6								
2,6-Dinitrotoluene	U	6.6								
2-Chloronaphthalene	U	6.6								
2-Chlorophenol	U	6.6								
2-Methylnaphthalene	U	3.3								
2-Methylphenol	U	6.6								
2-Nitroaniline	U	6.6								
2-Nitrophenol	U	6.6								
3&4-Methylphenol	U	6.6								
3,3´-Dichlorobenzidine	U	6.6								
3-Nitroaniline	U	6.6								
4,6-Dinitro-2-methylphenol	U	6.6								
4-Bromophenyl phenyl ether	U	6.6								
4-Chloro-3-methylphenol	U	6.6								
4-Chloroaniline	U	6.6								
4-Chlorophenyl phenyl ether	U	6.6								
4-Nitroaniline	U	6.6								
4-Nitrophenol	U	13								
Acenaphthene	U	3.3								
Acenaphthylene	U	3.3								
Acetophenone	U	6.6								
Anthracene	U	3.3								
Atrazine	U	6.6								
Benz(a)anthracene	U	3.3								
Benzaldehyde	U	6.6								
Benzo(a)pyrene	U	3.3								
Benzo(b)fluoranthene	U	3.3								
Benzo(g,h,i)perylene	U	3.3								

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133297 **Instrument: SV-6** **Method: SW8270**

MBLK Sample ID: **MBLK-133297** Units: **ug/Kg** Analysis Date: **10-Oct-2018 11:29**
Client ID: Run ID: **SV-6_325120** SeqNo: **4766071** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzo(k)fluoranthene	U	3.3								
Bis(2-chloro-1-methylethyl) ether	U	6.6								
Bis(2-chloroethoxy)methane	U	6.6								
Bis(2-chloroethyl)ether	U	6.6								
Bis(2-ethylhexyl)phthalate	U	6.6								
Butyl benzyl phthalate	U	6.6								
Caprolactam	U	6.6								
Carbazole	U	6.6								
Chrysene	U	3.3								
Dibenz(a,h)anthracene	U	3.3								
Dibenzofuran	U	3.3								
Diethyl phthalate	U	6.6								
Dimethyl phthalate	U	6.6								
Di-n-butyl phthalate	U	6.6								
Di-n-octyl phthalate	U	6.6								
Fluoranthene	U	3.3								
Fluorene	U	3.3								
Hexachlorobenzene	U	6.6								
Hexachlorobutadiene	U	6.6								
Hexachlorocyclopentadiene	U	6.6								
Hexachloroethane	U	6.6								
Indeno(1,2,3-cd)pyrene	U	3.3								
Isophorone	U	6.6								
Naphthalene	U	3.3								
Nitrobenzene	U	6.6								
N-Nitrosodi-n-propylamine	U	6.6								
N-Nitrosodiphenylamine	U	6.6								
Pentachlorophenol	U	6.6								
Phenanthrene	U	3.3								
Phenol	U	6.6								
Pyrene	U	3.3								
Surr: 2,4,6-Tribromophenol	*138.8*	*0*	*167*	*0*	*83.1*	*36 - 126*				
Surr: 2-Fluorobiphenyl	*139.3*	*0*	*167*	*0*	*83.4*	*43 - 125*				
Surr: 2-Fluorophenol	*123.4*	*0*	*167*	*0*	*73.9*	*37 - 125*				

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133297 **Instrument: SV-6** **Method: SW8270**

MBLK Sample ID: **MBLK-133297** Units: **ug/Kg** Analysis Date: **10-Oct-2018 11:29**
Client ID: Run ID: **SV-6_325120** SeqNo: **4766071** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: 4-Terphenyl-d14	*156*	*0*	*167*	*0*	*93.4*	*32 - 125*				
Surr: Nitrobenzene-d5	*136*	*0*	*167*	*0*	*81.5*	*37 - 125*				
Surr: Phenol-d6	*127*	*0*	*167*	*0*	*76.1*	*40 - 125*				

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133297 **Instrument: SV-6** **Method: SW8270**

LCS Sample ID: **LCS-133297** Units: **ug/Kg** Analysis Date: **10-Oct-2018 11:49**
Client ID: Run ID: **SV-6_325120** SeqNo: **4766072** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1´-Biphenyl	115.8	6.6	167	0	69.3	50 - 120				
2,4,5-Trichlorophenol	132.5	6.6	167	0	79.3	45 - 127				
2,4,6-Trichlorophenol	137.4	6.6	167	0	82.2	45 - 130				
2,4-Dichlorophenol	134.5	6.6	167	0	80.6	45 - 125				
2,4-Dimethylphenol	123.7	6.6	167	0	74.1	45 - 120				
2,4-Dinitrophenol	114.1	13	167	0	68.3	10 - 126				
2,4-Dinitrotoluene	147.2	6.6	167	0	88.1	50 - 130				
2,6-Dinitrotoluene	143.9	6.6	167	0	86.2	50 - 125				
2-Chloronaphthalene	135.1	6.6	167	0	80.9	50 - 145				
2-Chlorophenol	131.2	6.6	167	0	78.6	45 - 120				
2-Methylnaphthalene	131.1	3.3	167	0	78.5	50 - 120				
2-Methylphenol	132.6	6.6	167	0	79.4	45 - 120				
2-Nitroaniline	171.7	6.6	167	0	103	45 - 138				
2-Nitrophenol	138.1	6.6	167	0	82.7	45 - 125				
3&4-Methylphenol	134.5	6.6	167	0	80.5	45 - 120				
3,3´-Dichlorobenzidine	119.4	6.6	167	0	71.5	15 - 120				
3-Nitroaniline	152.9	6.6	167	0	91.6	40 - 120				
4,6-Dinitro-2-methylphenol	139.7	6.6	167	0	83.7	15 - 135				
4-Bromophenyl phenyl ether	135.8	6.6	167	0	81.3	50 - 125				
4-Chloro-3-methylphenol	131.3	6.6	167	0	78.6	45 - 130				
4-Chloroaniline	101.1	6.6	167	0	60.6	20 - 120				
4-Chlorophenyl phenyl ether	134.4	6.6	167	0	80.5	50 - 120				
4-Nitroaniline	148.8	6.6	167	0	89.1	50 - 127				
4-Nitrophenol	157	13	167	0	94.0	40 - 147				
Acenaphthene	131.5	3.3	167	0	78.8	50 - 120				
Acenaphthylene	136.3	3.3	167	0	81.6	50 - 120				
Acetophenone	103.3	6.6	167	0	61.8	50 - 120				
Anthracene	137.8	3.3	167	0	82.5	50 - 123				
Atrazine	136.3	6.6	167	0	81.6	29 - 148				
Benz(a)anthracene	148.2	3.3	167	0	88.8	50 - 131				
Benzaldehyde	43.49	6.6	167	0	26.0	22 - 129				
Benzo(a)pyrene	151.1	3.3	167	0	90.5	50 - 130				
Benzo(b)fluoranthene	153.8	3.3	167	0	92.1	50 - 137				
Benzo(g,h,i)perylene	139.5	3.3	167	0	83.6	50 - 130				

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133297 **Instrument: SV-6** **Method: SW8270**

LCS Sample ID: **LCS-133297** Units: **ug/Kg** Analysis Date: **10-Oct-2018 11:49**
Client ID: Run ID: **SV-6_325120** SeqNo: **4766072** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzo(k)fluoranthene	140.1	3.3	167	0	83.9	50 - 143				
Bis(2-chloro-1-methylethyl) ether	121.1	6.6	167	0	72.5	50 - 120				
Bis(2-chloroethoxy)methane	120.5	6.6	167	0	72.2	50 - 120				
Bis(2-chloroethyl)ether	136.2	6.6	167	0	81.5	45 - 127				
Bis(2-ethylhexyl)phthalate	174.8	6.6	167	0	105	21 - 148				
Butyl benzyl phthalate	173.6	6.6	167	0	104	50 - 136				
Caprolactam	137.8	6.6	167	0	82.5	50 - 135				
Carbazole	145.3	6.6	167	0	87.0	50 - 143				
Chrysene	140.2	3.3	167	0	83.9	50 - 130				
Dibenz(a,h)anthracene	143.5	3.3	167	0	85.9	50 - 130				
Dibenzofuran	134	3.3	167	0	80.2	50 - 125				
Diethyl phthalate	140	6.6	167	0	83.8	50 - 125				
Dimethyl phthalate	134.6	6.6	167	0	80.6	50 - 125				
Di-n-butyl phthalate	152.7	6.6	167	0	91.4	50 - 140				
Di-n-octyl phthalate	183.2	6.6	167	0	110	50 - 140				
Fluoranthene	144.6	3.3	167	0	86.6	50 - 131				
Fluorene	133.3	3.3	167	0	79.8	50 - 125				
Hexachlorobenzene	126.7	6.6	167	0	75.9	50 - 124				
Hexachlorobutadiene	133.9	6.6	167	0	80.2	50 - 125				
Hexachlorocyclopentadiene	91.95	6.6	167	0	55.1	45 - 135				
Hexachloroethane	131	6.6	167	0	78.4	45 - 125				
Indeno(1,2,3-cd)pyrene	175.4	3.3	167	0	105	45 - 139				
Isophorone	125	6.6	167	0	74.8	45 - 130				
Naphthalene	127.2	3.3	167	0	76.2	50 - 125				
Nitrobenzene	126.9	6.6	167	0	76.0	50 - 125				
N-Nitrosodi-n-propylamine	128.2	6.6	167	0	76.8	45 - 120				
N-Nitrosodiphenylamine	134.9	6.6	167	0	80.7	50 - 130				
Pentachlorophenol	110.5	6.6	167	0	66.2	23 - 136				
Phenanthrene	131.8	3.3	167	0	78.9	50 - 125				
Phenol	131.1	6.6	167	0	78.5	45 - 130				
Pyrene	143.4	3.3	167	0	85.9	45 - 130				
Surr: 2,4,6-Tribromophenol	*145.3*	*0*	*167*	*0*	*87.0*	*36 - 126*				
Surr: 2-Fluorobiphenyl	*141.6*	*0*	*167*	*0*	*84.8*	*43 - 125*				
Surr: 2-Fluorophenol	*107.6*	*0*	*167*	*0*	*64.4*	*37 - 125*				

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133297 **Instrument: SV-6** **Method: SW8270**

LCS Sample ID: **LCS-133297** Units: **ug/Kg** Analysis Date: **10-Oct-2018 11:49**
Client ID: Run ID: **SV-6_325120** SeqNo: **4766072** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: 4-Terphenyl-d14	*153*	*0*	*167*	*0*	*91.6*	*32 - 125*				
Surr: Nitrobenzene-d5	*130.6*	*0*	*167*	*0*	*78.2*	*37 - 125*				
Surr: Phenol-d6	*129.6*	*0*	*167*	*0*	*77.6*	*40 - 125*				

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133297 **Instrument: SV-6** **Method: SW8270**

MS Sample ID: **HS18100338-02MS** Units: **ug/Kg** Analysis Date: **10-Oct-2018 14:15**
Client ID: **DRA29-20181004-01-51** Run ID: **SV-6_325120** SeqNo: **4766284** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1´-Biphenyl	104.7	6.6	166.5	0	62.9	50 - 120				
2,4,5-Trichlorophenol	133.3	6.6	166.5	0	80.0	45 - 127				
2,4,6-Trichlorophenol	126.4	6.6	166.5	0	75.9	45 - 130				
2,4-Dichlorophenol	122.3	6.6	166.5	0	73.4	45 - 125				
2,4-Dimethylphenol	98.93	6.6	166.5	0	59.4	45 - 120				
2,4-Dinitrophenol	84.13	13	166.5	0	50.5	10 - 126				
2,4-Dinitrotoluene	138.6	6.6	166.5	0	83.2	50 - 130				
2,6-Dinitrotoluene	133	6.6	166.5	0	79.9	50 - 125				
2-Chloronaphthalene	119.7	6.6	166.5	0	71.9	50 - 145				
2-Chlorophenol	120.2	6.6	166.5	0	72.2	45 - 120				
2-Methylnaphthalene	126.3	3.3	166.5	0	75.9	50 - 120				
2-Methylphenol	117.8	6.6	166.5	0	70.7	45 - 120				
2-Nitroaniline	152.7	6.6	166.5	0	91.7	45 - 138				
2-Nitrophenol	127.9	6.6	166.5	0	76.8	45 - 125				
3&4-Methylphenol	115.4	6.6	166.5	0	69.3	45 - 120				
3,3´-Dichlorobenzidine	193	6.6	166.5	0	116	15 - 120				
3-Nitroaniline	143	6.6	166.5	0	85.9	40 - 120				
4,6-Dinitro-2-methylphenol	119.4	6.6	166.5	0	71.7	15 - 135				
4-Bromophenyl phenyl ether	131.2	6.6	166.5	0	78.8	50 - 125				
4-Chloro-3-methylphenol	125.7	6.6	166.5	0	75.5	45 - 130				
4-Chloroaniline	195.1	6.6	166.5	0	117	20 - 120				
4-Chlorophenyl phenyl ether	122.6	6.6	166.5	0	73.7	50 - 120				
4-Nitroaniline	168.7	6.6	166.5	0	101	50 - 127				
4-Nitrophenol	147.1	13	166.5	0	88.3	40 - 147				
Acenaphthene	119.4	3.3	166.5	0	71.7	50 - 120				
Acenaphthylene	123.2	3.3	166.5	0	74.0	50 - 120				
Acetophenone	99.49	6.6	166.5	0	59.8	50 - 120				
Anthracene	133.1	3.3	166.5	0	79.9	50 - 123				
Atrazine	142.6	6.6	166.5	0	85.7	29 - 148				
Benz(a)anthracene	152.2	3.3	166.5	0	91.4	50 - 131				
Benzaldehyde	29.62	6.6	166.5	0	17.8	22 - 129				S
Benzo(a)pyrene	158.5	3.3	166.5	0	95.2	50 - 130				
Benzo(b)fluoranthene	163.5	3.3	166.5	0	98.2	50 - 137				
Benzo(g,h,i)perylene	145.7	3.3	166.5	0	87.5	50 - 130				

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133297 **Instrument: SV-6** **Method: SW8270**

MS Sample ID: **HS18100338-02MS** Units: **ug/Kg** Analysis Date: **10-Oct-2018 14:15**
Client ID: **DRA29-20181004-01-51** Run ID: **SV-6_325120** SeqNo: **4766284** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzo(k)fluoranthene	147.4	3.3	166.5	0	88.5	50 - 143				
Bis(2-chloro-1-methylethyl) ether	110.3	6.6	166.5	0	66.2	50 - 120				
Bis(2-chloroethoxy)methane	115.7	6.6	166.5	0	69.5	50 - 120				
Bis(2-chloroethyl)ether	119.1	6.6	166.5	0	71.6	45 - 127				
Bis(2-ethylhexyl)phthalate	190.1	6.6	166.5	5.597	111	21 - 148				
Butyl benzyl phthalate	184.4	6.6	166.5	0	111	50 - 136				
Caprolactam	136.8	6.6	166.5	0	82.2	50 - 135				
Carbazole	158.2	6.6	166.5	0	95.0	50 - 143				
Chrysene	149.3	3.3	166.5	0	89.7	50 - 130				
Dibenz(a,h)anthracene	141.7	3.3	166.5	0	85.1	50 - 130				
Dibenzofuran	122.8	3.3	166.5	0	73.8	50 - 125				
Diethyl phthalate	126.5	6.6	166.5	0	76.0	50 - 125				
Dimethyl phthalate	123.3	6.6	166.5	0	74.0	50 - 125				
Di-n-butyl phthalate	156.8	6.6	166.5	0.8558	93.6	50 - 140				
Di-n-octyl phthalate	194.8	6.6	166.5	0	117	50 - 140				
Fluoranthene	141.7	3.3	166.5	1.487	84.2	50 - 131				
Fluorene	125	3.3	166.5	0	75.1	50 - 125				
Hexachlorobenzene	135	6.6	166.5	0	81.1	50 - 124				
Hexachlorobutadiene	126.3	6.6	166.5	0	75.9	50 - 125				
Hexachlorocyclopentadiene	81.77	6.6	166.5	0	49.1	45 - 135				
Hexachloroethane	115.1	6.6	166.5	0	69.1	45 - 125				
Indeno(1,2,3-cd)pyrene	159.5	3.3	166.5	0	95.8	45 - 139				
Isophorone	118.3	6.6	166.5	0	71.1	45 - 130				
Naphthalene	121.6	3.3	166.5	0	73.1	50 - 125				
Nitrobenzene	121.6	6.6	166.5	0	73.0	50 - 125				
N-Nitrosodi-n-propylamine	117.7	6.6	166.5	0	70.7	45 - 120				
N-Nitrosodiphenylamine	135.1	6.6	166.5	0	81.2	50 - 130				
Pentachlorophenol	121.6	6.6	166.5	0	73.0	23 - 136				
Phenanthrene	126.7	3.3	166.5	1.044	75.4	50 - 125				
Phenol	117.8	6.6	166.5	0	70.7	45 - 130				
Pyrene	149.1	3.3	166.5	2.521	88.0	45 - 130				
Surr: 2,4,6-Tribromophenol	*139.7*	*0*	*166.5*	*0*	*83.9*	*36 - 126*				
Surr: 2-Fluorobiphenyl	*124.9*	*0*	*166.5*	*0*	*75.0*	*43 - 125*				
Surr: 2-Fluorophenol	*94.99*	*0*	*166.5*	*0*	*57.1*	*37 - 125*				

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133297 **Instrument:** SV-6 **Method:** SW8270

MS Sample ID: **HS18100338-02MS** Units: **ug/Kg** Analysis Date: **10-Oct-2018 14:15**
Client ID: **DRA29-20181004-01-51** Run ID: **SV-6_325120** SeqNo: **4766284** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: 4-Terphenyl-d14	*155.4*	*0*	*166.5*	*0*	*93.3*	*32 - 125*				
Surr: Nitrobenzene-d5	*123.3*	*0*	*166.5*	*0*	*74.0*	*37 - 125*				
Surr: Phenol-d6	*111.5*	*0*	*166.5*	*0*	*67.0*	*40 - 125*				

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133297 **Instrument: SV-6** **Method: SW8270**

MSD Sample ID: **HS18100338-02MSD** Units: **ug/Kg** Analysis Date: **10-Oct-2018 14:35**
Client ID: **DRA29-20181004-01-51** Run ID: **SV-6_325120** SeqNo: **4766285** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1´-Biphenyl	109.9	6.6	166.7	0	65.9	50 - 120	104.7	4.82	30	
2,4,5-Trichlorophenol	124.5	6.6	166.7	0	74.7	45 - 127	133.3	6.79	30	
2,4,6-Trichlorophenol	130.4	6.6	166.7	0	78.2	45 - 130	126.4	3.07	30	
2,4-Dichlorophenol	124	6.6	166.7	0	74.4	45 - 125	122.3	1.39	30	
2,4-Dimethylphenol	94.43	6.6	166.7	0	56.7	45 - 120	98.93	4.66	30	
2,4-Dinitrophenol	76.71	13	166.7	0	46.0	10 - 126	84.13	9.23	30	
2,4-Dinitrotoluene	140.1	6.6	166.7	0	84.0	50 - 130	138.6	1.09	30	
2,6-Dinitrotoluene	142.2	6.6	166.7	0	85.3	50 - 125	133	6.68	30	
2-Chloronaphthalene	124.5	6.6	166.7	0	74.7	50 - 145	119.7	3.98	30	
2-Chlorophenol	124.3	6.6	166.7	0	74.6	45 - 120	120.2	3.35	30	
2-Methylnaphthalene	125.4	3.3	166.7	0	75.2	50 - 120	126.3	0.71	30	
2-Methylphenol	123.4	6.6	166.7	0	74.0	45 - 120	117.8	4.63	30	
2-Nitroaniline	162	6.6	166.7	0	97.2	45 - 138	152.7	5.92	30	
2-Nitrophenol	127.5	6.6	166.7	0	76.5	45 - 125	127.9	0.323	30	
3&4-Methylphenol	119.1	6.6	166.7	0	71.5	45 - 120	115.4	3.22	30	
3,3´-Dichlorobenzidine	182.5	6.6	166.7	0	110	15 - 120	193	5.57	30	
3-Nitroaniline	106.1	6.6	166.7	0	63.6	40 - 120	143	29.7	30	
4,6-Dinitro-2-methylphenol	129.8	6.6	166.7	0	77.9	15 - 135	119.4	8.36	30	
4-Bromophenyl phenyl ether	135.2	6.6	166.7	0	81.1	50 - 125	131.2	3.01	30	
4-Chloro-3-methylphenol	122.1	6.6	166.7	0	73.3	45 - 130	125.7	2.89	30	
4-Chloroaniline	198.1	6.6	166.7	0	119	20 - 120	195.1	1.53	30	
4-Chlorophenyl phenyl ether	128.7	6.6	166.7	0	77.2	50 - 120	122.6	4.79	30	
4-Nitroaniline	156.3	6.6	166.7	0	93.8	50 - 127	168.7	7.62	30	
4-Nitrophenol	146.2	13	166.7	0	87.7	40 - 147	147.1	0.562	30	
Acenaphthene	125.9	3.3	166.7	0	75.5	50 - 120	119.4	5.24	30	
Acenaphthylene	127.7	3.3	166.7	0	76.6	50 - 120	123.2	3.62	30	
Acetophenone	100.6	6.6	166.7	0	60.3	50 - 120	99.49	1.07	30	
Anthracene	137.1	3.3	166.7	0	82.2	50 - 123	133.1	2.93	30	
Atrazine	146.5	6.6	166.7	0	87.9	29 - 148	142.6	2.7	30	
Benz(a)anthracene	150.7	3.3	166.7	0	90.4	50 - 131	152.2	0.968	30	
Benzaldehyde	29.58	6.6	166.7	0	17.7	22 - 129	29.62	0.139	30	S
Benzo(a)pyrene	153.1	3.3	166.7	0	91.8	50 - 130	158.5	3.47	30	
Benzo(b)fluoranthene	156.9	3.3	166.7	0	94.2	50 - 137	163.5	4.07	30	
Benzo(g,h,i)perylene	148.2	3.3	166.7	0	88.9	50 - 130	145.7	1.69	30	

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133297 **Instrument: SV-6** **Method: SW8270**

MSD Sample ID: **HS18100338-02MSD** Units: **ug/Kg** Analysis Date: **10-Oct-2018 14:35**
Client ID: **DRA29-20181004-01-51** Run ID: **SV-6_325120** SeqNo: **4766285** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Benzo(k)fluoranthene	149.8	3.3	166.7	0	89.9	50 - 143	147.4	1.56	30	
Bis(2-chloro-1-methylethyl) ether	118	6.6	166.7	0	70.8	50 - 120	110.3	6.75	30	
Bis(2-chloroethoxy)methane	117.4	6.6	166.7	0	70.5	50 - 120	115.7	1.48	30	
Bis(2-chloroethyl)ether	127.8	6.6	166.7	0	76.7	45 - 127	119.1	7.05	30	
Bis(2-ethylhexyl)phthalate	183.5	6.6	166.7	5.597	107	21 - 148	190.1	3.55	30	
Butyl benzyl phthalate	181.1	6.6	166.7	0	109	50 - 136	184.4	1.8	30	
Caprolactam	138.4	6.6	166.7	0	83.0	50 - 135	136.8	1.16	30	
Carbazole	149.2	6.6	166.7	0	89.5	50 - 143	158.2	5.89	30	
Chrysene	143	3.3	166.7	0	85.8	50 - 130	149.3	4.34	30	
Dibenz(a,h)anthracene	154.2	3.3	166.7	0	92.5	50 - 130	141.7	8.49	30	
Dibenzofuran	126.4	3.3	166.7	0	75.8	50 - 125	122.8	2.86	30	
Diethyl phthalate	132.2	6.6	166.7	0	79.3	50 - 125	126.5	4.35	30	
Dimethyl phthalate	127.5	6.6	166.7	0	76.5	50 - 125	123.3	3.35	30	
Di-n-butyl phthalate	155.7	6.6	166.7	0.8558	92.9	50 - 140	156.8	0.692	30	
Di-n-octyl phthalate	187.8	6.6	166.7	0	113	50 - 140	194.8	3.63	30	
Fluoranthene	142.5	3.3	166.7	1.487	84.6	50 - 131	141.7	0.517	30	
Fluorene	131.1	3.3	166.7	0	78.7	50 - 125	125	4.75	30	
Hexachlorobenzene	137.3	6.6	166.7	0	82.4	50 - 124	135	1.69	30	
Hexachlorobutadiene	129.5	6.6	166.7	0	77.7	50 - 125	126.3	2.53	30	
Hexachlorocyclopentadiene	84.05	6.6	166.7	0	50.4	45 - 135	81.77	2.74	30	
Hexachloroethane	124.8	6.6	166.7	0	74.9	45 - 125	115.1	8.15	30	
Indeno(1,2,3-cd)pyrene	159.3	3.3	166.7	0	95.6	45 - 139	159.5	0.136	30	
Isophorone	118.2	6.6	166.7	0	70.9	45 - 130	118.3	0.0551	30	
Naphthalene	122.6	3.3	166.7	0	73.6	50 - 125	121.6	0.807	30	
Nitrobenzene	121.7	6.6	166.7	0	73.0	50 - 125	121.6	0.146	30	
N-Nitrosodi-n-propylamine	128.2	6.6	166.7	0	76.9	45 - 120	117.7	8.55	30	
N-Nitrosodiphenylamine	143.6	6.6	166.7	0	86.2	50 - 130	135.1	6.1	30	
Pentachlorophenol	131.8	6.6	166.7	0	79.1	23 - 136	121.6	8.07	30	
Phenanthrene	133.2	3.3	166.7	1.044	79.3	50 - 125	126.7	5.07	30	
Phenol	114.4	6.6	166.7	0	68.6	45 - 130	117.8	2.93	30	
Pyrene	148.7	3.3	166.7	2.521	87.7	45 - 130	149.1	0.252	30	
Surr: 2,4,6-Tribromophenol	*145.4*	*0*	*166.7*	*0*	*87.3*	*36 - 126*	*139.7*	*3.99*	*30*	
Surr: 2-Fluorobiphenyl	*132.6*	*0*	*166.7*	*0*	*79.6*	*43 - 125*	*124.9*	*6.02*	*30*	
Surr: 2-Fluorophenol	*103.8*	*0*	*166.7*	*0*	*62.3*	*37 - 125*	*94.99*	*8.82*	*30*	

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133297 **Instrument:** SV-6 **Method:** SW8270

MSD Sample ID: **HS18100338-02MSD** Units: **ug/Kg** Analysis Date: **10-Oct-2018 14:35**
Client ID: **DRA29-20181004-01-51** Run ID: **SV-6_325120** SeqNo: **4766285** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: 4-Terphenyl-d14	*155.7*	*0*	*166.7*	*0*	*93.4*	*32 - 125*	*155.4*	*0.18*	*30*	
Surr: Nitrobenzene-d5	*124.7*	*0*	*166.7*	*0*	*74.8*	*37 - 125*	*123.3*	*1.17*	*30*	
Surr: Phenol-d6	*115.6*	*0*	*166.7*	*0*	*69.4*	*40 - 125*	*111.5*	*3.6*	*30*	

The following samples were analyzed in this batch:

HS18100338-02	HS18100338-03	HS18100338-04	HS18100338-05
HS18100338-06	HS18100338-07	HS18100338-08	HS18100338-09
HS18100338-10	HS18100338-11	HS18100338-12	HS18100338-13
HS18100338-14	HS18100338-15		

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: R325102 **Instrument: Balance1** **Method: ASTM D2216**

DUP Sample ID: **HS18100267-04DUP** Units: **wt%** Analysis Date: **09-Oct-2018 09:58**
Client ID: Run ID: **Balance1_325102** SeqNo: **4765658** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Percent Moisture	23	0.0100					23.2	0.866	20	

The following samples were analyzed in this batch:

HS18100338-02	HS18100338-03	HS18100338-04	HS18100338-05
HS18100338-06	HS18100338-07	HS18100338-08	HS18100338-09
HS18100338-10	HS18100338-11	HS18100338-12	HS18100338-13
HS18100338-14	HS18100338-15		

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: **HS18100338**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
Date	
mg/Kg-dry	Milligrams per Kilogram- Dry weight corrected
mg/L	Milligrams per Liter
ug/100cm2	micrograms per 100 cm2

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
North Carolina	624-2018	31-Dec-2018
Arkansas	88-0356	27-Mar-2019
Texas	T10470231-18-21	30-Apr-2019
North Dakota	R193 2018-2019	30-Apr-2019
Illinois	004438	29-Jun-2019
Louisiana	03087	30-Jun-2019
Dept of Defense	ANAB L2231	22-Dec-2018
Kentucky	123043 - 2018	30-Apr-2019
Kansas	E-10352 2018-2019	31-Jul-2019
Oklahoma	2018-156	31-Aug-2019

Sample Receipt Checklist

Client Name: Weston Baton Rouge La
Work Order: HS18100338
Date/Time Received: **08-Oct-2018 10:30**
Received by: **JRM**

Checklist completed by: *Jared R. Makan* eSignature 8-Oct-2018 Date
Reviewed by: *Bernadette A. Fini* eSignature 9-Oct-2018 Date

Matrices: **Soil,Water, Wipe**
Carrier name: **ALS Courier**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☐	No ☑	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
TX1005 solids received in hermetically sealed vials?	Yes ☐	No ☐	N/A ☑
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☐	No ☑	
Temperature(s)/Thermometer(s):	24.7c/24.3c UC/C	IR11	
Cooler(s)/Kit(s):	Green		
Date/Time sample(s) sent to storage:	10/08/2018 13:20		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes: Samples received out of temp. Sample collection times differ for the following: DRA31-20181004-12-51 - COC = 11:15, Sx = 11:14. FJD04-09-WS14-20181004-81 - COC = 15:06, Sx = 14:06. Samples logged in per COC.

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

ED_002624_00001126-00125

USEPA
DateShipped: 10/4/2018
CarrierName: UPS
AirbillNo: J1797624035

CHAIN OF CUSTODY RECORD
Site #: 1234
Contact Name: Sean Gavlas
Contact Phone: 609-433-8434

No: 6-100318-165808-0031
Cooler #: 1
Lab: ALS - Houston TX
Lab Phone: 281-530-5656

Lab #	Sample #	Location	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container	Preservative	Lab QC
	DRA32-20181004-12-23	FieldQC	PCBs	Water	10/4/2018	11:30	2	250 mL amber	4 C	N
	DRA32-20181004-12-23	FieldQC	SVOC / PAH	Water	10/4/2018	11:30	2	1L amber	4 C	N
	DRA32-20181004-12-23	FieldQC	Metals	Water	10/4/2018	11:30	1	250 mL poly	HN03	N
	DRA29-20181004-01-51	DRA29	PCB (8082A),SVOC+PAH (8270),TAL Metals+Hg (6020)	Soil	10/4/2018	08:42	1	4oz glass	4C	N
	DRA29-20181004-06-51	DRA29	PCB (8082A),SVOC+PAH (8270),TAL Metals+Hg (6020)	Soil	10/4/2018	08:59	1	4oz glass	4C	N
	DRA29-20181004-06-52	DRA29	PCB (8082A),SVOC+PAH (8270),TAL Metals+Hg (6020)	Soil	10/4/2018	08:59	1	4oz glass	4C	N
	DRA29-20181004-12-51	DRA29	PCB (8082A),SVOC+PAH (8270),TAL Metals+Hg (6020)	Soil	10/4/2018	09:17	1	4oz glass	4C	N
	DRA30-20181004-01-51	DRA30	PCB (8082A),SVOC+PAH (8270),TAL Metals+Hg (6020)	Soil	10/4/2018	09:31	1	4oz glass	4C	N
	DRA30-20181004-06-51	DRA30	PCB (8082A),SVOC+PAH (8270),TAL Metals+Hg (6020)	Soil	10/4/2018	09:51	1	4oz glass	4C	Y
	DRA30-20181004-12-51	DRA30	PCB (8082A),SVOC+PAH (8270),TAL Metals+Hg (6020)	Soil	10/4/2018	10:05	1	4oz glass	4C	N
	DRA31-20181004-01-51	DRA31	PCB (8082A),SVOC+PAH (8270),TAL Metals+Hg (6020)	Soil	10/4/2018	10:40	1	4oz glass	4C	N

Special Instructions: Analyze all samples for listed analyses with a 3-day TAT. Send sample results to Jeff Wright (jeff.wright@westonsolutions.com) and Sean Gavlas (sean.gavlas@westonsolutions.com).

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
All Samples All Analyses		10/4/18/1100	J. Jimenez	10/8/18 10:30	Cooler - Green Temp 24.7 IR11 CF-01

HS18100338
Weston Solutions, Inc.
FJ Doyle Site

ED_002624_00001126-00126

USEPA
DateShipped: 10/4/2018
CarrierName: UPS
AirbillNo: J1797624035

CHAIN OF CUSTODY RECORD
Site #: 1234
Contact Name: Sean Gavlas
Contact Phone: 609-433-8434

No: 6-100318-165808-0031
Cooler #: 1
Lab: ALS - Houston TX
Lab Phone: 281-530-5656

Lab #	Sample #	Location	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container	Preservative	Lab QC
	DRA31-20181004-06-51	DRA31	PCB (8082A),SVOC+PAH (8270),TAL Metals+Hg (6020)	Soil	10/4/2018	11:05	1	4oz glass	4C	N
	DRA31-20181004-12-51	DRA31	PCB (8082A),SVOC+PAH (8270),TAL Metals+Hg (6020)	Soil	10/4/2018	11:15	1	4oz glass	4C	N
	DRA32-20181004-01-51	DRA32	PCB (8082A),SVOC+PAH (8270),TAL Metals+Hg (6020)	Soil	10/4/2018	10:45	1	4oz glass	4C	N
	DRA32-20181004-06-51	DRA32	PCB (8082A),SVOC+PAH (8270),TAL Metals+Hg (6020)	Soil	10/4/2018	10:55	1	4oz glass	4C	N
	DRA32-20181004-06-52	DRA32	PCB (8082A),SVOC+PAH (8270),TAL Metals+Hg (6020)	Soil	10/4/2018	10:55	1	4oz glass	4C	N
	DRA32-20181004-12-51	DRA32	PCB (8082A),SVOC+PAH (8270),TAL Metals+Hg (6020)	Soil	10/4/2018	11:15	1	4oz glass	4C	N
	FJD04-09-PCS01-20181004-81	FJD04-09-PCS01	PCB (Aroclor 1268 ONLY), Pb (6020)	Paint	10/4/2018	16:16	1	4oz glass	4C	N
	FJD04-09-WS01-20181004-81	FJD04-09-WS01	PCBs (8082A)	Wipe	10/4/2018	14:11	1	4 oz. glass	Hexane	N
	FJD04-09-WS01-20181004-82	FJD04-09-WS01	PCBs (8082A)	Wipe	10/4/2018	14:13	1	4 oz. glass	Hexane	N
	FJD04-09-WS02-20181004-81	FJD04-09-WS02	PCBs (8082A)	Wipe	10/4/2018	14:16	1	4 oz. glass	Hexane	N
	FJD04-09-WS03-20181004-81	FJD04-09-WS03	PCBs (8082A)	Wipe	10/4/2018	14:20	1	4 oz. glass	Hexane	N

Special Instructions: Analyze all samples for listed analyses with a 3-day TAT. Send sample results to Jeff Wright (jeff.wright@westonsolutions.com) and Sean Gavlas (sean.gavlas@westonsolutions.com).

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
All Samples All Analyses		10/4/18 1900	J. MARCHAN	10/8/18 10:30	Cooler Green Temp 24.7 IR11 CF-0.4

HS18100338
Weston Solutions, Inc.
FJ Doyle Site

ED_002624_00001126-00127

USEPA
DateShipped: 10/4/2018
CarrierName: UPS
AirbillNo: J1797624035

CHAIN OF CUSTODY RECORD
Site #: 1234
Contact Name: Sean Gavlas
Contact Phone: 609-433-8434

No: 6-100318-165808-0031
Cooler #: 1
Lab: ALS - Houston TX
Lab Phone: 281-530-5656

Lab #	Sample #	Location	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container	Preservative	Lab QC
	FJD04-09-WS13-20181004-81	FJD04-09-WS13	PCBs (8082A)	Wipe	10/4/2018	15:02	1	4 oz. glass	Hexane	N
	FJD04-09-WS14-20181004-81	FJD04-09-WS14	PCBs (8082A)	Wipe	10/4/2018	15:06	1	4 oz. glass	Hexane	N

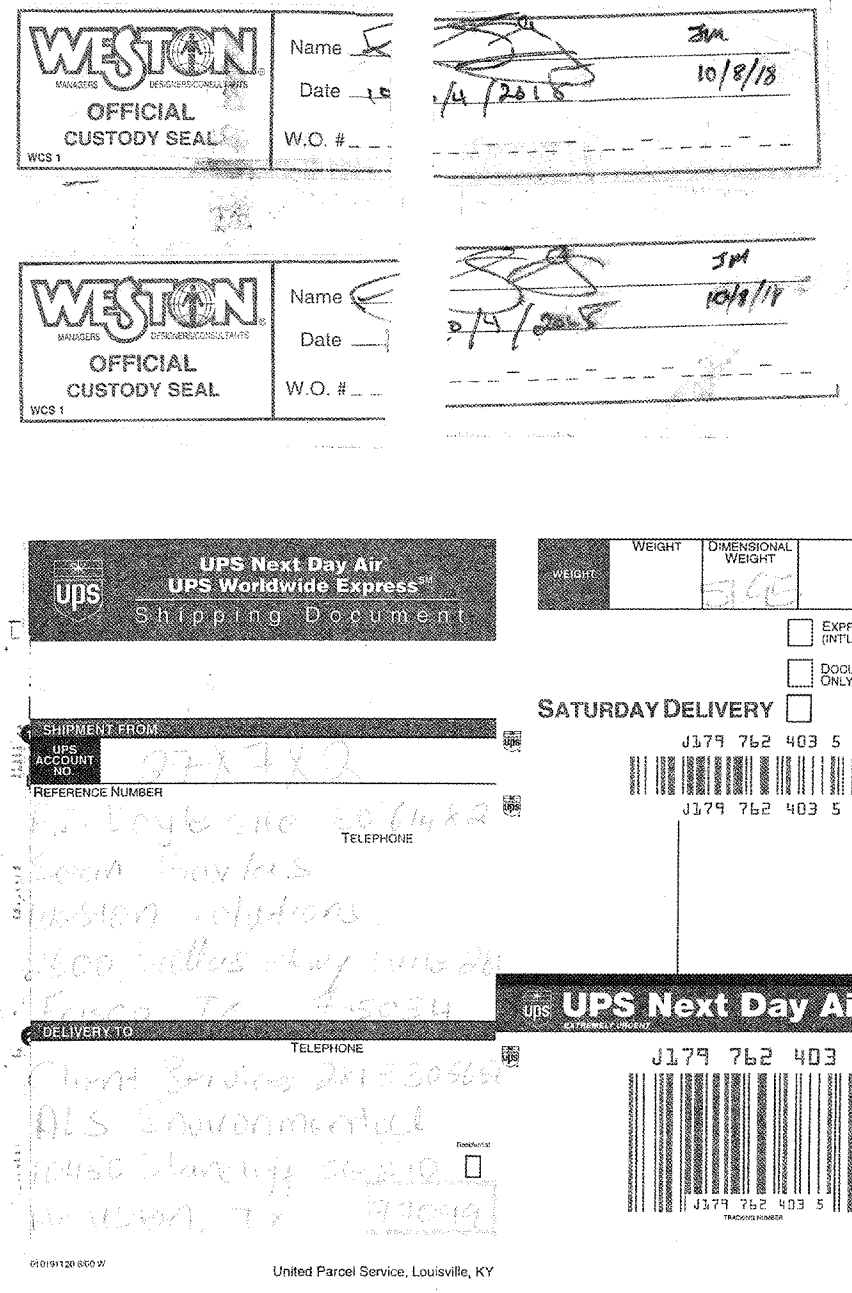
Special Instructions: Analyze all samples for listed analyses with a 3-day TAT. Send sample results to Jeff Wright (jeff.wright@westonsolutions.com) and Sean Gavlas (sean.gavlas@westonsolutions.com).

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
All Samples/ All Analyses		10/4/18/1900	J. Waumm	10/8/18 10:30	Cooler - Green Temp 24.7 Ice cf-0.4

HS18100338
Weston Solutions, Inc.
FJ Doyle Site

ED_002624_00001126-00128



ED_002624_00001126-00129

REPUBLIC SERVICES, INC.

Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

FAX

INCOMPLETE FILE TRANSMITTAL

TO: Cheryl Muegge	**LOG NO.:** 34161818258
FAX:	**File Received:** 10/31/2018
From: Special Waste Dept.	**Response Date:** 10/31/2018
Re: United States Environmental Protection Agency - Region 6 / Construction & Demolition Debris	

SECTION I	SECTION II	SECTION III	SECTION IV	SECTION V	SECTION VI
☐ DisposalFacility	☐ TransporterName	☐ NameOfWaste	☐ USEPA	☐ CharacteristicComponents	☐ GenAuthSignature
☐ GeneratorName	☐ TransporterSiteAddress	☑ ProcessGeneratingWaste	☐ SampleDate	☐ FreeLiquids	☐ GenCoName
☐ GeneratorSiteAddress	☐ TransporterCityStateZip	☐ TypeOfWaste	☐ CompositeGrab	☐ YesNo	☐ NoStateLetter
☐ GeneratorCityStateZip	☐ TransporterMailingAddress	☐ PhysicalState	☐ SampleID	☐ pH_Flash	☐ Name_Title
☐ GeneratorMailingAddress	☐ TransporterContactName	☐ MethodOfShipment			☐ SignatureDate
☐ GeneratorContactName	☐ TransporterTelFax	☐ EstimatedAnnualVolume			
☐ GeneratorTelFax		☐ Frequency			
☐ GeneratorStateID		☐ DisposalConsideration			
☐ WasteCodeTexas					

ANALYTICALS	TCLP TOTAL METALS	TCLP VOLATILES	TCLP SEMI-VOLATILES	PESTICIDES / HERBICIDE	
☐ TotalCyanide	☐ Arsenic	☐ Benzene	☐ Cresols	☐ Chlordane	☐ LabLetterhead
☐ ReactiveCyanide	☐ Barium	☐ CarbonTetrachloride	☐ DichlorobenzeneOne	☐ Endrin	☐ ChainOfCustody
☐ TotalSulfide	☐ Cadmium	☐ Chlorobenzene	☐ DinitrotolueneTwo	☐ Heptachlor	☐ NoLabSignature
☐ ReactiveSulfide	☐ Chromium	☐ Chloroform	☐ Hexachlorobenzene	☐ HeptachlorEpoxide	☐ ReportOneYearOldPlus
☐ TotalPCB	☐ Copper	☐ DichloroethaneOne	☐ Nitrobenzene	☐ Lindane	☐ NoThirdPartyLab
☐ TOX_EOX	☐ Lead	☐ DichloroehyleneTwo	☐ Pentachlorophenol	☐ Methoxychlor	☐ MissingReportPages
☐ Phenols	☐ Mercury	☐ MethylEthylKetone	☐ Pyridine	☐ Toxaphene	☐ MissingMSDSPages
☐ FlashPoint	☐ Selenium	☐ Tetrachloroethylene	☐ TrichlorophenolFive	☐ TwoFourD	☐ TotalSulfates
☐ pH	☐ Silver	☐ Trichlorethylene	☐ TrichlorphenolSix	☐ TwoFourFiveTP	☐ TotalSulfur
☐ PaintFilter	☐ Zinc	☐ VinylChloride			☐ WrongProfile
☐ TPH					
☐ BTEX					☑ GeneratorIncomplete

Notes:

Please have the generator add more details to their process generating waste: for what purpose was the building used on-site? What activities or processes occurred in the building? What possible contaminants may have been used in it? How was it determined that no contamination exists in the material that is to be disposed? Please have the generator describe their process for ensuring no contaminated material is designated for disposal. Additional analytical may be required.

What is the metal that constitutes up to 30% of the waste? Please have the generator describe.

REPUBLIC SERVICES **SPECIAL WASTE PROFILE**

Requested Disposal Facility: 3416 Maloy Solid Waste LF TX

Waste Profile #
3416 18 18258
Sales Rep #: 533

Saveable fill-in form. Restricted printing until all required (yellow) fields are completed.

I. Generator Information

Generator Name: United States Environmental Protection Agency - Region 6			
Generator Site Address: **Personal Address / Ex. 6**			
City: Leonard	County: Fannin	State: Texas	Zip: 75452
State ID/Reg No: NA	State Approval/Waste Code: NA (if applicable)		NAICS # :
Generator Mailing Address (if different): ☑ 1445 Ross Avenue, Suite 1200			
City: Dallas	County: Dallas	State: Texas	Zip: 75202-2733
Generator Contact Name: Gary Moore, On-Scene Coordinator (6SF-ER)		Email: moore.gary@epa.gov	
Phone Number: (214) 665-6609	Ext:	Fax Number:	

per G.M. 10/30/18 CM

II. Billing Information

Bill To: Environmental Restoration, LLC		Contact Name: Don Edgington	
Billing Address: 1666 Fabick Drive		Email: d.edgington@erllc.com	
City: Fenton	State: Missouri	Zip: 63026	Phone: (251) 406-0220

III. Waste Stream Information

Name of Waste: Construction & Demolition (C&D) debris	
Process Generating Waste: Demolition and removal of on-site building and foundation.	
Type of Waste:	☐ INDUSTRIAL PROCESS WASTE ☑ POLLUTION CONTROL WASTE
Physical State:	☑ SOLID ☐ SEMI-SOLID ☐ POWDER ☐ LIQUID
Method of Shipment:	☑ BULK ☐ DRUM ☐ BAGGED ☐ OTHER:
Estimated Annual Volume:	150 Tons
Frequency:	☑ ONE TIME ☐ ONGOING
Disposal Consideration:	☑ LANDFILL ☐ SOLIDIFICATION ☐ BIOREMEDIATION

IV. Representative Sample Certification

☑ NO SAMPLE TAKEN

Is the representative sample collected to prepare this profile and laboratory analysis, collected in accordance with U.S. EPA 40 CFR 261.20(c) guidelines or equivalent rules?	☐ YES or ☐ NO
Type of Sample: ☐ COMPOSITE SAMPLE ☐ GRAB SAMPLE	
Sample Date:	

© Republic Services, April 2013

REPUBLIC SERVICES **SPECIAL WASTE PROFILE**

Waste Profile #
3416 18 18258

V. Physical Characteristics of Waste

Characteristic Components	% by Weight (range)
1. Concrete, gravels, rock	80 - 100%
2. Metal, glass, wood	0 - 30%
3. Trash/PPE	0 - 10%
4.	
5.	

Color	Odor (describe)	Does Waste Contain Free Liquids?	% Solids	pH:	Flash Point
varies	none	☐ YES or ☑ NO	100%	n/a	n/a °F

Attach Laboratory Analytical Report (and/or Material Safety Data Sheet) Including Chain of Custody and Required Parameters Provided for this Profile

Does this waste or generating process contain regulated concentrations of the following Pesticides and/or Herbicides: Chlordane, Endrin, Heptachlor (and its epoxides), Lindane, Methoxychlor, Toxaphene, 2,4-D, or 2,4,5-TP Silvex as defined in 40 CFR 261.33?	☐ Yes or ☑ No
Does this waste contain reactive sulfides (greater than 500 ppm) or reactive cyanide (greater than 250 ppm)[reference 40 CFR 261.23(a)(5)]?	☐ Yes or ☑ No
Does this waste contain regulated concentrations of Polychlorinated Biphenyls (PCBs) as defined in 40 CFR Part 761?	☐ Yes or ☑ No
Does this waste contain concentrations of listed hazardous wastes defined in 40 CFR 261.31, 261.32, 261.33, including RCRA F-Listed Solvents?	☐ Yes or ☑ No
Does this waste exhibit a Hazardous Characteristic as defined by Federal and/or State regulations?	☐ Yes or ☑ No
Does this waste contain regulated concentrations of 2,3,7,8-Tetrachlorodibenzodioxin (2,3,7,8-TCCD), or any other dioxin as defined in 40 CFR 261.31?	☐ Yes or ☑ No
Is this a regulated Radioactive Waste as defined by Federal and/or State regulations?	☐ Yes or ☑ No
Is this a regulated Medical or Infectious Waste as defined by Federal and/or State regulations?	☐ Yes or ☑ No
Is this waste a reactive or heat generating waste?	☐ Yes or ☑ No
Does the waste contain sulfur or sulfur by-products?	☐ Yes or ☑ No
Is this waste generated at a Federal Superfund Clean Up Site?	☑ Yes or ☐ No
Is this waste from a TSD facility, TSD like facility or consolidator?	☐ Yes or ☑ No

VI. Certification

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true, complete and accurate description of the waste material being offered for disposal and all known or suspected hazards have been disclosed. All Analytical Results/Material Safety Data Sheets submitted are truthful and complete and are representative of the waste.

I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. I shall immediately give written notice of any change or condition pertaining to the waste not provided herein. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue.

I further certify that the company has not altered the form or content of this profile sheet as provided by Republic Services Inc.

Gary Moore, EPA On-Scene Coordinator
Authorized Representative Name And Title (Type or Print)

U.S. Environmental Protection Agency
Company Name

Authorized Representative Signature

10/29/2018
Date

© Republic Services, April 2013

Message

From: Moore, Gary [Moore.Gary@epa.gov]
Sent: 11/1/2018 11:09:43 PM
To: 'Don Edgington' [d.edgington@erllc.com]; Evan Wortman [e.wortman@erllc.com]
CC: Delgado, Paige [Delgado.Paige@epa.gov]
Subject: RE: DLWN: Special Waste Workflow 10/31/2018 3:45:51 PM/INCOMPLETE: Addt'l Information Required - US EPA - Region 6 Profile 34161818258

Don/Evan: The following is what I want to send to Cheryl to update the information submitted by Don. Also, I do not think we are ready to get the profile approved because we don't have the necessary data to support the disposal of the C&D material (ie. wood and concrete). We do have sheet metal wipes but only for PCBs as well as a paint sample for Aroclor 1268 and Lead. We need to talk about this and to Chris/Cheryl to determine what they are going to need for disposal of this debris. I am going to wait until we talk further about this. I would like to get on a conference call with you and Evan so we can talk through this.

Also, I just noticed that the Special Waste Profile had the wrong facility address. Should be 905 N. Poplar not [redacted] Also, did we need to put the State Registration Number in the profile?

Thanks
Gary Moore

Hello Cheryl:

I wanted to provide some supplemental information to the information provided by Don Edgington, EPA Contractor, provided you earlier today to try to answer your questions:

1) **What purpose was the building used on site?** This building was used as FJ Doyle Salvage from approximately 1976 to 1999. I was told that the transformers were empty (contained residual transformer oil) when they came to the site. The residual transformer oil was drained into a pan on the floor of the building and then pumped into outside tanks. The transformers were then dismantled to remove the metal parts for recycling as well as recycling of the transformer carcasses. After 1999, I was told that the property was used to store old trucks and parts and then as an auto repair facility and finally just for storage.
2) **What activities or processes occurred in the building?** See information in question 1 above.
3) **What possible contaminants may have been used in it?** A reasonable assumption is that some organic materials may have been spilled (tansformer oil, auto fluids, etc. on the building floor, probable copper, lead and other minute amounts of metals from the metal salvage activities.
4) **How was it determined that no contamination exists in the materials that is to be disposed?** See attached analytical report; specifically analyses on 16 wipe samples taken from sheet metal both inside and out including interior ceiling areas inside the structure to be demolished. The concrete and wood debris will have to be sampled to determine the appropriate waste stream.
5) **Please have the generator describe their process for ensuring no contaminated materials is designated for inclusion with C&D for disposal. Additional analytical may be required**. The building will be removed in small, discrete sections and visually assessed for any staining or abnormalities. Debris will be further segregated into metals, concrete, and wooded stockpiles and further evaluated prior to loading. Analytical is anticipated to be performed on a representative sample of the wood and concrete debris to determine the appropriate landfill. It is highly unlikely that representative sample of the debris will show the C&D material will be hazardous, or TSCA regulated.

Attachment: ALS Laboratories Final Report – HST 18100338 Final Level II.

All of the wipe samples (16) were taken from various locations on the building and were collected by Weston Solutions, Inc. representatives.

From: Don Edgington <d.edgington@erllc.com>
Sent: Thursday, November 01, 2018 1:28 PM
To: Muegge, Cheryl <CMuegge@republicservices.com>
Cc: Alderete, Chris <CAlderete@republicservices.com>; Moore, Gary <Moore.Gary@epa.gov>; Delgado, Paige <Delgado.Paige@epa.gov>; Evan Wortman <e.wortman@erllc.com>
Subject: RE: DLWN: Special Waste Workflow 10/31/2018 3:45:51 PM/INCOMPLETE: Addt'l Information Required - US EPA - Region 6 Profile 34161818258

Cheryl—

Answering your questions in order:

1) **What purpose was the building used on site?** The building formerly housed F.J. Doyle Salvage, which was a concern involved with recycling out-of-service power transmission transformers for recoverable metals.
2) **What activities or processes occurred in the building?** As the site has been abandoned for several years, it is our assumption that drained carcasses and commercially viable metals were stored inside and probable disassembly of the drained carcasses ensued to recycle same.
3) **What possible contaminants may have been used in it?** Again, our assumption is that some organic wastes may have been spilled inside the building's floor, probable copper, lead and other minute amounts of metals.
4) **How was it determined that no contamination exists in the materials that is to be disposed?** See attached analytical report; specifically analyses on 16 wipe samples taken from wood, metal and concrete areas inside the structure to be demolished.
5) **Please have the generator describe their process for ensuring no contaminated materials is designated for inclusion with C&D for disposal. Additional analytical may be required**. The building will be removed in small, discrete sections and visually assessed for any staining or abnormalities. Debris will be further segregated into metals, concrete, glass and wooded stockpiles and further evaluated prior to loading.

Attachment: ALS Laboratories Final Report – HST 18100338 Final Level II.

All of the wipe samples (16) were taken from various locations on the building and were collected by Weston Services, Inc. representatives.

If you have any other questions/comments, please advise.

Regards,

Don

From: Muegge, Cheryl <CMuegge@republicservices.com>
Sent: Thursday, November 01, 2018 10:57 AM
To: Don Edgington <d.edgington@erllc.com>
Cc: Alderete, Chris <CAlderete@republicservices.com>
Subject: FW: DLWN: Special Waste Workflow 10/31/2018 3:45:51 PM/INCOMPLETE: Addt'l Information Required - US EPA - Region 6 Profile 34161818258

Don,

We have received an incomplete on the United States Environmental Protection Agency Region 6 / Construction & Demolition Debris Profile 34161818258 citing:

"Please have the generator add more details to their process generating waste: for what purpose was the building used on-site? What activities or processes occurred in the building? What possible contaminants may have been used in it? How was it determined that no contamination exists in the material that is to be disposed? Please have the generator describe their process for ensuring no contaminated material is designated for disposal. Additional analytical may be required."

"What is the metal that constitutes up to 30% of the waste? Please have the generator describe."

Thank you,

Cheryl Muegge
Sales Coordinator - Special Waste

2815 State Hwy 42 N
Kilgore, TX 75662
e cmuegge@republicservices.com
o 903-986-5337
w RrepublicServices.com

From: workflow
Sent: Wednesday, October 31, 2018 9:17 AM
To: Muegge, Cheryl <CMuegge@republicservices.com>
Subject: DLWN: Special Waste Workflow 10/31/2018 3:45:51 PM/INCOMPLETE: Addt'l Information Required

REPOSITORY:	Corporate
USER:	System Admin (cssadmin)
ACTIVITY:	Notify Users

MESSAGE:
Please review the appended notes on the Special Waste Profile package for missing information. Please then email the missing information to the analyst that declined this Special Waste Profile package.

LAST COMPLETED WORKFLOW STEP:
REQUEST FOR APPROVAL: Analyst Review

COMPLETED WORKFLOW STEP:
Joseph Sorokach VOTE: 02 - Insufficient Information
No Comments

WORKFLOW DETAIL:

INSTANCE NAME:	Special Waste Workflow 10/31/2018 3:45:51 PM
ROUTE NAME:	Special Waste Workflow
STEP NAME:	INCOMPLETE: Addt'l Information Required
SUBMITTER NAME:	Cheryl Muegge

STEP STARTED: 10/31/2018 2:16:34 PM
STEP DUE DATE: 11/7/2018 7:00:00 PM

WebTools:
http://locator/default.aspx?WFRow=98CC0FD3-0962-44A7-8178-4A7FE4663B86&WFStep=2&WFRoute=4

ROUTE INSTRUCTIONS:
This workflow is designed to support Special Waste Profile packages that are submitted by Coordinators. The workflow does the following:

1) The Special Waste Profile is routed to the Analysts Queue.
2) The Analyst reviews the Profile Package and either selects 01 - Approved the Request, 02 - Insufficient Information, or 03 - Inacceptable Material.
3) If options of 01 or 03 are selected (Approved or Rejected), the Coordinator is notified. If 02 - Insufficient Information is selected the Coordinator is assigned a workflow task to send the Analyst additional information.
4) Once the Profile is officially approved or rejected, the support document is named using an autopath and then moved to an archive folder.

STEP INSTRUCTIONS:
Please review the appended notes on the Special Waste Profile package for missing information. Please then email the missing information to the analyst that declined this Special Waste Profile package.

FILES RELATED TO ACTIVITY:

Corporate\Documents\Special Waste_In Process\34161818258_United States Environmental Protection Agency - Region 6_2018-10-31.pdf
WebTools: http://locator/default.aspx?id=D2273E26152F463D867FCA5FA72E876E&dir=Objects

DETAILED FILE INFORMATION:

DESCRIPTION:	
VERSION ID:	2.0
STATUS:	Normal
LAST UPDATED:	10/31/2018 2:16:28 PM
LAST ACCESSED:	10/31/2018 2:16:28 PM
VERSION DATE:	10/31/2018 2:16:28 PM
VERSION NOTES:	

PROFILE PROPERTY INFORMATION:

PROFILE:	SpecialWaste
Lawson Co#:	3416
SW Profile#:	34161818258
SW DocType:	Original Documents
Document Date:	10/31/2018
SW Generator:	United States Environmental Protection Agency - Region 6
SW Sales Rep:	Chris Alderete
SW Coordinator:	Cheryl Muegge
SW Waste Stream:	75452

Confidentiality Warning: This e-mail and any attachments contain information intended only for the use of the individual or entity named above. If the reader of this e-mail is not the intended recipient or the employee or agent responsible for delivering it to the intended recipient, any dissemination, publication or copying of this e-mail is strictly prohibited. Although this email has been scanned for malware, the sender does not accept any responsibility for any loss, disruption or damage to your data or computer system that may occur while using data contained in, or transmitted with, this e-mail. If you have received this e-mail in error, please immediately notify by return e-mail. Thank you.

ENVIRONMENTAL RESTORATION LLC.

Daily Work Order No. 15
U.S. EPA, Region 6

DAILY WORK ORDER

Operating Period: 11/20/18 → 11/25/18	Task Order: 0618F0308	Page 1 of 1
Project Name: F.J. Doyle Salvage Site	OSC: Gary Moore/Paige Delgado	
Location (City, State): Leonard, Texas	Shift: 1 2	Start Time: 07:00 / Stop Time: 17:30

1. Work Authorized for the Period	Work Accomplished for the Period
1) Continue off-site T&D of non-regulated, non-hazardous soils (non-TSCA); 2) Complete excavations in Grid No(s) FJD06-01 and FJD07-01 (to property boundary between day care center and residence at Ex. 6 Personal Privacy (PP)); 3) Cover and secure remaining waste stockpiles; inspect and correct storm-water controls and containment areas; 4) Demobilize for Thanksgiving break.	1) Completed: excavations in Grid No. FJD06-01; 2) In progress: excavations in Grid No. FJD07-01; 3) In Progress: Off-site T&D of non-regulated, non-hazardous soils; twelve (12) additional loads delivered to TSDF; 4) Completed: Inspected installed storm-water controls and containment areas; cover and secure waste stockpiles, 5) Demobilize for Thanksgiving break.

OSC Signature:	Date:	OSC Signature:	Date:
RM Signature:	Date: 11/20/18	RM Signature:	Date: 11/20/18

2. Upcoming Work Authorized

Return to site to resume excavations in non-regulated, non-hazardous (non-TSCA) grids; commence excavations in TSCA grids; resume off-site T&D of remaining non-hazardous soils stockpile.

3. Quantity / Volume Tracking:

Description:	Current Period:	Total to Date:
2"– 3" Limestone Rock (Haul Road)		5 Truck Loads – 47.25 tons
Non-regulated, non-hazardous soils	12 Truck Loads - 338.82 tons	25 Truck Loads - 651.71 tons

4. Number of Personnel Authorized Current Period

Personnel Category:	Quantity:	Personnel Category:	Quantity:
Response Manager	1	Operator	2
FCA	1	Laborer	4
Foreman	1	Truck Driver/Laborer	1

5. Equipment Authorized for Current Period

Item	Qty	Used	Not Used / or Down	Item	Qty	Used	Not Used / or Down
½ ton crew-cab pickup (RM)	1	1		Portable toilets	3	3	
½ ton extended-cab	2	2		Hand-wash station	1	1	
¾ ton crew-cab flatbed w/ fuel cell	1	1		Skid steer with bucket/forks Bobcat TS90	1	1	
1-ton dump-truck	1	1		Mini-excavator (Bobcat E85)	1	1	
½ -ton extended cab (POV)	1	1		2,000-gallon Water Truck	1	1	
40' x 8' office trailer	1	1		Excavator (JD 210G)	1	1	
70 kW Generator	1	1					
20' Conex Box	1	1					

6. Comments / Amendments (Include Time)

This Daily Work Order has been prepared to cover demobilization on Wednesday, 11/21/18 and any off-site hours for reporting and removal scheduling during the plan period, ending 11/25/18.

Signature of OSC	11/21/18 Date	Signature of RM	11/20/18 Date

ENVIRONMENTAL RESTORATION LLC.

Daily Work Order No. 15
U.S. EPA, Region 6

DAILY WORK ORDER

Operating Period: 11/20/18 → 11/25/18	Task Order: 0618F0308	Page 1 of 1
Project Name: F.J. Doyle Salvage Site	OSC: Gary Moore/Paige Delgado	
Location (City, State): Leonard, Texas	Shift: 1 2	Start Time: 07:00 / Stop Time: 17:30

1. Work Authorized for the Period	Work Accomplished for the Period
1) Continue off-site T&D of non-regulated, non-hazardous soils (non-TSCA); 2) Complete excavations in Grid No(s) FJD06-01 and FJD07-01 (to property boundary between day care center and residence at Ex. 6 Personal Privacy (PP)); 3) Cover and secure remaining waste stockpiles; inspect and correct storm-water controls and containment areas; 4) Demobilize for Thanksgiving break.	1) Completed: excavations in Grid No. FJD06-01; 2) In progress: excavations in Grid No. FJD07-01; 3) In Progress: Off-site T&D of non-regulated, non-hazardous soils; twelve (12) additional loads delivered to TSDF; 4) Completed: Inspected installed storm-water controls and containment areas; cover and secure waste stockpiles, 5) Demobilize for Thanksgiving break.

OSC Signature:	Date:	OSC Signature:	Date:
RM Signature: Ron W Delgado	Date: 11/20/18	RM Signature: Ron W Delgado	Date: 11/20/18

2. Upcoming Work Authorized

Return to site to resume excavations in non-regulated, non-hazardous (non-TSCA) grids; commence excavations in TSCA grids; resume off-site T&D of remaining non-hazardous soils stockpile.

3. Quantity / Volume Tracking:

Description:	Current Period:	Total to Date:
2"– 3" Limestone Rock (Haul Road)		5 Truck Loads – 47.25 tons
Non-regulated, non-hazardous soils	12 Truck Loads - 338.82 tons	25 Truck Loads - 651.71 tons

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Personnel Category:	Quantity:	Personnel Category:	Quantity:
Response Manager	1	Operator	2
FCA	1	Laborer	4
Foreman	1	Truck Driver/Laborer	1

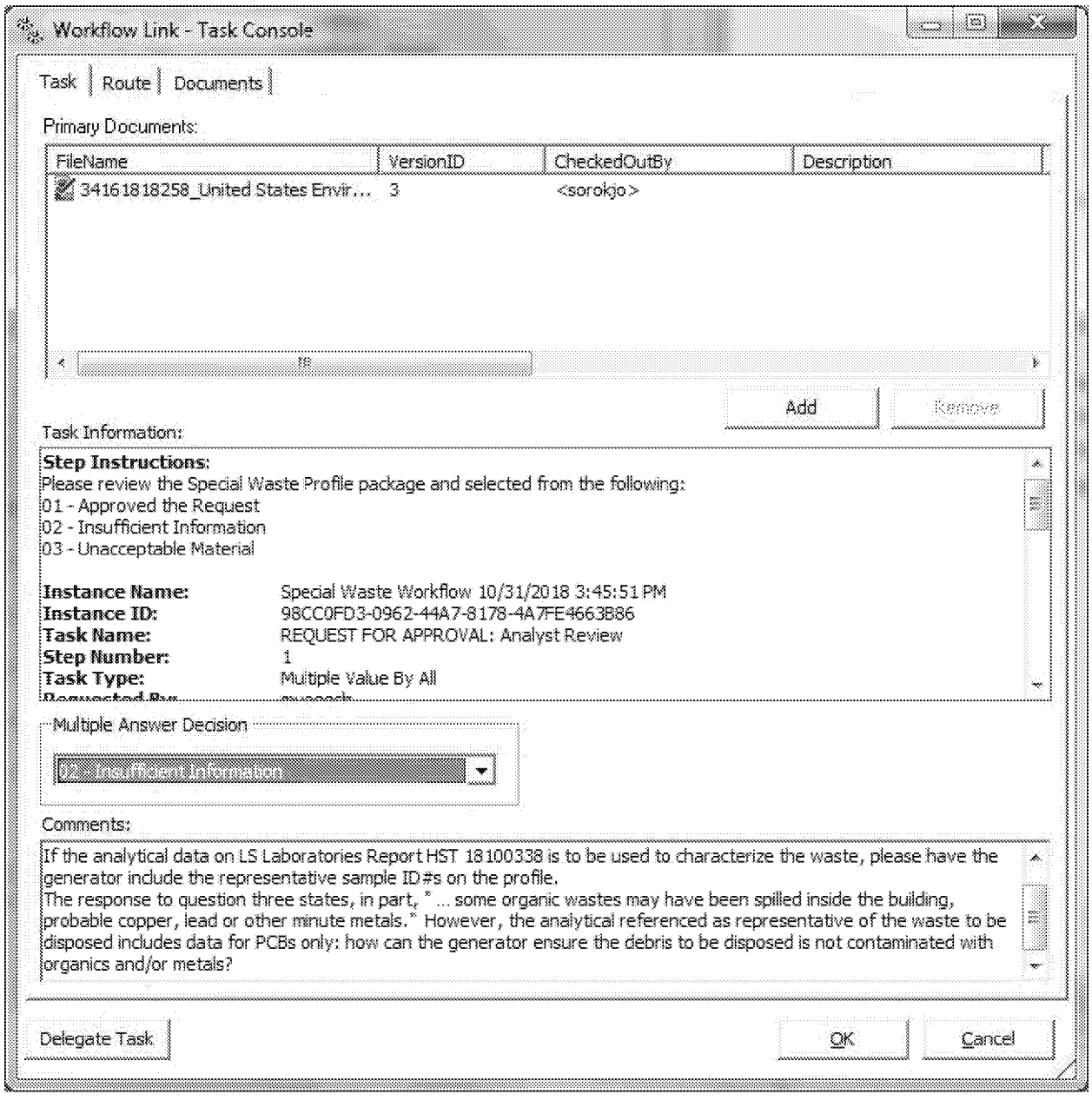
5. Equipment Authorized for Current Period

Item	Qty	Used	Not Used / or Down	Item	Qty	Used	Not Used / or Down
½ ton crew-cab pickup (RM)	1	1		Portable toilets	3	3	
½ ton extended-cab	2	2		Hand-wash station	1	1	
¾ ton crew-cab flatbed w/ fuel cell	1	1		Skid steer with bucket/forks Bobcat TS90	1	1	
1-ton dump-truck	1	1		Mini-excavator (Bobcat E85)	1	1	
½ -ton extended cab (POV)	1	1		2,000-gallon Water Truck	1	1	
40' x 8' office trailer	1	1		Excavator (JD 210G)	1	1	
70 kW Generator	1	1					
20' Conex Box	1	1					

6. Comments / Amendments (Include Time)

This Daily Work Order has been prepared to cover demobilization on Wednesday, 11/21/18 and any off-site hours for reporting and removal scheduling during the plan period, ending 11/25/18.

Signature of OSC	Date	Signature of RM	Date
		Ron W Delgado	11/20/18



Please have the generator provide Third Party authorization for Don Degington to respond on behalf of the US EPA.

If the analytical data on LS Laboratories Report HST 18100338 is to be used to characterize the waste, please have the generator include the representative sample ID#s on the profile.

The response to question three states, in part, " … some organic wastes may have been spilled inside the building, probable copper, lead or other minute metals." However, the analytical referenced as representative of the waste to be disposed includes data for PCBs only: how can the generator ensure the debris to be disposed is not contaminated with organics and/or metals?

Muegge, Cheryl

From: Don Edgington <d.edgington@erllc.com>
Sent: Thursday, November 01, 2018 1:28 PM
To: Muegge, Cheryl
Cc: Alderete, Chris; Moore, Gary; Delgado, Paige; Evan Wortman
Subject: RE: DLWN: Special Waste Workflow 10/31/2018 3:45:51 PM/INCOMPLETE: Addt'l Information Required - US EPA - Region 6 Profile 34161818258
Attachments: HS18100338 FJ Doyle Site Final Level II. Final.PDF

Note that (d.edgington@erllc.com) is an external email. Forward unfamiliar emails to infosec.phishing@republicservices.com

Cheryl—

Answering your questions in order:

1) **What purpose was the building used on site?** The building formerly housed F.J. Doyle Salvage, which was a concern involved with recycling out-of-service power transmission transformers for recoverable metals.
2) **What activities or processes occurred in the building?** As the site has been abandoned for several years, it is our assumption that drained carcasses and commercially viable metals were stored inside and probable disassembly of the drained carcasses ensued to recycle same.
3) **What possible contaminants may have been used in it?** Again, our assumption is that some organic wastes may have been spilled inside the building's floor, probable copper, lead and other minute amounts of metals.
4) **How was it determined that no contamination exists in the materials that is to be disposed?** See attached analytical report; specifically analyses on 16 wipe samples taken from wood, metal and concrete areas inside the structure to be demolished.
5) **Please have the generator describe their process for ensuring no contaminated materials is designated for inclusion with C&D for disposal. Additional analytical may be required**. The building will be removed in small, discrete sections and visually assessed for any staining or abnormalities. Debris will be further segregated into metals, concrete, glass and wooded stockpiles and further evaluated prior to loading.

Attachment: ALS Laboratories Final Report – HST 18100338 Final Level II.

All of the wipe samples (16) were taken from various locations on the building and were collected by Weston Services, Inc. representatives.

If you have any other questions/comments, please advise.

Regards,

Don

From: Muegge, Cheryl <CMuegge@republicservices.com>
Sent: Thursday, November 01, 2018 10:57 AM
To: Don Edgington <d.edgington@erllc.com>
Cc: Alderete, Chris <CAlderete@republicservices.com>
Subject: FW: DLWN: Special Waste Workflow 10/31/2018 3:45:51 PM/INCOMPLETE: Addt'l Information Required - US EPA - Region 6 Profile 34161818258

ED 002624 00001155-00002

Don,

We have received an incomplete on the United States Environmental Protection Agency Region 6 / Construction & Demolition Debris Profile 34161818258 citing:

"Please have the generator add more details to their process generating waste: for what purpose was the building used on-site? What activities or processes occurred in the building? What possible contaminants may have been used in it? How was it determined that no contamination exists in the material that is to be disposed? Please have the generator describe their process for ensuring no contaminated material is designated for disposal. Additional analytical may be required."

"What is the metal that constitutes up to 30% of the waste? Please have the generator describe."

Thank you,

Cheryl Muegge
Sales Coordinator - Special Waste

2815 State Hwy 42 N
Kilgore, TX 75662
e cmuegge@republicservices.com
o 903-986-5337
w RepublicServices.com

We'll handle it from here.

[redacted]

From: workflow
Sent: Wednesday, October 31, 2018 9:17 AM
To: Muegge, Cheryl <CMuegge@republicservices.com>
Subject: DLWN: Special Waste Workflow 10/31/2018 3:45:51 PM/INCOMPLETE: Addt'l Information Required

REPOSITORY:	Corporate
USER:	System Admin (cssadmin)
ACTIVITY:	Notify Users

MESSAGE:
Please review the appended notes on the Special Waste Profile package for missing information. Please then email the missing information to the analyst that declined this Special Waste Profile package.

LAST COMPLETED WORKFLOW STEP:
REQUEST FOR APPROVAL: Analyst Review
COMPLETED WORKFLOW STEP:
Joseph Sorokach VOTE: 02 - Insufficient Information
No Comments

WORKFLOW DETAIL:

INSTANCE NAME:	Special Waste Workflow 10/31/2018 3:45:51 PM
ROUTE NAME:	Special Waste Workflow
STEP NAME:	INCOMPLETE: Addt'l Information Required
SUBMITTER NAME:	Cheryl Muegge

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887

October 11, 2018

Jeff Wright
Weston Solutions, Inc.
13702 Coursey Blvd.,
Bldg #7, Ste A
Baton Rouge, LA 70817

Work Order: **HS18100338**

Laboratory Results for: **FJ Doyle Site**

Dear Jeff,

ALS Environmental received 32 sample(s) on Oct 08, 2018 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: JUMOKE.LAWAL
Bernadette A. Fini
Project Manager

ED_002624_00001155-00004

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Work Order: HS18100338

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS18100338-01	DRA32-20181004-12-23	Water		04-Oct-2018 11:30	08-Oct-2018 10:30	☐
HS18100338-02	DRA29-20181004-01-51	Soil		04-Oct-2018 08:42	08-Oct-2018 10:30	☐
HS18100338-03	DRA29-20181004-06-51	Soil		04-Oct-2018 08:59	08-Oct-2018 10:30	☐
HS18100338-04	DRA29-20181004-06-52	Soil		04-Oct-2018 08:59	08-Oct-2018 10:30	☐
HS18100338-05	DRA29-20181004-12-51	Soil		04-Oct-2018 09:17	08-Oct-2018 10:30	☐
HS18100338-06	DRA30-20181004-01-51	Soil		04-Oct-2018 09:31	08-Oct-2018 10:30	☐
HS18100338-07	DRA30-20181004-06-51	Soil		04-Oct-2018 09:51	08-Oct-2018 10:30	☐
HS18100338-08	DRA30-20181004-12-51	Soil		04-Oct-2018 10:05	08-Oct-2018 10:30	☐
HS18100338-09	DRA31-20181004-01-51	Soil		04-Oct-2018 10:40	08-Oct-2018 10:30	☐
HS18100338-10	DRA31-20181004-06-51	Soil		04-Oct-2018 11:05	08-Oct-2018 10:30	☐
HS18100338-11	DRA31-20181004-12-51	Soil		04-Oct-2018 11:15	08-Oct-2018 10:30	☐
HS18100338-12	DRA32-20181004-01-51	Soil		04-Oct-2018 10:45	08-Oct-2018 10:30	☐
HS18100338-13	DRA32-20181004-06-51	Soil		04-Oct-2018 10:55	08-Oct-2018 10:30	☐
HS18100338-14	DRA32-20181004-06-52	Soil		04-Oct-2018 10:55	08-Oct-2018 10:30	☐
HS18100338-15	DRA32-20181004-12-51	Soil		04-Oct-2018 11:15	08-Oct-2018 10:30	☐
HS18100338-16	FJD04-09-PCS01-20181004-81	Paint		04-Oct-2018 16:16	08-Oct-2018 10:30	☐
HS18100338-17	FJD04-09-WS01-20181004-81	Wipe		04-Oct-2018 14:11	08-Oct-2018 10:30	☐
HS18100338-18	FJD04-09-WS01-20181004-82	Wipe		04-Oct-2018 14:13	08-Oct-2018 10:30	☐
HS18100338-19	FJD04-09-WS02-20181004-81	Wipe		04-Oct-2018 14:16	08-Oct-2018 10:30	☐
HS18100338-20	FJD04-09-WS03-20181004-81	Wipe		04-Oct-2018 14:20	08-Oct-2018 10:30	☐
HS18100338-21	FJD04-09-WS04-20181004-81	Wipe		04-Oct-2018 14:26	08-Oct-2018 10:30	☐
HS18100338-22	FJD04-09-WS05-20181004-81	Wipe		04-Oct-2018 14:28	08-Oct-2018 10:30	☐
HS18100338-23	FJD04-09-WS05-20181004-82	Wipe		04-Oct-2018 14:31	08-Oct-2018 10:30	☐
HS18100338-24	FJD04-09-WS06-20181004-81	Wipe		04-Oct-2018 14:33	08-Oct-2018 10:30	☐
HS18100338-25	FJD04-09-WS07-20181004-81	Wipe		04-Oct-2018 14:36	08-Oct-2018 10:30	☐
HS18100338-26	FJD04-09-WS08-20181004-81	Wipe		04-Oct-2018 14:38	08-Oct-2018 10:30	☐

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Work Order: HS18100338

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS18100338-27	FJD04-09-WS09-20181004-81	Wipe		04-Oct-2018 14:42	08-Oct-2018 10:30	☐
HS18100338-28	FJD04-09-WS10-20181004-81	Wipe		04-Oct-2018 14:46	08-Oct-2018 10:30	☐
HS18100338-29	FJD04-09-WS11-20181004-81	Wipe		04-Oct-2018 14:54	08-Oct-2018 10:30	☐
HS18100338-30	FJD04-09-WS12-20181004-81	Wipe		04-Oct-2018 14:58	08-Oct-2018 10:30	☐
HS18100338-31	FJD04-09-WS13-20181004-81	Wipe		04-Oct-2018 15:02	08-Oct-2018 10:30	☐
HS18100338-32	FJD04-09-WS14-20181004-81	Wipe		04-Oct-2018 15:06	08-Oct-2018 10:30	☐

Client: Weston Solutions, Inc. **CASE NARRATIVE**
Project: FJ Doyle Site
Work Order: HS18100338

Work Order Comments

- Login notes:

Samples received out of temp. Per client email 10-8-18 continue with analysis.
Sample collection times differ for the following: DRA31-20181004-12-51 - COC = 11:15, Sx = 11:14. FJD04-09-WS14-20181004-81 - COC = 15:06, Sx = 14:06. Samples logged in per chain.

ECD Organics by Method SW8082

Batch ID: 133300,133307,133318,133387

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

GCMS Semivolatiles by Method SW8270

Batch ID: 133244

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Batch ID: 133297

Sample ID: DRA29-20181004-01-51 (HS18100338-02MS)

- One or more of the matrix spike compounds for the EPA 8270 analysis were recovered outside of the quality control limits due to sample matrix interferences. The LCS sample associated to this sample was within control limits.

Sample ID: DRA29-20181004-01-51 (HS18100338-02MSD)

- One or more of the matrix spike compounds for the EPA 8270 analysis were recovered outside of the quality control limits due to sample matrix interferences. The LCS sample associated to this sample was within control limits.

Metals by Method SW7471A

Batch ID: 133369

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Metals by Method SW7470

Batch ID: 133349

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Metals by Method SW6020

Batch ID: 133282

Sample ID: DRA29-20181004-01-51 (HS18100338-02MS)

- MS and MSD failed for Antimony, Chromium, Magnesium, Potassium, Vanadium, but passed in PSD

- The MS and/or MSD recovery was outside of the control; however, the result in the parent sample is greater than 4x the spike amount. Calcium, Manganese, Zinc, Iron, Barium

- Copper failed in MS and MSD, but passed in PDS

- The MS and/or MSD recovery was outside of the control; however, the result in the parent sample is greater than 4x the spike amount. Aluminum

Sample ID: DRA29-20181004-01-51 (HS18100338-02MSD)

Client: Weston Solutions, Inc. **CASE NARRATIVE**
Project: FJ Doyle Site
Work Order: HS18100338

Metals by Method SW6020

Batch ID: 133282

- Due to non-homogeneity of the soil sample matrix the MS/MSD recoveries and RPD were outside the control limits. Barium, Zinc

Sample ID: DRA29-20181004-01-51 (HS18100338-02PDS)

- The PDS recovery was outside method control limits, however the result in the parent sample is greater than 4x the spike amount. Zinc

Sample ID: DRA29-20181004-01-51 (HS18100338-02SD)

- The percent difference between the results of the sample and the serial dilution were greater than 10%. Copper

Batch ID: 133292

Sample ID: HS18100285-02MS

- MS/MSD and DUPs are for an unrelated sample

WetChemistry by Method ASTM D2216

Batch ID: R325102

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA32-20181004-12-23
Collection Date: 04-Oct-2018 11:30

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-01
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES	**Method:SW8270**				Prep:SW3510 / 08-Oct-2018		Analyst: GEY
1,1′-Biphenyl	U		0.000024	0.00020	mg/L	1	10-Oct-2018 14:40
2,4,5-Trichlorophenol	U		0.000057	0.00020	mg/L	1	10-Oct-2018 14:40
2,4,6-Trichlorophenol	U		0.000048	0.00020	mg/L	1	10-Oct-2018 14:40
2,4-Dichlorophenol	U		0.000043	0.00020	mg/L	1	10-Oct-2018 14:40
2,4-Dimethylphenol	U		0.000040	0.00020	mg/L	1	10-Oct-2018 14:40
2,4-Dinitrophenol	U		0.00010	0.0010	mg/L	1	10-Oct-2018 14:40
2,4-Dinitrotoluene	U		0.000058	0.00020	mg/L	1	10-Oct-2018 14:40
2,6-Dinitrotoluene	U		0.000042	0.00020	mg/L	1	10-Oct-2018 14:40
2-Chloronaphthalene	U		0.000021	0.00020	mg/L	1	10-Oct-2018 14:40
2-Chlorophenol	U		0.000036	0.00020	mg/L	1	10-Oct-2018 14:40
2-Methylnaphthalene	U		0.000019	0.00010	mg/L	1	10-Oct-2018 14:40
2-Methylphenol	U		0.000045	0.00020	mg/L	1	10-Oct-2018 14:40
2-Nitroaniline	U		0.000041	0.00020	mg/L	1	10-Oct-2018 14:40
2-Nitrophenol	U		0.000034	0.00020	mg/L	1	10-Oct-2018 14:40
3&4-Methylphenol	U		0.000036	0.00020	mg/L	1	10-Oct-2018 14:40
3,3′-Dichlorobenzidine	U		0.000044	0.00020	mg/L	1	10-Oct-2018 14:40
3-Nitroaniline	U		0.000049	0.00020	mg/L	1	10-Oct-2018 14:40
4,6-Dinitro-2-methylphenol	U		0.000020	0.00020	mg/L	1	10-Oct-2018 14:40
4-Bromophenyl phenyl ether	U		0.000051	0.00020	mg/L	1	10-Oct-2018 14:40
4-Chloro-3-methylphenol	U		0.000032	0.00020	mg/L	1	10-Oct-2018 14:40
4-Chloroaniline	U		0.000039	0.00020	mg/L	1	10-Oct-2018 14:40
4-Chlorophenyl phenyl ether	U		0.000044	0.00020	mg/L	1	10-Oct-2018 14:40
4-Nitroaniline	U		0.000035	0.00020	mg/L	1	10-Oct-2018 14:40
4-Nitrophenol	U		0.000047	0.0010	mg/L	1	10-Oct-2018 14:40
Acenaphthene	U		0.000027	0.00010	mg/L	1	10-Oct-2018 14:40
Acenaphthylene	U		0.000015	0.00010	mg/L	1	10-Oct-2018 14:40
Acetophenone	U		0.000024	0.00020	mg/L	1	10-Oct-2018 14:40
Anthracene	U		0.000014	0.00010	mg/L	1	10-Oct-2018 14:40
Atrazine	U		0.000033	0.00020	mg/L	1	10-Oct-2018 14:40
Benz(a)anthracene	U		0.000050	0.00010	mg/L	1	10-Oct-2018 14:40
Benzaldehyde	U	n	0.000030	0.00020	mg/L	1	10-Oct-2018 14:40
Benzo(a)pyrene	U		0.000020	0.00010	mg/L	1	10-Oct-2018 14:40
Benzo(b)fluoranthene	U		0.000023	0.00010	mg/L	1	10-Oct-2018 14:40
Benzo(g,h,i)perylene	U		0.000014	0.00010	mg/L	1	10-Oct-2018 14:40
Benzo(k)fluoranthene	U		0.000019	0.00010	mg/L	1	10-Oct-2018 14:40
Bis(2-chloro-1-methylethyl) ether	U		0.000070	0.00020	mg/L	1	10-Oct-2018 14:40
Bis(2-chloroethoxy)methane	U		0.000030	0.00020	mg/L	1	10-Oct-2018 14:40
Bis(2-chloroethyl)ether	U		0.000026	0.00020	mg/L	1	10-Oct-2018 14:40
Bis(2-ethylhexyl)phthalate	**0.00014**	J	**0.000037**	**0.00020**	**mg/L**	1	10-Oct-2018 14:40

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA32-20181004-12-23
Collection Date: 04-Oct-2018 11:30

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-01
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES	**Method:SW8270**				Prep:SW3510 / 08-Oct-2018		Analyst: GEY
Butyl benzyl phthalate	U		0.000019	0.00020	mg/L	1	10-Oct-2018 14:40
Caprolactam	**0.00027**		**0.000045**	**0.00020**	**mg/L**	1	10-Oct-2018 14:40
Carbazole	U		0.000025	0.00020	mg/L	1	10-Oct-2018 14:40
Chrysene	U		0.000021	0.00010	mg/L	1	10-Oct-2018 14:40
Dibenz(a,h)anthracene	U		0.000024	0.00010	mg/L	1	10-Oct-2018 14:40
Dibenzofuran	U		0.000020	0.00010	mg/L	1	10-Oct-2018 14:40
Diethyl phthalate	U		0.000030	0.00020	mg/L	1	10-Oct-2018 14:40
Dimethyl phthalate	U		0.000041	0.00020	mg/L	1	10-Oct-2018 14:40
Di-n-butyl phthalate	**0.00023**		**0.000020**	**0.00020**	**mg/L**	1	10-Oct-2018 14:40
Di-n-octyl phthalate	U		0.000020	0.00020	mg/L	1	10-Oct-2018 14:40
Fluoranthene	U		0.000010	0.00010	mg/L	1	10-Oct-2018 14:40
Fluorene	U		0.000030	0.00010	mg/L	1	10-Oct-2018 14:40
Hexachlorobenzene	U		0.000044	0.00020	mg/L	1	10-Oct-2018 14:40
Hexachlorobutadiene	U		0.000030	0.00020	mg/L	1	10-Oct-2018 14:40
Hexachlorocyclopentadiene	U		0.000030	0.00020	mg/L	1	10-Oct-2018 14:40
Hexachloroethane	U		0.000059	0.00020	mg/L	1	10-Oct-2018 14:40
Indeno(1,2,3-cd)pyrene	U		0.000022	0.00010	mg/L	1	10-Oct-2018 14:40
Isophorone	U		0.000025	0.00020	mg/L	1	10-Oct-2018 14:40
Naphthalene	U		0.000020	0.00010	mg/L	1	10-Oct-2018 14:40
Nitrobenzene	U		0.000024	0.00020	mg/L	1	10-Oct-2018 14:40
N-Nitrosodi-n-propylamine	U		0.000032	0.00020	mg/L	1	10-Oct-2018 14:40
N-Nitrosodiphenylamine	U		0.000025	0.00020	mg/L	1	10-Oct-2018 14:40
Pentachlorophenol	U		0.000079	0.00020	mg/L	1	10-Oct-2018 14:40
Phenanthrene	U		0.000021	0.00010	mg/L	1	10-Oct-2018 14:40
Phenol	U		0.000035	0.00020	mg/L	1	10-Oct-2018 14:40
Pyrene	U		0.000019	0.00010	mg/L	1	10-Oct-2018 14:40
Surr: 2,4,6-Tribromophenol	*69.1*			*34-129*	*%REC*	*1*	*10-Oct-2018 14:40*
Surr: 2-Fluorobiphenyl	*76.7*			*40-125*	*%REC*	*1*	*10-Oct-2018 14:40*
Surr: 2-Fluorophenol	*54.6*			*20-120*	*%REC*	*1*	*10-Oct-2018 14:40*
Surr: 4-Terphenyl-d14	*89.4*			*40-135*	*%REC*	*1*	*10-Oct-2018 14:40*
Surr: Nitrobenzene-d5	*71.5*			*41-120*	*%REC*	*1*	*10-Oct-2018 14:40*
Surr: Phenol-d6	*59.1*			*20-120*	*%REC*	*1*	*10-Oct-2018 14:40*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA32-20181004-12-23
Collection Date: 04-Oct-2018 11:30

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-01
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A		**Method:SW8082**			Prep:SW3510C/3665A / 09-Oct-2018		Analyst: JBA
Aroclor 1016	U		0.000667	0.00208	mg/L	1	10-Oct-2018 12:18
Aroclor 1221	U		0.000625	0.00208	mg/L	1	10-Oct-2018 12:18
Aroclor 1232	U		0.000625	0.00208	mg/L	1	10-Oct-2018 12:18
Aroclor 1242	U		0.000500	0.00208	mg/L	1	10-Oct-2018 12:18
Aroclor 1248	U		0.000625	0.00208	mg/L	1	10-Oct-2018 12:18
Aroclor 1254	U		0.000625	0.00208	mg/L	1	10-Oct-2018 12:18
Aroclor 1260	U		0.000833	0.00208	mg/L	1	10-Oct-2018 12:18
Surr: Decachlorobiphenyl	*113*			*54-140*	*%REC*	*1*	*10-Oct-2018 12:18*
Surr: Tetrachloro-m-xylene	*95.7*			*53-137*	*%REC*	*1*	*10-Oct-2018 12:18*
ICP-MS METALS BY SW6020A		**Method:SW6020**			Prep:SW3010A / 09-Oct-2018		Analyst: JC
Aluminum	**0.0423**		**0.00180**	**0.0100**	**mg/L**	1	11-Oct-2018 15:27
Antimony	U		0.000400	0.00200	mg/L	1	11-Oct-2018 15:27
Arsenic	U		0.000400	0.00200	mg/L	1	11-Oct-2018 15:27
Barium	**0.00453**		**0.00190**	**0.00400**	**mg/L**	1	11-Oct-2018 15:27
Beryllium	**0.000215**	J	**0.000200**	**0.00200**	**mg/L**	1	11-Oct-2018 15:27
Cadmium	U		0.000200	0.00200	mg/L	1	11-Oct-2018 15:27
Calcium	**1.81**		**0.0340**	**0.500**	**mg/L**	1	11-Oct-2018 15:27
Chromium	**0.000570**	J	**0.000400**	**0.00400**	**mg/L**	1	11-Oct-2018 15:27
Cobalt	**0.000264**	J	**0.000200**	**0.00500**	**mg/L**	1	11-Oct-2018 15:27
Copper	**0.00830**		**0.00100**	**0.00200**	**mg/L**	1	11-Oct-2018 15:27
Iron	U		0.0120	0.200	mg/L	1	11-Oct-2018 15:27
Lead	U		0.000600	0.00200	mg/L	1	11-Oct-2018 15:27
Magnesium	**0.320**		**0.0100**	**0.200**	**mg/L**	1	11-Oct-2018 15:27
Manganese	**0.0193**		**0.000700**	**0.00500**	**mg/L**	1	11-Oct-2018 15:27
Nickel	**0.000818**	J	**0.000600**	**0.00200**	**mg/L**	1	11-Oct-2018 15:27
Potassium	**0.180**	J	**0.0180**	**0.200**	**mg/L**	1	11-Oct-2018 15:27
Selenium	U		0.00110	0.00200	mg/L	1	11-Oct-2018 15:27
Silver	U		0.000200	0.00200	mg/L	1	11-Oct-2018 15:27
Sodium	**0.368**		**0.0140**	**0.200**	**mg/L**	1	11-Oct-2018 15:27
Thallium	U		0.000200	0.00200	mg/L	1	11-Oct-2018 15:27
Vanadium	U		0.000600	0.00500	mg/L	1	11-Oct-2018 15:27
Zinc	**0.00706**		**0.00200**	**0.00400**	**mg/L**	1	11-Oct-2018 15:27
MERCURY BY SW7470A		**Method:SW7470**			Prep:SW7470 / 10-Oct-2018		Analyst: JCJ
Mercury	U		0.0000300	0.000200	mg/L	1	10-Oct-2018 16:05

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc. **ANALYTICAL REPORT**
Project: FJ Doyle Site WorkOrder:HS18100338
Sample ID: DRA29-20181004-01-51 Lab ID:HS18100338-02
Collection Date: 04-Oct-2018 08:42 Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**				Prep:SW3541 / 08-Oct-2018		Analyst: ACN
1,1´-Biphenyl	U		0.0021	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
2,4,5-Trichlorophenol	U		0.0031	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
2,4,6-Trichlorophenol	U		0.0021	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
2,4-Dichlorophenol	U		0.0016	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
2,4-Dimethylphenol	U		0.0041	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
2,4-Dinitrophenol	U		0.0055	0.016	mg/Kg-dry	1	10-Oct-2018 13:56
2,4-Dinitrotoluene	U		0.0011	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
2,6-Dinitrotoluene	U		0.0041	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
2-Chloronaphthalene	U		0.0016	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
2-Chlorophenol	U		0.0016	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
2-Methylnaphthalene	U		0.00062	0.0041	mg/Kg-dry	1	10-Oct-2018 13:56
2-Methylphenol	U		0.0014	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
2-Nitroaniline	U		0.0023	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
2-Nitrophenol	U		0.0031	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
3&4-Methylphenol	U		0.0012	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
3,3´-Dichlorobenzidine	U		0.0031	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
3-Nitroaniline	U		0.0023	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
4,6-Dinitro-2-methylphenol	U		0.0026	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
4-Bromophenyl phenyl ether	U		0.0020	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
4-Chloro-3-methylphenol	U		0.00086	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
4-Chloroaniline	U		0.0014	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
4-Chlorophenyl phenyl ether	U		0.0018	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
4-Nitroaniline	U		0.0027	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
4-Nitrophenol	U		0.0023	0.016	mg/Kg-dry	1	10-Oct-2018 13:56
Acenaphthene	U		0.00062	0.0041	mg/Kg-dry	1	10-Oct-2018 13:56
Acenaphthylene	U		0.0012	0.0041	mg/Kg-dry	1	10-Oct-2018 13:56
Acetophenone	U		0.00099	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
Anthracene	U		0.00062	0.0041	mg/Kg-dry	1	10-Oct-2018 13:56
Atrazine	U		0.0025	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
Benz(a)anthracene	U		0.0020	0.0041	mg/Kg-dry	1	10-Oct-2018 13:56
Benzaldehyde	U	n	0.0015	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
Benzo(a)pyrene	U		0.0012	0.0041	mg/Kg-dry	1	10-Oct-2018 13:56
Benzo(b)fluoranthene	U		0.0015	0.0041	mg/Kg-dry	1	10-Oct-2018 13:56
Benzo(g,h,i)perylene	U		0.00086	0.0041	mg/Kg-dry	1	10-Oct-2018 13:56
Benzo(k)fluoranthene	U		0.0011	0.0041	mg/Kg-dry	1	10-Oct-2018 13:56
Bis(2-chloro-1-methylethyl) ether	U		0.0017	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
Bis(2-chloroethoxy)methane	U		0.0011	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
Bis(2-chloroethyl)ether	U		0.0014	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
Bis(2-ethylhexyl)phthalate	**0.0069**	J	**0.0021**	**0.0081**	**mg/Kg-dry**	1	10-Oct-2018 13:56

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA29-20181004-01-51
Collection Date: 04-Oct-2018 08:42

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-02
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**				Prep:SW3541 / 08-Oct-2018		Analyst: ACN
Butyl benzyl phthalate	U		0.0016	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
Caprolactam	U		0.0015	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
Carbazole	U		0.0015	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
Chrysene	U		0.00099	0.0041	mg/Kg-dry	1	10-Oct-2018 13:56
Dibenz(a,h)anthracene	U		0.0020	0.0041	mg/Kg-dry	1	10-Oct-2018 13:56
Dibenzofuran	U		0.00086	0.0041	mg/Kg-dry	1	10-Oct-2018 13:56
Diethyl phthalate	U		0.0012	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
Dimethyl phthalate	U		0.00099	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
Di-n-butyl phthalate	U		0.0015	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
Di-n-octyl phthalate	U		0.0011	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
Fluoranthene	**0.0018**	J	**0.0014**	**0.0041**	**mg/Kg-dry**	1	10-Oct-2018 13:56
Fluorene	U		0.0014	0.0041	mg/Kg-dry	1	10-Oct-2018 13:56
Hexachlorobenzene	U		0.0011	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
Hexachlorobutadiene	U		0.0015	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
Hexachlorocyclopentadiene	U		0.00099	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
Hexachloroethane	U		0.0018	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
Indeno(1,2,3-cd)pyrene	U		0.00099	0.0041	mg/Kg-dry	1	10-Oct-2018 13:56
Isophorone	U		0.00099	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
Naphthalene	U		0.00074	0.0041	mg/Kg-dry	1	10-Oct-2018 13:56
Nitrobenzene	U		0.0011	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
N-Nitrosodi-n-propylamine	U		0.0014	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
N-Nitrosodiphenylamine	U		0.00086	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
Pentachlorophenol	U		0.0041	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
Phenanthrene	U		0.0018	0.0041	mg/Kg-dry	1	10-Oct-2018 13:56
Phenol	U		0.0014	0.0081	mg/Kg-dry	1	10-Oct-2018 13:56
Pyrene	**0.0031**	J	**0.00074**	**0.0041**	**mg/Kg-dry**	1	10-Oct-2018 13:56
Surr: 2,4,6-Tribromophenol	*79.4*			*36-126*	*%REC*	*1*	*10-Oct-2018 13:56*
Surr: 2-Fluorobiphenyl	*79.3*			*43-125*	*%REC*	*1*	*10-Oct-2018 13:56*
Surr: 2-Fluorophenol	*53.4*			*37-125*	*%REC*	*1*	*10-Oct-2018 13:56*
Surr: 4-Terphenyl-d14	*96.2*			*32-125*	*%REC*	*1*	*10-Oct-2018 13:56*
Surr: Nitrobenzene-d5	*70.7*			*37-125*	*%REC*	*1*	*10-Oct-2018 13:56*
Surr: Phenol-d6	*63.9*			*40-125*	*%REC*	*1*	*10-Oct-2018 13:56*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA29-20181004-01-51
Collection Date: 04-Oct-2018 08:42

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-02
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A		**Method:SW8082**			Prep:SW3541/3665A / 08-Oct-2018		Analyst: JBA
Aroclor 1016	U		0.0052	0.021	mg/Kg-dry	1	10-Oct-2018 03:24
Aroclor 1221	U		0.0069	0.021	mg/Kg-dry	1	10-Oct-2018 03:24
Aroclor 1232	U		0.0055	0.021	mg/Kg-dry	1	10-Oct-2018 03:24
Aroclor 1242	U		0.0073	0.021	mg/Kg-dry	1	10-Oct-2018 03:24
Aroclor 1248	U		0.0073	0.021	mg/Kg-dry	1	10-Oct-2018 03:24
Aroclor 1254	U		0.0058	0.021	mg/Kg-dry	1	10-Oct-2018 03:24
Aroclor 1260	U		0.0049	0.021	mg/Kg-dry	1	10-Oct-2018 03:24
Surr: Decachlorobiphenyl	*124*			*54-143*	*%REC*	*1*	*10-Oct-2018 03:24*
Surr: Tetrachloro-m-xylene	*107*			*50-140*	*%REC*	*1*	*10-Oct-2018 03:24*
METALS BY SW6020A		**Method:SW6020**			Prep:SW3050A / 08-Oct-2018		Analyst: JC
Aluminum	**12,300**		**27.5**	**237**	**mg/Kg-dry**	100	11-Oct-2018 14:32
Antimony	**0.297**	J	**0.0770**	**0.592**	**mg/Kg-dry**	1	10-Oct-2018 22:08
Arsenic	**9.25**		**0.0829**	**0.592**	**mg/Kg-dry**	1	10-Oct-2018 22:08
Barium	**122**		**0.0355**	**0.592**	**mg/Kg-dry**	1	10-Oct-2018 22:08
Beryllium	**0.599**		**0.0249**	**0.592**	**mg/Kg-dry**	1	10-Oct-2018 22:08
Cadmium	**0.502**	J	**0.0320**	**0.592**	**mg/Kg-dry**	1	10-Oct-2018 22:08
Calcium	**217,000**		**588**	**5920**	**mg/Kg-dry**	100	11-Oct-2018 14:32
Chromium	**18.0**		**0.0273**	**0.592**	**mg/Kg-dry**	1	10-Oct-2018 22:08
Cobalt	**8.04**		**0.0178**	**0.592**	**mg/Kg-dry**	1	10-Oct-2018 22:08
Copper	**31.7**		**0.0450**	**0.237**	**mg/Kg-dry**	1	11-Oct-2018 16:11
Iron	**12,100**		**2.17**	**59.2**	**mg/Kg-dry**	1	10-Oct-2018 22:08
Lead	**28.5**		**0.0154**	**0.592**	**mg/Kg-dry**	1	10-Oct-2018 22:08
Magnesium	**3,440**		**2.97**	**59.2**	**mg/Kg-dry**	1	10-Oct-2018 22:08
Manganese	**1,270**		**5.09**	**59.2**	**mg/Kg-dry**	100	11-Oct-2018 14:32
Nickel	**17.3**		**0.0569**	**0.592**	**mg/Kg-dry**	1	10-Oct-2018 22:08
Potassium	**1,610**		**7.96**	**59.2**	**mg/Kg-dry**	1	10-Oct-2018 22:08
Selenium	**0.832**		**0.108**	**0.592**	**mg/Kg-dry**	1	10-Oct-2018 22:08
Silver	**0.0820**	J	**0.0178**	**0.592**	**mg/Kg-dry**	1	10-Oct-2018 22:08
Sodium	**135**		**4.94**	**59.2**	**mg/Kg-dry**	1	10-Oct-2018 22:08
Thallium	U		0.264	0.592	mg/Kg-dry	1	10-Oct-2018 22:08
Vanadium	**43.2**		**0.0889**	**0.592**	**mg/Kg-dry**	1	10-Oct-2018 22:08
Zinc	**84.5**		**0.201**	**0.592**	**mg/Kg-dry**	1	10-Oct-2018 22:08
MERCURY BY SW7471B		**Method:SW7471A**			Prep:SW7471A / 10-Oct-2018		Analyst: JCJ
Mercury	**0.0246**		**0.000617**	**0.00436**	**mg/Kg-dry**	1	11-Oct-2018 13:10
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**19.0**		**0.0100**	**0.0100**	**wt%**	1	09-Oct-2018 09:58

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc. **ANALYTICAL REPORT**
Project: FJ Doyle Site WorkOrder:HS18100338
Sample ID: DRA29-20181004-06-51 Lab ID:HS18100338-03
Collection Date: 04-Oct-2018 08:59 Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**			Prep:SW3541 / 08-Oct-2018			Analyst: ACN
1,1′-Biphenyl	U		0.0020	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
2,4,5-Trichlorophenol	U		0.0030	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
2,4,6-Trichlorophenol	U		0.0020	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
2,4-Dichlorophenol	U		0.0016	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
2,4-Dimethylphenol	U		0.0039	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
2,4-Dinitrophenol	U		0.0054	0.016	mg/Kg-dry	1	10-Oct-2018 14:58
2,4-Dinitrotoluene	U		0.0011	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
2,6-Dinitrotoluene	U		0.0039	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
2-Chloronaphthalene	U		0.0016	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
2-Chlorophenol	U		0.0016	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
2-Methylnaphthalene	**0.0062**		**0.00060**	**0.0039**	**mg/Kg-dry**	1	10-Oct-2018 14:58
2-Methylphenol	U		0.0013	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
2-Nitroaniline	U		0.0023	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
2-Nitrophenol	U		0.0030	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
3&4-Methylphenol	U		0.0012	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
3,3′-Dichlorobenzidine	U		0.0030	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
3-Nitroaniline	U		0.0023	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
4,6-Dinitro-2-methylphenol	U		0.0025	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
4-Bromophenyl phenyl ether	U		0.0019	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
4-Chloro-3-methylphenol	U		0.00083	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
4-Chloroaniline	U		0.0013	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
4-Chlorophenyl phenyl ether	U		0.0018	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
4-Nitroaniline	U		0.0026	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
4-Nitrophenol	U		0.0023	0.016	mg/Kg-dry	1	10-Oct-2018 14:58
Acenaphthene	U		0.00060	0.0039	mg/Kg-dry	1	10-Oct-2018 14:58
Acenaphthylene	U		0.0012	0.0039	mg/Kg-dry	1	10-Oct-2018 14:58
Acetophenone	U		0.00095	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
Anthracene	U		0.00060	0.0039	mg/Kg-dry	1	10-Oct-2018 14:58
Atrazine	U		0.0024	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
Benz(a)anthracene	**0.0075**		**0.0019**	**0.0039**	**mg/Kg-dry**	1	10-Oct-2018 14:58
Benzaldehyde	U	n	0.0014	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
Benzo(a)pyrene	U		0.0012	0.0039	mg/Kg-dry	1	10-Oct-2018 14:58
Benzo(b)fluoranthene	U		0.0014	0.0039	mg/Kg-dry	1	10-Oct-2018 14:58
Benzo(g,h,i)perylene	U		0.00083	0.0039	mg/Kg-dry	1	10-Oct-2018 14:58
Benzo(k)fluoranthene	U		0.0011	0.0039	mg/Kg-dry	1	10-Oct-2018 14:58
Bis(2-chloro-1-methylethyl) ether	U		0.0017	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
Bis(2-chloroethoxy)methane	U		0.0011	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
Bis(2-chloroethyl)ether	U		0.0013	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
Bis(2-ethylhexyl)phthalate	**0.0096**		**0.0020**	**0.0079**	**mg/Kg-dry**	1	10-Oct-2018 14:58

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA29-20181004-06-51
Collection Date: 04-Oct-2018 08:59

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-03
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**			Prep:SW3541 / 08-Oct-2018			Analyst: ACN
Butyl benzyl phthalate	U		0.0016	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
Caprolactam	U		0.0014	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
Carbazole	U		0.0014	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
Chrysene	**0.0073**		**0.00095**	**0.0039**	**mg/Kg-dry**	1	10-Oct-2018 14:58
Dibenz(a,h)anthracene	U		0.0019	0.0039	mg/Kg-dry	1	10-Oct-2018 14:58
Dibenzofuran	U		0.00083	0.0039	mg/Kg-dry	1	10-Oct-2018 14:58
Diethyl phthalate	U		0.0012	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
Dimethyl phthalate	U		0.00095	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
Di-n-butyl phthalate	U		0.0014	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
Di-n-octyl phthalate	U		0.0011	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
Fluoranthene	U		0.0013	0.0039	mg/Kg-dry	1	10-Oct-2018 14:58
Fluorene	**0.0043**		**0.0013**	**0.0039**	**mg/Kg-dry**	1	10-Oct-2018 14:58
Hexachlorobenzene	U		0.0011	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
Hexachlorobutadiene	U		0.0014	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
Hexachlorocyclopentadiene	U		0.00095	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
Hexachloroethane	U		0.0018	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
Indeno(1,2,3-cd)pyrene	U		0.00095	0.0039	mg/Kg-dry	1	10-Oct-2018 14:58
Isophorone	U		0.00095	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
Naphthalene	**0.0014**	J	**0.00072**	**0.0039**	**mg/Kg-dry**	1	10-Oct-2018 14:58
Nitrobenzene	U		0.0011	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
N-Nitrosodi-n-propylamine	U		0.0013	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
N-Nitrosodiphenylamine	U		0.00083	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
Pentachlorophenol	U		0.0039	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
Phenanthrene	**0.020**		**0.0018**	**0.0039**	**mg/Kg-dry**	1	10-Oct-2018 14:58
Phenol	U		0.0013	0.0079	mg/Kg-dry	1	10-Oct-2018 14:58
Pyrene	U		0.00072	0.0039	mg/Kg-dry	1	10-Oct-2018 14:58
Surr: 2,4,6-Tribromophenol	*77.6*			*36-126*	*%REC*	*1*	*10-Oct-2018 14:58*
Surr: 2-Fluorobiphenyl	*77.4*			*43-125*	*%REC*	*1*	*10-Oct-2018 14:58*
Surr: 2-Fluorophenol	*55.3*			*37-125*	*%REC*	*1*	*10-Oct-2018 14:58*
Surr: 4-Terphenyl-d14	*82.3*			*32-125*	*%REC*	*1*	*10-Oct-2018 14:58*
Surr: Nitrobenzene-d5	*70.9*			*37-125*	*%REC*	*1*	*10-Oct-2018 14:58*
Surr: Phenol-d6	*65.8*			*40-125*	*%REC*	*1*	*10-Oct-2018 14:58*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA29-20181004-06-51
Collection Date: 04-Oct-2018 08:59

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-03
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A		**Method:SW8082**			Prep:SW3541/3665A / 08-Oct-2018		Analyst: JBA
Aroclor 1016	U		0.0050	0.020	mg/Kg-dry	1	10-Oct-2018 04:43
Aroclor 1221	U		0.0067	0.020	mg/Kg-dry	1	10-Oct-2018 04:43
Aroclor 1232	U		0.0054	0.020	mg/Kg-dry	1	10-Oct-2018 04:43
Aroclor 1242	U		0.0070	0.020	mg/Kg-dry	1	10-Oct-2018 04:43
Aroclor 1248	U		0.0070	0.020	mg/Kg-dry	1	10-Oct-2018 04:43
Aroclor 1254	U		0.0056	0.020	mg/Kg-dry	1	10-Oct-2018 04:43
Aroclor 1260	U		0.0048	0.020	mg/Kg-dry	1	10-Oct-2018 04:43
Surr: Decachlorobiphenyl	*133*			*54-143*	*%REC*	*1*	*10-Oct-2018 04:43*
Surr: Tetrachloro-m-xylene	*116*			*50-140*	*%REC*	*1*	*10-Oct-2018 04:43*
METALS BY SW6020A		**Method:SW6020**			Prep:SW3050A / 08-Oct-2018		Analyst: JC
Aluminum	**15,900**		**26.8**	**231**	**mg/Kg-dry**	100	11-Oct-2018 14:39
Antimony	**0.240**	J	**0.0750**	**0.577**	**mg/Kg-dry**	1	10-Oct-2018 22:34
Arsenic	**11.2**		**0.0808**	**0.577**	**mg/Kg-dry**	1	10-Oct-2018 22:34
Barium	**126**		**0.0346**	**0.577**	**mg/Kg-dry**	1	10-Oct-2018 22:34
Beryllium	**0.704**		**0.0242**	**0.577**	**mg/Kg-dry**	1	10-Oct-2018 22:34
Cadmium	**0.418**	J	**0.0312**	**0.577**	**mg/Kg-dry**	1	10-Oct-2018 22:34
Calcium	**225,000**		**573**	**5770**	**mg/Kg-dry**	100	11-Oct-2018 14:39
Chromium	**18.7**		**0.0265**	**0.577**	**mg/Kg-dry**	1	10-Oct-2018 22:34
Cobalt	**8.80**		**0.0173**	**0.577**	**mg/Kg-dry**	1	10-Oct-2018 22:34
Copper	**30.7**		**0.0439**	**0.231**	**mg/Kg-dry**	1	11-Oct-2018 16:22
Iron	**14,200**		**2.11**	**57.7**	**mg/Kg-dry**	1	10-Oct-2018 22:34
Lead	**26.1**		**0.0150**	**0.577**	**mg/Kg-dry**	1	10-Oct-2018 22:34
Magnesium	**3,410**		**2.90**	**57.7**	**mg/Kg-dry**	1	10-Oct-2018 22:34
Manganese	**1,500**		**4.96**	**57.7**	**mg/Kg-dry**	100	11-Oct-2018 14:39
Nickel	**21.6**		**0.0554**	**0.577**	**mg/Kg-dry**	1	11-Oct-2018 16:22
Potassium	**1,560**		**7.76**	**57.7**	**mg/Kg-dry**	1	10-Oct-2018 22:34
Selenium	**0.843**		**0.105**	**0.577**	**mg/Kg-dry**	1	11-Oct-2018 16:22
Silver	**0.0727**	J	**0.0173**	**0.577**	**mg/Kg-dry**	1	10-Oct-2018 22:34
Sodium	**137**		**4.81**	**57.7**	**mg/Kg-dry**	1	10-Oct-2018 22:34
Thallium	U		0.257	0.577	mg/Kg-dry	1	10-Oct-2018 22:34
Vanadium	**47.4**		**0.0866**	**0.577**	**mg/Kg-dry**	1	10-Oct-2018 22:34
Zinc	**61.0**		**0.196**	**0.577**	**mg/Kg-dry**	1	10-Oct-2018 22:34
MERCURY BY SW7471B		**Method:SW7471A**			Prep:SW7471A / 10-Oct-2018		Analyst: JCJ
Mercury	**0.0191**		**0.000589**	**0.00417**	**mg/Kg-dry**	1	11-Oct-2018 13:15
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**16.3**		**0.0100**	**0.0100**	**wt%**	1	09-Oct-2018 09:58

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA29-20181004-06-52
Collection Date: 04-Oct-2018 08:59

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-04
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**				Prep:SW3541 / 08-Oct-2018		Analyst: ACN
1,1′-Biphenyl	U		0.0020	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
2,4,5-Trichlorophenol	U		0.0030	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
2,4,6-Trichlorophenol	U		0.0020	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
2,4-Dichlorophenol	U		0.0016	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
2,4-Dimethylphenol	U		0.0040	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
2,4-Dinitrophenol	U		0.0054	0.016	mg/Kg-dry	1	10-Oct-2018 15:18
2,4-Dinitrotoluene	U		0.0011	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
2,6-Dinitrotoluene	U		0.0040	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
2-Chloronaphthalene	U		0.0016	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
2-Chlorophenol	U		0.0016	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
2-Methylnaphthalene	**0.0031**	J	**0.00060**	**0.0040**	**mg/Kg-dry**	1	10-Oct-2018 15:18
2-Methylphenol	U		0.0013	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
2-Nitroaniline	U		0.0023	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
2-Nitrophenol	U		0.0030	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
3&4-Methylphenol	U		0.0012	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
3,3′-Dichlorobenzidine	U		0.0030	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
3-Nitroaniline	U		0.0023	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
4,6-Dinitro-2-methylphenol	U		0.0025	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
4-Bromophenyl phenyl ether	U		0.0019	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
4-Chloro-3-methylphenol	U		0.00084	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
4-Chloroaniline	U		0.0013	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
4-Chlorophenyl phenyl ether	U		0.0018	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
4-Nitroaniline	U		0.0026	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
4-Nitrophenol	U		0.0023	0.016	mg/Kg-dry	1	10-Oct-2018 15:18
Acenaphthene	U		0.00060	0.0040	mg/Kg-dry	1	10-Oct-2018 15:18
Acenaphthylene	U		0.0012	0.0040	mg/Kg-dry	1	10-Oct-2018 15:18
Acetophenone	U		0.00096	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
Anthracene	U		0.00060	0.0040	mg/Kg-dry	1	10-Oct-2018 15:18
Atrazine	U		0.0024	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
Benz(a)anthracene	**0.0052**		**0.0019**	**0.0040**	**mg/Kg-dry**	1	10-Oct-2018 15:18
Benzaldehyde	U	n	0.0014	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
Benzo(a)pyrene	**0.0080**		**0.0012**	**0.0040**	**mg/Kg-dry**	1	10-Oct-2018 15:18
Benzo(b)fluoranthene	**0.0057**		**0.0014**	**0.0040**	**mg/Kg-dry**	1	10-Oct-2018 15:18
Benzo(g,h,i)perylene	**0.045**		**0.00084**	**0.0040**	**mg/Kg-dry**	1	10-Oct-2018 15:18
Benzo(k)fluoranthene	**0.0075**		**0.0011**	**0.0040**	**mg/Kg-dry**	1	10-Oct-2018 15:18
Bis(2-chloro-1-methylethyl) ether	U		0.0017	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
Bis(2-chloroethoxy)methane	U		0.0011	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
Bis(2-chloroethyl)ether	U		0.0013	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
Bis(2-ethylhexyl)phthalate	**0.011**		**0.0020**	**0.0079**	**mg/Kg-dry**	1	10-Oct-2018 15:18

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA29-20181004-06-52
Collection Date: 04-Oct-2018 08:59

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-04
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**				Prep:SW3541 / 08-Oct-2018		Analyst: ACN
Butyl benzyl phthalate	U		0.0016	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
Caprolactam	U		0.0014	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
Carbazole	U		0.0014	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
Chrysene	**0.0064**		**0.00096**	**0.0040**	**mg/Kg-dry**	1	10-Oct-2018 15:18
Dibenz(a,h)anthracene	**0.039**		**0.0019**	**0.0040**	**mg/Kg-dry**	1	10-Oct-2018 15:18
Dibenzofuran	U		0.00084	0.0040	mg/Kg-dry	1	10-Oct-2018 15:18
Diethyl phthalate	U		0.0012	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
Dimethyl phthalate	U		0.00096	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
Di-n-butyl phthalate	**0.0022**	J	**0.0014**	**0.0079**	**mg/Kg-dry**	1	10-Oct-2018 15:18
Di-n-octyl phthalate	U		0.0011	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
Fluoranthene	U		0.0013	0.0040	mg/Kg-dry	1	10-Oct-2018 15:18
Fluorene	U		0.0013	0.0040	mg/Kg-dry	1	10-Oct-2018 15:18
Hexachlorobenzene	U		0.0011	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
Hexachlorobutadiene	U		0.0014	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
Hexachlorocyclopentadiene	U		0.00096	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
Hexachloroethane	U		0.0018	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
Indeno(1,2,3-cd)pyrene	**0.040**		**0.00096**	**0.0040**	**mg/Kg-dry**	1	10-Oct-2018 15:18
Isophorone	U		0.00096	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
Naphthalene	U		0.00072	0.0040	mg/Kg-dry	1	10-Oct-2018 15:18
Nitrobenzene	U		0.0011	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
N-Nitrosodi-n-propylamine	U		0.0013	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
N-Nitrosodiphenylamine	U		0.00084	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
Pentachlorophenol	U		0.0040	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
Phenanthrene	**0.0069**		**0.0018**	**0.0040**	**mg/Kg-dry**	1	10-Oct-2018 15:18
Phenol	U		0.0013	0.0079	mg/Kg-dry	1	10-Oct-2018 15:18
Pyrene	U		0.00072	0.0040	mg/Kg-dry	1	10-Oct-2018 15:18
Surr: 2,4,6-Tribromophenol	*80.1*			*36-126*	*%REC*	*1*	*10-Oct-2018 15:18*
Surr: 2-Fluorobiphenyl	*77.3*			*43-125*	*%REC*	*1*	*10-Oct-2018 15:18*
Surr: 2-Fluorophenol	*52.1*			*37-125*	*%REC*	*1*	*10-Oct-2018 15:18*
Surr: 4-Terphenyl-d14	*88.9*			*32-125*	*%REC*	*1*	*10-Oct-2018 15:18*
Surr: Nitrobenzene-d5	*74.0*			*37-125*	*%REC*	*1*	*10-Oct-2018 15:18*
Surr: Phenol-d6	*64.2*			*40-125*	*%REC*	*1*	*10-Oct-2018 15:18*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA29-20181004-06-52
Collection Date: 04-Oct-2018 08:59

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-04
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A		**Method:SW8082**			Prep:SW3541/3665A / 08-Oct-2018		Analyst: JBA
Aroclor 1016	U		0.0050	0.020	mg/Kg-dry	1	10-Oct-2018 04:58
Aroclor 1221	U		0.0067	0.020	mg/Kg-dry	1	10-Oct-2018 04:58
Aroclor 1232	U		0.0054	0.020	mg/Kg-dry	1	10-Oct-2018 04:58
Aroclor 1242	U		0.0071	0.020	mg/Kg-dry	1	10-Oct-2018 04:58
Aroclor 1248	U		0.0071	0.020	mg/Kg-dry	1	10-Oct-2018 04:58
Aroclor 1254	U		0.0056	0.020	mg/Kg-dry	1	10-Oct-2018 04:58
Aroclor 1260	U		0.0048	0.020	mg/Kg-dry	1	10-Oct-2018 04:58
Surr: Decachlorobiphenyl	*124*			*54-143*	*%REC*	*1*	*10-Oct-2018 04:58*
Surr: Tetrachloro-m-xylene	*95.6*			*50-140*	*%REC*	*1*	*10-Oct-2018 04:58*
METALS BY SW6020A		**Method:SW6020**			Prep:SW3050A / 08-Oct-2018		Analyst: JC
Aluminum	**16,900**		**27.2**	**235**	**mg/Kg-dry**	100	11-Oct-2018 14:41
Antimony	**0.251**	J	**0.0763**	**0.587**	**mg/Kg-dry**	1	10-Oct-2018 22:36
Arsenic	**11.0**		**0.0822**	**0.587**	**mg/Kg-dry**	1	10-Oct-2018 22:36
Barium	**137**		**0.0352**	**0.587**	**mg/Kg-dry**	1	10-Oct-2018 22:36
Beryllium	**0.734**		**0.0247**	**0.587**	**mg/Kg-dry**	1	10-Oct-2018 22:36
Cadmium	**0.453**	J	**0.0317**	**0.587**	**mg/Kg-dry**	1	10-Oct-2018 22:36
Calcium	**186,000**		**582**	**5870**	**mg/Kg-dry**	100	11-Oct-2018 14:41
Chromium	**19.5**		**0.0270**	**0.587**	**mg/Kg-dry**	1	10-Oct-2018 22:36
Cobalt	**9.12**		**0.0176**	**0.587**	**mg/Kg-dry**	1	10-Oct-2018 22:36
Copper	**28.6**		**0.0446**	**0.235**	**mg/Kg-dry**	1	11-Oct-2018 16:24
Iron	**13,900**		**2.15**	**58.7**	**mg/Kg-dry**	1	10-Oct-2018 22:36
Lead	**25.2**		**0.0153**	**0.587**	**mg/Kg-dry**	1	10-Oct-2018 22:36
Magnesium	**2,850**		**2.95**	**58.7**	**mg/Kg-dry**	1	10-Oct-2018 22:36
Manganese	**1,500**		**5.05**	**58.7**	**mg/Kg-dry**	100	11-Oct-2018 14:41
Nickel	**22.1**		**0.0564**	**0.587**	**mg/Kg-dry**	1	11-Oct-2018 16:24
Potassium	**1,620**		**7.89**	**58.7**	**mg/Kg-dry**	1	10-Oct-2018 22:36
Selenium	**0.552**	J	**0.107**	**0.587**	**mg/Kg-dry**	1	11-Oct-2018 16:24
Silver	**0.0944**	J	**0.0176**	**0.587**	**mg/Kg-dry**	1	10-Oct-2018 22:36
Sodium	**114**		**4.90**	**58.7**	**mg/Kg-dry**	1	10-Oct-2018 22:36
Thallium	U		0.262	0.587	mg/Kg-dry	1	10-Oct-2018 22:36
Vanadium	**50.4**		**0.0881**	**0.587**	**mg/Kg-dry**	1	10-Oct-2018 22:36
Zinc	**72.7**		**0.200**	**0.587**	**mg/Kg-dry**	1	10-Oct-2018 22:36
MERCURY BY SW7471B		**Method:SW7471A**			Prep:SW7471A / 10-Oct-2018		Analyst: JCJ
Mercury	**0.0219**		**0.000602**	**0.00426**	**mg/Kg-dry**	1	11-Oct-2018 13:17
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**16.9**		**0.0100**	**0.0100**	**wt%**	1	09-Oct-2018 09:58

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA29-20181004-12-51
Collection Date: 04-Oct-2018 09:17

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-05
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**				Prep:SW3541 / 08-Oct-2018		Analyst: ACN
1,1′-Biphenyl	U		0.0021	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
2,4,5-Trichlorophenol	U		0.0030	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
2,4,6-Trichlorophenol	U		0.0021	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
2,4-Dichlorophenol	U		0.0016	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
2,4-Dimethylphenol	U		0.0040	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
2,4-Dinitrophenol	U		0.0054	0.016	mg/Kg-dry	1	10-Oct-2018 15:37
2,4-Dinitrotoluene	U		0.0011	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
2,6-Dinitrotoluene	U		0.0040	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
2-Chloronaphthalene	U		0.0016	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
2-Chlorophenol	U		0.0016	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
2-Methylnaphthalene	**0.012**		**0.00061**	**0.0040**	**mg/Kg-dry**	1	10-Oct-2018 15:37
2-Methylphenol	U		0.0013	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
2-Nitroaniline	U		0.0023	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
2-Nitrophenol	U		0.0030	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
3&4-Methylphenol	U		0.0012	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
3,3′-Dichlorobenzidine	U		0.0030	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
3-Nitroaniline	U		0.0023	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
4,6-Dinitro-2-methylphenol	U		0.0025	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
4-Bromophenyl phenyl ether	U		0.0019	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
4-Chloro-3-methylphenol	U		0.00085	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
4-Chloroaniline	U		0.0013	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
4-Chlorophenyl phenyl ether	U		0.0018	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
4-Nitroaniline	U		0.0027	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
4-Nitrophenol	U		0.0023	0.016	mg/Kg-dry	1	10-Oct-2018 15:37
Acenaphthene	U		0.00061	0.0040	mg/Kg-dry	1	10-Oct-2018 15:37
Acenaphthylene	U		0.0012	0.0040	mg/Kg-dry	1	10-Oct-2018 15:37
Acetophenone	U		0.00097	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
Anthracene	U		0.00061	0.0040	mg/Kg-dry	1	10-Oct-2018 15:37
Atrazine	U		0.0024	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
Benz(a)anthracene	U		0.0019	0.0040	mg/Kg-dry	1	10-Oct-2018 15:37
Benzaldehyde	U	n	0.0015	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
Benzo(a)pyrene	U		0.0012	0.0040	mg/Kg-dry	1	10-Oct-2018 15:37
Benzo(b)fluoranthene	U		0.0015	0.0040	mg/Kg-dry	1	10-Oct-2018 15:37
Benzo(g,h,i)perylene	U		0.00085	0.0040	mg/Kg-dry	1	10-Oct-2018 15:37
Benzo(k)fluoranthene	U		0.0011	0.0040	mg/Kg-dry	1	10-Oct-2018 15:37
Bis(2-chloro-1-methylethyl) ether	U		0.0017	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
Bis(2-chloroethoxy)methane	U		0.0011	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
Bis(2-chloroethyl)ether	U		0.0013	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
Bis(2-ethylhexyl)phthalate	U		0.0021	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA29-20181004-12-51
Collection Date: 04-Oct-2018 09:17

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-05
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**			Prep:SW3541 / 08-Oct-2018			Analyst: ACN
Butyl benzyl phthalate	U		0.0016	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
Caprolactam	U		0.0015	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
Carbazole	U		0.0015	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
Chrysene	U		0.00097	0.0040	mg/Kg-dry	1	10-Oct-2018 15:37
Dibenz(a,h)anthracene	U		0.0019	0.0040	mg/Kg-dry	1	10-Oct-2018 15:37
Dibenzofuran	U		0.00085	0.0040	mg/Kg-dry	1	10-Oct-2018 15:37
Diethyl phthalate	U		0.0012	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
Dimethyl phthalate	U		0.00097	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
Di-n-butyl phthalate	U		0.0015	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
Di-n-octyl phthalate	U		0.0011	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
Fluoranthene	U		0.0013	0.0040	mg/Kg-dry	1	10-Oct-2018 15:37
Fluorene	**0.0038**	J	**0.0013**	**0.0040**	**mg/Kg-dry**	1	10-Oct-2018 15:37
Hexachlorobenzene	U		0.0011	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
Hexachlorobutadiene	U		0.0015	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
Hexachlorocyclopentadiene	U		0.00097	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
Hexachloroethane	U		0.0018	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
Indeno(1,2,3-cd)pyrene	U		0.00097	0.0040	mg/Kg-dry	1	10-Oct-2018 15:37
Isophorone	U		0.00097	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
Naphthalene	U		0.00073	0.0040	mg/Kg-dry	1	10-Oct-2018 15:37
Nitrobenzene	U		0.0011	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
N-Nitrosodi-n-propylamine	U		0.0013	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
N-Nitrosodiphenylamine	U		0.00085	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
Pentachlorophenol	U		0.0040	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
Phenanthrene	**0.015**		**0.0018**	**0.0040**	**mg/Kg-dry**	1	10-Oct-2018 15:37
Phenol	U		0.0013	0.0080	mg/Kg-dry	1	10-Oct-2018 15:37
Pyrene	U		0.00073	0.0040	mg/Kg-dry	1	10-Oct-2018 15:37
Surr: 2,4,6-Tribromophenol	*84.3*			*36-126*	*%REC*	*1*	*10-Oct-2018 15:37*
Surr: 2-Fluorobiphenyl	*86.5*			*43-125*	*%REC*	*1*	*10-Oct-2018 15:37*
Surr: 2-Fluorophenol	*62.4*			*37-125*	*%REC*	*1*	*10-Oct-2018 15:37*
Surr: 4-Terphenyl-d14	*95.7*			*32-125*	*%REC*	*1*	*10-Oct-2018 15:37*
Surr: Nitrobenzene-d5	*84.6*			*37-125*	*%REC*	*1*	*10-Oct-2018 15:37*
Surr: Phenol-d6	*75.3*			*40-125*	*%REC*	*1*	*10-Oct-2018 15:37*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA29-20181004-12-51
Collection Date: 04-Oct-2018 09:17

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-05
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A		**Method:SW8082**			Prep:SW3541/3665A / 08-Oct-2018		Analyst: JBA
Aroclor 1016	U		0.0051	0.020	mg/Kg-dry	1	10-Oct-2018 05:14
Aroclor 1221	U		0.0068	0.020	mg/Kg-dry	1	10-Oct-2018 05:14
Aroclor 1232	U		0.0055	0.020	mg/Kg-dry	1	10-Oct-2018 05:14
Aroclor 1242	U		0.0072	0.020	mg/Kg-dry	1	10-Oct-2018 05:14
Aroclor 1248	U		0.0072	0.020	mg/Kg-dry	1	10-Oct-2018 05:14
Aroclor 1254	U		0.0057	0.020	mg/Kg-dry	1	10-Oct-2018 05:14
Aroclor 1260	U		0.0049	0.020	mg/Kg-dry	1	10-Oct-2018 05:14
Surr: Decachlorobiphenyl	*136*			*54-143*	*%REC*	*1*	*10-Oct-2018 05:14*
Surr: Tetrachloro-m-xylene	*113*			*50-140*	*%REC*	*1*	*10-Oct-2018 05:14*
METALS BY SW6020A		**Method:SW6020**			Prep:SW3050A / 08-Oct-2018		Analyst: JC
Aluminum	**16,200**		**26.2**	**226**	**mg/Kg-dry**	100	11-Oct-2018 14:43
Antimony	**0.236**	J	**0.0734**	**0.565**	**mg/Kg-dry**	1	10-Oct-2018 22:39
Arsenic	**12.1**		**0.0790**	**0.565**	**mg/Kg-dry**	1	10-Oct-2018 22:39
Barium	**150**		**0.0339**	**0.565**	**mg/Kg-dry**	1	10-Oct-2018 22:39
Beryllium	**0.681**		**0.0237**	**0.565**	**mg/Kg-dry**	1	10-Oct-2018 22:39
Cadmium	**0.457**	J	**0.0305**	**0.565**	**mg/Kg-dry**	1	10-Oct-2018 22:39
Calcium	**274,000**		**560**	**5650**	**mg/Kg-dry**	100	11-Oct-2018 14:43
Chromium	**18.1**		**0.0260**	**0.565**	**mg/Kg-dry**	1	10-Oct-2018 22:39
Cobalt	**10.0**		**0.0169**	**0.565**	**mg/Kg-dry**	1	10-Oct-2018 22:39
Copper	**15.5**		**0.0429**	**0.226**	**mg/Kg-dry**	1	11-Oct-2018 16:32
Iron	**13,900**		**2.07**	**56.5**	**mg/Kg-dry**	1	10-Oct-2018 22:39
Lead	**68.7**		**0.0147**	**0.565**	**mg/Kg-dry**	1	10-Oct-2018 22:39
Magnesium	**2,380**		**2.83**	**56.5**	**mg/Kg-dry**	1	10-Oct-2018 22:39
Manganese	**1,590**		**4.86**	**56.5**	**mg/Kg-dry**	100	11-Oct-2018 14:43
Nickel	**20.7**		**0.0542**	**0.565**	**mg/Kg-dry**	1	11-Oct-2018 16:32
Potassium	**1,510**		**7.59**	**56.5**	**mg/Kg-dry**	1	10-Oct-2018 22:39
Selenium	**1.43**		**0.103**	**0.565**	**mg/Kg-dry**	1	11-Oct-2018 16:32
Silver	**0.0743**	J	**0.0169**	**0.565**	**mg/Kg-dry**	1	10-Oct-2018 22:39
Sodium	**171**		**4.71**	**56.5**	**mg/Kg-dry**	1	10-Oct-2018 22:39
Thallium	U		0.252	0.565	mg/Kg-dry	1	10-Oct-2018 22:39
Vanadium	**50.9**		**0.0847**	**0.565**	**mg/Kg-dry**	1	10-Oct-2018 22:39
Zinc	**69.9**		**0.192**	**0.565**	**mg/Kg-dry**	1	10-Oct-2018 22:39
MERCURY BY SW7471B		**Method:SW7471A**			Prep:SW7471A / 10-Oct-2018		Analyst: JCJ
Mercury	**0.0251**		**0.000605**	**0.00428**	**mg/Kg-dry**	1	11-Oct-2018 13:19
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**17.9**		**0.0100**	**0.0100**	**wt%**	1	09-Oct-2018 09:58

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA30-20181004-01-51
Collection Date: 04-Oct-2018 09:31

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-06
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**				Prep:SW3541 / 08-Oct-2018		Analyst: ACN
1,1´-Biphenyl	U		0.0023	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
2,4,5-Trichlorophenol	U		0.0034	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
2,4,6-Trichlorophenol	U		0.0023	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
2,4-Dichlorophenol	U		0.0017	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
2,4-Dimethylphenol	U		0.0044	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
2,4-Dinitrophenol	U		0.0061	0.018	mg/Kg-dry	1	10-Oct-2018 15:57
2,4-Dinitrotoluene	U		0.0012	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
2,6-Dinitrotoluene	U		0.0044	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
2-Chloronaphthalene	U		0.0017	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
2-Chlorophenol	U		0.0017	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
2-Methylnaphthalene	**0.0035**	J	**0.00067**	**0.0044**	**mg/Kg-dry**	1	10-Oct-2018 15:57
2-Methylphenol	U		0.0015	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
2-Nitroaniline	U		0.0026	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
2-Nitrophenol	U		0.0034	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
3&4-Methylphenol	U		0.0013	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
3,3´-Dichlorobenzidine	U		0.0034	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
3-Nitroaniline	U		0.0026	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
4,6-Dinitro-2-methylphenol	U		0.0028	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
4-Bromophenyl phenyl ether	U		0.0022	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
4-Chloro-3-methylphenol	U		0.00094	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
4-Chloroaniline	U		0.0015	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
4-Chlorophenyl phenyl ether	U		0.0020	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
4-Nitroaniline	U		0.0030	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
4-Nitrophenol	U		0.0026	0.018	mg/Kg-dry	1	10-Oct-2018 15:57
Acenaphthene	U		0.00067	0.0044	mg/Kg-dry	1	10-Oct-2018 15:57
Acenaphthylene	U		0.0013	0.0044	mg/Kg-dry	1	10-Oct-2018 15:57
Acetophenone	U		0.0011	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
Anthracene	U		0.00067	0.0044	mg/Kg-dry	1	10-Oct-2018 15:57
Atrazine	U		0.0027	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
Benz(a)anthracene	**0.0034**	J	**0.0022**	**0.0044**	**mg/Kg-dry**	1	10-Oct-2018 15:57
Benzaldehyde	U	n	0.0016	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
Benzo(a)pyrene	U		0.0013	0.0044	mg/Kg-dry	1	10-Oct-2018 15:57
Benzo(b)fluoranthene	U		0.0016	0.0044	mg/Kg-dry	1	10-Oct-2018 15:57
Benzo(g,h,i)perylene	U		0.00094	0.0044	mg/Kg-dry	1	10-Oct-2018 15:57
Benzo(k)fluoranthene	U		0.0012	0.0044	mg/Kg-dry	1	10-Oct-2018 15:57
Bis(2-chloro-1-methylethyl) ether	U		0.0019	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
Bis(2-chloroethoxy)methane	U		0.0012	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
Bis(2-chloroethyl)ether	U		0.0015	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
Bis(2-ethylhexyl)phthalate	**0.0068**	J	**0.0023**	**0.0089**	**mg/Kg-dry**	1	10-Oct-2018 15:57

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA30-20181004-01-51
Collection Date: 04-Oct-2018 09:31

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-06
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**				Prep:SW3541 / 08-Oct-2018		Analyst: ACN
Butyl benzyl phthalate	U		0.0017	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
Caprolactam	U		0.0016	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
Carbazole	U		0.0016	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
Chrysene	**0.0032**	J	**0.0011**	**0.0044**	**mg/Kg-dry**	1	10-Oct-2018 15:57
Dibenz(a,h)anthracene	U		0.0022	0.0044	mg/Kg-dry	1	10-Oct-2018 15:57
Dibenzofuran	U		0.00094	0.0044	mg/Kg-dry	1	10-Oct-2018 15:57
Diethyl phthalate	U		0.0013	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
Dimethyl phthalate	U		0.0011	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
Di-n-butyl phthalate	U		0.0016	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
Di-n-octyl phthalate	U		0.0012	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
Fluoranthene	U		0.0015	0.0044	mg/Kg-dry	1	10-Oct-2018 15:57
Fluorene	U		0.0015	0.0044	mg/Kg-dry	1	10-Oct-2018 15:57
Hexachlorobenzene	U		0.0012	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
Hexachlorobutadiene	U		0.0016	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
Hexachlorocyclopentadiene	U		0.0011	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
Hexachloroethane	U		0.0020	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
Indeno(1,2,3-cd)pyrene	U		0.0011	0.0044	mg/Kg-dry	1	10-Oct-2018 15:57
Isophorone	U		0.0011	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
Naphthalene	U		0.00081	0.0044	mg/Kg-dry	1	10-Oct-2018 15:57
Nitrobenzene	U		0.0012	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
N-Nitrosodi-n-propylamine	U		0.0015	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
N-Nitrosodiphenylamine	U		0.00094	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
Pentachlorophenol	U		0.0044	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
Phenanthrene	**0.012**		**0.0020**	**0.0044**	**mg/Kg-dry**	1	10-Oct-2018 15:57
Phenol	U		0.0015	0.0089	mg/Kg-dry	1	10-Oct-2018 15:57
Pyrene	U		0.00081	0.0044	mg/Kg-dry	1	10-Oct-2018 15:57
Surr: 2,4,6-Tribromophenol	*74.8*			*36-126*	*%REC*	*1*	*10-Oct-2018 15:57*
Surr: 2-Fluorobiphenyl	*76.8*			*43-125*	*%REC*	*1*	*10-Oct-2018 15:57*
Surr: 2-Fluorophenol	*55.5*			*37-125*	*%REC*	*1*	*10-Oct-2018 15:57*
Surr: 4-Terphenyl-d14	*87.8*			*32-125*	*%REC*	*1*	*10-Oct-2018 15:57*
Surr: Nitrobenzene-d5	*76.3*			*37-125*	*%REC*	*1*	*10-Oct-2018 15:57*
Surr: Phenol-d6	*65.4*			*40-125*	*%REC*	*1*	*10-Oct-2018 15:57*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA30-20181004-01-51
Collection Date: 04-Oct-2018 09:31

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-06
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A		**Method:SW8082**			Prep:SW3541/3665A / 08-Oct-2018		Analyst: JBA
Aroclor 1016	U		0.0056	0.022	mg/Kg-dry	1	10-Oct-2018 06:48
Aroclor 1221	U		0.0075	0.022	mg/Kg-dry	1	10-Oct-2018 06:48
Aroclor 1232	U		0.0060	0.022	mg/Kg-dry	1	10-Oct-2018 06:48
Aroclor 1242	U		0.0079	0.022	mg/Kg-dry	1	10-Oct-2018 06:48
Aroclor 1248	U		0.0079	0.022	mg/Kg-dry	1	10-Oct-2018 06:48
Aroclor 1254	U		0.0063	0.022	mg/Kg-dry	1	10-Oct-2018 06:48
Aroclor 1260	U		0.0054	0.022	mg/Kg-dry	1	10-Oct-2018 06:48
Surr: Decachlorobiphenyl	*136*			*54-143*	*%REC*	*1*	*10-Oct-2018 06:48*
Surr: Tetrachloro-m-xylene	*115*			*50-140*	*%REC*	*1*	*10-Oct-2018 06:48*
METALS BY SW6020A		**Method:SW6020**			Prep:SW3050A / 08-Oct-2018		Analyst: JC
Aluminum	**9,320**		**29.5**	**255**	**mg/Kg-dry**	100	11-Oct-2018 14:45
Antimony	**0.289**	J	**0.0827**	**0.636**	**mg/Kg-dry**	1	10-Oct-2018 22:41
Arsenic	**11.5**		**0.0891**	**0.636**	**mg/Kg-dry**	1	10-Oct-2018 22:41
Barium	**100**		**0.0382**	**0.636**	**mg/Kg-dry**	1	10-Oct-2018 22:41
Beryllium	**0.557**	J	**0.0267**	**0.636**	**mg/Kg-dry**	1	10-Oct-2018 22:41
Cadmium	**0.507**	J	**0.0344**	**0.636**	**mg/Kg-dry**	1	10-Oct-2018 22:41
Calcium	**219,000**		**631**	**6360**	**mg/Kg-dry**	100	11-Oct-2018 14:45
Chromium	**13.8**		**0.0293**	**0.636**	**mg/Kg-dry**	1	10-Oct-2018 22:41
Cobalt	**6.56**		**0.0191**	**0.636**	**mg/Kg-dry**	1	10-Oct-2018 22:41
Copper	**19.7**		**0.0484**	**0.255**	**mg/Kg-dry**	1	11-Oct-2018 16:34
Iron	**11,400**		**2.33**	**63.6**	**mg/Kg-dry**	1	10-Oct-2018 22:41
Lead	**32.4**		**0.0165**	**0.636**	**mg/Kg-dry**	1	10-Oct-2018 22:41
Magnesium	**3,410**		**3.20**	**63.6**	**mg/Kg-dry**	1	10-Oct-2018 22:41
Manganese	**1,070**		**5.47**	**63.6**	**mg/Kg-dry**	100	11-Oct-2018 14:45
Nickel	**16.8**		**0.0611**	**0.636**	**mg/Kg-dry**	1	11-Oct-2018 16:34
Potassium	**1,450**		**8.55**	**63.6**	**mg/Kg-dry**	1	10-Oct-2018 22:41
Selenium	**0.878**		**0.116**	**0.636**	**mg/Kg-dry**	1	11-Oct-2018 16:34
Silver	**0.0831**	J	**0.0191**	**0.636**	**mg/Kg-dry**	1	10-Oct-2018 22:41
Sodium	**308**		**5.31**	**63.6**	**mg/Kg-dry**	1	10-Oct-2018 22:41
Thallium	U		0.284	0.636	mg/Kg-dry	1	10-Oct-2018 22:41
Vanadium	**34.9**		**0.0955**	**0.636**	**mg/Kg-dry**	1	10-Oct-2018 22:41
Zinc	**81.2**		**0.216**	**0.636**	**mg/Kg-dry**	1	10-Oct-2018 22:41
MERCURY BY SW7471B		**Method:SW7471A**			Prep:SW7471A / 10-Oct-2018		Analyst: JCJ
Mercury	**0.0299**		**0.000658**	**0.00465**	**mg/Kg-dry**	1	11-Oct-2018 13:21
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**26.0**		**0.0100**	**0.0100**	**wt%**	1	09-Oct-2018 09:58

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA30-20181004-06-51
Collection Date: 04-Oct-2018 09:51

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-07
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**				Prep:SW3541 / 08-Oct-2018		Analyst: ACN
1,1′-Biphenyl	U		0.0021	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
2,4,5-Trichlorophenol	U		0.0031	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
2,4,6-Trichlorophenol	U		0.0021	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
2,4-Dichlorophenol	U		0.0016	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
2,4-Dimethylphenol	U		0.0041	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
2,4-Dinitrophenol	U		0.0055	0.016	mg/Kg-dry	1	10-Oct-2018 16:17
2,4-Dinitrotoluene	U		0.0011	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
2,6-Dinitrotoluene	U		0.0041	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
2-Chloronaphthalene	U		0.0016	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
2-Chlorophenol	U		0.0016	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
2-Methylnaphthalene	**0.0021**	J	**0.00061**	**0.0041**	**mg/Kg-dry**	1	10-Oct-2018 16:17
2-Methylphenol	U		0.0014	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
2-Nitroaniline	U		0.0023	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
2-Nitrophenol	U		0.0031	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
3&4-Methylphenol	U		0.0012	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
3,3′-Dichlorobenzidine	U		0.0031	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
3-Nitroaniline	U		0.0023	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
4,6-Dinitro-2-methylphenol	U		0.0026	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
4-Bromophenyl phenyl ether	U		0.0020	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
4-Chloro-3-methylphenol	U		0.00086	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
4-Chloroaniline	U		0.0014	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
4-Chlorophenyl phenyl ether	U		0.0018	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
4-Nitroaniline	U		0.0027	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
4-Nitrophenol	U		0.0023	0.016	mg/Kg-dry	1	10-Oct-2018 16:17
Acenaphthene	U		0.00061	0.0041	mg/Kg-dry	1	10-Oct-2018 16:17
Acenaphthylene	U		0.0012	0.0041	mg/Kg-dry	1	10-Oct-2018 16:17
Acetophenone	U		0.00098	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
Anthracene	U		0.00061	0.0041	mg/Kg-dry	1	10-Oct-2018 16:17
Atrazine	U		0.0025	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
Benz(a)anthracene	**0.0041**		**0.0020**	**0.0041**	**mg/Kg-dry**	1	10-Oct-2018 16:17
Benzaldehyde	U	n	0.0015	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
Benzo(a)pyrene	**0.011**		**0.0012**	**0.0041**	**mg/Kg-dry**	1	10-Oct-2018 16:17
Benzo(b)fluoranthene	**0.0099**		**0.0015**	**0.0041**	**mg/Kg-dry**	1	10-Oct-2018 16:17
Benzo(g,h,i)perylene	**0.019**		**0.00086**	**0.0041**	**mg/Kg-dry**	1	10-Oct-2018 16:17
Benzo(k)fluoranthene	**0.011**		**0.0011**	**0.0041**	**mg/Kg-dry**	1	10-Oct-2018 16:17
Bis(2-chloro-1-methylethyl) ether	U		0.0017	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
Bis(2-chloroethoxy)methane	U		0.0011	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
Bis(2-chloroethyl)ether	U		0.0014	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
Bis(2-ethylhexyl)phthalate	**0.022**		**0.0021**	**0.0081**	**mg/Kg-dry**	1	10-Oct-2018 16:17

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA30-20181004-06-51
Collection Date: 04-Oct-2018 09:51

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-07
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**			Prep:SW3541 / 08-Oct-2018			Analyst: ACN
Butyl benzyl phthalate	U		0.0016	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
Caprolactam	U		0.0015	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
Carbazole	U		0.0015	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
Chrysene	**0.0090**		**0.00098**	**0.0041**	**mg/Kg-dry**	1	10-Oct-2018 16:17
Dibenz(a,h)anthracene	**0.017**		**0.0020**	**0.0041**	**mg/Kg-dry**	1	10-Oct-2018 16:17
Dibenzofuran	U		0.00086	0.0041	mg/Kg-dry	1	10-Oct-2018 16:17
Diethyl phthalate	U		0.0012	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
Dimethyl phthalate	U		0.00098	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
Di-n-butyl phthalate	U		0.0015	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
Di-n-octyl phthalate	**0.021**		**0.0011**	**0.0081**	**mg/Kg-dry**	1	10-Oct-2018 16:17
Fluoranthene	U		0.0014	0.0041	mg/Kg-dry	1	10-Oct-2018 16:17
Fluorene	U		0.0014	0.0041	mg/Kg-dry	1	10-Oct-2018 16:17
Hexachlorobenzene	U		0.0011	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
Hexachlorobutadiene	U		0.0015	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
Hexachlorocyclopentadiene	U		0.00098	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
Hexachloroethane	U		0.0018	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
Indeno(1,2,3-cd)pyrene	**0.020**		**0.00098**	**0.0041**	**mg/Kg-dry**	1	10-Oct-2018 16:17
Isophorone	U		0.00098	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
Naphthalene	U		0.00074	0.0041	mg/Kg-dry	1	10-Oct-2018 16:17
Nitrobenzene	U		0.0011	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
N-Nitrosodi-n-propylamine	U		0.0014	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
N-Nitrosodiphenylamine	U		0.00086	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
Pentachlorophenol	U		0.0041	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
Phenanthrene	**0.0075**		**0.0018**	**0.0041**	**mg/Kg-dry**	1	10-Oct-2018 16:17
Phenol	U		0.0014	0.0081	mg/Kg-dry	1	10-Oct-2018 16:17
Pyrene	U		0.00074	0.0041	mg/Kg-dry	1	10-Oct-2018 16:17
Surr: 2,4,6-Tribromophenol	*75.0*			*36-126*	*%REC*	*1*	*10-Oct-2018 16:17*
Surr: 2-Fluorobiphenyl	*65.9*			*43-125*	*%REC*	*1*	*10-Oct-2018 16:17*
Surr: 2-Fluorophenol	*50.1*			*37-125*	*%REC*	*1*	*10-Oct-2018 16:17*
Surr: 4-Terphenyl-d14	*87.7*			*32-125*	*%REC*	*1*	*10-Oct-2018 16:17*
Surr: Nitrobenzene-d5	*58.4*			*37-125*	*%REC*	*1*	*10-Oct-2018 16:17*
Surr: Phenol-d6	*54.1*			*40-125*	*%REC*	*1*	*10-Oct-2018 16:17*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA30-20181004-06-51
Collection Date: 04-Oct-2018 09:51

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-07
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A		**Method:SW8082**			Prep:SW3541/3665A / 08-Oct-2018		Analyst: JBA
Aroclor 1016	U		0.0051	0.020	mg/Kg-dry	1	10-Oct-2018 07:04
Aroclor 1221	U		0.0069	0.020	mg/Kg-dry	1	10-Oct-2018 07:04
Aroclor 1232	U		0.0055	0.020	mg/Kg-dry	1	10-Oct-2018 07:04
Aroclor 1242	U		0.0072	0.020	mg/Kg-dry	1	10-Oct-2018 07:04
Aroclor 1248	U		0.0072	0.020	mg/Kg-dry	1	10-Oct-2018 07:04
Aroclor 1254	U		0.0058	0.020	mg/Kg-dry	1	10-Oct-2018 07:04
Aroclor 1260	U		0.0049	0.020	mg/Kg-dry	1	10-Oct-2018 07:04
Surr: Decachlorobiphenyl	*128*			*54-143*	*%REC*	*1*	*10-Oct-2018 07:04*
Surr: Tetrachloro-m-xylene	*109*			*50-140*	*%REC*	*1*	*10-Oct-2018 07:04*
METALS BY SW6020A		**Method:SW6020**			Prep:SW3050A / 08-Oct-2018		Analyst: JC
Aluminum	**12,400**		**26.2**	**226**	**mg/Kg-dry**	100	11-Oct-2018 14:48
Antimony	**0.389**	J	**0.0735**	**0.566**	**mg/Kg-dry**	1	10-Oct-2018 22:43
Arsenic	**53.6**		**0.0792**	**0.566**	**mg/Kg-dry**	1	10-Oct-2018 22:43
Barium	**101**		**0.0339**	**0.566**	**mg/Kg-dry**	1	10-Oct-2018 22:43
Beryllium	**0.564**	J	**0.0238**	**0.566**	**mg/Kg-dry**	1	10-Oct-2018 22:43
Cadmium	**0.512**	J	**0.0305**	**0.566**	**mg/Kg-dry**	1	10-Oct-2018 22:43
Calcium	**248,000**		**561**	**5660**	**mg/Kg-dry**	100	11-Oct-2018 14:48
Chromium	**14.3**		**0.0260**	**0.566**	**mg/Kg-dry**	1	10-Oct-2018 22:43
Cobalt	**6.35**		**0.0170**	**0.566**	**mg/Kg-dry**	1	10-Oct-2018 22:43
Copper	**16.6**		**0.0430**	**0.226**	**mg/Kg-dry**	1	11-Oct-2018 16:36
Iron	**11,000**		**2.07**	**56.6**	**mg/Kg-dry**	1	10-Oct-2018 22:43
Lead	**60.1**		**0.0147**	**0.566**	**mg/Kg-dry**	1	10-Oct-2018 22:43
Magnesium	**2,520**		**2.84**	**56.6**	**mg/Kg-dry**	1	10-Oct-2018 22:43
Manganese	**1,160**		**4.86**	**56.6**	**mg/Kg-dry**	100	11-Oct-2018 14:48
Nickel	**17.4**		**0.0543**	**0.566**	**mg/Kg-dry**	1	11-Oct-2018 16:36
Potassium	**1,190**		**7.60**	**56.6**	**mg/Kg-dry**	1	10-Oct-2018 22:43
Selenium	**0.613**		**0.103**	**0.566**	**mg/Kg-dry**	1	11-Oct-2018 16:36
Silver	**0.0760**	J	**0.0170**	**0.566**	**mg/Kg-dry**	1	10-Oct-2018 22:43
Sodium	**318**		**4.72**	**56.6**	**mg/Kg-dry**	1	10-Oct-2018 22:43
Thallium	U		0.252	0.566	mg/Kg-dry	1	10-Oct-2018 22:43
Vanadium	**37.8**		**0.0848**	**0.566**	**mg/Kg-dry**	1	10-Oct-2018 22:43
Zinc	**63.8**		**0.192**	**0.566**	**mg/Kg-dry**	1	10-Oct-2018 22:43
MERCURY BY SW7471B		**Method:SW7471A**			Prep:SW7471A / 10-Oct-2018		Analyst: JCJ
Mercury	**0.0278**		**0.000606**	**0.00429**	**mg/Kg-dry**	1	11-Oct-2018 13:22
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**18.7**		**0.0100**	**0.0100**	**wt%**	1	09-Oct-2018 09:58

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc. **ANALYTICAL REPORT**
Project: FJ Doyle Site WorkOrder:HS18100338
Sample ID: DRA30-20181004-12-51 Lab ID:HS18100338-08
Collection Date: 04-Oct-2018 10:05 Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**			Prep:SW3541 / 08-Oct-2018			Analyst: ACN
1,1´-Biphenyl	U		0.0021	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
2,4,5-Trichlorophenol	U		0.0031	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
2,4,6-Trichlorophenol	U		0.0021	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
2,4-Dichlorophenol	U		0.0016	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
2,4-Dimethylphenol	U		0.0041	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
2,4-Dinitrophenol	U		0.0055	0.016	mg/Kg-dry	1	10-Oct-2018 16:36
2,4-Dinitrotoluene	U		0.0011	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
2,6-Dinitrotoluene	U		0.0041	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
2-Chloronaphthalene	U		0.0016	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
2-Chlorophenol	U		0.0016	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
2-Methylnaphthalene	**0.0060**		**0.00061**	**0.0041**	**mg/Kg-dry**	1	10-Oct-2018 16:36
2-Methylphenol	U		0.0014	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
2-Nitroaniline	U		0.0023	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
2-Nitrophenol	U		0.0031	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
3&4-Methylphenol	U		0.0012	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
3,3´-Dichlorobenzidine	U		0.0031	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
3-Nitroaniline	U		0.0023	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
4,6-Dinitro-2-methylphenol	U		0.0026	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
4-Bromophenyl phenyl ether	U		0.0020	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
4-Chloro-3-methylphenol	U		0.00086	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
4-Chloroaniline	U		0.0014	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
4-Chlorophenyl phenyl ether	U		0.0018	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
4-Nitroaniline	U		0.0027	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
4-Nitrophenol	U		0.0023	0.016	mg/Kg-dry	1	10-Oct-2018 16:36
Acenaphthene	U		0.00061	0.0041	mg/Kg-dry	1	10-Oct-2018 16:36
Acenaphthylene	U		0.0012	0.0041	mg/Kg-dry	1	10-Oct-2018 16:36
Acetophenone	U		0.00098	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
Anthracene	U		0.00061	0.0041	mg/Kg-dry	1	10-Oct-2018 16:36
Atrazine	U		0.0025	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
Benz(a)anthracene	**0.0033**	J	**0.0020**	**0.0041**	**mg/Kg-dry**	1	10-Oct-2018 16:36
Benzaldehyde	U	n	0.0015	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
Benzo(a)pyrene	**0.0030**	J	**0.0012**	**0.0041**	**mg/Kg-dry**	1	10-Oct-2018 16:36
Benzo(b)fluoranthene	**0.0043**		**0.0015**	**0.0041**	**mg/Kg-dry**	1	10-Oct-2018 16:36
Benzo(g,h,i)perylene	**0.019**		**0.00086**	**0.0041**	**mg/Kg-dry**	1	10-Oct-2018 16:36
Benzo(k)fluoranthene	**0.0027**	J	**0.0011**	**0.0041**	**mg/Kg-dry**	1	10-Oct-2018 16:36
Bis(2-chloro-1-methylethyl) ether	U		0.0017	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
Bis(2-chloroethoxy)methane	U		0.0011	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
Bis(2-chloroethyl)ether	U		0.0014	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
Bis(2-ethylhexyl)phthalate	**0.024**		**0.0021**	**0.0081**	**mg/Kg-dry**	1	10-Oct-2018 16:36

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA30-20181004-12-51
Collection Date: 04-Oct-2018 10:05

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-08
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**			Prep:SW3541 / 08-Oct-2018			Analyst: ACN
Butyl benzyl phthalate	U		0.0016	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
Caprolactam	U		0.0015	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
Carbazole	U		0.0015	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
Chrysene	**0.015**		**0.00098**	**0.0041**	**mg/Kg-dry**	1	10-Oct-2018 16:36
Dibenz(a,h)anthracene	**0.018**		**0.0020**	**0.0041**	**mg/Kg-dry**	1	10-Oct-2018 16:36
Dibenzofuran	U		0.00086	0.0041	mg/Kg-dry	1	10-Oct-2018 16:36
Diethyl phthalate	U		0.0012	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
Dimethyl phthalate	U		0.00098	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
Di-n-butyl phthalate	U		0.0015	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
Di-n-octyl phthalate	**0.026**		**0.0011**	**0.0081**	**mg/Kg-dry**	1	10-Oct-2018 16:36
Fluoranthene	U		0.0014	0.0041	mg/Kg-dry	1	10-Oct-2018 16:36
Fluorene	U		0.0014	0.0041	mg/Kg-dry	1	10-Oct-2018 16:36
Hexachlorobenzene	U		0.0011	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
Hexachlorobutadiene	U		0.0015	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
Hexachlorocyclopentadiene	U		0.00098	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
Hexachloroethane	U		0.0018	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
Indeno(1,2,3-cd)pyrene	**0.016**		**0.00098**	**0.0041**	**mg/Kg-dry**	1	10-Oct-2018 16:36
Isophorone	U		0.00098	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
Naphthalene	U		0.00074	0.0041	mg/Kg-dry	1	10-Oct-2018 16:36
Nitrobenzene	U		0.0011	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
N-Nitrosodi-n-propylamine	U		0.0014	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
N-Nitrosodiphenylamine	U		0.00086	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
Pentachlorophenol	U		0.0041	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
Phenanthrene	**0.018**		**0.0018**	**0.0041**	**mg/Kg-dry**	1	10-Oct-2018 16:36
Phenol	U		0.0014	0.0081	mg/Kg-dry	1	10-Oct-2018 16:36
Pyrene	U		0.00074	0.0041	mg/Kg-dry	1	10-Oct-2018 16:36
Surr: 2,4,6-Tribromophenol	*72.4*			*36-126*	*%REC*	*1*	*10-Oct-2018 16:36*
Surr: 2-Fluorobiphenyl	*71.1*			*43-125*	*%REC*	*1*	*10-Oct-2018 16:36*
Surr: 2-Fluorophenol	*53.3*			*37-125*	*%REC*	*1*	*10-Oct-2018 16:36*
Surr: 4-Terphenyl-d14	*85.7*			*32-125*	*%REC*	*1*	*10-Oct-2018 16:36*
Surr: Nitrobenzene-d5	*69.7*			*37-125*	*%REC*	*1*	*10-Oct-2018 16:36*
Surr: Phenol-d6	*60.7*			*40-125*	*%REC*	*1*	*10-Oct-2018 16:36*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA30-20181004-12-51
Collection Date: 04-Oct-2018 10:05

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-08
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A		**Method:SW8082**			Prep:SW3541/3665A / 08-Oct-2018		Analyst: JBA
Aroclor 1016	U		0.0052	0.021	mg/Kg-dry	1	10-Oct-2018 07:20
Aroclor 1221	U		0.0069	0.021	mg/Kg-dry	1	10-Oct-2018 07:20
Aroclor 1232	U		0.0055	0.021	mg/Kg-dry	1	10-Oct-2018 07:20
Aroclor 1242	U		0.0073	0.021	mg/Kg-dry	1	10-Oct-2018 07:20
Aroclor 1248	U		0.0073	0.021	mg/Kg-dry	1	10-Oct-2018 07:20
Aroclor 1254	U		0.0058	0.021	mg/Kg-dry	1	10-Oct-2018 07:20
Aroclor 1260	U		0.0049	0.021	mg/Kg-dry	1	10-Oct-2018 07:20
Surr: Decachlorobiphenyl	*137*			*54-143*	*%REC*	*1*	*10-Oct-2018 07:20*
Surr: Tetrachloro-m-xylene	*111*			*50-140*	*%REC*	*1*	*10-Oct-2018 07:20*
METALS BY SW6020A		**Method:SW6020**			Prep:SW3050A / 08-Oct-2018		Analyst: JC
Aluminum	**14,900**		**26.2**	**226**	**mg/Kg-dry**	100	11-Oct-2018 14:57
Antimony	**0.228**	J	**0.0733**	**0.564**	**mg/Kg-dry**	1	10-Oct-2018 22:45
Arsenic	**33.9**		**0.0789**	**0.564**	**mg/Kg-dry**	1	10-Oct-2018 22:45
Barium	**113**		**0.0338**	**0.564**	**mg/Kg-dry**	1	10-Oct-2018 22:45
Beryllium	**0.622**		**0.0237**	**0.564**	**mg/Kg-dry**	1	10-Oct-2018 22:45
Cadmium	**0.394**	J	**0.0304**	**0.564**	**mg/Kg-dry**	1	10-Oct-2018 22:45
Calcium	**237,000**		**559**	**5640**	**mg/Kg-dry**	100	11-Oct-2018 14:57
Chromium	**17.7**		**0.0259**	**0.564**	**mg/Kg-dry**	1	10-Oct-2018 22:45
Cobalt	**7.12**		**0.0169**	**0.564**	**mg/Kg-dry**	1	10-Oct-2018 22:45
Copper	**13.4**		**0.0429**	**0.226**	**mg/Kg-dry**	1	11-Oct-2018 16:38
Iron	**11,700**		**2.06**	**56.4**	**mg/Kg-dry**	1	10-Oct-2018 22:45
Lead	**31.6**		**0.0147**	**0.564**	**mg/Kg-dry**	1	10-Oct-2018 22:45
Magnesium	**2,470**		**2.83**	**56.4**	**mg/Kg-dry**	1	10-Oct-2018 22:45
Manganese	**1,270**		**4.85**	**56.4**	**mg/Kg-dry**	100	11-Oct-2018 14:57
Nickel	**20.2**		**0.0541**	**0.564**	**mg/Kg-dry**	1	11-Oct-2018 16:38
Potassium	**1,370**		**7.58**	**56.4**	**mg/Kg-dry**	1	10-Oct-2018 22:45
Selenium	**0.590**		**0.103**	**0.564**	**mg/Kg-dry**	1	11-Oct-2018 16:38
Silver	**0.0774**	J	**0.0169**	**0.564**	**mg/Kg-dry**	1	10-Oct-2018 22:45
Sodium	**435**		**4.70**	**56.4**	**mg/Kg-dry**	1	10-Oct-2018 22:45
Thallium	U		0.251	0.564	mg/Kg-dry	1	10-Oct-2018 22:45
Vanadium	**47.2**		**0.0846**	**0.564**	**mg/Kg-dry**	1	10-Oct-2018 22:45
Zinc	**50.9**		**0.192**	**0.564**	**mg/Kg-dry**	1	10-Oct-2018 22:45
MERCURY BY SW7471B		**Method:SW7471A**			Prep:SW7471A / 10-Oct-2018		Analyst: JCJ
Mercury	**0.0273**		**0.000610**	**0.00432**	**mg/Kg-dry**	1	11-Oct-2018 13:24
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**18.8**		**0.0100**	**0.0100**	**wt%**	1	09-Oct-2018 09:58

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA31-20181004-01-51
Collection Date: 04-Oct-2018 10:40

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-09
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**				Prep:SW3541 / 08-Oct-2018		Analyst: ACN
1,1′-Biphenyl	U		0.0020	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
2,4,5-Trichlorophenol	U		0.0030	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
2,4,6-Trichlorophenol	U		0.0020	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
2,4-Dichlorophenol	U		0.0016	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
2,4-Dimethylphenol	U		0.0039	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
2,4-Dinitrophenol	U		0.0054	0.016	mg/Kg-dry	1	10-Oct-2018 16:56
2,4-Dinitrotoluene	U		0.0011	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
2,6-Dinitrotoluene	U		0.0039	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
2-Chloronaphthalene	U		0.0016	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
2-Chlorophenol	U		0.0016	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
2-Methylnaphthalene	**0.0025**	J	**0.00060**	**0.0039**	**mg/Kg-dry**	1	10-Oct-2018 16:56
2-Methylphenol	U		0.0013	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
2-Nitroaniline	U		0.0023	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
2-Nitrophenol	U		0.0030	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
3&4-Methylphenol	U		0.0012	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
3,3′-Dichlorobenzidine	U		0.0030	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
3-Nitroaniline	U		0.0023	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
4,6-Dinitro-2-methylphenol	U		0.0025	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
4-Bromophenyl phenyl ether	U		0.0019	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
4-Chloro-3-methylphenol	U		0.00084	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
4-Chloroaniline	U		0.0013	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
4-Chlorophenyl phenyl ether	U		0.0018	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
4-Nitroaniline	U		0.0026	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
4-Nitrophenol	U		0.0023	0.016	mg/Kg-dry	1	10-Oct-2018 16:56
Acenaphthene	U		0.00060	0.0039	mg/Kg-dry	1	10-Oct-2018 16:56
Acenaphthylene	U		0.0012	0.0039	mg/Kg-dry	1	10-Oct-2018 16:56
Acetophenone	U		0.00096	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
Anthracene	U		0.00060	0.0039	mg/Kg-dry	1	10-Oct-2018 16:56
Atrazine	U		0.0024	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
Benz(a)anthracene	**0.0038**	J	**0.0019**	**0.0039**	**mg/Kg-dry**	1	10-Oct-2018 16:56
Benzaldehyde	U	n	0.0014	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
Benzo(a)pyrene	U		0.0012	0.0039	mg/Kg-dry	1	10-Oct-2018 16:56
Benzo(b)fluoranthene	U		0.0014	0.0039	mg/Kg-dry	1	10-Oct-2018 16:56
Benzo(g,h,i)perylene	U		0.00084	0.0039	mg/Kg-dry	1	10-Oct-2018 16:56
Benzo(k)fluoranthene	U		0.0011	0.0039	mg/Kg-dry	1	10-Oct-2018 16:56
Bis(2-chloro-1-methylethyl) ether	U		0.0017	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
Bis(2-chloroethoxy)methane	U		0.0011	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
Bis(2-chloroethyl)ether	U		0.0013	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
Bis(2-ethylhexyl)phthalate	**0.0081**		**0.0020**	**0.0079**	**mg/Kg-dry**	1	10-Oct-2018 16:56

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA31-20181004-01-51
Collection Date: 04-Oct-2018 10:40

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-09
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**				Prep:SW3541 / 08-Oct-2018		Analyst: ACN
Butyl benzyl phthalate	U		0.0016	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
Caprolactam	U		0.0014	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
Carbazole	U		0.0014	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
Chrysene	**0.0031**	J	**0.00096**	**0.0039**	**mg/Kg-dry**	1	10-Oct-2018 16:56
Dibenz(a,h)anthracene	U		0.0019	0.0039	mg/Kg-dry	1	10-Oct-2018 16:56
Dibenzofuran	U		0.00084	0.0039	mg/Kg-dry	1	10-Oct-2018 16:56
Diethyl phthalate	U		0.0012	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
Dimethyl phthalate	U		0.00096	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
Di-n-butyl phthalate	U		0.0014	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
Di-n-octyl phthalate	U		0.0011	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
Fluoranthene	U		0.0013	0.0039	mg/Kg-dry	1	10-Oct-2018 16:56
Fluorene	U		0.0013	0.0039	mg/Kg-dry	1	10-Oct-2018 16:56
Hexachlorobenzene	U		0.0011	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
Hexachlorobutadiene	U		0.0014	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
Hexachlorocyclopentadiene	U		0.00096	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
Hexachloroethane	U		0.0018	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
Indeno(1,2,3-cd)pyrene	U		0.00096	0.0039	mg/Kg-dry	1	10-Oct-2018 16:56
Isophorone	U		0.00096	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
Naphthalene	U		0.00072	0.0039	mg/Kg-dry	1	10-Oct-2018 16:56
Nitrobenzene	U		0.0011	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
N-Nitrosodi-n-propylamine	U		0.0013	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
N-Nitrosodiphenylamine	U		0.00084	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
Pentachlorophenol	U		0.0039	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
Phenanthrene	**0.0081**		**0.0018**	**0.0039**	**mg/Kg-dry**	1	10-Oct-2018 16:56
Phenol	U		0.0013	0.0079	mg/Kg-dry	1	10-Oct-2018 16:56
Pyrene	U		0.00072	0.0039	mg/Kg-dry	1	10-Oct-2018 16:56
Surr: 2,4,6-Tribromophenol	*65.0*			*36-126*	*%REC*	*1*	*10-Oct-2018 16:56*
Surr: 2-Fluorobiphenyl	*61.9*			*43-125*	*%REC*	*1*	*10-Oct-2018 16:56*
Surr: 2-Fluorophenol	*49.3*			*37-125*	*%REC*	*1*	*10-Oct-2018 16:56*
Surr: 4-Terphenyl-d14	*78.6*			*32-125*	*%REC*	*1*	*10-Oct-2018 16:56*
Surr: Nitrobenzene-d5	*62.2*			*37-125*	*%REC*	*1*	*10-Oct-2018 16:56*
Surr: Phenol-d6	*55.8*			*40-125*	*%REC*	*1*	*10-Oct-2018 16:56*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA31-20181004-01-51
Collection Date: 04-Oct-2018 10:40

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-09
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A		**Method:SW8082**			Prep:SW3541/3665A / 08-Oct-2018		Analyst: JBA
Aroclor 1016	U		0.0050	0.020	mg/Kg-dry	1	10-Oct-2018 07:35
Aroclor 1221	U		0.0067	0.020	mg/Kg-dry	1	10-Oct-2018 07:35
Aroclor 1232	U		0.0054	0.020	mg/Kg-dry	1	10-Oct-2018 07:35
Aroclor 1242	U		0.0070	0.020	mg/Kg-dry	1	10-Oct-2018 07:35
Aroclor 1248	U		0.0070	0.020	mg/Kg-dry	1	10-Oct-2018 07:35
Aroclor 1254	U		0.0056	0.020	mg/Kg-dry	1	10-Oct-2018 07:35
Aroclor 1260	U		0.0048	0.020	mg/Kg-dry	1	10-Oct-2018 07:35
Surr: Decachlorobiphenyl	*137*			*54-143*	*%REC*	*1*	*10-Oct-2018 07:35*
Surr: Tetrachloro-m-xylene	*118*			*50-140*	*%REC*	*1*	*10-Oct-2018 07:35*
METALS BY SW6020A		**Method:SW6020**			Prep:SW3050A / 08-Oct-2018		Analyst: JC
Aluminum	**10,900**		**26.4**	**227**	**mg/Kg-dry**	100	11-Oct-2018 14:59
Antimony	**0.108**	J	**0.0738**	**0.568**	**mg/Kg-dry**	1	10-Oct-2018 22:47
Arsenic	**3.34**		**0.0795**	**0.568**	**mg/Kg-dry**	1	10-Oct-2018 22:47
Barium	**102**		**0.0341**	**0.568**	**mg/Kg-dry**	1	10-Oct-2018 22:47
Beryllium	**0.540**	J	**0.0239**	**0.568**	**mg/Kg-dry**	1	10-Oct-2018 22:47
Cadmium	**0.111**	J	**0.0307**	**0.568**	**mg/Kg-dry**	1	10-Oct-2018 22:47
Calcium	**54,100**		**563**	**5680**	**mg/Kg-dry**	100	11-Oct-2018 14:59
Chromium	**12.7**		**0.0261**	**0.568**	**mg/Kg-dry**	1	10-Oct-2018 22:47
Cobalt	**4.15**		**0.0170**	**0.568**	**mg/Kg-dry**	1	10-Oct-2018 22:47
Copper	**8.81**		**0.0432**	**0.227**	**mg/Kg-dry**	1	11-Oct-2018 16:40
Iron	**9,860**		**2.08**	**56.8**	**mg/Kg-dry**	1	10-Oct-2018 22:47
Lead	**9.57**		**0.0148**	**0.568**	**mg/Kg-dry**	1	10-Oct-2018 22:47
Magnesium	**6,020**		**2.85**	**56.8**	**mg/Kg-dry**	1	10-Oct-2018 22:47
Manganese	**372**		**4.88**	**56.8**	**mg/Kg-dry**	100	11-Oct-2018 14:59
Nickel	**10.8**		**0.0545**	**0.568**	**mg/Kg-dry**	1	11-Oct-2018 16:40
Potassium	**2,440**		**7.63**	**56.8**	**mg/Kg-dry**	1	10-Oct-2018 22:47
Selenium	**0.455**	J	**0.103**	**0.568**	**mg/Kg-dry**	1	11-Oct-2018 16:40
Silver	**0.0366**	J	**0.0170**	**0.568**	**mg/Kg-dry**	1	10-Oct-2018 22:47
Sodium	**89.6**		**4.74**	**56.8**	**mg/Kg-dry**	1	10-Oct-2018 22:47
Thallium	U		0.253	0.568	mg/Kg-dry	1	10-Oct-2018 22:47
Vanadium	**20.3**		**0.0852**	**0.568**	**mg/Kg-dry**	1	10-Oct-2018 22:47
Zinc	**34.3**		**0.193**	**0.568**	**mg/Kg-dry**	1	10-Oct-2018 22:47
MERCURY BY SW7471B		**Method:SW7471A**			Prep:SW7471A / 10-Oct-2018		Analyst: JCJ
Mercury	**0.0119**		**0.000604**	**0.00428**	**mg/Kg-dry**	1	11-Oct-2018 13:26
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**16.5**		**0.0100**	**0.0100**	**wt%**	1	09-Oct-2018 09:58

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA31-20181004-06-51
Collection Date: 04-Oct-2018 11:05

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-10
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**				Prep:SW3541 / 08-Oct-2018		Analyst: ACN
1,1´-Biphenyl	U		0.0020	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
2,4,5-Trichlorophenol	U		0.0030	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
2,4,6-Trichlorophenol	U		0.0020	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
2,4-Dichlorophenol	U		0.0016	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
2,4-Dimethylphenol	U		0.0040	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
2,4-Dinitrophenol	U		0.0054	0.016	mg/Kg-dry	1	10-Oct-2018 17:15
2,4-Dinitrotoluene	U		0.0011	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
2,6-Dinitrotoluene	U		0.0040	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
2-Chloronaphthalene	U		0.0016	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
2-Chlorophenol	U		0.0016	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
2-Methylnaphthalene	**0.018**		**0.00060**	**0.0040**	**mg/Kg-dry**	1	10-Oct-2018 17:15
2-Methylphenol	U		0.0013	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
2-Nitroaniline	U		0.0023	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
2-Nitrophenol	U		0.0030	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
3&4-Methylphenol	U		0.0012	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
3,3´-Dichlorobenzidine	U		0.0030	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
3-Nitroaniline	U		0.0023	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
4,6-Dinitro-2-methylphenol	U		0.0025	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
4-Bromophenyl phenyl ether	U		0.0019	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
4-Chloro-3-methylphenol	U		0.00084	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
4-Chloroaniline	U		0.0013	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
4-Chlorophenyl phenyl ether	U		0.0018	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
4-Nitroaniline	U		0.0026	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
4-Nitrophenol	U		0.0023	0.016	mg/Kg-dry	1	10-Oct-2018 17:15
Acenaphthene	U		0.00060	0.0040	mg/Kg-dry	1	10-Oct-2018 17:15
Acenaphthylene	U		0.0012	0.0040	mg/Kg-dry	1	10-Oct-2018 17:15
Acetophenone	U		0.00096	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
Anthracene	U		0.00060	0.0040	mg/Kg-dry	1	10-Oct-2018 17:15
Atrazine	U		0.0024	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
Benz(a)anthracene	**0.0026**	J	**0.0019**	**0.0040**	**mg/Kg-dry**	1	10-Oct-2018 17:15
Benzaldehyde	U	n	0.0014	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
Benzo(a)pyrene	U		0.0012	0.0040	mg/Kg-dry	1	10-Oct-2018 17:15
Benzo(b)fluoranthene	U		0.0014	0.0040	mg/Kg-dry	1	10-Oct-2018 17:15
Benzo(g,h,i)perylene	U		0.00084	0.0040	mg/Kg-dry	1	10-Oct-2018 17:15
Benzo(k)fluoranthene	U		0.0011	0.0040	mg/Kg-dry	1	10-Oct-2018 17:15
Bis(2-chloro-1-methylethyl) ether	U		0.0017	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
Bis(2-chloroethoxy)methane	U		0.0011	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
Bis(2-chloroethyl)ether	U		0.0013	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
Bis(2-ethylhexyl)phthalate	**0.0091**		**0.0020**	**0.0079**	**mg/Kg-dry**	1	10-Oct-2018 17:15

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA31-20181004-06-51
Collection Date: 04-Oct-2018 11:05

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-10
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**			Prep:SW3541 / 08-Oct-2018			Analyst: ACN
Butyl benzyl phthalate	U		0.0016	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
Caprolactam	U		0.0014	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
Carbazole	U		0.0014	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
Chrysene	**0.012**		**0.00096**	**0.0040**	**mg/Kg-dry**	1	10-Oct-2018 17:15
Dibenz(a,h)anthracene	U		0.0019	0.0040	mg/Kg-dry	1	10-Oct-2018 17:15
Dibenzofuran	U		0.00084	0.0040	mg/Kg-dry	1	10-Oct-2018 17:15
Diethyl phthalate	U		0.0012	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
Dimethyl phthalate	U		0.00096	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
Di-n-butyl phthalate	U		0.0014	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
Di-n-octyl phthalate	U		0.0011	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
Fluoranthene	U		0.0013	0.0040	mg/Kg-dry	1	10-Oct-2018 17:15
Fluorene	U		0.0013	0.0040	mg/Kg-dry	1	10-Oct-2018 17:15
Hexachlorobenzene	U		0.0011	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
Hexachlorobutadiene	U		0.0014	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
Hexachlorocyclopentadiene	U		0.00096	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
Hexachloroethane	U		0.0018	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
Indeno(1,2,3-cd)pyrene	U		0.00096	0.0040	mg/Kg-dry	1	10-Oct-2018 17:15
Isophorone	U		0.00096	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
Naphthalene	U		0.00072	0.0040	mg/Kg-dry	1	10-Oct-2018 17:15
Nitrobenzene	U		0.0011	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
N-Nitrosodi-n-propylamine	U		0.0013	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
N-Nitrosodiphenylamine	U		0.00084	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
Pentachlorophenol	U		0.0040	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
Phenanthrene	**0.024**		**0.0018**	**0.0040**	**mg/Kg-dry**	1	10-Oct-2018 17:15
Phenol	U		0.0013	0.0079	mg/Kg-dry	1	10-Oct-2018 17:15
Pyrene	U		0.00072	0.0040	mg/Kg-dry	1	10-Oct-2018 17:15
Surr: 2,4,6-Tribromophenol	*77.0*			*36-126*	*%REC*	*1*	*10-Oct-2018 17:15*
Surr: 2-Fluorobiphenyl	*77.6*			*43-125*	*%REC*	*1*	*10-Oct-2018 17:15*
Surr: 2-Fluorophenol	*62.5*			*37-125*	*%REC*	*1*	*10-Oct-2018 17:15*
Surr: 4-Terphenyl-d14	*87.6*			*32-125*	*%REC*	*1*	*10-Oct-2018 17:15*
Surr: Nitrobenzene-d5	*77.8*			*37-125*	*%REC*	*1*	*10-Oct-2018 17:15*
Surr: Phenol-d6	*69.3*			*40-125*	*%REC*	*1*	*10-Oct-2018 17:15*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA31-20181004-06-51
Collection Date: 04-Oct-2018 11:05

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-10
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A		**Method:SW8082**			Prep:SW3541/3665A / 08-Oct-2018		Analyst: JBA
Aroclor 1016	U		0.0050	0.020	mg/Kg-dry	1	10-Oct-2018 07:51
Aroclor 1221	U		0.0067	0.020	mg/Kg-dry	1	10-Oct-2018 07:51
Aroclor 1232	U		0.0054	0.020	mg/Kg-dry	1	10-Oct-2018 07:51
Aroclor 1242	U		0.0071	0.020	mg/Kg-dry	1	10-Oct-2018 07:51
Aroclor 1248	U		0.0071	0.020	mg/Kg-dry	1	10-Oct-2018 07:51
Aroclor 1254	U		0.0056	0.020	mg/Kg-dry	1	10-Oct-2018 07:51
Aroclor 1260	U		0.0048	0.020	mg/Kg-dry	1	10-Oct-2018 07:51
Surr: Decachlorobiphenyl	*130*			*54-143*	*%REC*	*1*	*10-Oct-2018 07:51*
Surr: Tetrachloro-m-xylene	*131*			*50-140*	*%REC*	*1*	*10-Oct-2018 07:51*
METALS BY SW6020A		**Method:SW6020**			Prep:SW3050A / 08-Oct-2018		Analyst: JDE
Aluminum	**19,900**		**135**	**1160**	**mg/Kg-dry**	500	11-Oct-2018 16:37
Antimony	**0.200**	J	**0.0757**	**0.582**	**mg/Kg-dry**	1	11-Oct-2018 16:43
Arsenic	**7.83**		**0.0815**	**0.582**	**mg/Kg-dry**	1	10-Oct-2018 22:54
Barium	**148**		**0.0349**	**0.582**	**mg/Kg-dry**	1	10-Oct-2018 22:54
Beryllium	**0.833**		**0.0244**	**0.582**	**mg/Kg-dry**	1	11-Oct-2018 16:43
Cadmium	**0.285**	J	**0.0314**	**0.582**	**mg/Kg-dry**	1	10-Oct-2018 22:54
Calcium	**125,000**		**577**	**5820**	**mg/Kg-dry**	100	11-Oct-2018 15:01
Chromium	**25.3**		**0.0268**	**0.582**	**mg/Kg-dry**	1	11-Oct-2018 16:43
Cobalt	**6.41**		**0.0175**	**0.582**	**mg/Kg-dry**	1	10-Oct-2018 22:54
Copper	**17.5**		**0.0442**	**0.233**	**mg/Kg-dry**	1	11-Oct-2018 16:43
Iron	**14,800**		**2.13**	**58.2**	**mg/Kg-dry**	1	10-Oct-2018 22:54
Lead	**24.4**		**0.0151**	**0.582**	**mg/Kg-dry**	1	10-Oct-2018 22:54
Magnesium	**4,450**		**2.92**	**58.2**	**mg/Kg-dry**	1	11-Oct-2018 16:43
Manganese	**755**		**5.01**	**58.2**	**mg/Kg-dry**	100	11-Oct-2018 15:01
Nickel	**18.3**		**0.0559**	**0.582**	**mg/Kg-dry**	1	11-Oct-2018 16:43
Potassium	**2,310**		**7.82**	**58.2**	**mg/Kg-dry**	1	11-Oct-2018 16:43
Selenium	**0.678**		**0.106**	**0.582**	**mg/Kg-dry**	1	11-Oct-2018 16:43
Silver	**0.0661**	J	**0.0175**	**0.582**	**mg/Kg-dry**	1	10-Oct-2018 22:54
Sodium	**113**		**4.85**	**58.2**	**mg/Kg-dry**	1	11-Oct-2018 16:43
Thallium	U		0.260	0.582	mg/Kg-dry	1	10-Oct-2018 22:54
Vanadium	**43.9**		**0.0873**	**0.582**	**mg/Kg-dry**	1	10-Oct-2018 22:54
Zinc	**59.0**		**0.198**	**0.582**	**mg/Kg-dry**	1	10-Oct-2018 22:54
MERCURY BY SW7471B		**Method:SW7471A**			Prep:SW7471A / 10-Oct-2018		Analyst: JCJ
Mercury	**0.0113**		**0.000603**	**0.00427**	**mg/Kg-dry**	1	11-Oct-2018 13:36
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**17.2**		**0.0100**	**0.0100**	**wt%**	1	09-Oct-2018 09:58

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA31-20181004-12-51
Collection Date: 04-Oct-2018 11:15

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-11
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**			Prep:SW3541 / 08-Oct-2018			Analyst: ACN
1,1´-Biphenyl	U		0.0022	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
2,4,5-Trichlorophenol	U		0.0033	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
2,4,6-Trichlorophenol	U		0.0022	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
2,4-Dichlorophenol	U		0.0017	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
2,4-Dimethylphenol	U		0.0043	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
2,4-Dinitrophenol	U		0.0059	0.017	mg/Kg-dry	1	10-Oct-2018 17:35
2,4-Dinitrotoluene	U		0.0012	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
2,6-Dinitrotoluene	U		0.0043	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
2-Chloronaphthalene	U		0.0017	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
2-Chlorophenol	U		0.0017	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
2-Methylnaphthalene	**0.0064**		**0.00065**	**0.0043**	**mg/Kg-dry**	1	10-Oct-2018 17:35
2-Methylphenol	U		0.0014	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
2-Nitroaniline	U		0.0025	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
2-Nitrophenol	U		0.0033	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
3&4-Methylphenol	U		0.0013	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
3,3´-Dichlorobenzidine	U		0.0033	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
3-Nitroaniline	U		0.0025	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
4,6-Dinitro-2-methylphenol	U		0.0027	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
4-Bromophenyl phenyl ether	U		0.0021	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
4-Chloro-3-methylphenol	U		0.00092	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
4-Chloroaniline	U		0.0014	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
4-Chlorophenyl phenyl ether	U		0.0020	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
4-Nitroaniline	U		0.0029	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
4-Nitrophenol	U		0.0025	0.017	mg/Kg-dry	1	10-Oct-2018 17:35
Acenaphthene	U		0.00065	0.0043	mg/Kg-dry	1	10-Oct-2018 17:35
Acenaphthylene	U		0.0013	0.0043	mg/Kg-dry	1	10-Oct-2018 17:35
Acetophenone	U		0.0010	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
Anthracene	U		0.00065	0.0043	mg/Kg-dry	1	10-Oct-2018 17:35
Atrazine	U		0.0026	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
Benz(a)anthracene	**0.0091**		**0.0021**	**0.0043**	**mg/Kg-dry**	1	10-Oct-2018 17:35
Benzaldehyde	U	n	0.0016	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
Benzo(a)pyrene	U		0.0013	0.0043	mg/Kg-dry	1	10-Oct-2018 17:35
Benzo(b)fluoranthene	U		0.0016	0.0043	mg/Kg-dry	1	10-Oct-2018 17:35
Benzo(g,h,i)perylene	U		0.00092	0.0043	mg/Kg-dry	1	10-Oct-2018 17:35
Benzo(k)fluoranthene	U		0.0012	0.0043	mg/Kg-dry	1	10-Oct-2018 17:35
Bis(2-chloro-1-methylethyl) ether	U		0.0018	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
Bis(2-chloroethoxy)methane	U		0.0012	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
Bis(2-chloroethyl)ether	U		0.0014	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
Bis(2-ethylhexyl)phthalate	U		0.0022	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA31-20181004-12-51
Collection Date: 04-Oct-2018 11:15

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-11
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**			Prep:SW3541 / 08-Oct-2018			Analyst: ACN
Butyl benzyl phthalate	U		0.0017	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
Caprolactam	U		0.0016	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
Carbazole	U		0.0016	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
Chrysene	**0.0048**		**0.0010**	**0.0043**	**mg/Kg-dry**	1	10-Oct-2018 17:35
Dibenz(a,h)anthracene	U		0.0021	0.0043	mg/Kg-dry	1	10-Oct-2018 17:35
Dibenzofuran	U		0.00092	0.0043	mg/Kg-dry	1	10-Oct-2018 17:35
Diethyl phthalate	U		0.0013	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
Dimethyl phthalate	U		0.0010	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
Di-n-butyl phthalate	U		0.0016	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
Di-n-octyl phthalate	U		0.0012	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
Fluoranthene	U		0.0014	0.0043	mg/Kg-dry	1	10-Oct-2018 17:35
Fluorene	U		0.0014	0.0043	mg/Kg-dry	1	10-Oct-2018 17:35
Hexachlorobenzene	U		0.0012	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
Hexachlorobutadiene	U		0.0016	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
Hexachlorocyclopentadiene	U		0.0010	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
Hexachloroethane	U		0.0020	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
Indeno(1,2,3-cd)pyrene	U		0.0010	0.0043	mg/Kg-dry	1	10-Oct-2018 17:35
Isophorone	U		0.0010	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
Naphthalene	U		0.00078	0.0043	mg/Kg-dry	1	10-Oct-2018 17:35
Nitrobenzene	U		0.0012	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
N-Nitrosodi-n-propylamine	U		0.0014	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
N-Nitrosodiphenylamine	U		0.00092	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
Pentachlorophenol	U		0.0043	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
Phenanthrene	**0.019**		**0.0020**	**0.0043**	**mg/Kg-dry**	1	10-Oct-2018 17:35
Phenol	U		0.0014	0.0086	mg/Kg-dry	1	10-Oct-2018 17:35
Pyrene	U		0.00078	0.0043	mg/Kg-dry	1	10-Oct-2018 17:35
Surr: 2,4,6-Tribromophenol	*77.0*			*36-126*	*%REC*	*1*	*10-Oct-2018 17:35*
Surr: 2-Fluorobiphenyl	*72.9*			*43-125*	*%REC*	*1*	*10-Oct-2018 17:35*
Surr: 2-Fluorophenol	*48.3*			*37-125*	*%REC*	*1*	*10-Oct-2018 17:35*
Surr: 4-Terphenyl-d14	*87.1*			*32-125*	*%REC*	*1*	*10-Oct-2018 17:35*
Surr: Nitrobenzene-d5	*68.3*			*37-125*	*%REC*	*1*	*10-Oct-2018 17:35*
Surr: Phenol-d6	*60.6*			*40-125*	*%REC*	*1*	*10-Oct-2018 17:35*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA31-20181004-12-51
Collection Date: 04-Oct-2018 11:15

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-11
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A	**Method:SW8082**				Prep:SW3541/3665A / 08-Oct-2018		Analyst: JBA
Aroclor 1016	U		0.0055	0.022	mg/Kg-dry	1	10-Oct-2018 08:07
Aroclor 1221	U		0.0073	0.022	mg/Kg-dry	1	10-Oct-2018 08:07
Aroclor 1232	U		0.0059	0.022	mg/Kg-dry	1	10-Oct-2018 08:07
Aroclor 1242	U		0.0077	0.022	mg/Kg-dry	1	10-Oct-2018 08:07
Aroclor 1248	U		0.0077	0.022	mg/Kg-dry	1	10-Oct-2018 08:07
Aroclor 1254	U		0.0061	0.022	mg/Kg-dry	1	10-Oct-2018 08:07
Aroclor 1260	U		0.0052	0.022	mg/Kg-dry	1	10-Oct-2018 08:07
Surr: Decachlorobiphenyl	*134*			*54-143*	*%REC*	*1*	*10-Oct-2018 08:07*
Surr: Tetrachloro-m-xylene	*115*			*50-140*	*%REC*	*1*	*10-Oct-2018 08:07*
METALS BY SW6020A	**Method:SW6020**				Prep:SW3050A / 08-Oct-2018		Analyst: JDE
Aluminum	**28,800**		**140**	**1210**	**mg/Kg-dry**	500	11-Oct-2018 16:39
Antimony	**0.129**	J	**0.0786**	**0.605**	**mg/Kg-dry**	1	11-Oct-2018 16:45
Arsenic	**5.07**		**0.0847**	**0.605**	**mg/Kg-dry**	1	10-Oct-2018 22:56
Barium	**225**		**3.63**	**60.5**	**mg/Kg-dry**	100	11-Oct-2018 15:04
Beryllium	**1.31**		**0.0254**	**0.605**	**mg/Kg-dry**	1	11-Oct-2018 16:45
Cadmium	**0.299**	J	**0.0327**	**0.605**	**mg/Kg-dry**	1	10-Oct-2018 22:56
Calcium	**62,700**		**600**	**6050**	**mg/Kg-dry**	100	11-Oct-2018 15:04
Chromium	**36.1**		**0.0278**	**0.605**	**mg/Kg-dry**	1	11-Oct-2018 16:45
Cobalt	**7.34**		**0.0181**	**0.605**	**mg/Kg-dry**	1	10-Oct-2018 22:56
Copper	**14.1**		**0.0460**	**0.242**	**mg/Kg-dry**	1	11-Oct-2018 16:45
Iron	**21,400**		**2.21**	**60.5**	**mg/Kg-dry**	1	10-Oct-2018 22:56
Lead	**20.1**		**0.0157**	**0.605**	**mg/Kg-dry**	1	10-Oct-2018 22:56
Magnesium	**4,800**		**3.04**	**60.5**	**mg/Kg-dry**	1	11-Oct-2018 16:45
Manganese	**711**		**5.20**	**60.5**	**mg/Kg-dry**	100	11-Oct-2018 15:04
Nickel	**23.8**		**0.0580**	**0.605**	**mg/Kg-dry**	1	11-Oct-2018 16:45
Potassium	**2,670**		**8.13**	**60.5**	**mg/Kg-dry**	1	11-Oct-2018 16:45
Selenium	**0.606**		**0.110**	**0.605**	**mg/Kg-dry**	1	11-Oct-2018 16:45
Silver	**0.123**	J	**0.0181**	**0.605**	**mg/Kg-dry**	1	10-Oct-2018 22:56
Sodium	**78.7**		**5.04**	**60.5**	**mg/Kg-dry**	1	11-Oct-2018 16:45
Thallium	U		0.270	0.605	mg/Kg-dry	1	10-Oct-2018 22:56
Vanadium	**58.9**		**0.0907**	**0.605**	**mg/Kg-dry**	1	10-Oct-2018 22:56
Zinc	**62.7**		**0.206**	**0.605**	**mg/Kg-dry**	1	10-Oct-2018 22:56
MERCURY BY SW7471B	**Method:SW7471A**				Prep:SW7471A / 10-Oct-2018		Analyst: JCJ
Mercury	**0.0292**		**0.000646**	**0.00457**	**mg/Kg-dry**	1	11-Oct-2018 13:38
MOISTURE - ASTM D2216	**Method:ASTM D2216**						Analyst: DFF
Percent Moisture	**24.0**		**0.0100**	**0.0100**	**wt%**	1	09-Oct-2018 09:58

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc. **ANALYTICAL REPORT**
Project: FJ Doyle Site WorkOrder:HS18100338
Sample ID: DRA32-20181004-01-51 Lab ID:HS18100338-12
Collection Date: 04-Oct-2018 10:45 Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**			Prep:SW3541 / 08-Oct-2018			Analyst: ACN
1,1′-Biphenyl	U		0.0022	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
2,4,5-Trichlorophenol	U		0.0032	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
2,4,6-Trichlorophenol	U		0.0022	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
2,4-Dichlorophenol	U		0.0017	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
2,4-Dimethylphenol	U		0.0043	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
2,4-Dinitrophenol	U		0.0058	0.017	mg/Kg-dry	1	10-Oct-2018 17:55
2,4-Dinitrotoluene	U		0.0012	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
2,6-Dinitrotoluene	U		0.0043	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
2-Chloronaphthalene	U		0.0017	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
2-Chlorophenol	U		0.0017	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
2-Methylnaphthalene	**0.011**		**0.00065**	**0.0043**	**mg/Kg-dry**	1	10-Oct-2018 17:55
2-Methylphenol	U		0.0014	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
2-Nitroaniline	U		0.0025	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
2-Nitrophenol	U		0.0032	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
3&4-Methylphenol	U		0.0013	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
3,3′-Dichlorobenzidine	U		0.0032	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
3-Nitroaniline	U		0.0025	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
4,6-Dinitro-2-methylphenol	U		0.0027	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
4-Bromophenyl phenyl ether	U		0.0021	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
4-Chloro-3-methylphenol	U		0.00091	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
4-Chloroaniline	U		0.0014	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
4-Chlorophenyl phenyl ether	U		0.0019	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
4-Nitroaniline	U		0.0029	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
4-Nitrophenol	U		0.0025	0.017	mg/Kg-dry	1	10-Oct-2018 17:55
Acenaphthene	U		0.00065	0.0043	mg/Kg-dry	1	10-Oct-2018 17:55
Acenaphthylene	U		0.0013	0.0043	mg/Kg-dry	1	10-Oct-2018 17:55
Acetophenone	U		0.0010	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
Anthracene	U		0.00065	0.0043	mg/Kg-dry	1	10-Oct-2018 17:55
Atrazine	U		0.0026	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
Benz(a)anthracene	**0.015**		**0.0021**	**0.0043**	**mg/Kg-dry**	1	10-Oct-2018 17:55
Benzaldehyde	U	n	0.0016	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
Benzo(a)pyrene	U		0.0013	0.0043	mg/Kg-dry	1	10-Oct-2018 17:55
Benzo(b)fluoranthene	**0.0021**	J	**0.0016**	**0.0043**	**mg/Kg-dry**	1	10-Oct-2018 17:55
Benzo(g,h,i)perylene	U		0.00091	0.0043	mg/Kg-dry	1	10-Oct-2018 17:55
Benzo(k)fluoranthene	U		0.0012	0.0043	mg/Kg-dry	1	10-Oct-2018 17:55
Bis(2-chloro-1-methylethyl) ether	U		0.0018	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
Bis(2-chloroethoxy)methane	U		0.0012	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
Bis(2-chloroethyl)ether	U		0.0014	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
Bis(2-ethylhexyl)phthalate	U		0.0022	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA32-20181004-01-51
Collection Date: 04-Oct-2018 10:45

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-12
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**				Prep:SW3541 / 08-Oct-2018		Analyst: ACN
Butyl benzyl phthalate	U		0.0017	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
Caprolactam	U		0.0016	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
Carbazole	U		0.0016	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
Chrysene	**0.0099**		**0.0010**	**0.0043**	**mg/Kg-dry**	1	10-Oct-2018 17:55
Dibenz(a,h)anthracene	U		0.0021	0.0043	mg/Kg-dry	1	10-Oct-2018 17:55
Dibenzofuran	U		0.00091	0.0043	mg/Kg-dry	1	10-Oct-2018 17:55
Diethyl phthalate	U		0.0013	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
Dimethyl phthalate	U		0.0010	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
Di-n-butyl phthalate	U		0.0016	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
Di-n-octyl phthalate	U		0.0012	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
Fluoranthene	U		0.0014	0.0043	mg/Kg-dry	1	10-Oct-2018 17:55
Fluorene	U		0.0014	0.0043	mg/Kg-dry	1	10-Oct-2018 17:55
Hexachlorobenzene	U		0.0012	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
Hexachlorobutadiene	U		0.0016	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
Hexachlorocyclopentadiene	U		0.0010	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
Hexachloroethane	U		0.0019	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
Indeno(1,2,3-cd)pyrene	U		0.0010	0.0043	mg/Kg-dry	1	10-Oct-2018 17:55
Isophorone	U		0.0010	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
Naphthalene	**0.0026**	J	**0.00078**	**0.0043**	**mg/Kg-dry**	1	10-Oct-2018 17:55
Nitrobenzene	U		0.0012	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
N-Nitrosodi-n-propylamine	U		0.0014	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
N-Nitrosodiphenylamine	U		0.00091	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
Pentachlorophenol	U		0.0043	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
Phenanthrene	**0.045**		**0.0019**	**0.0043**	**mg/Kg-dry**	1	10-Oct-2018 17:55
Phenol	U		0.0014	0.0086	mg/Kg-dry	1	10-Oct-2018 17:55
Pyrene	U		0.00078	0.0043	mg/Kg-dry	1	10-Oct-2018 17:55
Surr: 2,4,6-Tribromophenol	*86.1*			*36-126*	*%REC*	*1*	*10-Oct-2018 17:55*
Surr: 2-Fluorobiphenyl	*80.4*			*43-125*	*%REC*	*1*	*10-Oct-2018 17:55*
Surr: 2-Fluorophenol	*60.9*			*37-125*	*%REC*	*1*	*10-Oct-2018 17:55*
Surr: 4-Terphenyl-d14	*91.1*			*32-125*	*%REC*	*1*	*10-Oct-2018 17:55*
Surr: Nitrobenzene-d5	*78.4*			*37-125*	*%REC*	*1*	*10-Oct-2018 17:55*
Surr: Phenol-d6	*69.5*			*40-125*	*%REC*	*1*	*10-Oct-2018 17:55*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA32-20181004-01-51
Collection Date: 04-Oct-2018 10:45

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-12
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A		**Method:SW8082**			Prep:SW3541/3665A / 08-Oct-2018		Analyst: JBA
Aroclor 1016	U		0.0054	0.022	mg/Kg-dry	1	10-Oct-2018 08:22
Aroclor 1221	U		0.0073	0.022	mg/Kg-dry	1	10-Oct-2018 08:22
Aroclor 1232	U		0.0058	0.022	mg/Kg-dry	1	10-Oct-2018 08:22
Aroclor 1242	U		0.0077	0.022	mg/Kg-dry	1	10-Oct-2018 08:22
Aroclor 1248	U		0.0077	0.022	mg/Kg-dry	1	10-Oct-2018 08:22
Aroclor 1254	U		0.0061	0.022	mg/Kg-dry	1	10-Oct-2018 08:22
Aroclor 1260	U		0.0052	0.022	mg/Kg-dry	1	10-Oct-2018 08:22
Surr: Decachlorobiphenyl	*124*			*54-143*	*%REC*	*1*	*10-Oct-2018 08:22*
Surr: Tetrachloro-m-xylene	*91.5*			*50-140*	*%REC*	*1*	*10-Oct-2018 08:22*
METALS BY SW6020A		**Method:SW6020**			Prep:SW3050A / 08-Oct-2018		Analyst: JC
Aluminum	**7,330**		**29.2**	**252**	**mg/Kg-dry**	100	11-Oct-2018 15:06
Antimony	**0.227**	J	**0.0818**	**0.629**	**mg/Kg-dry**	1	11-Oct-2018 16:47
Arsenic	**6.04**		**0.0881**	**0.629**	**mg/Kg-dry**	1	10-Oct-2018 22:58
Barium	**105**		**0.0378**	**0.629**	**mg/Kg-dry**	1	10-Oct-2018 22:58
Beryllium	**0.403**	J	**0.0264**	**0.629**	**mg/Kg-dry**	1	11-Oct-2018 16:47
Cadmium	**0.518**	J	**0.0340**	**0.629**	**mg/Kg-dry**	1	10-Oct-2018 22:58
Calcium	**213,000**		**624**	**6290**	**mg/Kg-dry**	100	11-Oct-2018 15:06
Chromium	**13.6**		**0.0289**	**0.629**	**mg/Kg-dry**	1	11-Oct-2018 16:47
Cobalt	**5.30**		**0.0189**	**0.629**	**mg/Kg-dry**	1	10-Oct-2018 22:58
Copper	**34.2**		**0.0478**	**0.252**	**mg/Kg-dry**	1	11-Oct-2018 16:47
Iron	**9,160**		**2.30**	**62.9**	**mg/Kg-dry**	1	10-Oct-2018 22:58
Lead	**34.4**		**0.0164**	**0.629**	**mg/Kg-dry**	1	10-Oct-2018 22:58
Magnesium	**4,070**		**3.16**	**62.9**	**mg/Kg-dry**	1	11-Oct-2018 16:47
Manganese	**785**		**5.41**	**62.9**	**mg/Kg-dry**	100	11-Oct-2018 15:06
Nickel	**12.9**		**0.0604**	**0.629**	**mg/Kg-dry**	1	11-Oct-2018 16:47
Potassium	**2,040**		**8.46**	**62.9**	**mg/Kg-dry**	1	11-Oct-2018 16:47
Selenium	**0.529**	J	**0.115**	**0.629**	**mg/Kg-dry**	1	11-Oct-2018 16:47
Silver	**0.0642**	J	**0.0189**	**0.629**	**mg/Kg-dry**	1	10-Oct-2018 22:58
Sodium	**232**		**5.25**	**62.9**	**mg/Kg-dry**	1	11-Oct-2018 16:47
Thallium	U		0.281	0.629	mg/Kg-dry	1	10-Oct-2018 22:58
Vanadium	**26.3**		**0.0944**	**0.629**	**mg/Kg-dry**	1	10-Oct-2018 22:58
Zinc	**107**		**0.214**	**0.629**	**mg/Kg-dry**	1	10-Oct-2018 22:58
MERCURY BY SW7471B		**Method:SW7471A**			Prep:SW7471A / 10-Oct-2018		Analyst: JCJ
Mercury	**0.0317**		**0.000648**	**0.00458**	**mg/Kg-dry**	1	11-Oct-2018 13:40
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**23.2**		**0.0100**	**0.0100**	**wt%**	1	09-Oct-2018 09:58

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc. **ANALYTICAL REPORT**
Project: FJ Doyle Site WorkOrder:HS18100338
Sample ID: DRA32-20181004-06-51 Lab ID:HS18100338-13
Collection Date: 04-Oct-2018 10:55 Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**				Prep:SW3541 / 08-Oct-2018		Analyst: ACN
1,1´-Biphenyl	U		0.0023	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
2,4,5-Trichlorophenol	U		0.0033	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
2,4,6-Trichlorophenol	U		0.0023	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
2,4-Dichlorophenol	U		0.0017	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
2,4-Dimethylphenol	U		0.0044	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
2,4-Dinitrophenol	U		0.0060	0.018	mg/Kg-dry	1	10-Oct-2018 18:14
2,4-Dinitrotoluene	U		0.0012	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
2,6-Dinitrotoluene	U		0.0044	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
2-Chloronaphthalene	U		0.0017	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
2-Chlorophenol	U		0.0017	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
2-Methylnaphthalene	**0.0058**		**0.00067**	**0.0044**	**mg/Kg-dry**	1	10-Oct-2018 18:14
2-Methylphenol	U		0.0015	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
2-Nitroaniline	U		0.0025	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
2-Nitrophenol	U		0.0033	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
3&4-Methylphenol	U		0.0013	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
3,3´-Dichlorobenzidine	U		0.0033	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
3-Nitroaniline	U		0.0025	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
4,6-Dinitro-2-methylphenol	U		0.0028	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
4-Bromophenyl phenyl ether	U		0.0021	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
4-Chloro-3-methylphenol	U		0.00093	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
4-Chloroaniline	U		0.0015	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
4-Chlorophenyl phenyl ether	U		0.0020	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
4-Nitroaniline	U		0.0029	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
4-Nitrophenol	U		0.0025	0.018	mg/Kg-dry	1	10-Oct-2018 18:14
Acenaphthene	U		0.00067	0.0044	mg/Kg-dry	1	10-Oct-2018 18:14
Acenaphthylene	**0.0022**	J	**0.0013**	**0.0044**	**mg/Kg-dry**	1	10-Oct-2018 18:14
Acetophenone	U		0.0011	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
Anthracene	U		0.00067	0.0044	mg/Kg-dry	1	10-Oct-2018 18:14
Atrazine	U		0.0027	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
Benz(a)anthracene	U		0.0021	0.0044	mg/Kg-dry	1	10-Oct-2018 18:14
Benzaldehyde	U	n	0.0016	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
Benzo(a)pyrene	U		0.0013	0.0044	mg/Kg-dry	1	10-Oct-2018 18:14
Benzo(b)fluoranthene	U		0.0016	0.0044	mg/Kg-dry	1	10-Oct-2018 18:14
Benzo(g,h,i)perylene	U		0.00093	0.0044	mg/Kg-dry	1	10-Oct-2018 18:14
Benzo(k)fluoranthene	U		0.0012	0.0044	mg/Kg-dry	1	10-Oct-2018 18:14
Bis(2-chloro-1-methylethyl) ether	U		0.0019	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
Bis(2-chloroethoxy)methane	U		0.0012	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
Bis(2-chloroethyl)ether	U		0.0015	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
Bis(2-ethylhexyl)phthalate	**0.0069**	J	**0.0023**	**0.0088**	**mg/Kg-dry**	1	10-Oct-2018 18:14

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA32-20181004-06-51
Collection Date: 04-Oct-2018 10:55

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-13
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**				Prep:SW3541 / 08-Oct-2018		Analyst: ACN
Butyl benzyl phthalate	U		0.0017	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
Caprolactam	U		0.0016	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
Carbazole	U		0.0016	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
Chrysene	U		0.0011	0.0044	mg/Kg-dry	1	10-Oct-2018 18:14
Dibenz(a,h)anthracene	U		0.0021	0.0044	mg/Kg-dry	1	10-Oct-2018 18:14
Dibenzofuran	U		0.00093	0.0044	mg/Kg-dry	1	10-Oct-2018 18:14
Diethyl phthalate	U		0.0013	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
Dimethyl phthalate	U		0.0011	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
Di-n-butyl phthalate	U		0.0016	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
Di-n-octyl phthalate	U		0.0012	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
Fluoranthene	U		0.0015	0.0044	mg/Kg-dry	1	10-Oct-2018 18:14
Fluorene	U		0.0015	0.0044	mg/Kg-dry	1	10-Oct-2018 18:14
Hexachlorobenzene	U		0.0012	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
Hexachlorobutadiene	U		0.0016	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
Hexachlorocyclopentadiene	U		0.0011	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
Hexachloroethane	U		0.0020	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
Indeno(1,2,3-cd)pyrene	U		0.0011	0.0044	mg/Kg-dry	1	10-Oct-2018 18:14
Isophorone	U		0.0011	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
Naphthalene	U		0.00080	0.0044	mg/Kg-dry	1	10-Oct-2018 18:14
Nitrobenzene	U		0.0012	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
N-Nitrosodi-n-propylamine	U		0.0015	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
N-Nitrosodiphenylamine	U		0.00093	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
Pentachlorophenol	U		0.0044	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
Phenanthrene	**0.0042**	J	**0.0020**	**0.0044**	**mg/Kg-dry**	1	10-Oct-2018 18:14
Phenol	U		0.0015	0.0088	mg/Kg-dry	1	10-Oct-2018 18:14
Pyrene	U		0.00080	0.0044	mg/Kg-dry	1	10-Oct-2018 18:14
Surr: 2,4,6-Tribromophenol	*60.4*			*36-126*	*%REC*	*1*	*10-Oct-2018 18:14*
Surr: 2-Fluorobiphenyl	*73.0*			*43-125*	*%REC*	*1*	*10-Oct-2018 18:14*
Surr: 2-Fluorophenol	*52.4*			*37-125*	*%REC*	*1*	*10-Oct-2018 18:14*
Surr: 4-Terphenyl-d14	*76.5*			*32-125*	*%REC*	*1*	*10-Oct-2018 18:14*
Surr: Nitrobenzene-d5	*68.4*			*37-125*	*%REC*	*1*	*10-Oct-2018 18:14*
Surr: Phenol-d6	*66.5*			*40-125*	*%REC*	*1*	*10-Oct-2018 18:14*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA32-20181004-06-51
Collection Date: 04-Oct-2018 10:55

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-13
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A	**Method:SW8082**				Prep:SW3541/3665A / 08-Oct-2018		Analyst: JBA
Aroclor 1016	U		0.0056	0.022	mg/Kg-dry	1	10-Oct-2018 08:38
Aroclor 1221	U		0.0074	0.022	mg/Kg-dry	1	10-Oct-2018 08:38
Aroclor 1232	U		0.0060	0.022	mg/Kg-dry	1	10-Oct-2018 08:38
Aroclor 1242	U		0.0078	0.022	mg/Kg-dry	1	10-Oct-2018 08:38
Aroclor 1248	U		0.0078	0.022	mg/Kg-dry	1	10-Oct-2018 08:38
Aroclor 1254	U		0.0063	0.022	mg/Kg-dry	1	10-Oct-2018 08:38
Aroclor 1260	U		0.0053	0.022	mg/Kg-dry	1	10-Oct-2018 08:38
Surr: Decachlorobiphenyl	*117*			*54-143*	*%REC*	*1*	*10-Oct-2018 08:38*
Surr: Tetrachloro-m-xylene	*84.4*			*50-140*	*%REC*	*1*	*10-Oct-2018 08:38*
METALS BY SW6020A	**Method:SW6020**				Prep:SW3050A / 08-Oct-2018		Analyst: JC
Aluminum	**8,930**		**29.2**	**252**	**mg/Kg-dry**	100	11-Oct-2018 15:08
Antimony	**0.258**	J	**0.0819**	**0.630**	**mg/Kg-dry**	1	11-Oct-2018 16:49
Arsenic	**12.3**		**0.0882**	**0.630**	**mg/Kg-dry**	1	10-Oct-2018 23:01
Barium	**90.8**		**0.0378**	**0.630**	**mg/Kg-dry**	1	10-Oct-2018 23:01
Beryllium	**0.520**	J	**0.0264**	**0.630**	**mg/Kg-dry**	1	11-Oct-2018 16:49
Cadmium	**0.563**	J	**0.0340**	**0.630**	**mg/Kg-dry**	1	10-Oct-2018 23:01
Calcium	**225,000**		**625**	**6300**	**mg/Kg-dry**	100	11-Oct-2018 15:08
Chromium	**17.4**		**0.0290**	**0.630**	**mg/Kg-dry**	1	11-Oct-2018 16:49
Cobalt	**5.76**		**0.0189**	**0.630**	**mg/Kg-dry**	1	10-Oct-2018 23:01
Copper	**27.7**		**0.0479**	**0.252**	**mg/Kg-dry**	1	11-Oct-2018 16:49
Iron	**10,600**		**2.30**	**63.0**	**mg/Kg-dry**	1	10-Oct-2018 23:01
Lead	**56.1**		**0.0164**	**0.630**	**mg/Kg-dry**	1	10-Oct-2018 23:01
Magnesium	**4,640**		**3.16**	**63.0**	**mg/Kg-dry**	1	11-Oct-2018 16:49
Manganese	**878**		**5.41**	**63.0**	**mg/Kg-dry**	100	11-Oct-2018 15:08
Nickel	**16.2**		**0.0604**	**0.630**	**mg/Kg-dry**	1	11-Oct-2018 16:49
Potassium	**1,750**		**8.46**	**63.0**	**mg/Kg-dry**	1	11-Oct-2018 16:49
Selenium	**0.745**		**0.115**	**0.630**	**mg/Kg-dry**	1	11-Oct-2018 16:49
Silver	**0.0835**	J	**0.0189**	**0.630**	**mg/Kg-dry**	1	10-Oct-2018 23:01
Sodium	**181**		**5.25**	**63.0**	**mg/Kg-dry**	1	11-Oct-2018 16:49
Thallium	U		0.281	0.630	mg/Kg-dry	1	10-Oct-2018 23:01
Vanadium	**31.5**		**0.0944**	**0.630**	**mg/Kg-dry**	1	10-Oct-2018 23:01
Zinc	**126**		**0.214**	**0.630**	**mg/Kg-dry**	1	10-Oct-2018 23:01
MERCURY BY SW7471B	**Method:SW7471A**				Prep:SW7471A / 10-Oct-2018		Analyst: JCJ
Mercury	**0.0415**		**0.000667**	**0.00472**	**mg/Kg-dry**	1	11-Oct-2018 13:42
MOISTURE - ASTM D2216	**Method:ASTM D2216**						Analyst: DFF
Percent Moisture	**25.0**		**0.0100**	**0.0100**	**wt%**	1	09-Oct-2018 09:58

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA32-20181004-06-52
Collection Date: 04-Oct-2018 10:55

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-14
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**				Prep:SW3541 / 08-Oct-2018		Analyst: ACN
1,1′-Biphenyl	U		0.0022	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
2,4,5-Trichlorophenol	U		0.0033	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
2,4,6-Trichlorophenol	U		0.0022	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
2,4-Dichlorophenol	U		0.0017	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
2,4-Dimethylphenol	U		0.0043	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
2,4-Dinitrophenol	U		0.0059	0.017	mg/Kg-dry	1	10-Oct-2018 18:34
2,4-Dinitrotoluene	U		0.0012	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
2,6-Dinitrotoluene	U		0.0043	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
2-Chloronaphthalene	U		0.0017	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
2-Chlorophenol	U		0.0017	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
2-Methylnaphthalene	**0.0024**	J	**0.00066**	**0.0043**	**mg/Kg-dry**	1	10-Oct-2018 18:34
2-Methylphenol	U		0.0014	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
2-Nitroaniline	U		0.0025	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
2-Nitrophenol	U		0.0033	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
3&4-Methylphenol	U		0.0013	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
3,3′-Dichlorobenzidine	U		0.0033	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
3-Nitroaniline	U		0.0025	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
4,6-Dinitro-2-methylphenol	U		0.0028	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
4-Bromophenyl phenyl ether	U		0.0021	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
4-Chloro-3-methylphenol	U		0.00092	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
4-Chloroaniline	U		0.0014	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
4-Chlorophenyl phenyl ether	U		0.0020	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
4-Nitroaniline	U		0.0029	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
4-Nitrophenol	U		0.0025	0.017	mg/Kg-dry	1	10-Oct-2018 18:34
Acenaphthene	U		0.00066	0.0043	mg/Kg-dry	1	10-Oct-2018 18:34
Acenaphthylene	U		0.0013	0.0043	mg/Kg-dry	1	10-Oct-2018 18:34
Acetophenone	U		0.0011	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
Anthracene	U		0.00066	0.0043	mg/Kg-dry	1	10-Oct-2018 18:34
Atrazine	U		0.0026	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
Benz(a)anthracene	U		0.0021	0.0043	mg/Kg-dry	1	10-Oct-2018 18:34
Benzaldehyde	U	n	0.0016	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
Benzo(a)pyrene	U		0.0013	0.0043	mg/Kg-dry	1	10-Oct-2018 18:34
Benzo(b)fluoranthene	U		0.0016	0.0043	mg/Kg-dry	1	10-Oct-2018 18:34
Benzo(g,h,i)perylene	U		0.00092	0.0043	mg/Kg-dry	1	10-Oct-2018 18:34
Benzo(k)fluoranthene	U		0.0012	0.0043	mg/Kg-dry	1	10-Oct-2018 18:34
Bis(2-chloro-1-methylethyl) ether	U		0.0018	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
Bis(2-chloroethoxy)methane	U		0.0012	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
Bis(2-chloroethyl)ether	U		0.0014	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
Bis(2-ethylhexyl)phthalate	**0.0077**	J	**0.0022**	**0.0087**	**mg/Kg-dry**	1	10-Oct-2018 18:34

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA32-20181004-06-52
Collection Date: 04-Oct-2018 10:55

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-14
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**				Prep:SW3541 / 08-Oct-2018		Analyst: ACN
Butyl benzyl phthalate	U		0.0017	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
Caprolactam	U		0.0016	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
Carbazole	U		0.0016	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
Chrysene	U		0.0011	0.0043	mg/Kg-dry	1	10-Oct-2018 18:34
Dibenz(a,h)anthracene	U		0.0021	0.0043	mg/Kg-dry	1	10-Oct-2018 18:34
Dibenzofuran	U		0.00092	0.0043	mg/Kg-dry	1	10-Oct-2018 18:34
Diethyl phthalate	U		0.0013	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
Dimethyl phthalate	U		0.0011	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
Di-n-butyl phthalate	U		0.0016	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
Di-n-octyl phthalate	U		0.0012	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
Fluoranthene	**0.0016**	J	**0.0014**	**0.0043**	**mg/Kg-dry**	1	10-Oct-2018 18:34
Fluorene	U		0.0014	0.0043	mg/Kg-dry	1	10-Oct-2018 18:34
Hexachlorobenzene	U		0.0012	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
Hexachlorobutadiene	U		0.0016	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
Hexachlorocyclopentadiene	U		0.0011	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
Hexachloroethane	U		0.0020	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
Indeno(1,2,3-cd)pyrene	U		0.0011	0.0043	mg/Kg-dry	1	10-Oct-2018 18:34
Isophorone	U		0.0011	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
Naphthalene	U		0.00079	0.0043	mg/Kg-dry	1	10-Oct-2018 18:34
Nitrobenzene	U		0.0012	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
N-Nitrosodi-n-propylamine	U		0.0014	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
N-Nitrosodiphenylamine	U		0.00092	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
Pentachlorophenol	U		0.0043	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
Phenanthrene	**0.0030**	J	**0.0020**	**0.0043**	**mg/Kg-dry**	1	10-Oct-2018 18:34
Phenol	U		0.0014	0.0087	mg/Kg-dry	1	10-Oct-2018 18:34
Pyrene	**0.0011**	J	**0.00079**	**0.0043**	**mg/Kg-dry**	1	10-Oct-2018 18:34
Surr: 2,4,6-Tribromophenol	*80.8*			*36-126*	*%REC*	*1*	*10-Oct-2018 18:34*
Surr: 2-Fluorobiphenyl	*75.3*			*43-125*	*%REC*	*1*	*10-Oct-2018 18:34*
Surr: 2-Fluorophenol	*63.0*			*37-125*	*%REC*	*1*	*10-Oct-2018 18:34*
Surr: 4-Terphenyl-d14	*91.9*			*32-125*	*%REC*	*1*	*10-Oct-2018 18:34*
Surr: Nitrobenzene-d5	*71.9*			*37-125*	*%REC*	*1*	*10-Oct-2018 18:34*
Surr: Phenol-d6	*64.7*			*40-125*	*%REC*	*1*	*10-Oct-2018 18:34*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA32-20181004-06-52
Collection Date: 04-Oct-2018 10:55

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-14
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A		**Method:SW8082**			Prep:SW3541/3665A / 08-Oct-2018		Analyst: JBA
Aroclor 1016	U		0.0055	0.022	mg/Kg-dry	1	10-Oct-2018 08:54
Aroclor 1221	U		0.0074	0.022	mg/Kg-dry	1	10-Oct-2018 08:54
Aroclor 1232	U		0.0059	0.022	mg/Kg-dry	1	10-Oct-2018 08:54
Aroclor 1242	U		0.0078	0.022	mg/Kg-dry	1	10-Oct-2018 08:54
Aroclor 1248	U		0.0078	0.022	mg/Kg-dry	1	10-Oct-2018 08:54
Aroclor 1254	U		0.0062	0.022	mg/Kg-dry	1	10-Oct-2018 08:54
Aroclor 1260	U		0.0053	0.022	mg/Kg-dry	1	10-Oct-2018 08:54
Surr: Decachlorobiphenyl	*138*			*54-143*	*%REC*	*1*	*10-Oct-2018 08:54*
Surr: Tetrachloro-m-xylene	*89.9*			*50-140*	*%REC*	*1*	*10-Oct-2018 08:54*
METALS BY SW6020A		**Method:SW6020**			Prep:SW3050A / 08-Oct-2018		Analyst: JC
Aluminum	**10,100**		**29.6**	**255**	**mg/Kg-dry**	100	11-Oct-2018 15:10
Antimony	**0.372**	J	**0.0828**	**0.637**	**mg/Kg-dry**	1	11-Oct-2018 16:51
Arsenic	**7.36**		**0.0892**	**0.637**	**mg/Kg-dry**	1	10-Oct-2018 23:03
Barium	**93.1**		**0.0382**	**0.637**	**mg/Kg-dry**	1	10-Oct-2018 23:03
Beryllium	**0.547**	J	**0.0267**	**0.637**	**mg/Kg-dry**	1	11-Oct-2018 16:51
Cadmium	**0.621**	J	**0.0344**	**0.637**	**mg/Kg-dry**	1	10-Oct-2018 23:03
Calcium	**259,000**		**632**	**6370**	**mg/Kg-dry**	100	11-Oct-2018 15:10
Chromium	**17.7**		**0.0293**	**0.637**	**mg/Kg-dry**	1	11-Oct-2018 16:51
Cobalt	**6.29**		**0.0191**	**0.637**	**mg/Kg-dry**	1	10-Oct-2018 23:03
Copper	**29.7**		**0.0484**	**0.255**	**mg/Kg-dry**	1	11-Oct-2018 16:51
Iron	**12,000**		**2.33**	**63.7**	**mg/Kg-dry**	1	10-Oct-2018 23:03
Lead	**52.3**		**0.0166**	**0.637**	**mg/Kg-dry**	1	10-Oct-2018 23:03
Magnesium	**4,560**		**3.20**	**63.7**	**mg/Kg-dry**	1	11-Oct-2018 16:51
Manganese	**1,070**		**5.48**	**63.7**	**mg/Kg-dry**	100	11-Oct-2018 15:10
Nickel	**16.9**		**0.0611**	**0.637**	**mg/Kg-dry**	1	11-Oct-2018 16:51
Potassium	**1,710**		**8.56**	**63.7**	**mg/Kg-dry**	1	11-Oct-2018 16:51
Selenium	**1.12**		**0.116**	**0.637**	**mg/Kg-dry**	1	11-Oct-2018 16:51
Silver	**0.0638**	J	**0.0191**	**0.637**	**mg/Kg-dry**	1	10-Oct-2018 23:03
Sodium	**183**		**5.31**	**63.7**	**mg/Kg-dry**	1	11-Oct-2018 16:51
Thallium	U		0.284	0.637	mg/Kg-dry	1	10-Oct-2018 23:03
Vanadium	**34.1**		**0.0955**	**0.637**	**mg/Kg-dry**	1	10-Oct-2018 23:03
Zinc	**126**		**0.217**	**0.637**	**mg/Kg-dry**	1	10-Oct-2018 23:03
MERCURY BY SW7471B		**Method:SW7471A**			Prep:SW7471A / 10-Oct-2018		Analyst: JCJ
Mercury	**0.0463**		**0.000644**	**0.00456**	**mg/Kg-dry**	1	11-Oct-2018 13:43
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**24.1**		**0.0100**	**0.0100**	**wt%**	1	09-Oct-2018 09:58

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA32-20181004-12-51
Collection Date: 04-Oct-2018 11:15

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-15
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**				Prep:SW3541 / 08-Oct-2018		Analyst: ACN
1,1´-Biphenyl	U		0.0021	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
2,4,5-Trichlorophenol	U		0.0031	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
2,4,6-Trichlorophenol	U		0.0021	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
2,4-Dichlorophenol	U		0.0016	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
2,4-Dimethylphenol	U		0.0041	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
2,4-Dinitrophenol	U		0.0055	0.016	mg/Kg-dry	1	10-Oct-2018 18:53
2,4-Dinitrotoluene	U		0.0011	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
2,6-Dinitrotoluene	U		0.0041	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
2-Chloronaphthalene	U		0.0016	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
2-Chlorophenol	U		0.0016	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
2-Methylnaphthalene	U		0.00061	0.0041	mg/Kg-dry	1	10-Oct-2018 18:53
2-Methylphenol	U		0.0014	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
2-Nitroaniline	U		0.0023	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
2-Nitrophenol	U		0.0031	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
3&4-Methylphenol	U		0.0012	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
3,3´-Dichlorobenzidine	U		0.0031	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
3-Nitroaniline	U		0.0023	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
4,6-Dinitro-2-methylphenol	U		0.0026	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
4-Bromophenyl phenyl ether	U		0.0020	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
4-Chloro-3-methylphenol	U		0.00086	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
4-Chloroaniline	U		0.0014	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
4-Chlorophenyl phenyl ether	U		0.0018	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
4-Nitroaniline	U		0.0027	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
4-Nitrophenol	U		0.0023	0.016	mg/Kg-dry	1	10-Oct-2018 18:53
Acenaphthene	U		0.00061	0.0041	mg/Kg-dry	1	10-Oct-2018 18:53
Acenaphthylene	U		0.0012	0.0041	mg/Kg-dry	1	10-Oct-2018 18:53
Acetophenone	U		0.00098	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
Anthracene	U		0.00061	0.0041	mg/Kg-dry	1	10-Oct-2018 18:53
Atrazine	U		0.0025	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
Benz(a)anthracene	U		0.0020	0.0041	mg/Kg-dry	1	10-Oct-2018 18:53
Benzaldehyde	U	n	0.0015	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
Benzo(a)pyrene	U		0.0012	0.0041	mg/Kg-dry	1	10-Oct-2018 18:53
Benzo(b)fluoranthene	U		0.0015	0.0041	mg/Kg-dry	1	10-Oct-2018 18:53
Benzo(g,h,i)perylene	U		0.00086	0.0041	mg/Kg-dry	1	10-Oct-2018 18:53
Benzo(k)fluoranthene	U		0.0011	0.0041	mg/Kg-dry	1	10-Oct-2018 18:53
Bis(2-chloro-1-methylethyl) ether	U		0.0017	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
Bis(2-chloroethoxy)methane	U		0.0011	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
Bis(2-chloroethyl)ether	U		0.0014	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
Bis(2-ethylhexyl)phthalate	**0.022**		**0.0021**	**0.0081**	**mg/Kg-dry**	1	10-Oct-2018 18:53

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA32-20181004-12-51
Collection Date: 04-Oct-2018 11:15

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-15
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	**Method:SW8270**			Prep:SW3541 / 08-Oct-2018			Analyst: ACN
Butyl benzyl phthalate		U	0.0016	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
Caprolactam		U	0.0015	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
Carbazole		U	0.0015	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
Chrysene		U	0.00098	0.0041	mg/Kg-dry	1	10-Oct-2018 18:53
Dibenz(a,h)anthracene		U	0.0020	0.0041	mg/Kg-dry	1	10-Oct-2018 18:53
Dibenzofuran		U	0.00086	0.0041	mg/Kg-dry	1	10-Oct-2018 18:53
Diethyl phthalate		U	0.0012	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
Dimethyl phthalate		U	0.00098	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
Di-n-butyl phthalate		U	0.0015	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
Di-n-octyl phthalate		U	0.0011	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
Fluoranthene		U	0.0014	0.0041	mg/Kg-dry	1	10-Oct-2018 18:53
Fluorene		U	0.0014	0.0041	mg/Kg-dry	1	10-Oct-2018 18:53
Hexachlorobenzene		U	0.0011	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
Hexachlorobutadiene		U	0.0015	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
Hexachlorocyclopentadiene		U	0.00098	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
Hexachloroethane		U	0.0018	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
Indeno(1,2,3-cd)pyrene		U	0.00098	0.0041	mg/Kg-dry	1	10-Oct-2018 18:53
Isophorone		U	0.00098	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
Naphthalene		U	0.00074	0.0041	mg/Kg-dry	1	10-Oct-2018 18:53
Nitrobenzene		U	0.0011	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
N-Nitrosodi-n-propylamine		U	0.0014	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
N-Nitrosodiphenylamine		U	0.00086	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
Pentachlorophenol		U	0.0041	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
Phenanthrene		U	0.0018	0.0041	mg/Kg-dry	1	10-Oct-2018 18:53
Phenol		U	0.0014	0.0081	mg/Kg-dry	1	10-Oct-2018 18:53
Pyrene		U	0.00074	0.0041	mg/Kg-dry	1	10-Oct-2018 18:53
Surr: 2,4,6-Tribromophenol	*60.5*			*36-126*	*%REC*	*1*	*10-Oct-2018 18:53*
Surr: 2-Fluorobiphenyl	*52.2*			*43-125*	*%REC*	*1*	*10-Oct-2018 18:53*
Surr: 2-Fluorophenol	*45.6*			*37-125*	*%REC*	*1*	*10-Oct-2018 18:53*
Surr: 4-Terphenyl-d14	*74.1*			*32-125*	*%REC*	*1*	*10-Oct-2018 18:53*
Surr: Nitrobenzene-d5	*50.9*			*37-125*	*%REC*	*1*	*10-Oct-2018 18:53*
Surr: Phenol-d6	*47.7*			*40-125*	*%REC*	*1*	*10-Oct-2018 18:53*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: DRA32-20181004-12-51
Collection Date: 04-Oct-2018 11:15

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-15
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A		**Method:SW8082**			Prep:SW3541/3665A / 08-Oct-2018		Analyst: JBA
Aroclor 1016	U		0.0052	0.021	mg/Kg-dry	1	10-Oct-2018 09:09
Aroclor 1221	U		0.0069	0.021	mg/Kg-dry	1	10-Oct-2018 09:09
Aroclor 1232	U		0.0055	0.021	mg/Kg-dry	1	10-Oct-2018 09:09
Aroclor 1242	U		0.0073	0.021	mg/Kg-dry	1	10-Oct-2018 09:09
Aroclor 1248	U		0.0073	0.021	mg/Kg-dry	1	10-Oct-2018 09:09
Aroclor 1254	U		0.0058	0.021	mg/Kg-dry	1	10-Oct-2018 09:09
Aroclor 1260	U		0.0049	0.021	mg/Kg-dry	1	10-Oct-2018 09:09
Surr: Decachlorobiphenyl	*133*			*54-143*	*%REC*	*1*	*10-Oct-2018 09:09*
Surr: Tetrachloro-m-xylene	*103*			*50-140*	*%REC*	*1*	*10-Oct-2018 09:09*
METALS BY SW6020A		**Method:SW6020**			Prep:SW3050A / 08-Oct-2018		Analyst: JC
Aluminum	**6,740**		**27.3**	**235**	**mg/Kg-dry**	100	11-Oct-2018 15:13
Antimony	**0.252**	J	**0.0765**	**0.588**	**mg/Kg-dry**	1	11-Oct-2018 16:59
Arsenic	**7.82**		**0.0824**	**0.588**	**mg/Kg-dry**	1	10-Oct-2018 23:05
Barium	**61.1**		**0.0353**	**0.588**	**mg/Kg-dry**	1	10-Oct-2018 23:05
Beryllium	**0.421**	J	**0.0247**	**0.588**	**mg/Kg-dry**	1	11-Oct-2018 16:59
Cadmium	**0.502**	J	**0.0318**	**0.588**	**mg/Kg-dry**	1	10-Oct-2018 23:05
Calcium	**252,000**		**584**	**5880**	**mg/Kg-dry**	100	11-Oct-2018 15:13
Chromium	**13.8**		**0.0271**	**0.588**	**mg/Kg-dry**	1	11-Oct-2018 16:59
Cobalt	**5.64**		**0.0177**	**0.588**	**mg/Kg-dry**	1	10-Oct-2018 23:05
Copper	**11.2**		**0.0447**	**0.235**	**mg/Kg-dry**	1	11-Oct-2018 16:59
Iron	**8,460**		**2.15**	**58.8**	**mg/Kg-dry**	1	10-Oct-2018 23:05
Lead	**119**		**0.0153**	**0.588**	**mg/Kg-dry**	1	10-Oct-2018 23:05
Magnesium	**2,590**		**2.95**	**58.8**	**mg/Kg-dry**	1	11-Oct-2018 16:59
Manganese	**858**		**5.06**	**58.8**	**mg/Kg-dry**	100	11-Oct-2018 15:13
Nickel	**15.0**		**0.0565**	**0.588**	**mg/Kg-dry**	1	11-Oct-2018 16:59
Potassium	**1,750**		**7.91**	**58.8**	**mg/Kg-dry**	1	11-Oct-2018 16:59
Selenium	**1.09**		**0.107**	**0.588**	**mg/Kg-dry**	1	11-Oct-2018 16:59
Silver	**0.0514**	J	**0.0177**	**0.588**	**mg/Kg-dry**	1	10-Oct-2018 23:05
Sodium	**255**		**4.91**	**58.8**	**mg/Kg-dry**	1	11-Oct-2018 16:59
Thallium	U		0.262	0.588	mg/Kg-dry	1	10-Oct-2018 23:05
Vanadium	**29.3**		**0.0883**	**0.588**	**mg/Kg-dry**	1	10-Oct-2018 23:05
Zinc	**63.4**		**0.200**	**0.588**	**mg/Kg-dry**	1	10-Oct-2018 23:05
MERCURY BY SW7471B		**Method:SW7471A**			Prep:SW7471A / 10-Oct-2018		Analyst: JCJ
Mercury	**0.0552**		**0.000591**	**0.00418**	**mg/Kg-dry**	1	11-Oct-2018 13:45
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**19.0**		**0.0100**	**0.0100**	**wt%**	1	09-Oct-2018 09:58

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: FJD04-09-PCS01-20181004-81
Collection Date: 04-Oct-2018 16:16

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-16
Matrix:Paint

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A		**Method:SW8082**			Prep:CLP4_PEST / 10-Oct-2018		Analyst: JBA
Aroclor 1268	U	n	0.033	0.033	mg/Kg	1	11-Oct-2018 01:36
Surr: Tetrachloro-m-xylene	*89.2*			*55-150*	*%REC*	*1*	*11-Oct-2018 01:36*
LEAD IN PAINT BY SW6020A		**Method:SW6020**			Prep:SW3050A / 08-Oct-2018		Analyst: JC
Lead	**151**		**1.24**	**47.7**	**mg/Kg**	100	10-Oct-2018 23:07

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: FJD04-09-WS01-20181004-81
Collection Date: 04-Oct-2018 14:11

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-17
Matrix:Wipe

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A	**Method:SW8082**			Prep:SW3541C/3665A / 09-Oct-2018		Analyst: JBA	
Aroclor 1016	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:04
Aroclor 1221	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:04
Aroclor 1232	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:04
Aroclor 1242	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:04
Aroclor 1248	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:04
Aroclor 1254	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:04
Aroclor 1260	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:04
Surr: Decachlorobiphenyl	*121*			*30-150*	*%REC*	*1*	*09-Oct-2018 20:04*
Surr: Tetrachloro-m-xylene	*113*			*30-150*	*%REC*	*1*	*09-Oct-2018 20:04*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: FJD04-09-WS01-20181004-82
Collection Date: 04-Oct-2018 14:13

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-18
Matrix:Wipe

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A	**Method:SW8082**			Prep:SW3541C/3665A / 09-Oct-2018		Analyst: JBA	
Aroclor 1016	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:20
Aroclor 1221	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:20
Aroclor 1232	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:20
Aroclor 1242	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:20
Aroclor 1248	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:20
Aroclor 1254	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:20
Aroclor 1260	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:20
Surr: Decachlorobiphenyl	*117*			*30-150*	*%REC*	*1*	*09-Oct-2018 20:20*
Surr: Tetrachloro-m-xylene	*110*			*30-150*	*%REC*	*1*	*09-Oct-2018 20:20*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: FJD04-09-WS02-20181004-81
Collection Date: 04-Oct-2018 14:16

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-19
Matrix:Wipe

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A	**Method:SW8082**			Prep:SW3541C/3665A / 09-Oct-2018		Analyst: JBA	
Aroclor 1016	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:36
Aroclor 1221	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:36
Aroclor 1232	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:36
Aroclor 1242	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:36
Aroclor 1248	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:36
Aroclor 1254	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:36
Aroclor 1260	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:36
Surr: Decachlorobiphenyl	*132*			*30-150*	*%REC*	*1*	*09-Oct-2018 20:36*
Surr: Tetrachloro-m-xylene	*99.7*			*30-150*	*%REC*	*1*	*09-Oct-2018 20:36*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: FJD04-09-WS03-20181004-81
Collection Date: 04-Oct-2018 14:20

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-20
Matrix:Wipe

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A	**Method:SW8082**			Prep:SW3541C/3665A / 09-Oct-2018		Analyst: JBA	
Aroclor 1016	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:51
Aroclor 1221	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:51
Aroclor 1232	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:51
Aroclor 1242	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:51
Aroclor 1248	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:51
Aroclor 1254	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:51
Aroclor 1260	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 20:51
Surr: Decachlorobiphenyl	*127*			*30-150*	*%REC*	*1*	*09-Oct-2018 20:51*
Surr: Tetrachloro-m-xylene	*118*			*30-150*	*%REC*	*1*	*09-Oct-2018 20:51*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: FJD04-09-WS04-20181004-81
Collection Date: 04-Oct-2018 14:26

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-21
Matrix:Wipe

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A	**Method:SW8082**			Prep:SW3541C/3665A / 09-Oct-2018		Analyst: JBA	
Aroclor 1016	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 21:07
Aroclor 1221	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 21:07
Aroclor 1232	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 21:07
Aroclor 1242	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 21:07
Aroclor 1248	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 21:07
Aroclor 1254	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 21:07
Aroclor 1260	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 21:07
Surr: Decachlorobiphenyl	*134*			*30-150*	*%REC*	*1*	*09-Oct-2018 21:07*
Surr: Tetrachloro-m-xylene	*107*			*30-150*	*%REC*	*1*	*09-Oct-2018 21:07*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: FJD04-09-WS05-20181004-81
Collection Date: 04-Oct-2018 14:28

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-22
Matrix:Wipe

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A	**Method:SW8082**			Prep:SW3541C/3665A / 09-Oct-2018		Analyst: JBA	
Aroclor 1016	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 21:23
Aroclor 1221	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 21:23
Aroclor 1232	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 21:23
Aroclor 1242	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 21:23
Aroclor 1248	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 21:23
Aroclor 1254	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 21:23
Aroclor 1260	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 21:23
Surr: Decachlorobiphenyl	*130*			*30-150*	*%REC*	*1*	*09-Oct-2018 21:23*
Surr: Tetrachloro-m-xylene	*117*			*30-150*	*%REC*	*1*	*09-Oct-2018 21:23*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: FJD04-09-WS05-20181004-82
Collection Date: 04-Oct-2018 14:31

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-23
Matrix:Wipe

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A	**Method:SW8082**			Prep:SW3541C/3665A / 09-Oct-2018		Analyst: JBA	
Aroclor 1016	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 22:57
Aroclor 1221	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 22:57
Aroclor 1232	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 22:57
Aroclor 1242	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 22:57
Aroclor 1248	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 22:57
Aroclor 1254	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 22:57
Aroclor 1260	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 22:57
Surr: Decachlorobiphenyl	*129*			*30-150*	*%REC*	*1*	*09-Oct-2018 22:57*
Surr: Tetrachloro-m-xylene	*113*			*30-150*	*%REC*	*1*	*09-Oct-2018 22:57*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: FJD04-09-WS06-20181004-81
Collection Date: 04-Oct-2018 14:33

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-24
Matrix:Wipe

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A	**Method:SW8082**			Prep:SW3541C/3665A / 09-Oct-2018		Analyst: JBA	
Aroclor 1016	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 23:13
Aroclor 1221	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 23:13
Aroclor 1232	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 23:13
Aroclor 1242	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 23:13
Aroclor 1248	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 23:13
Aroclor 1254	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 23:13
Aroclor 1260	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 23:13
Surr: Decachlorobiphenyl	*108*			*30-150*	*%REC*	*1*	*09-Oct-2018 23:13*
Surr: Tetrachloro-m-xylene	*97.8*			*30-150*	*%REC*	*1*	*09-Oct-2018 23:13*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: FJD04-09-WS07-20181004-81
Collection Date: 04-Oct-2018 14:36

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-25
Matrix:Wipe

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A	**Method:SW8082**			Prep:SW3541C/3665A / 09-Oct-2018		Analyst: JBA	
Aroclor 1016	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 23:28
Aroclor 1221	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 23:28
Aroclor 1232	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 23:28
Aroclor 1242	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 23:28
Aroclor 1248	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 23:28
Aroclor 1254	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 23:28
Aroclor 1260	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 23:28
Surr: Decachlorobiphenyl	*130*			*30-150*	*%REC*	*1*	*09-Oct-2018 23:28*
Surr: Tetrachloro-m-xylene	*120*			*30-150*	*%REC*	*1*	*09-Oct-2018 23:28*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: FJD04-09-WS08-20181004-81
Collection Date: 04-Oct-2018 14:38

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-26
Matrix:Wipe

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A	**Method:SW8082**			Prep:SW3541C/3665A / 09-Oct-2018		Analyst: JBA	
Aroclor 1016	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 23:44
Aroclor 1221	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 23:44
Aroclor 1232	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 23:44
Aroclor 1242	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 23:44
Aroclor 1248	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 23:44
Aroclor 1254	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 23:44
Aroclor 1260	U		0.50	0.50	ug/100cm2	1	09-Oct-2018 23:44
Surr: Decachlorobiphenyl	*131*			*30-150*	*%REC*	*1*	*09-Oct-2018 23:44*
Surr: Tetrachloro-m-xylene	*107*			*30-150*	*%REC*	*1*	*09-Oct-2018 23:44*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: FJD04-09-WS09-20181004-81
Collection Date: 04-Oct-2018 14:42

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-27
Matrix:Wipe

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A	**Method:SW8082**			Prep:SW3541C/3665A / 09-Oct-2018		Analyst: JBA	
Aroclor 1016	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:00
Aroclor 1221	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:00
Aroclor 1232	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:00
Aroclor 1242	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:00
Aroclor 1248	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:00
Aroclor 1254	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:00
Aroclor 1260	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:00
Surr: Decachlorobiphenyl	*136*			*30-150*	*%REC*	*1*	*10-Oct-2018 00:00*
Surr: Tetrachloro-m-xylene	*120*			*30-150*	*%REC*	*1*	*10-Oct-2018 00:00*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: FJD04-09-WS10-20181004-81
Collection Date: 04-Oct-2018 14:46

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-28
Matrix:Wipe

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A	**Method:SW8082**				Prep:SW3541C/3665A / 09-Oct-2018		Analyst: JBA
Aroclor 1016	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:16
Aroclor 1221	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:16
Aroclor 1232	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:16
Aroclor 1242	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:16
Aroclor 1248	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:16
Aroclor 1254	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:16
Aroclor 1260	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:16
Surr: Decachlorobiphenyl	*112*			*30-150*	*%REC*	*1*	*10-Oct-2018 00:16*
Surr: Tetrachloro-m-xylene	*95.6*			*30-150*	*%REC*	*1*	*10-Oct-2018 00:16*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: FJD04-09-WS11-20181004-81
Collection Date: 04-Oct-2018 14:54

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-29
Matrix:Wipe

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A	**Method:SW8082**			Prep:SW3541C/3665A / 09-Oct-2018		Analyst: JBA	
Aroclor 1016	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:31
Aroclor 1221	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:31
Aroclor 1232	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:31
Aroclor 1242	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:31
Aroclor 1248	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:31
Aroclor 1254	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:31
Aroclor 1260	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:31
Surr: Decachlorobiphenyl	*129*			*30-150*	*%REC*	*1*	*10-Oct-2018 00:31*
Surr: Tetrachloro-m-xylene	*115*			*30-150*	*%REC*	*1*	*10-Oct-2018 00:31*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: FJD04-09-WS12-20181004-81
Collection Date: 04-Oct-2018 14:58

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-30
Matrix:Wipe

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A	**Method:SW8082**			Prep:SW3541C/3665A / 09-Oct-2018		Analyst: JBA	
Aroclor 1016	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:47
Aroclor 1221	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:47
Aroclor 1232	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:47
Aroclor 1242	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:47
Aroclor 1248	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:47
Aroclor 1254	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:47
Aroclor 1260	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 00:47
Surr: Decachlorobiphenyl	*128*			*30-150*	*%REC*	*1*	*10-Oct-2018 00:47*
Surr: Tetrachloro-m-xylene	*114*			*30-150*	*%REC*	*1*	*10-Oct-2018 00:47*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: FJD04-09-WS13-20181004-81
Collection Date: 04-Oct-2018 15:02

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-31
Matrix:Wipe

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A	**Method:SW8082**			Prep:SW3541C/3665A / 09-Oct-2018		Analyst: JBA	
Aroclor 1016	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 01:03
Aroclor 1221	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 01:03
Aroclor 1232	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 01:03
Aroclor 1242	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 01:03
Aroclor 1248	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 01:03
Aroclor 1254	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 01:03
Aroclor 1260	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 01:03
Surr: Decachlorobiphenyl	*125*			*30-150*	*%REC*	*1*	*10-Oct-2018 01:03*
Surr: Tetrachloro-m-xylene	*102*			*30-150*	*%REC*	*1*	*10-Oct-2018 01:03*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
Sample ID: FJD04-09-WS14-20181004-81
Collection Date: 04-Oct-2018 15:06

ANALYTICAL REPORT
WorkOrder:HS18100338
Lab ID:HS18100338-32
Matrix:Wipe

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PCBS BY SW8082A	**Method:SW8082**			Prep:SW3541C/3665A / 09-Oct-2018		Analyst: JBA	
Aroclor 1016	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 01:18
Aroclor 1221	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 01:18
Aroclor 1232	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 01:18
Aroclor 1242	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 01:18
Aroclor 1248	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 01:18
Aroclor 1254	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 01:18
Aroclor 1260	U		0.50	0.50	ug/100cm2	1	10-Oct-2018 01:18
Surr: Decachlorobiphenyl	*111*			*30-150*	*%REC*	*1*	*10-Oct-2018 01:18*
Surr: Tetrachloro-m-xylene	*94.8*			*30-150*	*%REC*	*1*	*10-Oct-2018 01:18*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

WEIGHT LOG

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

Batch ID: 133244 **Method:** LOW-LEVEL SEMIVOLATILES **Prep:** 3510_B_LOW

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18100338-01	1	1000	1 (mL)	0.001

Batch ID: 133282 **Method:** LEAD IN PAINT BY SW6020A **Prep:** 3050_I_LOW

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18100338-16	1	0.5244	50 (mL)	95.35
HS18100338-02	1	0.521	50 (mL)	95.97
HS18100338-03	1	0.5175	50 (mL)	96.62
HS18100338-04	1	0.5125	50 (mL)	97.56
HS18100338-05	1	0.5393	50 (mL)	92.71
HS18100338-06	1	0.5308	50 (mL)	94.2
HS18100338-07	1	0.5437	50 (mL)	91.96
HS18100338-08	1	0.546	50 (mL)	91.58
HS18100338-09	1	0.5272	50 (mL)	94.84
HS18100338-10	1	0.5187	50 (mL)	96.39
HS18100338-11	1	0.544	50 (mL)	91.91
HS18100338-12	1	0.5173	50 (mL)	96.66
HS18100338-13	1	0.5294	50 (mL)	94.45
HS18100338-14	1	0.5172	50 (mL)	96.67
HS18100338-15	1	0.5246	50 (mL)	95.31

Batch ID: 133292 **Method:** ICP-MS METALS BY SW6020A **Prep:** 3010A

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18100338-01	1	10	10 (mL)	1

Batch ID: 133297 **Method:** LOW-LEVEL SEMIVOLATILES BY 8270D **Prep:** 3541_B_LOW

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18100338-02	1	30.07	1 (mL)	0.03326
HS18100338-03	1	30.05	1 (mL)	0.03328
HS18100338-04	1	30.12	1 (mL)	0.0332
HS18100338-05	1	30.18	1 (mL)	0.03313
HS18100338-06	1	30.15	1 (mL)	0.03317
HS18100338-07	1	30.06	1 (mL)	0.03327
HS18100338-08	1	30.09	1 (mL)	0.03323
HS18100338-09	1	30.02	1 (mL)	0.03331
HS18100338-10	1	30.17	1 (mL)	0.03315
HS18100338-11	1	30.19	1 (mL)	0.03312
HS18100338-12	1	30.12	1 (mL)	0.0332
HS18100338-13	1	30.03	1 (mL)	0.0333
HS18100338-14	1	30.04	1 (mL)	0.03329
HS18100338-15	1	30.15	1 (mL)	0.03317

WEIGHT LOG

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

Batch ID: 133300 **Method:** PCBS BY SW8082A **Prep:** PCBPR_SOX

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18100338-02	1	30.06	10 (mL)	0.3327
HS18100338-03	1	30.02	10 (mL)	0.3331
HS18100338-04	1	30.05	10 (mL)	0.3328
HS18100338-05	1	30.13	10 (mL)	0.3319
HS18100338-06	1	30.19	10 (mL)	0.3312
HS18100338-07	1	30.15	10 (mL)	0.3317
HS18100338-08	1	30.03	10 (mL)	0.333
HS18100338-09	1	30.11	10 (mL)	0.3321
HS18100338-10	1	30.16	10 (mL)	0.3316
HS18100338-11	1	30.18	10 (mL)	0.3313
HS18100338-12	1	30.12	10 (mL)	0.332
HS18100338-13	1	30.08	10 (mL)	0.3324
HS18100338-14	1	30.07	10 (mL)	0.3326
HS18100338-15	1	30.14	10 (mL)	0.3318

Batch ID: 133307 **Method:** PCBS BY SW8082A **Prep:** PCBWIPEPR_SOX

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18100338-17	1	1	10 (mL)	10
HS18100338-18	1	1	10 (mL)	10
HS18100338-19	1	1	10 (mL)	10
HS18100338-20	1	1	10 (mL)	10
HS18100338-21	1	1	10 (mL)	10
HS18100338-22	1	1	10 (mL)	10
HS18100338-23	1	1	10 (mL)	10
HS18100338-24	1	1	10 (mL)	10
HS18100338-25	1	1	10 (mL)	10
HS18100338-26	1	1	10 (mL)	10
HS18100338-27	1	1	10 (mL)	10
HS18100338-28	1	1	10 (mL)	10
HS18100338-29	1	1	10 (mL)	10
HS18100338-30	1	1	10 (mL)	10
HS18100338-31	1	1	10 (mL)	10
HS18100338-32	1	1	10 (mL)	10

Batch ID: 133318 **Method:** PCBS BY SW8082A **Prep:** 3510_PCB

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18100338-01	1	240	10 (mL)	0.04167

Batch ID: 133349 **Method:** MERCURY BY SW7470A **Prep:** HG_WPR

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18100338-01	1	10 (mL)	10 (mL)	1

WEIGHT LOG

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

Batch ID: 133369 **Method:** MERCURY BY SW7471B **Prep:** HG_S_LOWPR

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18100338-02	1	0.5646	40 (mL)	70.85
HS18100338-03	1	0.5721	40 (mL)	69.92
HS18100338-04	1	0.564	40 (mL)	70.92
HS18100338-05	1	0.5678	40 (mL)	70.45
HS18100338-06	1	0.5793	40 (mL)	69.05
HS18100338-07	1	0.5722	40 (mL)	69.91
HS18100338-08	1	0.5692	40 (mL)	70.27
HS18100338-09	1	0.5587	40 (mL)	71.59
HS18100338-10	1	0.5645	40 (mL)	70.86
HS18100338-11	1	0.574	40 (mL)	69.69
HS18100338-12	1	0.5669	40 (mL)	70.56
HS18100338-13	1	0.5638	40 (mL)	70.95
HS18100338-14	1	0.5766	40 (mL)	69.37
HS18100338-15	1	0.5886	40 (mL)	67.96

Batch ID: 133387 **Method:** PCBS BY SW8082A **Prep:** PEST/PCB PR_SOX

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18100338-16	1	15.06	10 (mL)	0.664

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 133244	**Test Name :** LOW-LEVEL SEMIVOLATILES			**Matrix:** Water		
HS18100338-01	DRA32-20181004-12-23	04 Oct 2018 11:30		08 Oct 2018 09:09	10 Oct 2018 14:40	1
Batch ID 133282	**Test Name :** LEAD IN PAINT BY SW6020A			**Matrix:** Paint		
HS18100338-16	FJD04-09-PCS01-20181004-81	04 Oct 2018 16:16		08 Oct 2018 15:23	10 Oct 2018 23:07	100

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 133282	**Test Name :** METALS BY SW6020A			**Matrix:** Soil		
HS18100338-02	DRA29-20181004-01-51	04 Oct 2018 08:42		08 Oct 2018 15:23	11 Oct 2018 16:11	1
HS18100338-02	DRA29-20181004-01-51	04 Oct 2018 08:42		08 Oct 2018 15:23	11 Oct 2018 14:32	100
HS18100338-02	DRA29-20181004-01-51	04 Oct 2018 08:42		08 Oct 2018 15:23	10 Oct 2018 22:08	1
HS18100338-03	DRA29-20181004-06-51	04 Oct 2018 08:59		08 Oct 2018 15:23	11 Oct 2018 16:22	1
HS18100338-03	DRA29-20181004-06-51	04 Oct 2018 08:59		08 Oct 2018 15:23	11 Oct 2018 14:39	100
HS18100338-03	DRA29-20181004-06-51	04 Oct 2018 08:59		08 Oct 2018 15:23	10 Oct 2018 22:34	1
HS18100338-04	DRA29-20181004-06-52	04 Oct 2018 08:59		08 Oct 2018 15:23	11 Oct 2018 16:24	1
HS18100338-04	DRA29-20181004-06-52	04 Oct 2018 08:59		08 Oct 2018 15:23	11 Oct 2018 14:41	100
HS18100338-04	DRA29-20181004-06-52	04 Oct 2018 08:59		08 Oct 2018 15:23	10 Oct 2018 22:36	1
HS18100338-05	DRA29-20181004-12-51	04 Oct 2018 09:17		08 Oct 2018 15:23	11 Oct 2018 16:32	1
HS18100338-05	DRA29-20181004-12-51	04 Oct 2018 09:17		08 Oct 2018 15:23	11 Oct 2018 14:43	100
HS18100338-05	DRA29-20181004-12-51	04 Oct 2018 09:17		08 Oct 2018 15:23	10 Oct 2018 22:39	1
HS18100338-06	DRA30-20181004-01-51	04 Oct 2018 09:31		08 Oct 2018 15:23	11 Oct 2018 16:34	1
HS18100338-06	DRA30-20181004-01-51	04 Oct 2018 09:31		08 Oct 2018 15:23	11 Oct 2018 14:45	100
HS18100338-06	DRA30-20181004-01-51	04 Oct 2018 09:31		08 Oct 2018 15:23	10 Oct 2018 22:41	1
HS18100338-07	DRA30-20181004-06-51	04 Oct 2018 09:51		08 Oct 2018 15:23	11 Oct 2018 16:36	1
HS18100338-07	DRA30-20181004-06-51	04 Oct 2018 09:51		08 Oct 2018 15:23	11 Oct 2018 14:48	100
HS18100338-07	DRA30-20181004-06-51	04 Oct 2018 09:51		08 Oct 2018 15:23	10 Oct 2018 22:43	1
HS18100338-08	DRA30-20181004-12-51	04 Oct 2018 10:05		08 Oct 2018 15:23	11 Oct 2018 16:38	1
HS18100338-08	DRA30-20181004-12-51	04 Oct 2018 10:05		08 Oct 2018 15:23	11 Oct 2018 14:57	100
HS18100338-08	DRA30-20181004-12-51	04 Oct 2018 10:05		08 Oct 2018 15:23	10 Oct 2018 22:45	1
HS18100338-09	DRA31-20181004-01-51	04 Oct 2018 10:40		08 Oct 2018 15:23	11 Oct 2018 16:40	1
HS18100338-09	DRA31-20181004-01-51	04 Oct 2018 10:40		08 Oct 2018 15:23	11 Oct 2018 14:59	100
HS18100338-09	DRA31-20181004-01-51	04 Oct 2018 10:40		08 Oct 2018 15:23	10 Oct 2018 22:47	1
HS18100338-10	DRA31-20181004-06-51	04 Oct 2018 11:05		08 Oct 2018 15:23	11 Oct 2018 16:37	500
HS18100338-10	DRA31-20181004-06-51	04 Oct 2018 11:05		08 Oct 2018 15:23	11 Oct 2018 16:43	1
HS18100338-10	DRA31-20181004-06-51	04 Oct 2018 11:05		08 Oct 2018 15:23	11 Oct 2018 15:01	100
HS18100338-10	DRA31-20181004-06-51	04 Oct 2018 11:05		08 Oct 2018 15:23	10 Oct 2018 22:54	1
HS18100338-11	DRA31-20181004-12-51	04 Oct 2018 11:15		08 Oct 2018 15:23	11 Oct 2018 16:45	1
HS18100338-11	DRA31-20181004-12-51	04 Oct 2018 11:15		08 Oct 2018 15:23	11 Oct 2018 16:39	500
HS18100338-11	DRA31-20181004-12-51	04 Oct 2018 11:15		08 Oct 2018 15:23	11 Oct 2018 15:04	100
HS18100338-11	DRA31-20181004-12-51	04 Oct 2018 11:15		08 Oct 2018 15:23	10 Oct 2018 22:56	1
HS18100338-12	DRA32-20181004-01-51	04 Oct 2018 10:45		08 Oct 2018 15:23	11 Oct 2018 16:47	1
HS18100338-12	DRA32-20181004-01-51	04 Oct 2018 10:45		08 Oct 2018 15:23	11 Oct 2018 15:06	100
HS18100338-12	DRA32-20181004-01-51	04 Oct 2018 10:45		08 Oct 2018 15:23	10 Oct 2018 22:58	1
HS18100338-13	DRA32-20181004-06-51	04 Oct 2018 10:55		08 Oct 2018 15:23	11 Oct 2018 16:49	1
HS18100338-13	DRA32-20181004-06-51	04 Oct 2018 10:55		08 Oct 2018 15:23	11 Oct 2018 15:08	100
HS18100338-13	DRA32-20181004-06-51	04 Oct 2018 10:55		08 Oct 2018 15:23	10 Oct 2018 23:01	1
HS18100338-14	DRA32-20181004-06-52	04 Oct 2018 10:55		08 Oct 2018 15:23	11 Oct 2018 16:51	1

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
HS18100338-14	DRA32-20181004-06-52	04 Oct 2018 10:55		08 Oct 2018 15:23	11 Oct 2018 15:10	100
HS18100338-14	DRA32-20181004-06-52	04 Oct 2018 10:55		08 Oct 2018 15:23	10 Oct 2018 23:03	1
HS18100338-15	DRA32-20181004-12-51	04 Oct 2018 11:15		08 Oct 2018 15:23	11 Oct 2018 16:59	1
HS18100338-15	DRA32-20181004-12-51	04 Oct 2018 11:15		08 Oct 2018 15:23	11 Oct 2018 15:13	100
HS18100338-15	DRA32-20181004-12-51	04 Oct 2018 11:15		08 Oct 2018 15:23	10 Oct 2018 23:05	1
Batch ID 133292	**Test Name :** ICP-MS METALS BY SW6020A			**Matrix:** Water		
HS18100338-01	DRA32-20181004-12-23	04 Oct 2018 11:30		09 Oct 2018 11:00	11 Oct 2018 15:27	1
Batch ID 133297	**Test Name :** LOW-LEVEL SEMIVOLATILES BY 8270D			**Matrix:** Soil		
HS18100338-02	DRA29-20181004-01-51	04 Oct 2018 08:42		08 Oct 2018 17:00	10 Oct 2018 13:56	1
HS18100338-03	DRA29-20181004-06-51	04 Oct 2018 08:59		08 Oct 2018 17:00	10 Oct 2018 14:58	1
HS18100338-04	DRA29-20181004-06-52	04 Oct 2018 08:59		08 Oct 2018 17:00	10 Oct 2018 15:18	1
HS18100338-05	DRA29-20181004-12-51	04 Oct 2018 09:17		08 Oct 2018 17:00	10 Oct 2018 15:37	1
HS18100338-06	DRA30-20181004-01-51	04 Oct 2018 09:31		08 Oct 2018 17:00	10 Oct 2018 15:57	1
HS18100338-07	DRA30-20181004-06-51	04 Oct 2018 09:51		08 Oct 2018 17:00	10 Oct 2018 16:17	1
HS18100338-08	DRA30-20181004-12-51	04 Oct 2018 10:05		08 Oct 2018 17:00	10 Oct 2018 16:36	1
HS18100338-09	DRA31-20181004-01-51	04 Oct 2018 10:40		08 Oct 2018 17:00	10 Oct 2018 16:56	1
HS18100338-10	DRA31-20181004-06-51	04 Oct 2018 11:05		08 Oct 2018 17:00	10 Oct 2018 17:15	1
HS18100338-11	DRA31-20181004-12-51	04 Oct 2018 11:15		08 Oct 2018 17:00	10 Oct 2018 17:35	1
HS18100338-12	DRA32-20181004-01-51	04 Oct 2018 10:45		08 Oct 2018 17:00	10 Oct 2018 17:55	1
HS18100338-13	DRA32-20181004-06-51	04 Oct 2018 10:55		08 Oct 2018 17:00	10 Oct 2018 18:14	1
HS18100338-14	DRA32-20181004-06-52	04 Oct 2018 10:55		08 Oct 2018 17:00	10 Oct 2018 18:34	1
HS18100338-15	DRA32-20181004-12-51	04 Oct 2018 11:15		08 Oct 2018 17:00	10 Oct 2018 18:53	1
Batch ID 133300	**Test Name :** PCBS BY SW8082A			**Matrix:** Soil		
HS18100338-02	DRA29-20181004-01-51	04 Oct 2018 08:42		08 Oct 2018 18:00	10 Oct 2018 03:24	1
HS18100338-03	DRA29-20181004-06-51	04 Oct 2018 08:59		08 Oct 2018 18:00	10 Oct 2018 04:43	1
HS18100338-04	DRA29-20181004-06-52	04 Oct 2018 08:59		08 Oct 2018 18:00	10 Oct 2018 04:58	1
HS18100338-05	DRA29-20181004-12-51	04 Oct 2018 09:17		08 Oct 2018 18:00	10 Oct 2018 05:14	1
HS18100338-06	DRA30-20181004-01-51	04 Oct 2018 09:31		08 Oct 2018 18:00	10 Oct 2018 06:48	1
HS18100338-07	DRA30-20181004-06-51	04 Oct 2018 09:51		08 Oct 2018 18:00	10 Oct 2018 07:04	1
HS18100338-08	DRA30-20181004-12-51	04 Oct 2018 10:05		08 Oct 2018 18:00	10 Oct 2018 07:20	1
HS18100338-09	DRA31-20181004-01-51	04 Oct 2018 10:40		08 Oct 2018 18:00	10 Oct 2018 07:35	1
HS18100338-10	DRA31-20181004-06-51	04 Oct 2018 11:05		08 Oct 2018 18:00	10 Oct 2018 07:51	1
HS18100338-11	DRA31-20181004-12-51	04 Oct 2018 11:15		08 Oct 2018 18:00	10 Oct 2018 08:07	1
HS18100338-12	DRA32-20181004-01-51	04 Oct 2018 10:45		08 Oct 2018 18:00	10 Oct 2018 08:22	1
HS18100338-13	DRA32-20181004-06-51	04 Oct 2018 10:55		08 Oct 2018 18:00	10 Oct 2018 08:38	1
HS18100338-14	DRA32-20181004-06-52	04 Oct 2018 10:55		08 Oct 2018 18:00	10 Oct 2018 08:54	1
HS18100338-15	DRA32-20181004-12-51	04 Oct 2018 11:15		08 Oct 2018 18:00	10 Oct 2018 09:09	1

ED_002624_00001155-00076

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 133307	**Test Name :** PCBS BY SW8082A			**Matrix:** Wipe		
HS18100338-17	FJD04-09-WS01-20181004-81	04 Oct 2018 14:11		09 Oct 2018 11:00	09 Oct 2018 20:04	1
HS18100338-18	FJD04-09-WS01-20181004-82	04 Oct 2018 14:13		09 Oct 2018 11:00	09 Oct 2018 20:20	1
HS18100338-19	FJD04-09-WS02-20181004-81	04 Oct 2018 14:16		09 Oct 2018 11:00	09 Oct 2018 20:36	1
HS18100338-20	FJD04-09-WS03-20181004-81	04 Oct 2018 14:20		09 Oct 2018 11:00	09 Oct 2018 20:51	1
HS18100338-21	FJD04-09-WS04-20181004-81	04 Oct 2018 14:26		09 Oct 2018 11:00	09 Oct 2018 21:07	1
HS18100338-22	FJD04-09-WS05-20181004-81	04 Oct 2018 14:28		09 Oct 2018 11:00	09 Oct 2018 21:23	1
HS18100338-23	FJD04-09-WS05-20181004-82	04 Oct 2018 14:31		09 Oct 2018 11:00	09 Oct 2018 22:57	1
HS18100338-24	FJD04-09-WS06-20181004-81	04 Oct 2018 14:33		09 Oct 2018 11:00	09 Oct 2018 23:13	1
HS18100338-25	FJD04-09-WS07-20181004-81	04 Oct 2018 14:36		09 Oct 2018 11:00	09 Oct 2018 23:28	1
HS18100338-26	FJD04-09-WS08-20181004-81	04 Oct 2018 14:38		09 Oct 2018 11:00	09 Oct 2018 23:44	1
HS18100338-27	FJD04-09-WS09-20181004-81	04 Oct 2018 14:42		09 Oct 2018 11:00	10 Oct 2018 00:00	1
HS18100338-28	FJD04-09-WS10-20181004-81	04 Oct 2018 14:46		09 Oct 2018 11:00	10 Oct 2018 00:16	1
HS18100338-29	FJD04-09-WS11-20181004-81	04 Oct 2018 14:54		09 Oct 2018 11:00	10 Oct 2018 00:31	1
HS18100338-30	FJD04-09-WS12-20181004-81	04 Oct 2018 14:58		09 Oct 2018 11:00	10 Oct 2018 00:47	1
HS18100338-31	FJD04-09-WS13-20181004-81	04 Oct 2018 15:02		09 Oct 2018 11:00	10 Oct 2018 01:03	1
HS18100338-32	FJD04-09-WS14-20181004-81	04 Oct 2018 15:06		09 Oct 2018 11:00	10 Oct 2018 01:18	1
Batch ID 133318	**Test Name :** PCBS BY SW8082A			**Matrix:** Water		
HS18100338-01	DRA32-20181004-12-23	04 Oct 2018 11:30		09 Oct 2018 13:44	10 Oct 2018 12:18	1
Batch ID 133349	**Test Name :** MERCURY BY SW7470A			**Matrix:** Water		
HS18100338-01	DRA32-20181004-12-23	04 Oct 2018 11:30		10 Oct 2018 09:00	10 Oct 2018 16:05	1

ED_002624_00001155-00077

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 133369	**Test Name :** MERCURY BY SW7471B			**Matrix:** Soil		
HS18100338-02	DRA29-20181004-01-51	04 Oct 2018 08:42		10 Oct 2018 13:47	11 Oct 2018 13:10	1
HS18100338-03	DRA29-20181004-06-51	04 Oct 2018 08:59		10 Oct 2018 13:47	11 Oct 2018 13:15	1
HS18100338-04	DRA29-20181004-06-52	04 Oct 2018 08:59		10 Oct 2018 13:47	11 Oct 2018 13:17	1
HS18100338-05	DRA29-20181004-12-51	04 Oct 2018 09:17		10 Oct 2018 13:47	11 Oct 2018 13:19	1
HS18100338-06	DRA30-20181004-01-51	04 Oct 2018 09:31		10 Oct 2018 13:47	11 Oct 2018 13:21	1
HS18100338-07	DRA30-20181004-06-51	04 Oct 2018 09:51		10 Oct 2018 13:47	11 Oct 2018 13:22	1
HS18100338-08	DRA30-20181004-12-51	04 Oct 2018 10:05		10 Oct 2018 13:47	11 Oct 2018 13:24	1
HS18100338-09	DRA31-20181004-01-51	04 Oct 2018 10:40		10 Oct 2018 13:47	11 Oct 2018 13:26	1
HS18100338-10	DRA31-20181004-06-51	04 Oct 2018 11:05		10 Oct 2018 13:47	11 Oct 2018 13:36	1
HS18100338-11	DRA31-20181004-12-51	04 Oct 2018 11:15		10 Oct 2018 13:47	11 Oct 2018 13:38	1
HS18100338-12	DRA32-20181004-01-51	04 Oct 2018 10:45		10 Oct 2018 13:47	11 Oct 2018 13:40	1
HS18100338-13	DRA32-20181004-06-51	04 Oct 2018 10:55		10 Oct 2018 13:47	11 Oct 2018 13:42	1
HS18100338-14	DRA32-20181004-06-52	04 Oct 2018 10:55		10 Oct 2018 13:47	11 Oct 2018 13:43	1
HS18100338-15	DRA32-20181004-12-51	04 Oct 2018 11:15		10 Oct 2018 13:47	11 Oct 2018 13:45	1
Batch ID 133387	**Test Name :** PCBS BY SW8082A			**Matrix:** Paint		
HS18100338-16	FJD04-09-PCS01-20181004-81	04 Oct 2018 16:16		10 Oct 2018 14:30	11 Oct 2018 01:36	1
Batch ID R325102	**Test Name :** MOISTURE - ASTM D2216			**Matrix:** Soil		
HS18100338-02	DRA29-20181004-01-51	04 Oct 2018 08:42			09 Oct 2018 09:58	1
HS18100338-03	DRA29-20181004-06-51	04 Oct 2018 08:59			09 Oct 2018 09:58	1
HS18100338-04	DRA29-20181004-06-52	04 Oct 2018 08:59			09 Oct 2018 09:58	1
HS18100338-05	DRA29-20181004-12-51	04 Oct 2018 09:17			09 Oct 2018 09:58	1
HS18100338-06	DRA30-20181004-01-51	04 Oct 2018 09:31			09 Oct 2018 09:58	1
HS18100338-07	DRA30-20181004-06-51	04 Oct 2018 09:51			09 Oct 2018 09:58	1
HS18100338-08	DRA30-20181004-12-51	04 Oct 2018 10:05			09 Oct 2018 09:58	1
HS18100338-09	DRA31-20181004-01-51	04 Oct 2018 10:40			09 Oct 2018 09:58	1
HS18100338-10	DRA31-20181004-06-51	04 Oct 2018 11:05			09 Oct 2018 09:58	1
HS18100338-11	DRA31-20181004-12-51	04 Oct 2018 11:15			09 Oct 2018 09:58	1
HS18100338-12	DRA32-20181004-01-51	04 Oct 2018 10:45			09 Oct 2018 09:58	1
HS18100338-13	DRA32-20181004-06-51	04 Oct 2018 10:55			09 Oct 2018 09:58	1
HS18100338-14	DRA32-20181004-06-52	04 Oct 2018 10:55			09 Oct 2018 09:58	1
HS18100338-15	DRA32-20181004-12-51	04 Oct 2018 11:15			09 Oct 2018 09:58	1

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133300 **Instrument: ECD_7** **Method: SW8082**

MBLK Sample ID: **MBLK-133300** Units: **ug/Kg** Analysis Date: **10-Oct-2018 02:53**
Client ID: Run ID: **ECD_7_325204** SeqNo: **4767788** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	U	17								
Aroclor 1260	U	17								
Surr: Decachlorobiphenyl	*7.565*	*1.6*	*6.667*	*0*	*113*	*54 - 143*				
Surr: Tetrachloro-m-xylene	*6.796*	*1.6*	*6.667*	*0*	*102*	*50 - 140*				

LCS Sample ID: **LCS-133300** Units: **ug/Kg** Analysis Date: **10-Oct-2018 03:08**
Client ID: Run ID: **ECD_7_325204** SeqNo: **4767789** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	186	17	166.7	0	112	53 - 135				
Aroclor 1260	219	17	166.7	0	131	54 - 137				
Surr: Decachlorobiphenyl	*8.03*	*1.6*	*6.667*	*0*	*120*	*54 - 143*				
Surr: Tetrachloro-m-xylene	*6.917*	*1.6*	*6.667*	*0*	*104*	*50 - 140*				

MS Sample ID: **HS18100338-02MS** Units: **ug/Kg** Analysis Date: **10-Oct-2018 03:40**
Client ID: **DRA29-20181004-01-51** Run ID: **ECD_7_325204** SeqNo: **4767791** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	176.1	17	166.2	0	106	53 - 135				
Aroclor 1260	206	17	166.2	0	124	54 - 137				
Surr: Decachlorobiphenyl	*7.59*	*1.6*	*6.647*	*0*	*114*	*54 - 143*				
Surr: Tetrachloro-m-xylene	*6.516*	*1.6*	*6.647*	*0*	*98.0*	*50 - 140*				

MSD Sample ID: **HS18100338-02MSD** Units: **ug/Kg** Analysis Date: **10-Oct-2018 03:56**
Client ID: **DRA29-20181004-01-51** Run ID: **ECD_7_325204** SeqNo: **4767792** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	181.2	17	166.3	0	109	53 - 135	176.1	2.83	30	
Aroclor 1260	204.9	17	166.3	0	123	54 - 137	206	0.524	30	
Surr: Decachlorobiphenyl	*8.148*	*1.6*	*6.651*	*0*	*122*	*54 - 143*	*7.59*	*7.09*	*30*	
Surr: Tetrachloro-m-xylene	*6.822*	*1.6*	*6.651*	*0*	*103*	*50 - 140*	*6.516*	*4.59*	*30*	

The following samples were analyzed in this batch:

HS18100338-02	HS18100338-03	HS18100338-04	HS18100338-05
HS18100338-06	HS18100338-07	HS18100338-08	HS18100338-09
HS18100338-10	HS18100338-11	HS18100338-12	HS18100338-13
HS18100338-14	HS18100338-15		

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133307 **Instrument: ECD_7** **Method: SW8082**

MBLK Sample ID: **MBLK-133307** Units: **ng, Total** Analysis Date: **09-Oct-2018 19:17**
Client ID: Run ID: **ECD_7_325200** SeqNo: **4767741** PrepDate: **09-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	U	500								
Aroclor 1260	U	500								
Surr: Decachlorobiphenyl	*231*	*0*	*200*	*0*	*115*	*30 - 150*				
Surr: Tetrachloro-m-xylene	*200.5*	*0*	*200*	*0*	*100*	*30 - 150*				

LCS Sample ID: **LCS-133307** Units: **ng, Total** Analysis Date: **09-Oct-2018 19:33**
Client ID: Run ID: **ECD_7_325200** SeqNo: **4767742** PrepDate: **09-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	4995	500	5000	0	99.9	50 - 130				
Aroclor 1260	5362	500	5000	0	107	50 - 130				
Surr: Decachlorobiphenyl	*196*	*0*	*200*	*0*	*98.0*	*30 - 150*				
Surr: Tetrachloro-m-xylene	*190.4*	*0*	*200*	*0*	*95.2*	*30 - 150*				

LCSD Sample ID: **LCSD-133307** Units: **ng, Total** Analysis Date: **09-Oct-2018 19:48**
Client ID: Run ID: **ECD_7_325200** SeqNo: **4767743** PrepDate: **09-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	5365	500	5000	0	107	50 - 130	4995	7.14	30	
Aroclor 1260	6073	500	5000	0	121	50 - 130	5362	12.4	30	
Surr: Decachlorobiphenyl	*243.1*	*0*	*200*	*0*	*122*	*30 - 150*	*196*	*21.5*	*30*	
Surr: Tetrachloro-m-xylene	*206*	*0*	*200*	*0*	*103*	*30 - 150*	*190.4*	*7.9*	*30*	

The following samples were analyzed in this batch:

HS18100338-17	HS18100338-18	HS18100338-19	HS18100338-20
HS18100338-21	HS18100338-22	HS18100338-23	HS18100338-24
HS18100338-25	HS18100338-26	HS18100338-27	HS18100338-28
HS18100338-29	HS18100338-30	HS18100338-31	HS18100338-32

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133318 **Instrument: ECD_7** **Method: SW8082**

MBLK Sample ID: **MBLK-133318** Units: **ug/L** Analysis Date: **10-Oct-2018 11:15**
Client ID: Run ID: **ECD_7_325212** SeqNo: **4767918** PrepDate: **09-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	U	0.500								
Aroclor 1260	U	0.500								
Surr: Decachlorobiphenyl	*0.2222*	*0.0500*	*0.2*	*0*	*111*	*54 - 140*				
Surr: Tetrachloro-m-xylene	*0.2044*	*0.0500*	*0.2*	*0*	*102*	*53 - 137*				

LCS Sample ID: **LCS-133318** Units: **ug/L** Analysis Date: **10-Oct-2018 11:31**
Client ID: Run ID: **ECD_7_325212** SeqNo: **4767919** PrepDate: **09-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	4.928	0.500	5	0	98.6	54 - 138				
Aroclor 1260	5.42	0.500	5	0	108	57 - 136				
Surr: Decachlorobiphenyl	*0.2046*	*0.0500*	*0.2*	*0*	*102*	*54 - 140*				
Surr: Tetrachloro-m-xylene	*0.1882*	*0.0500*	*0.2*	*0*	*94.1*	*53 - 137*				

LCSD Sample ID: **LCSD-133318** Units: **ug/L** Analysis Date: **10-Oct-2018 11:46**
Client ID: Run ID: **ECD_7_325212** SeqNo: **4767920** PrepDate: **09-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	4.923	0.500	5	0	98.5	54 - 138	4.928	0.101	20	
Aroclor 1260	5.346	0.500	5	0	107	57 - 136	5.42	1.37	20	
Surr: Decachlorobiphenyl	*0.1905*	*0.0500*	*0.2*	*0*	*95.2*	*54 - 140*	*0.2046*	*7.11*	*20*	
Surr: Tetrachloro-m-xylene	*0.1888*	*0.0500*	*0.2*	*0*	*94.4*	*53 - 137*	*0.1882*	*0.313*	*20*	

The following samples were analyzed in this batch: HS18100338-01

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133387 **Instrument: ECD_7** **Method: SW8082**

MBLK Sample ID: **MBLK-133387** Units: **ug/Kg** Analysis Date: **10-Oct-2018 21:56**
Client ID: Run ID: **ECD_7_325216** SeqNo: **4768024** PrepDate: **10-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1268	U	17								
Surr: Tetrachloro-m-xylene	*7.177*	*0*	*6.67*	*0*	*108*	*55 - 137*				

LCS Sample ID: **LCS-133387 1268** Units: **ug/Kg** Analysis Date: **10-Oct-2018 22:43**
Client ID: Run ID: **ECD_7_325216** SeqNo: **4768025** PrepDate: **10-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1268	164.5	17	166.7	0	98.7	50 - 150				

LCSD Sample ID: **LCSD-133387 1268** Units: **ug/Kg** Analysis Date: **10-Oct-2018 22:59**
Client ID: Run ID: **ECD_7_325216** SeqNo: **4768026** PrepDate: **10-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1268	163.2	17	166.7	0	97.9	50 - 150	164.5	0.818	30	

The following samples were analyzed in this batch: HS18100338-16

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133282 **Instrument: ICPMS04** **Method: SW6020**

MBLK Sample ID: **MBLK-133282** Units: **mg/Kg** Analysis Date: **11-Oct-2018 14:30**
Client ID: Run ID: **ICPMS04_325213** SeqNo: **4768178** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.6721	2.00								J
Antimony	U	0.500								
Arsenic	U	0.500								
Barium	0.1029	0.500								J
Beryllium	U	0.500								
Cadmium	U	0.500								
Calcium	U	50.0								
Chromium	U	0.500								
Cobalt	U	0.500								
Copper	U	0.200								
Iron	U	50.0								
Lead	U	0.500								
Magnesium	U	50.0								
Manganese	U	0.500								
Nickel	U	0.500								
Potassium	U	50.0								
Selenium	U	0.500								
Silver	U	0.500								
Sodium	U	50.0								
Thallium	U	0.500								
Vanadium	0.0896	0.500								J
Zinc	U	0.500								

LCS Sample ID: **LCS-133282** Units: **mg/Kg** Analysis Date: **11-Oct-2018 13:55**
Client ID: Run ID: **ICPMS04_325213** SeqNo: **4768488** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	62.33	2.00	60	0	104	80 - 120				
Copper	10.75	0.200	10	0	108	80 - 120				

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133282 **Instrument: ICPMS04** **Method: SW6020**

LCS Sample ID: **LCS-133282** Units: **mg/Kg** Analysis Date: **10-Oct-2018 22:06**
Client ID: Run ID: **ICPMS04_325162** SeqNo: **4767536** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	9.985	0.500	10	0	99.8	80 - 120				
Arsenic	9.757	0.500	10	0	97.6	80 - 120				
Barium	10.57	0.500	10	0	106	80 - 120				
Beryllium	10.9	0.500	10	0	109	80 - 120				
Cadmium	10.01	0.500	10	0	100	80 - 120				
Calcium	989.7	50.0	1000	0	99.0	80 - 120				
Chromium	9.758	0.500	10	0	97.6	80 - 120				
Cobalt	9.67	0.500	10	0	96.7	80 - 120				
Iron	975.4	50.0	1000	0	97.5	80 - 120				
Lead	10	0.500	10	0	100	80 - 120				
Magnesium	1020	50.0	1000	0	102	80 - 120				
Manganese	9.603	0.500	10	0	96.0	80 - 120				
Nickel	9.377	0.500	10	0	93.8	80 - 120				
Potassium	968.6	50.0	1000	0	96.9	80 - 120				
Selenium	10.02	0.500	10	0	100	80 - 120				
Silver	9.912	0.500	10	0	99.1	80 - 120				
Sodium	980.6	50.0	1000	0	98.1	80 - 120				
Thallium	10.19	0.500	10	0	102	80 - 120				
Vanadium	9.911	0.500	10	0	99.1	80 - 120				
Zinc	9.226	0.500	10	0	92.3	80 - 120				

MS Sample ID: **HS18100338-02MS** Units: **mg/Kg** Analysis Date: **11-Oct-2018 16:15**
Client ID: **DRA29-20181004-01-51** Run ID: **ICPMS04_325213** SeqNo: **4768921** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	14410	1.90	57.12	9134	9240	75 - 125				SEO
Copper	43.26	0.190	9.52	25.66	185	75 - 125				S

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133282 **Instrument: ICPMS04** **Method: SW6020**

MS Sample ID: **HS18100338-02MS** Units: **mg/Kg** Analysis Date: **10-Oct-2018 22:12**
Client ID: **DRA29-20181004-01-51** Run ID: **ICPMS04_325162** SeqNo: **4767539** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	5.453	0.476	9.52	0.2402	54.8	75 - 125				S
Arsenic	16.1	0.476	9.52	7.491	90.4	75 - 125				
Barium	108.7	0.476	9.52	98.69	105	75 - 125				O
Beryllium	10.18	0.476	9.52	0.4854	102	75 - 125				
Cadmium	9.947	0.476	9.52	0.4067	100	75 - 125				
Calcium	151200	47.6	952	161600	-1090	75 - 125				SEO
Chromium	26.91	0.476	9.52	14.56	130	75 - 125				S
Cobalt	14.85	0.476	9.52	6.51	87.6	75 - 125				
Iron	10910	47.6	952	9833	113	75 - 125				O
Lead	31.76	0.476	9.52	23.07	91.3	75 - 125				
Magnesium	4199	47.6	952	2785	148	75 - 125				S
Manganese	792.5	0.476	9.52	910.1	-1230	75 - 125				SEO
Nickel	22.53	0.476	9.52	14	89.6	75 - 125				
Potassium	3104	47.6	952	1300	189	75 - 125				S
Selenium	10.28	0.476	9.52	0.6737	101	75 - 125				
Silver	8.922	0.476	9.52	0.06641	93.0	75 - 125				
Sodium	1079	47.6	952	109.5	102	75 - 125				
Thallium	9.887	0.476	9.52	0.132	102	75 - 125				
Vanadium	47.64	0.476	9.52	35.02	133	75 - 125				S
Zinc	105.1	0.476	9.52	68.49	385	75 - 125				SO

MSD Sample ID: **HS18100338-02MSD** Units: **mg/Kg** Analysis Date: **11-Oct-2018 16:18**
Client ID: **DRA29-20181004-01-51** Run ID: **ICPMS04_325213** SeqNo: **4768922** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	13510	1.93	57.85	9134	7560	75 - 125	14410	6.5	20	SEO
Copper	38.87	0.193	9.641	25.66	137	75 - 125	43.26	10.7	20	S

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133282 **Instrument: ICPMS04** **Method: SW6020**

MSD Sample ID: **HS18100338-02MSD** Units: **mg/Kg** Analysis Date: **10-Oct-2018 22:14**
Client ID: **DRA29-20181004-01-51** Run ID: **ICPMS04_325162** SeqNo: **4767540** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	6.016	0.482	9.641	0.2402	59.9	75 - 125	5.453	9.82	20	S
Arsenic	16.68	0.482	9.641	7.491	95.3	75 - 125	16.1	3.56	20	
Barium	143.1	0.482	9.641	98.69	461	75 - 125	108.7	27.4	20	SRO
Beryllium	10.23	0.482	9.641	0.4854	101	75 - 125	10.18	0.476	20	
Cadmium	10.28	0.482	9.641	0.4067	102	75 - 125	9.947	3.34	20	
Calcium	156700	48.2	964.1	161600	-516	75 - 125	151200	3.53	20	SEO
Chromium	26.25	0.482	9.641	14.56	121	75 - 125	26.91	2.48	20	
Cobalt	15.96	0.482	9.641	6.51	98.0	75 - 125	14.85	7.2	20	
Iron	11870	48.2	964.1	9833	212	75 - 125	10910	8.44	20	SO
Lead	33.92	0.482	9.641	23.07	113	75 - 125	31.76	6.59	20	
Magnesium	3743	48.2	964.1	2785	99.4	75 - 125	4199	11.5	20	
Manganese	938	0.482	9.641	910.1	290	75 - 125	792.5	16.8	20	SEO
Nickel	23.45	0.482	9.641	14	97.9	75 - 125	22.53	3.99	20	
Potassium	2850	48.2	964.1	1300	161	75 - 125	3104	8.55	20	S
Selenium	10.1	0.482	9.641	0.6737	97.8	75 - 125	10.28	1.74	20	
Silver	9.177	0.482	9.641	0.06641	94.5	75 - 125	8.922	2.82	20	
Sodium	1075	48.2	964.1	109.5	100	75 - 125	1079	0.43	20	
Thallium	10.21	0.482	9.641	0.132	104	75 - 125	9.887	3.17	20	
Vanadium	48.9	0.482	9.641	35.02	144	75 - 125	47.64	2.61	20	S
Zinc	77.91	0.482	9.641	68.49	97.8	75 - 125	105.1	29.7	20	RO

PDS Sample ID: **HS18100338-02PDS** Units: **mg/Kg** Analysis Date: **11-Oct-2018 14:36**
Client ID: **DRA29-20181004-01-51** Run ID: **ICPMS04_325213** SeqNo: **4768212** PrepDate: **08-Oct-2018** DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	10750	192	959.7	9954	83.4	75 - 125				O
Calcium	272400	4800	95970	175400	101	75 - 125				
Manganese	1974	48.0	959.7	1026	98.8	75 - 125				

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133282 **Instrument: ICPMS04** **Method: SW6020**

PDS Sample ID: **HS18100338-02PDS** Units: **mg/Kg** Analysis Date: **10-Oct-2018 22:17**
Client ID: **DRA29-20181004-01-51** Run ID: **ICPMS04_325162** SeqNo: **4767541** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	9.916	0.480	9.597	0.2402	101	75 - 125				
Arsenic	16.55	0.480	9.597	7.491	94.4	75 - 125				
Barium	106.4	0.480	9.597	98.69	80.7	75 - 125				O
Beryllium	10.72	0.480	9.597	0.4854	107	75 - 125				
Cadmium	10.12	0.480	9.597	0.4067	101	75 - 125				
Chromium	22.77	0.480	9.597	14.56	85.5	75 - 125				
Cobalt	15.83	0.480	9.597	6.51	97.1	75 - 125				
Iron	10880	48.0	959.7	9833	109	75 - 125				O
Lead	32.03	0.480	9.597	23.07	93.4	75 - 125				
Magnesium	3505	48.0	959.7	2785	75.1	75 - 125				
Nickel	21.93	0.480	9.597	14	82.6	75 - 125				
Potassium	2303	48.0	959.7	1300	104	75 - 125				
Selenium	10.35	0.480	9.597	0.6737	101	75 - 125				
Silver	8.77	0.480	9.597	0.06641	90.7	75 - 125				
Sodium	1049	48.0	959.7	109.5	97.9	75 - 125				
Thallium	9.726	0.480	9.597	0.132	100.0	75 - 125				
Vanadium	42.48	0.480	9.597	35.02	77.7	75 - 125				
Zinc	73.46	0.480	9.597	68.49	51.9	75 - 125				SO

PDS Sample ID: **HS18100338-02PDS** Units: **mg/Kg** Analysis Date: **11-Oct-2018 16:20**
Client ID: **DRA29-20181004-01-51** Run ID: **ICPMS04_325213** SeqNo: **4768923** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	35.99	0.192	9.597	25.66	108	75 - 125				

SD Sample ID: **HS18100338-02SD** Units: **mg/Kg** Analysis Date: **11-Oct-2018 14:34**
Client ID: **DRA29-20181004-01-51** Run ID: **ICPMS04_325213** SeqNo: **4768211** PrepDate: **08-Oct-2018** DF: **500**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Aluminum	9900	960					9954	0.535	10	
Calcium	169700	24000					175400	3.24	10	
Manganese	1068	240					1026	4.01	10	

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133282 **Instrument: ICPMS04** **Method: SW6020**

SD Sample ID: **HS18100338-02SD** Units: **mg/Kg** Analysis Date: **10-Oct-2018 22:10**
Client ID: **DRA29-20181004-01-51** Run ID: **ICPMS04_325162** SeqNo: **4767538** PrepDate: **08-Oct-2018** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Antimony	U	2.40					0.2402	0	10	
Arsenic	7.545	2.40					7.491	0.716	10	
Barium	96.8	2.40					98.69	1.91	10	
Beryllium	0.5095	2.40					0.4854	0	10	J
Cadmium	0.3605	2.40					0.4067	0	10	J
Chromium	14.33	2.40					14.56	1.56	10	
Cobalt	6.81	2.40					6.51	4.6	10	
Iron	10230	240					9833	3.99	10	
Lead	23.11	2.40					23.07	0.188	10	
Magnesium	2814	240					2785	1.03	10	
Nickel	13.97	2.40					14	0.224	10	
Potassium	1257	240					1300	3.34	10	
Selenium	1.478	2.40					0.6737	0	10	J
Silver	U	2.40					0.06641	0	10	
Sodium	93.66	240					109.5	0	10	J
Thallium	U	2.40					0.132	0	10	
Vanadium	34.52	2.40					35.02	1.44	10	
Zinc	70.78	2.40					68.49	3.35	10	

SD Sample ID: **HS18100338-02SD** Units: **mg/Kg** Analysis Date: **11-Oct-2018 16:13**
Client ID: **DRA29-20181004-01-51** Run ID: **ICPMS04_325213** SeqNo: **4768920** PrepDate: **08-Oct-2018** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Copper	28.63	0.960					25.66	11.6	10	R

The following samples were analyzed in this batch:

HS18100338-02	HS18100338-03	HS18100338-04	HS18100338-05
HS18100338-06	HS18100338-07	HS18100338-08	HS18100338-09
HS18100338-10	HS18100338-11	HS18100338-12	HS18100338-13
HS18100338-14	HS18100338-15	HS18100338-16	

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133292 **Instrument: ICPMS05** **Method: SW6020**

MBLK Sample ID: **MBLK-133292** Units: **mg/L** Analysis Date: **11-Oct-2018 16:29**
Client ID: Run ID: **ICPMS05_325198** SeqNo: **4768961** PrepDate: **09-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.003291	0.0100								J

MBLK Sample ID: **MBLK-133292** Units: **mg/L** Analysis Date: **11-Oct-2018 15:22**
Client ID: Run ID: **ICPMS04_325213** SeqNo: **4768617** PrepDate: **09-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	U	0.00200								
Arsenic	U	0.00200								
Barium	U	0.00400								
Beryllium	U	0.00200								
Cadmium	U	0.00200								
Calcium	0.0396	0.500								J
Chromium	U	0.00400								
Cobalt	U	0.00500								
Copper	U	0.00200								
Iron	U	0.200								
Lead	U	0.00200								
Magnesium	0.02144	0.200								J
Manganese	0.000982	0.00500								J
Nickel	U	0.00200								
Potassium	U	0.200								
Selenium	U	0.00200								
Silver	U	0.00200								
Sodium	U	0.200								
Thallium	U	0.00200								
Vanadium	U	0.00500								
Zinc	U	0.00400								

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133292 **Instrument: ICPMS05** **Method: SW6020**

LCS Sample ID: **LCS-133292** Units: **mg/L** Analysis Date: **11-Oct-2018 15:25**
Client ID: Run ID: **ICPMS04_325213** SeqNo: **4768618** PrepDate: **09-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1085	0.0100	0.1	0	108	80 - 120				
Antimony	0.05079	0.00200	0.05	0	102	80 - 120				
Arsenic	0.05156	0.00200	0.05	0	103	80 - 120				
Barium	0.04667	0.00400	0.05	0	93.3	80 - 120				
Beryllium	0.05041	0.00200	0.05	0	101	80 - 120				
Cadmium	0.05052	0.00200	0.05	0	101	80 - 120				
Calcium	5.149	0.500	5	0	103	80 - 120				
Chromium	0.05144	0.00400	0.05	0	103	80 - 120				
Cobalt	0.05047	0.00500	0.05	0	101	80 - 120				
Copper	0.05235	0.00200	0.05	0	105	80 - 120				
Iron	5.117	0.200	5	0	102	80 - 120				
Lead	0.05075	0.00200	0.05	0	101	80 - 120				
Magnesium	5.172	0.200	5	0	103	80 - 120				
Manganese	0.05391	0.00500	0.05	0	108	80 - 120				
Nickel	0.05208	0.00200	0.05	0	104	80 - 120				
Potassium	5.162	0.200	5	0	103	80 - 120				
Selenium	0.04893	0.00200	0.05	0	97.9	80 - 120				
Silver	0.05056	0.00200	0.05	0	101	80 - 120				
Sodium	5.187	0.200	5	0	104	80 - 120				
Thallium	0.04726	0.00200	0.05	0	94.5	80 - 120				
Vanadium	0.04932	0.00500	0.05	0	98.6	80 - 120				
Zinc	0.05327	0.00400	0.05	0	107	80 - 120				

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133292 **Instrument: ICPMS05** **Method: SW6020**

MS Sample ID: **HS18100285-02MS** Units: **mg/L** Analysis Date: **11-Oct-2018 15:34**
Client ID: Run ID: **ICPMS04_325213** SeqNo: **4768622** PrepDate: **09-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1136	0.0100	0.1	0.009067	105	80 - 120				
Antimony	0.05299	0.00200	0.05	0.000073	106	80 - 120				
Arsenic	0.05709	0.00200	0.05	0.000593	113	80 - 120				
Barium	0.6156	0.00400	0.05	0.5537	124	80 - 120				SO
Beryllium	0.05544	0.00200	0.05	0.000083	111	80 - 120				
Cadmium	0.05436	0.00200	0.05	0.000107	109	80 - 120				
Calcium	184.2	0.500	5	172.6	232	80 - 120				SEO
Chromium	0.05452	0.00400	0.05	0.000394	108	80 - 120				
Cobalt	0.05357	0.00500	0.05	0.000998	105	80 - 120				
Copper	0.052	0.00200	0.05	-0.001133	106	80 - 120				
Iron	14.22	0.200	5	8.783	109	80 - 120				
Lead	0.05265	0.00200	0.05	-0.000086	105	80 - 120				
Magnesium	21.66	0.200	5	15.82	117	80 - 120				
Manganese	0.6722	0.00500	0.05	0.5992	146	80 - 120				SO
Nickel	0.05433	0.00200	0.05	0.001022	107	80 - 120				
Potassium	9.598	0.200	5	4.267	107	80 - 120				
Selenium	0.05688	0.00200	0.05	-0.000615	115	80 - 120				
Silver	0.05404	0.00200	0.05	0.000034	108	80 - 120				
Sodium	38.13	0.200	5	31.68	129	80 - 120				SO
Thallium	0.05076	0.00200	0.05	0.000009	102	80 - 120				
Vanadium	0.05569	0.00500	0.05	-0.000391	112	80 - 120				
Zinc	0.05688	0.00400	0.05	0.003186	107	80 - 120				

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133292 **Instrument: ICPMS05** **Method: SW6020**

MSD Sample ID: **HS18100285-02MSD** Units: **mg/L** Analysis Date: **11-Oct-2018 15:36**
Client ID: Run ID: **ICPMS04_325213** SeqNo: **4768623** PrepDate: **09-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1102	0.0100	0.1	0.009067	101	80 - 120	0.1136	2.97	20	
Antimony	0.05167	0.00200	0.05	0.000073	103	80 - 120	0.05299	2.52	20	
Arsenic	0.05351	0.00200	0.05	0.000593	106	80 - 120	0.05709	6.48	20	
Barium	0.6133	0.00400	0.05	0.5537	119	80 - 120	0.6156	0.367	20	O
Beryllium	0.05253	0.00200	0.05	0.000083	105	80 - 120	0.05544	5.39	20	
Cadmium	0.0499	0.00200	0.05	0.000107	99.6	80 - 120	0.05436	8.56	20	
Calcium	180.9	0.500	5	172.6	166	80 - 120	184.2	1.8	20	SEO
Chromium	0.05041	0.00400	0.05	0.000394	100	80 - 120	0.05452	7.83	20	
Cobalt	0.05118	0.00500	0.05	0.000998	100	80 - 120	0.05357	4.55	20	
Copper	0.04884	0.00200	0.05	-0.001133	99.9	80 - 120	0.052	6.28	20	
Iron	14.16	0.200	5	8.783	108	80 - 120	14.22	0.413	20	
Lead	0.0513	0.00200	0.05	-0.000086	103	80 - 120	0.05265	2.58	20	
Magnesium	21.25	0.200	5	15.82	108	80 - 120	21.66	1.93	20	
Manganese	0.6504	0.00500	0.05	0.5992	102	80 - 120	0.6722	3.3	20	O
Nickel	0.05202	0.00200	0.05	0.001022	102	80 - 120	0.05433	4.34	20	
Potassium	9.651	0.200	5	4.267	108	80 - 120	9.598	0.553	20	
Selenium	0.05687	0.00200	0.05	-0.000615	115	80 - 120	0.05688	0.0176	20	
Silver	0.05072	0.00200	0.05	0.000034	101	80 - 120	0.05404	6.35	20	
Sodium	37.37	0.200	5	31.68	114	80 - 120	38.13	2.02	20	O
Thallium	0.05103	0.00200	0.05	0.000009	102	80 - 120	0.05076	0.527	20	
Vanadium	0.05098	0.00500	0.05	-0.000391	103	80 - 120	0.05569	8.83	20	
Zinc	0.04918	0.00400	0.05	0.003186	92.0	80 - 120	0.05688	14.5	20	

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133292 **Instrument: ICPMS05** **Method: SW6020**

PDS Sample ID: **HS18100285-02PDS** Units: **mg/L** Analysis Date: **11-Oct-2018 15:38**
Client ID: Run ID: **ICPMS04_325213** SeqNo: **4768624** PrepDate: **09-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1097	0.0100	0.1	0.009067	101	75 - 125				
Antimony	0.09672	0.00200	0.1	0.000073	96.6	75 - 125				
Arsenic	0.1006	0.00200	0.1	0.000593	100	75 - 125				
Barium	0.6697	0.00400	0.1	0.5537	116	75 - 125				O
Beryllium	0.11	0.00200	0.1	0.000083	110	75 - 125				
Cadmium	0.1046	0.00200	0.1	0.000107	105	75 - 125				
Chromium	0.09899	0.00400	0.1	0.000394	98.6	75 - 125				
Cobalt	0.1025	0.00500	0.1	0.000998	101	75 - 125				
Copper	0.09662	0.00200	0.1	-0.001133	97.8	75 - 125				
Iron	18.99	0.200	10	8.783	102	75 - 125				
Lead	0.1025	0.00200	0.1	-0.000086	103	75 - 125				
Magnesium	25.85	0.200	10	15.82	100	75 - 125				
Manganese	0.6799	0.00500	0.1	0.5992	80.7	75 - 125				O
Nickel	0.09661	0.00200	0.1	0.001022	95.6	75 - 125				
Potassium	14.84	0.200	10	4.267	106	75 - 125				
Selenium	0.1041	0.00200	0.1	-0.000615	105	75 - 125				
Silver	0.09533	0.00200	0.1	0.000034	95.3	75 - 125				
Sodium	40.94	0.200	10	31.68	92.7	75 - 125				
Thallium	0.1006	0.00200	0.1	0.000009	101	75 - 125				
Vanadium	0.1016	0.00500	0.1	-0.000391	102	75 - 125				
Zinc	0.09786	0.00400	0.1	0.003186	94.7	75 - 125				

PDS Sample ID: **HS18100285-02PDS** Units: **mg/L** Analysis Date: **11-Oct-2018 16:35**
Client ID: Run ID: **ICPMS05_325198** SeqNo: **4768964** PrepDate: **09-Oct-2018** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	186.7	5.00	100	164.1	22.5	75 - 125				S

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133292 **Instrument: ICPMS05** **Method: SW6020**

SD Sample ID: **HS18100285-02SD** Units: **mg/L** Analysis Date: **11-Oct-2018 15:31**
Client ID: Run ID: **ICPMS04_325213** SeqNo: **4768621** PrepDate: **09-Oct-2018** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Aluminum	0.02411	0.0500					0.009067	0	10	J
Antimony	U	0.0100					0.000073	0	10	
Arsenic	0.00546	0.0100					0.000593	0	10	J
Barium	0.5776	0.0200					0.5537	4.33	10	
Beryllium	U	0.0100					0.000083	0	10	
Cadmium	U	0.0100					0.000107	0	10	
Chromium	U	0.0200					0.000394	0	10	
Cobalt	0.001508	0.0250					0.000998	0	10	J
Copper	U	0.0100					-0.001133	0	10	
Iron	9.46	1.00					8.783	7.7	10	
Lead	U	0.0100					-0.000086	0	10	
Magnesium	16.14	1.00					15.82	2.02	10	
Manganese	0.6337	0.0250					0.5992	5.75	10	
Nickel	U	0.0100					0.001022	0	10	
Potassium	4.487	1.00					4.267	5.15	10	
Selenium	U	0.0100					-0.000615	0	10	
Silver	U	0.0100					0.000034	0	10	
Sodium	34.37	1.00					31.68	8.49	10	
Thallium	U	0.0100					0.000009	0	10	
Vanadium	0.004408	0.0250					-0.000391	0	10	J
Zinc	U	0.0200					0.003186	0	10	

SD Sample ID: **HS18100285-02SD** Units: **mg/L** Analysis Date: **11-Oct-2018 16:33**
Client ID: Run ID: **ICPMS05_325198** SeqNo: **4768963** PrepDate: **09-Oct-2018** DF: **50**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Calcium	158.9	25.0					164.1	3.19	10	

The following samples were analyzed in this batch: HS18100338-01

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133349 **Instrument: HG03** **Method: SW7470**

MBLK Sample ID: **MBLK-133349** Units: **mg/L** Analysis Date: **10-Oct-2018 15:11**
Client ID: Run ID: **HG03_325131** SeqNo: **4766461** PrepDate: **10-Oct-2018** DF: **1**

Analyte	Result		PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury		U	0.000200								

LCS Sample ID: **LCS-133349** Units: **mg/L** Analysis Date: **10-Oct-2018 15:13**
Client ID: Run ID: **HG03_325131** SeqNo: **4766462** PrepDate: **10-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00494	0.000200	0.005	0	98.8	80 - 120				

MS Sample ID: **HS18100338-01MS** Units: **mg/L** Analysis Date: **10-Oct-2018 16:07**
Client ID: **DRA32-20181004-12-23** Run ID: **HG03_325131** SeqNo: **4766557** PrepDate: **10-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00498	0.000200	0.005	0.000002	99.6	75 - 125				

MSD Sample ID: **HS18100338-01MSD** Units: **mg/L** Analysis Date: **10-Oct-2018 16:12**
Client ID: **DRA32-20181004-12-23** Run ID: **HG03_325131** SeqNo: **4766558** PrepDate: **10-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00496	0.000200	0.005	0.000002	99.2	75 - 125	0.00498	0.402	20	

The following samples were analyzed in this batch: HS18100338-01

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133369 **Instrument: HG03** **Method: SW7471A**

MBLK Sample ID: **MBLK-133369** Units: **ug/Kg** Analysis Date: **11-Oct-2018 12:59**
Client ID: Run ID: **HG03_325218** SeqNo: **4768081** PrepDate: **10-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	U	3.32								

LCS Sample ID: **LCS-133369** Units: **ug/Kg** Analysis Date: **11-Oct-2018 13:01**
Client ID: Run ID: **HG03_325218** SeqNo: **4768082** PrepDate: **10-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	320.7	3.32	333.3	0	96.2	80 - 120				

MS Sample ID: **HS18100338-02MS** Units: **ug/Kg** Analysis Date: **11-Oct-2018 13:12**
Client ID: **DRA29-20181004-01-51** Run ID: **HG03_325218** SeqNo: **4768087** PrepDate: **10-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	357.5	3.55	356.1	19.91	94.8	80 - 120				

MSD Sample ID: **HS18100338-02MSD** Units: **ug/Kg** Analysis Date: **11-Oct-2018 13:14**
Client ID: **DRA29-20181004-01-51** Run ID: **HG03_325218** SeqNo: **4768088** PrepDate: **10-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	361	3.55	356.1	19.91	95.8	80 - 120	357.5	0.991	20	

The following samples were analyzed in this batch:

HS18100338-02	HS18100338-03	HS18100338-04	HS18100338-05
HS18100338-06	HS18100338-07	HS18100338-08	HS18100338-09
HS18100338-10	HS18100338-11	HS18100338-12	HS18100338-13
HS18100338-14	HS18100338-15		

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133244 **Instrument: SV-7** **Method: SW8270**

MBLK Sample ID: **MBLK-133244** Units: **ug/L** Analysis Date: **10-Oct-2018 13:41**
Client ID: Run ID: **SV-7_325184** SeqNo: **4767492** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1´-Biphenyl	U	0.20								
2,4,5-Trichlorophenol	U	0.20								
2,4,6-Trichlorophenol	U	0.20								
2,4-Dichlorophenol	U	0.20								
2,4-Dimethylphenol	U	0.20								
2,4-Dinitrophenol	U	1.0								
2,4-Dinitrotoluene	U	0.20								
2,6-Dinitrotoluene	U	0.20								
2-Chloronaphthalene	U	0.20								
2-Chlorophenol	U	0.20								
2-Methylnaphthalene	U	0.10								
2-Methylphenol	U	0.20								
2-Nitroaniline	U	0.20								
2-Nitrophenol	U	0.20								
3&4-Methylphenol	U	0.20								
3,3´-Dichlorobenzidine	U	0.20								
3-Nitroaniline	U	0.20								
4,6-Dinitro-2-methylphenol	U	0.20								
4-Bromophenyl phenyl ether	U	0.20								
4-Chloro-3-methylphenol	U	0.20								
4-Chloroaniline	U	0.20								
4-Chlorophenyl phenyl ether	U	0.20								
4-Nitroaniline	U	0.20								
4-Nitrophenol	U	1.0								
Acenaphthene	U	0.10								
Acenaphthylene	U	0.10								
Acetophenone	U	0.20								
Anthracene	U	0.10								
Atrazine	U	0.20								
Benz(a)anthracene	U	0.10								
Benzaldehyde	U	0.20								
Benzo(a)pyrene	U	0.10								
Benzo(b)fluoranthene	U	0.10								
Benzo(g,h,i)perylene	U	0.10								

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133244 **Instrument: SV-7** **Method: SW8270**

MBLK Sample ID: **MBLK-133244** Units: **ug/L** Analysis Date: **10-Oct-2018 13:41**
Client ID: Run ID: **SV-7_325184** SeqNo: **4767492** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzo(k)fluoranthene	U	0.10								
Bis(2-chloro-1-methylethyl) ether	U	0.20								
Bis(2-chloroethoxy)methane	U	0.20								
Bis(2-chloroethyl)ether	U	0.20								
Bis(2-ethylhexyl)phthalate	U	0.20								
Butyl benzyl phthalate	U	0.20								
Caprolactam	U	0.20								
Carbazole	U	0.20								
Chrysene	U	0.10								
Dibenz(a,h)anthracene	U	0.10								
Dibenzofuran	U	0.10								
Diethyl phthalate	U	0.20								
Dimethyl phthalate	U	0.20								
Di-n-butyl phthalate	U	0.20								
Di-n-octyl phthalate	U	0.20								
Fluoranthene	U	0.10								
Fluorene	U	0.10								
Hexachlorobenzene	U	0.20								
Hexachlorobutadiene	U	0.20								
Hexachlorocyclopentadiene	U	0.20								
Hexachloroethane	U	0.20								
Indeno(1,2,3-cd)pyrene	U	0.10								
Isophorone	U	0.20								
Naphthalene	U	0.10								
Nitrobenzene	U	0.20								
N-Nitrosodi-n-propylamine	U	0.20								
N-Nitrosodiphenylamine	U	0.20								
Pentachlorophenol	U	0.20								
Phenanthrene	U	0.10								
Phenol	U	0.20								
Pyrene	U	0.10								
Surr: 2,4,6-Tribromophenol	*4.002*	*0.20*	*5*	*0*	*80.0*	*34 - 129*				
Surr: 2-Fluorobiphenyl	*4.441*	*0.20*	*5*	*0*	*88.8*	*40 - 125*				
Surr: 2-Fluorophenol	*3.02*	*0.20*	*5*	*0*	*60.4*	*20 - 120*				

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133244 **Instrument: SV-7** **Method: SW8270**

MBLK Sample ID: **MBLK-133244** Units: **ug/L** Analysis Date: **10-Oct-2018 13:41**
Client ID: Run ID: **SV-7_325184** SeqNo: **4767492** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: 4-Terphenyl-d14	*4.664*	*0.20*	*5*	*0*	*93.3*	*40 - 135*				
Surr: Nitrobenzene-d5	*3.574*	*0.20*	*5*	*0*	*71.5*	*41 - 120*				
Surr: Phenol-d6	*3.427*	*0.20*	*5*	*0*	*68.5*	*20 - 120*				

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133244 **Instrument: SV-7** **Method: SW8270**

LCS Sample ID: **LCS-133244** Units: **ug/L** Analysis Date: **10-Oct-2018 14:00**
Client ID: Run ID: **SV-7_325184** SeqNo: **4767493** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1´-Biphenyl	3.635	0.20	5	0	72.7	45 - 125				
2,4,5-Trichlorophenol	4.397	0.20	5	0	87.9	46 - 120				
2,4,6-Trichlorophenol	4.403	0.20	5	0	88.1	42 - 120				
2,4-Dichlorophenol	4.545	0.20	5	0	90.9	49 - 120				
2,4-Dimethylphenol	3.763	0.20	5	0	75.3	35 - 120				
2,4-Dinitrophenol	3.656	1.0	5	0	73.1	15 - 120				
2,4-Dinitrotoluene	4.238	0.20	5	0	84.8	50 - 122				
2,6-Dinitrotoluene	4.428	0.20	5	0	88.6	50 - 120				
2-Chloronaphthalene	4.427	0.20	5	0	88.5	50 - 120				
2-Chlorophenol	3.984	0.20	5	0	79.7	40 - 120				
2-Methylnaphthalene	4.378	0.10	5	0	87.6	50 - 120				
2-Methylphenol	4.06	0.20	5	0	81.2	45 - 120				
2-Nitroaniline	4.644	0.20	5	0	92.9	28 - 139				
2-Nitrophenol	3.932	0.20	5	0	78.6	40 - 120				
3&4-Methylphenol	4.086	0.20	5	0	81.7	35 - 120				
3,3´-Dichlorobenzidine	4.17	0.20	5	0	83.4	15 - 120				
3-Nitroaniline	4.352	0.20	5	0	87.0	30 - 120				
4,6-Dinitro-2-methylphenol	4.408	0.20	5	0	88.2	25 - 121				
4-Bromophenyl phenyl ether	4.421	0.20	5	0	88.4	45 - 120				
4-Chloro-3-methylphenol	4.117	0.20	5	0	82.3	47 - 120				
4-Chloroaniline	4.095	0.20	5	0	81.9	20 - 120				
4-Chlorophenyl phenyl ether	4.568	0.20	5	0	91.4	50 - 120				
4-Nitroaniline	4.087	0.20	5	0	81.7	30 - 133				
4-Nitrophenol	4.407	1.0	5	0	88.1	30 - 130				
Acenaphthene	4.032	0.10	5	0	80.6	45 - 120				
Acenaphthylene	4.295	0.10	5	0	85.9	47 - 120				
Acetophenone	3.244	0.20	5	0	64.9	40 - 120				
Anthracene	4.345	0.10	5	0	86.9	45 - 120				
Atrazine	4.101	0.20	5	0	82.0	40 - 130				
Benz(a)anthracene	4.621	0.10	5	0	92.4	40 - 120				
Benzaldehyde	0.8978	0.20	5	0	18.0	15 - 120				
Benzo(a)pyrene	4.609	0.10	5	0	92.2	45 - 120				
Benzo(b)fluoranthene	5.072	0.10	5	0	101	50 - 120				
Benzo(g,h,i)perylene	4.151	0.10	5	0	83.0	42 - 127				

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133244 **Instrument: SV-7** **Method: SW8270**

LCS Sample ID: **LCS-133244** Units: **ug/L** Analysis Date: **10-Oct-2018 14:00**
Client ID: Run ID: **SV-7_325184** SeqNo: **4767493** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzo(k)fluoranthene	4.36	0.10	5	0	87.2	45 - 127				
Bis(2-chloro-1-methylethyl) ether	3.353	0.20	5	0	67.1	40 - 120				
Bis(2-chloroethoxy)methane	3.516	0.20	5	0	70.3	45 - 120				
Bis(2-chloroethyl)ether	3.508	0.20	5	0	70.2	37 - 121				
Bis(2-ethylhexyl)phthalate	4.181	0.20	5	0	83.6	40 - 139				
Butyl benzyl phthalate	4.207	0.20	5	0	84.1	47 - 123				
Caprolactam	3.033	0.20	5	0	60.7	35 - 134				
Carbazole	4.446	0.20	5	0	88.9	42 - 128				
Chrysene	4.402	0.10	5	0	88.0	43 - 120				
Dibenz(a,h)anthracene	4.108	0.10	5	0	82.2	45 - 125				
Dibenzofuran	4.41	0.10	5	0	88.2	50 - 120				
Diethyl phthalate	4.407	0.20	5	0	88.1	41 - 120				
Dimethyl phthalate	4.252	0.20	5	0	85.0	40 - 122				
Di-n-butyl phthalate	4.453	0.20	5	0	89.1	45 - 123				
Di-n-octyl phthalate	4.704	0.20	5	0	94.1	45 - 129				
Fluoranthene	4.878	0.10	5	0	97.6	45 - 125				
Fluorene	4.464	0.10	5	0	89.3	49 - 120				
Hexachlorobenzene	4.65	0.20	5	0	93.0	48 - 120				
Hexachlorobutadiene	4.43	0.20	5	0	88.6	40 - 120				
Hexachlorocyclopentadiene	3.202	0.20	5	0	64.0	34 - 136				
Hexachloroethane	4.089	0.20	5	0	81.8	40 - 120				
Indeno(1,2,3-cd)pyrene	4.773	0.10	5	0	95.5	41 - 128				
Isophorone	3.498	0.20	5	0	70.0	40 - 121				
Naphthalene	4.085	0.10	5	0	81.7	45 - 120				
Nitrobenzene	3.471	0.20	5	0	69.4	44 - 120				
N-Nitrosodi-n-propylamine	3.861	0.20	5	0	77.2	40 - 120				
N-Nitrosodiphenylamine	4.151	0.20	5	0	83.0	40 - 125				
Pentachlorophenol	4.104	0.20	5	0	82.1	19 - 121				
Phenanthrene	4.318	0.10	5	0	86.4	45 - 121				
Phenol	3.854	0.20	5	0	77.1	20 - 124				
Pyrene	4.595	0.10	5	0	91.9	40 - 130				
Surr: 2,4,6-Tribromophenol	*4.319*	*0.20*	*5*	*0*	*86.4*	*34 - 129*				
Surr: 2-Fluorobiphenyl	*4.392*	*0.20*	*5*	*0*	*87.8*	*40 - 125*				
Surr: 2-Fluorophenol	*3.076*	*0.20*	*5*	*0*	*61.5*	*20 - 120*				

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133244 **Instrument: SV-7** **Method: SW8270**

LCS Sample ID: **LCS-133244** Units: **ug/L** Analysis Date: **10-Oct-2018 14:00**
Client ID: Run ID: **SV-7_325184** SeqNo: **4767493** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: 4-Terphenyl-d14	*4.693*	*0.20*	*5*	*0*	*93.9*	*40 - 135*				
Surr: Nitrobenzene-d5	*3.486*	*0.20*	*5*	*0*	*69.7*	*41 - 120*				
Surr: Phenol-d6	*3.435*	*0.20*	*5*	*0*	*68.7*	*20 - 120*				

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133244 **Instrument: SV-7** **Method: SW8270**

LCSD Sample ID: **LCSD-133244** Units: **ug/L** Analysis Date: **10-Oct-2018 14:20**
Client ID: Run ID: **SV-7_325184** SeqNo: **4767494** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1´-Biphenyl	3.438	0.20	5	0	68.8	45 - 125	3.635	5.58	20	
2,4,5-Trichlorophenol	4.186	0.20	5	0	83.7	46 - 120	4.397	4.91	20	
2,4,6-Trichlorophenol	4.108	0.20	5	0	82.2	42 - 120	4.403	6.94	20	
2,4-Dichlorophenol	4.301	0.20	5	0	86.0	49 - 120	4.545	5.51	20	
2,4-Dimethylphenol	3.496	0.20	5	0	69.9	35 - 120	3.763	7.37	20	
2,4-Dinitrophenol	3.813	1.0	5	0	76.3	15 - 120	3.656	4.22	50	
2,4-Dinitrotoluene	4.447	0.20	5	0	88.9	50 - 122	4.238	4.81	20	
2,6-Dinitrotoluene	4.377	0.20	5	0	87.5	50 - 120	4.428	1.16	20	
2-Chloronaphthalene	4.097	0.20	5	0	81.9	50 - 120	4.427	7.73	20	
2-Chlorophenol	3.622	0.20	5	0	72.4	40 - 120	3.984	9.53	20	
2-Methylnaphthalene	4.263	0.10	5	0	85.3	50 - 120	4.378	2.67	20	
2-Methylphenol	3.696	0.20	5	0	73.9	45 - 120	4.06	9.4	20	
2-Nitroaniline	4.396	0.20	5	0	87.9	28 - 139	4.644	5.49	20	
2-Nitrophenol	3.831	0.20	5	0	76.6	40 - 120	3.932	2.6	20	
3&4-Methylphenol	3.71	0.20	5	0	74.2	35 - 120	4.086	9.67	20	
3,3´-Dichlorobenzidine	3.77	0.20	5	0	75.4	15 - 120	4.17	10.1	20	
3-Nitroaniline	4.185	0.20	5	0	83.7	30 - 120	4.352	3.91	20	
4,6-Dinitro-2-methylphenol	4.418	0.20	5	0	88.4	25 - 121	4.408	0.22	30	
4-Bromophenyl phenyl ether	4.204	0.20	5	0	84.1	45 - 120	4.421	5.03	20	
4-Chloro-3-methylphenol	3.874	0.20	5	0	77.5	47 - 120	4.117	6.08	20	
4-Chloroaniline	4.032	0.20	5	0	80.6	20 - 120	4.095	1.54	20	
4-Chlorophenyl phenyl ether	4.539	0.20	5	0	90.8	50 - 120	4.568	0.64	20	
4-Nitroaniline	4.155	0.20	5	0	83.1	30 - 133	4.087	1.64	20	
4-Nitrophenol	4.324	1.0	5	0	86.5	30 - 130	4.407	1.9	20	
Acenaphthene	3.586	0.10	5	0	71.7	45 - 120	4.032	11.7	20	
Acenaphthylene	4.081	0.10	5	0	81.6	47 - 120	4.295	5.12	20	
Acetophenone	3.087	0.20	5	0	61.7	40 - 120	3.244	4.96	20	
Anthracene	4.35	0.10	5	0	87.0	45 - 120	4.345	0.108	20	
Atrazine	3.983	0.20	5	0	79.7	40 - 130	4.101	2.92	20	
Benz(a)anthracene	4.275	0.10	5	0	85.5	40 - 120	4.621	7.76	20	
Benzaldehyde	0.8695	0.20	5	0	17.4	15 - 120	0.8978	3.21	30	
Benzo(a)pyrene	4.318	0.10	5	0	86.4	45 - 120	4.609	6.52	20	
Benzo(b)fluoranthene	4.634	0.10	5	0	92.7	50 - 120	5.072	9.02	20	
Benzo(g,h,i)perylene	3.853	0.10	5	0	77.1	42 - 127	4.151	7.43	20	

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133244 **Instrument: SV-7** **Method: SW8270**

LCSD Sample ID: **LCSD-133244** Units: **ug/L** Analysis Date: **10-Oct-2018 14:20**
Client ID: Run ID: **SV-7_325184** SeqNo: **4767494** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Benzo(k)fluoranthene	4.207	0.10	5	0	84.1	45 - 127	4.36	3.55	20	
Bis(2-chloro-1-methylethyl) ether	3.09	0.20	5	0	61.8	40 - 120	3.353	8.18	20	
Bis(2-chloroethoxy)methane	3.385	0.20	5	0	67.7	45 - 120	3.516	3.81	20	
Bis(2-chloroethyl)ether	3.211	0.20	5	0	64.2	37 - 121	3.508	8.84	20	
Bis(2-ethylhexyl)phthalate	3.978	0.20	5	0	79.6	40 - 139	4.181	4.98	20	
Butyl benzyl phthalate	3.963	0.20	5	0	79.3	47 - 123	4.207	5.97	20	
Caprolactam	3.272	0.20	5	0	65.4	35 - 134	3.033	7.59	20	
Carbazole	4.119	0.20	5	0	82.4	42 - 128	4.446	7.64	20	
Chrysene	4.112	0.10	5	0	82.2	43 - 120	4.402	6.81	20	
Dibenz(a,h)anthracene	3.916	0.10	5	0	78.3	45 - 125	4.108	4.77	20	
Dibenzofuran	4.149	0.10	5	0	83.0	50 - 120	4.41	6.11	20	
Diethyl phthalate	4.302	0.20	5	0	86.0	41 - 120	4.407	2.41	20	
Dimethyl phthalate	4.176	0.20	5	0	83.5	40 - 122	4.252	1.81	20	
Di-n-butyl phthalate	4.374	0.20	5	0	87.5	45 - 123	4.453	1.81	20	
Di-n-octyl phthalate	4.246	0.20	5	0	84.9	45 - 129	4.704	10.2	20	
Fluoranthene	4.622	0.10	5	0	92.4	45 - 125	4.878	5.4	20	
Fluorene	4.414	0.10	5	0	88.3	49 - 120	4.464	1.12	20	
Hexachlorobenzene	4.299	0.20	5	0	86.0	48 - 120	4.65	7.84	20	
Hexachlorobutadiene	4.192	0.20	5	0	83.8	40 - 120	4.43	5.52	20	
Hexachlorocyclopentadiene	3.121	0.20	5	0	62.4	34 - 136	3.202	2.57	20	
Hexachloroethane	3.419	0.20	5	0	68.4	40 - 120	4.089	17.9	20	
Indeno(1,2,3-cd)pyrene	4.296	0.10	5	0	85.9	41 - 128	4.773	10.5	20	
Isophorone	3.345	0.20	5	0	66.9	40 - 121	3.498	4.47	20	
Naphthalene	3.825	0.10	5	0	76.5	45 - 120	4.085	6.6	20	
Nitrobenzene	3.43	0.20	5	0	68.6	44 - 120	3.471	1.21	20	
N-Nitrosodi-n-propylamine	3.624	0.20	5	0	72.5	40 - 120	3.861	6.34	20	
N-Nitrosodiphenylamine	4.076	0.20	5	0	81.5	40 - 125	4.151	1.81	20	
Pentachlorophenol	3.725	0.20	5	0	74.5	19 - 121	4.104	9.69	20	
Phenanthrene	4.149	0.10	5	0	83.0	45 - 121	4.318	3.99	20	
Phenol	3.594	0.20	5	0	71.9	20 - 124	3.854	6.99	20	
Pyrene	4.141	0.10	5	0	82.8	40 - 130	4.595	10.4	20	
Surr: 2,4,6-Tribromophenol	*4.131*	*0.20*	*5*	*0*	*82.6*	*34 - 129*	*4.319*	*4.43*	*20*	
Surr: 2-Fluorobiphenyl	*4.019*	*0.20*	*5*	*0*	*80.4*	*40 - 125*	*4.392*	*8.85*	*20*	
Surr: 2-Fluorophenol	*2.705*	*0.20*	*5*	*0*	*54.1*	*20 - 120*	*3.076*	*12.9*	*20*	

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133244 **Instrument: SV-7** **Method: SW8270**

LCSD Sample ID: **LCSD-133244** Units: **ug/L** Analysis Date: **10-Oct-2018 14:20**
Client ID: Run ID: **SV-7_325184** SeqNo: **4767494** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: 4-Terphenyl-d14	*4.303*	*0.20*	*5*	*0*	*86.1*	*40 - 135*	*4.693*	*8.67*	*20*	
Surr: Nitrobenzene-d5	*3.533*	*0.20*	*5*	*0*	*70.7*	*41 - 120*	*3.486*	*1.33*	*20*	
Surr: Phenol-d6	*3.145*	*0.20*	*5*	*0*	*62.9*	*20 - 120*	*3.435*	*8.8*	*20*	

The following samples were analyzed in this batch: HS18100338-01

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133297 **Instrument: SV-6** **Method: SW8270**

MBLK Sample ID: **MBLK-133297** Units: **ug/Kg** Analysis Date: **10-Oct-2018 11:29**
Client ID: Run ID: **SV-6_325120** SeqNo: **4766071** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1´-Biphenyl	U	6.6								
2,4,5-Trichlorophenol	U	6.6								
2,4,6-Trichlorophenol	U	6.6								
2,4-Dichlorophenol	U	6.6								
2,4-Dimethylphenol	U	6.6								
2,4-Dinitrophenol	U	13								
2,4-Dinitrotoluene	U	6.6								
2,6-Dinitrotoluene	U	6.6								
2-Chloronaphthalene	U	6.6								
2-Chlorophenol	U	6.6								
2-Methylnaphthalene	U	3.3								
2-Methylphenol	U	6.6								
2-Nitroaniline	U	6.6								
2-Nitrophenol	U	6.6								
3&4-Methylphenol	U	6.6								
3,3´-Dichlorobenzidine	U	6.6								
3-Nitroaniline	U	6.6								
4,6-Dinitro-2-methylphenol	U	6.6								
4-Bromophenyl phenyl ether	U	6.6								
4-Chloro-3-methylphenol	U	6.6								
4-Chloroaniline	U	6.6								
4-Chlorophenyl phenyl ether	U	6.6								
4-Nitroaniline	U	6.6								
4-Nitrophenol	U	13								
Acenaphthene	U	3.3								
Acenaphthylene	U	3.3								
Acetophenone	U	6.6								
Anthracene	U	3.3								
Atrazine	U	6.6								
Benz(a)anthracene	U	3.3								
Benzaldehyde	U	6.6								
Benzo(a)pyrene	U	3.3								
Benzo(b)fluoranthene	U	3.3								
Benzo(g,h,i)perylene	U	3.3								

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133297 **Instrument: SV-6** **Method: SW8270**

MBLK Sample ID: **MBLK-133297** Units: **ug/Kg** Analysis Date: **10-Oct-2018 11:29**
Client ID: Run ID: **SV-6_325120** SeqNo: **4766071** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzo(k)fluoranthene	U	3.3								
Bis(2-chloro-1-methylethyl) ether	U	6.6								
Bis(2-chloroethoxy)methane	U	6.6								
Bis(2-chloroethyl)ether	U	6.6								
Bis(2-ethylhexyl)phthalate	U	6.6								
Butyl benzyl phthalate	U	6.6								
Caprolactam	U	6.6								
Carbazole	U	6.6								
Chrysene	U	3.3								
Dibenz(a,h)anthracene	U	3.3								
Dibenzofuran	U	3.3								
Diethyl phthalate	U	6.6								
Dimethyl phthalate	U	6.6								
Di-n-butyl phthalate	U	6.6								
Di-n-octyl phthalate	U	6.6								
Fluoranthene	U	3.3								
Fluorene	U	3.3								
Hexachlorobenzene	U	6.6								
Hexachlorobutadiene	U	6.6								
Hexachlorocyclopentadiene	U	6.6								
Hexachloroethane	U	6.6								
Indeno(1,2,3-cd)pyrene	U	3.3								
Isophorone	U	6.6								
Naphthalene	U	3.3								
Nitrobenzene	U	6.6								
N-Nitrosodi-n-propylamine	U	6.6								
N-Nitrosodiphenylamine	U	6.6								
Pentachlorophenol	U	6.6								
Phenanthrene	U	3.3								
Phenol	U	6.6								
Pyrene	U	3.3								
Surr: 2,4,6-Tribromophenol	*138.8*	*0*	*167*	*0*	*83.1*	*36 - 126*				
Surr: 2-Fluorobiphenyl	*139.3*	*0*	*167*	*0*	*83.4*	*43 - 125*				
Surr: 2-Fluorophenol	*123.4*	*0*	*167*	*0*	*73.9*	*37 - 125*				

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133297 **Instrument: SV-6** **Method: SW8270**

MBLK Sample ID: **MBLK-133297** Units: **ug/Kg** Analysis Date: **10-Oct-2018 11:29**
Client ID: Run ID: **SV-6_325120** SeqNo: **4766071** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: 4-Terphenyl-d14	*156*	*0*	*167*	*0*	*93.4*	*32 - 125*				
Surr: Nitrobenzene-d5	*136*	*0*	*167*	*0*	*81.5*	*37 - 125*				
Surr: Phenol-d6	*127*	*0*	*167*	*0*	*76.1*	*40 - 125*				

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133297 **Instrument: SV-6** **Method: SW8270**

LCS Sample ID: **LCS-133297** Units: **ug/Kg** Analysis Date: **10-Oct-2018 11:49**
Client ID: Run ID: **SV-6_325120** SeqNo: **4766072** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1´-Biphenyl	115.8	6.6	167	0	69.3	50 - 120				
2,4,5-Trichlorophenol	132.5	6.6	167	0	79.3	45 - 127				
2,4,6-Trichlorophenol	137.4	6.6	167	0	82.2	45 - 130				
2,4-Dichlorophenol	134.5	6.6	167	0	80.6	45 - 125				
2,4-Dimethylphenol	123.7	6.6	167	0	74.1	45 - 120				
2,4-Dinitrophenol	114.1	13	167	0	68.3	10 - 126				
2,4-Dinitrotoluene	147.2	6.6	167	0	88.1	50 - 130				
2,6-Dinitrotoluene	143.9	6.6	167	0	86.2	50 - 125				
2-Chloronaphthalene	135.1	6.6	167	0	80.9	50 - 145				
2-Chlorophenol	131.2	6.6	167	0	78.6	45 - 120				
2-Methylnaphthalene	131.1	3.3	167	0	78.5	50 - 120				
2-Methylphenol	132.6	6.6	167	0	79.4	45 - 120				
2-Nitroaniline	171.7	6.6	167	0	103	45 - 138				
2-Nitrophenol	138.1	6.6	167	0	82.7	45 - 125				
3&4-Methylphenol	134.5	6.6	167	0	80.5	45 - 120				
3,3´-Dichlorobenzidine	119.4	6.6	167	0	71.5	15 - 120				
3-Nitroaniline	152.9	6.6	167	0	91.6	40 - 120				
4,6-Dinitro-2-methylphenol	139.7	6.6	167	0	83.7	15 - 135				
4-Bromophenyl phenyl ether	135.8	6.6	167	0	81.3	50 - 125				
4-Chloro-3-methylphenol	131.3	6.6	167	0	78.6	45 - 130				
4-Chloroaniline	101.1	6.6	167	0	60.6	20 - 120				
4-Chlorophenyl phenyl ether	134.4	6.6	167	0	80.5	50 - 120				
4-Nitroaniline	148.8	6.6	167	0	89.1	50 - 127				
4-Nitrophenol	157	13	167	0	94.0	40 - 147				
Acenaphthene	131.5	3.3	167	0	78.8	50 - 120				
Acenaphthylene	136.3	3.3	167	0	81.6	50 - 120				
Acetophenone	103.3	6.6	167	0	61.8	50 - 120				
Anthracene	137.8	3.3	167	0	82.5	50 - 123				
Atrazine	136.3	6.6	167	0	81.6	29 - 148				
Benz(a)anthracene	148.2	3.3	167	0	88.8	50 - 131				
Benzaldehyde	43.49	6.6	167	0	26.0	22 - 129				
Benzo(a)pyrene	151.1	3.3	167	0	90.5	50 - 130				
Benzo(b)fluoranthene	153.8	3.3	167	0	92.1	50 - 137				
Benzo(g,h,i)perylene	139.5	3.3	167	0	83.6	50 - 130				

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133297 **Instrument: SV-6** **Method: SW8270**

LCS Sample ID: **LCS-133297** Units: **ug/Kg** Analysis Date: **10-Oct-2018 11:49**
Client ID: Run ID: **SV-6_325120** SeqNo: **4766072** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzo(k)fluoranthene	140.1	3.3	167	0	83.9	50 - 143				
Bis(2-chloro-1-methylethyl) ether	121.1	6.6	167	0	72.5	50 - 120				
Bis(2-chloroethoxy)methane	120.5	6.6	167	0	72.2	50 - 120				
Bis(2-chloroethyl)ether	136.2	6.6	167	0	81.5	45 - 127				
Bis(2-ethylhexyl)phthalate	174.8	6.6	167	0	105	21 - 148				
Butyl benzyl phthalate	173.6	6.6	167	0	104	50 - 136				
Caprolactam	137.8	6.6	167	0	82.5	50 - 135				
Carbazole	145.3	6.6	167	0	87.0	50 - 143				
Chrysene	140.2	3.3	167	0	83.9	50 - 130				
Dibenz(a,h)anthracene	143.5	3.3	167	0	85.9	50 - 130				
Dibenzofuran	134	3.3	167	0	80.2	50 - 125				
Diethyl phthalate	140	6.6	167	0	83.8	50 - 125				
Dimethyl phthalate	134.6	6.6	167	0	80.6	50 - 125				
Di-n-butyl phthalate	152.7	6.6	167	0	91.4	50 - 140				
Di-n-octyl phthalate	183.2	6.6	167	0	110	50 - 140				
Fluoranthene	144.6	3.3	167	0	86.6	50 - 131				
Fluorene	133.3	3.3	167	0	79.8	50 - 125				
Hexachlorobenzene	126.7	6.6	167	0	75.9	50 - 124				
Hexachlorobutadiene	133.9	6.6	167	0	80.2	50 - 125				
Hexachlorocyclopentadiene	91.95	6.6	167	0	55.1	45 - 135				
Hexachloroethane	131	6.6	167	0	78.4	45 - 125				
Indeno(1,2,3-cd)pyrene	175.4	3.3	167	0	105	45 - 139				
Isophorone	125	6.6	167	0	74.8	45 - 130				
Naphthalene	127.2	3.3	167	0	76.2	50 - 125				
Nitrobenzene	126.9	6.6	167	0	76.0	50 - 125				
N-Nitrosodi-n-propylamine	128.2	6.6	167	0	76.8	45 - 120				
N-Nitrosodiphenylamine	134.9	6.6	167	0	80.7	50 - 130				
Pentachlorophenol	110.5	6.6	167	0	66.2	23 - 136				
Phenanthrene	131.8	3.3	167	0	78.9	50 - 125				
Phenol	131.1	6.6	167	0	78.5	45 - 130				
Pyrene	143.4	3.3	167	0	85.9	45 - 130				
Surr: 2,4,6-Tribromophenol	*145.3*	*0*	*167*	*0*	*87.0*	*36 - 126*				
Surr: 2-Fluorobiphenyl	*141.6*	*0*	*167*	*0*	*84.8*	*43 - 125*				
Surr: 2-Fluorophenol	*107.6*	*0*	*167*	*0*	*64.4*	*37 - 125*				

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133297 **Instrument: SV-6** **Method: SW8270**

LCS Sample ID: **LCS-133297** Units: **ug/Kg** Analysis Date: **10-Oct-2018 11:49**
Client ID: Run ID: **SV-6_325120** SeqNo: **4766072** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: 4-Terphenyl-d14	*153*	*0*	*167*	*0*	*91.6*	*32 - 125*				
Surr: Nitrobenzene-d5	*130.6*	*0*	*167*	*0*	*78.2*	*37 - 125*				
Surr: Phenol-d6	*129.6*	*0*	*167*	*0*	*77.6*	*40 - 125*				

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133297 **Instrument: SV-6** **Method: SW8270**

MS Sample ID: **HS18100338-02MS** Units: **ug/Kg** Analysis Date: **10-Oct-2018 14:15**
Client ID: **DRA29-20181004-01-51** Run ID: **SV-6_325120** SeqNo: **4766284** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1´-Biphenyl	104.7	6.6	166.5	0	62.9	50 - 120				
2,4,5-Trichlorophenol	133.3	6.6	166.5	0	80.0	45 - 127				
2,4,6-Trichlorophenol	126.4	6.6	166.5	0	75.9	45 - 130				
2,4-Dichlorophenol	122.3	6.6	166.5	0	73.4	45 - 125				
2,4-Dimethylphenol	98.93	6.6	166.5	0	59.4	45 - 120				
2,4-Dinitrophenol	84.13	13	166.5	0	50.5	10 - 126				
2,4-Dinitrotoluene	138.6	6.6	166.5	0	83.2	50 - 130				
2,6-Dinitrotoluene	133	6.6	166.5	0	79.9	50 - 125				
2-Chloronaphthalene	119.7	6.6	166.5	0	71.9	50 - 145				
2-Chlorophenol	120.2	6.6	166.5	0	72.2	45 - 120				
2-Methylnaphthalene	126.3	3.3	166.5	0	75.9	50 - 120				
2-Methylphenol	117.8	6.6	166.5	0	70.7	45 - 120				
2-Nitroaniline	152.7	6.6	166.5	0	91.7	45 - 138				
2-Nitrophenol	127.9	6.6	166.5	0	76.8	45 - 125				
3&4-Methylphenol	115.4	6.6	166.5	0	69.3	45 - 120				
3,3´-Dichlorobenzidine	193	6.6	166.5	0	116	15 - 120				
3-Nitroaniline	143	6.6	166.5	0	85.9	40 - 120				
4,6-Dinitro-2-methylphenol	119.4	6.6	166.5	0	71.7	15 - 135				
4-Bromophenyl phenyl ether	131.2	6.6	166.5	0	78.8	50 - 125				
4-Chloro-3-methylphenol	125.7	6.6	166.5	0	75.5	45 - 130				
4-Chloroaniline	195.1	6.6	166.5	0	117	20 - 120				
4-Chlorophenyl phenyl ether	122.6	6.6	166.5	0	73.7	50 - 120				
4-Nitroaniline	168.7	6.6	166.5	0	101	50 - 127				
4-Nitrophenol	147.1	13	166.5	0	88.3	40 - 147				
Acenaphthene	119.4	3.3	166.5	0	71.7	50 - 120				
Acenaphthylene	123.2	3.3	166.5	0	74.0	50 - 120				
Acetophenone	99.49	6.6	166.5	0	59.8	50 - 120				
Anthracene	133.1	3.3	166.5	0	79.9	50 - 123				
Atrazine	142.6	6.6	166.5	0	85.7	29 - 148				
Benz(a)anthracene	152.2	3.3	166.5	0	91.4	50 - 131				
Benzaldehyde	29.62	6.6	166.5	0	17.8	22 - 129				S
Benzo(a)pyrene	158.5	3.3	166.5	0	95.2	50 - 130				
Benzo(b)fluoranthene	163.5	3.3	166.5	0	98.2	50 - 137				
Benzo(g,h,i)perylene	145.7	3.3	166.5	0	87.5	50 - 130				

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133297 **Instrument: SV-6** **Method: SW8270**

MS Sample ID: **HS18100338-02MS** Units: **ug/Kg** Analysis Date: **10-Oct-2018 14:15**
Client ID: **DRA29-20181004-01-51** Run ID: **SV-6_325120** SeqNo: **4766284** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzo(k)fluoranthene	147.4	3.3	166.5	0	88.5	50 - 143				
Bis(2-chloro-1-methylethyl) ether	110.3	6.6	166.5	0	66.2	50 - 120				
Bis(2-chloroethoxy)methane	115.7	6.6	166.5	0	69.5	50 - 120				
Bis(2-chloroethyl)ether	119.1	6.6	166.5	0	71.6	45 - 127				
Bis(2-ethylhexyl)phthalate	190.1	6.6	166.5	5.597	111	21 - 148				
Butyl benzyl phthalate	184.4	6.6	166.5	0	111	50 - 136				
Caprolactam	136.8	6.6	166.5	0	82.2	50 - 135				
Carbazole	158.2	6.6	166.5	0	95.0	50 - 143				
Chrysene	149.3	3.3	166.5	0	89.7	50 - 130				
Dibenz(a,h)anthracene	141.7	3.3	166.5	0	85.1	50 - 130				
Dibenzofuran	122.8	3.3	166.5	0	73.8	50 - 125				
Diethyl phthalate	126.5	6.6	166.5	0	76.0	50 - 125				
Dimethyl phthalate	123.3	6.6	166.5	0	74.0	50 - 125				
Di-n-butyl phthalate	156.8	6.6	166.5	0.8558	93.6	50 - 140				
Di-n-octyl phthalate	194.8	6.6	166.5	0	117	50 - 140				
Fluoranthene	141.7	3.3	166.5	1.487	84.2	50 - 131				
Fluorene	125	3.3	166.5	0	75.1	50 - 125				
Hexachlorobenzene	135	6.6	166.5	0	81.1	50 - 124				
Hexachlorobutadiene	126.3	6.6	166.5	0	75.9	50 - 125				
Hexachlorocyclopentadiene	81.77	6.6	166.5	0	49.1	45 - 135				
Hexachloroethane	115.1	6.6	166.5	0	69.1	45 - 125				
Indeno(1,2,3-cd)pyrene	159.5	3.3	166.5	0	95.8	45 - 139				
Isophorone	118.3	6.6	166.5	0	71.1	45 - 130				
Naphthalene	121.6	3.3	166.5	0	73.1	50 - 125				
Nitrobenzene	121.6	6.6	166.5	0	73.0	50 - 125				
N-Nitrosodi-n-propylamine	117.7	6.6	166.5	0	70.7	45 - 120				
N-Nitrosodiphenylamine	135.1	6.6	166.5	0	81.2	50 - 130				
Pentachlorophenol	121.6	6.6	166.5	0	73.0	23 - 136				
Phenanthrene	126.7	3.3	166.5	1.044	75.4	50 - 125				
Phenol	117.8	6.6	166.5	0	70.7	45 - 130				
Pyrene	149.1	3.3	166.5	2.521	88.0	45 - 130				
Surr: 2,4,6-Tribromophenol	*139.7*	*0*	*166.5*	*0*	*83.9*	*36 - 126*				
Surr: 2-Fluorobiphenyl	*124.9*	*0*	*166.5*	*0*	*75.0*	*43 - 125*				
Surr: 2-Fluorophenol	*94.99*	*0*	*166.5*	*0*	*57.1*	*37 - 125*				

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133297 **Instrument:** SV-6 **Method:** SW8270

MS Sample ID: **HS18100338-02MS** Units: **ug/Kg** Analysis Date: **10-Oct-2018 14:15**
Client ID: **DRA29-20181004-01-51** Run ID: **SV-6_325120** SeqNo: **4766284** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: 4-Terphenyl-d14	*155.4*	*0*	*166.5*	*0*	*93.3*	*32 - 125*				
Surr: Nitrobenzene-d5	*123.3*	*0*	*166.5*	*0*	*74.0*	*37 - 125*				
Surr: Phenol-d6	*111.5*	*0*	*166.5*	*0*	*67.0*	*40 - 125*				

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133297 **Instrument: SV-6** **Method: SW8270**

MSD Sample ID: **HS18100338-02MSD** Units: **ug/Kg** Analysis Date: **10-Oct-2018 14:35**
Client ID: **DRA29-20181004-01-51** Run ID: **SV-6_325120** SeqNo: **4766285** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1´-Biphenyl	109.9	6.6	166.7	0	65.9	50 - 120	104.7	4.82	30	
2,4,5-Trichlorophenol	124.5	6.6	166.7	0	74.7	45 - 127	133.3	6.79	30	
2,4,6-Trichlorophenol	130.4	6.6	166.7	0	78.2	45 - 130	126.4	3.07	30	
2,4-Dichlorophenol	124	6.6	166.7	0	74.4	45 - 125	122.3	1.39	30	
2,4-Dimethylphenol	94.43	6.6	166.7	0	56.7	45 - 120	98.93	4.66	30	
2,4-Dinitrophenol	76.71	13	166.7	0	46.0	10 - 126	84.13	9.23	30	
2,4-Dinitrotoluene	140.1	6.6	166.7	0	84.0	50 - 130	138.6	1.09	30	
2,6-Dinitrotoluene	142.2	6.6	166.7	0	85.3	50 - 125	133	6.68	30	
2-Chloronaphthalene	124.5	6.6	166.7	0	74.7	50 - 145	119.7	3.98	30	
2-Chlorophenol	124.3	6.6	166.7	0	74.6	45 - 120	120.2	3.35	30	
2-Methylnaphthalene	125.4	3.3	166.7	0	75.2	50 - 120	126.3	0.71	30	
2-Methylphenol	123.4	6.6	166.7	0	74.0	45 - 120	117.8	4.63	30	
2-Nitroaniline	162	6.6	166.7	0	97.2	45 - 138	152.7	5.92	30	
2-Nitrophenol	127.5	6.6	166.7	0	76.5	45 - 125	127.9	0.323	30	
3&4-Methylphenol	119.1	6.6	166.7	0	71.5	45 - 120	115.4	3.22	30	
3,3´-Dichlorobenzidine	182.5	6.6	166.7	0	110	15 - 120	193	5.57	30	
3-Nitroaniline	106.1	6.6	166.7	0	63.6	40 - 120	143	29.7	30	
4,6-Dinitro-2-methylphenol	129.8	6.6	166.7	0	77.9	15 - 135	119.4	8.36	30	
4-Bromophenyl phenyl ether	135.2	6.6	166.7	0	81.1	50 - 125	131.2	3.01	30	
4-Chloro-3-methylphenol	122.1	6.6	166.7	0	73.3	45 - 130	125.7	2.89	30	
4-Chloroaniline	198.1	6.6	166.7	0	119	20 - 120	195.1	1.53	30	
4-Chlorophenyl phenyl ether	128.7	6.6	166.7	0	77.2	50 - 120	122.6	4.79	30	
4-Nitroaniline	156.3	6.6	166.7	0	93.8	50 - 127	168.7	7.62	30	
4-Nitrophenol	146.2	13	166.7	0	87.7	40 - 147	147.1	0.562	30	
Acenaphthene	125.9	3.3	166.7	0	75.5	50 - 120	119.4	5.24	30	
Acenaphthylene	127.7	3.3	166.7	0	76.6	50 - 120	123.2	3.62	30	
Acetophenone	100.6	6.6	166.7	0	60.3	50 - 120	99.49	1.07	30	
Anthracene	137.1	3.3	166.7	0	82.2	50 - 123	133.1	2.93	30	
Atrazine	146.5	6.6	166.7	0	87.9	29 - 148	142.6	2.7	30	
Benz(a)anthracene	150.7	3.3	166.7	0	90.4	50 - 131	152.2	0.968	30	
Benzaldehyde	29.58	6.6	166.7	0	17.7	22 - 129	29.62	0.139	30	S
Benzo(a)pyrene	153.1	3.3	166.7	0	91.8	50 - 130	158.5	3.47	30	
Benzo(b)fluoranthene	156.9	3.3	166.7	0	94.2	50 - 137	163.5	4.07	30	
Benzo(g,h,i)perylene	148.2	3.3	166.7	0	88.9	50 - 130	145.7	1.69	30	

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133297 **Instrument: SV-6** **Method: SW8270**

MSD Sample ID: **HS18100338-02MSD** Units: **ug/Kg** Analysis Date: **10-Oct-2018 14:35**
Client ID: **DRA29-20181004-01-51** Run ID: **SV-6_325120** SeqNo: **4766285** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Benzo(k)fluoranthene	149.8	3.3	166.7	0	89.9	50 - 143	147.4	1.56	30	
Bis(2-chloro-1-methylethyl) ether	118	6.6	166.7	0	70.8	50 - 120	110.3	6.75	30	
Bis(2-chloroethoxy)methane	117.4	6.6	166.7	0	70.5	50 - 120	115.7	1.48	30	
Bis(2-chloroethyl)ether	127.8	6.6	166.7	0	76.7	45 - 127	119.1	7.05	30	
Bis(2-ethylhexyl)phthalate	183.5	6.6	166.7	5.597	107	21 - 148	190.1	3.55	30	
Butyl benzyl phthalate	181.1	6.6	166.7	0	109	50 - 136	184.4	1.8	30	
Caprolactam	138.4	6.6	166.7	0	83.0	50 - 135	136.8	1.16	30	
Carbazole	149.2	6.6	166.7	0	89.5	50 - 143	158.2	5.89	30	
Chrysene	143	3.3	166.7	0	85.8	50 - 130	149.3	4.34	30	
Dibenz(a,h)anthracene	154.2	3.3	166.7	0	92.5	50 - 130	141.7	8.49	30	
Dibenzofuran	126.4	3.3	166.7	0	75.8	50 - 125	122.8	2.86	30	
Diethyl phthalate	132.2	6.6	166.7	0	79.3	50 - 125	126.5	4.35	30	
Dimethyl phthalate	127.5	6.6	166.7	0	76.5	50 - 125	123.3	3.35	30	
Di-n-butyl phthalate	155.7	6.6	166.7	0.8558	92.9	50 - 140	156.8	0.692	30	
Di-n-octyl phthalate	187.8	6.6	166.7	0	113	50 - 140	194.8	3.63	30	
Fluoranthene	142.5	3.3	166.7	1.487	84.6	50 - 131	141.7	0.517	30	
Fluorene	131.1	3.3	166.7	0	78.7	50 - 125	125	4.75	30	
Hexachlorobenzene	137.3	6.6	166.7	0	82.4	50 - 124	135	1.69	30	
Hexachlorobutadiene	129.5	6.6	166.7	0	77.7	50 - 125	126.3	2.53	30	
Hexachlorocyclopentadiene	84.05	6.6	166.7	0	50.4	45 - 135	81.77	2.74	30	
Hexachloroethane	124.8	6.6	166.7	0	74.9	45 - 125	115.1	8.15	30	
Indeno(1,2,3-cd)pyrene	159.3	3.3	166.7	0	95.6	45 - 139	159.5	0.136	30	
Isophorone	118.2	6.6	166.7	0	70.9	45 - 130	118.3	0.0551	30	
Naphthalene	122.6	3.3	166.7	0	73.6	50 - 125	121.6	0.807	30	
Nitrobenzene	121.7	6.6	166.7	0	73.0	50 - 125	121.6	0.146	30	
N-Nitrosodi-n-propylamine	128.2	6.6	166.7	0	76.9	45 - 120	117.7	8.55	30	
N-Nitrosodiphenylamine	143.6	6.6	166.7	0	86.2	50 - 130	135.1	6.1	30	
Pentachlorophenol	131.8	6.6	166.7	0	79.1	23 - 136	121.6	8.07	30	
Phenanthrene	133.2	3.3	166.7	1.044	79.3	50 - 125	126.7	5.07	30	
Phenol	114.4	6.6	166.7	0	68.6	45 - 130	117.8	2.93	30	
Pyrene	148.7	3.3	166.7	2.521	87.7	45 - 130	149.1	0.252	30	
Surr: 2,4,6-Tribromophenol	*145.4*	*0*	*166.7*	*0*	*87.3*	*36 - 126*	*139.7*	*3.99*	*30*	
Surr: 2-Fluorobiphenyl	*132.6*	*0*	*166.7*	*0*	*79.6*	*43 - 125*	*124.9*	*6.02*	*30*	
Surr: 2-Fluorophenol	*103.8*	*0*	*166.7*	*0*	*62.3*	*37 - 125*	*94.99*	*8.82*	*30*	

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: 133297 **Instrument: SV-6** **Method: SW8270**

MSD Sample ID: **HS18100338-02MSD** Units: **ug/Kg** Analysis Date: **10-Oct-2018 14:35**
Client ID: **DRA29-20181004-01-51** Run ID: **SV-6_325120** SeqNo: **4766285** PrepDate: **08-Oct-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: 4-Terphenyl-d14	*155.7*	*0*	*166.7*	*0*	*93.4*	*32 - 125*	*155.4*	*0.18*	*30*	
Surr: Nitrobenzene-d5	*124.7*	*0*	*166.7*	*0*	*74.8*	*37 - 125*	*123.3*	*1.17*	*30*	
Surr: Phenol-d6	*115.6*	*0*	*166.7*	*0*	*69.4*	*40 - 125*	*111.5*	*3.6*	*30*	

The following samples were analyzed in this batch:

HS18100338-02	HS18100338-03	HS18100338-04	HS18100338-05
HS18100338-06	HS18100338-07	HS18100338-08	HS18100338-09
HS18100338-10	HS18100338-11	HS18100338-12	HS18100338-13
HS18100338-14	HS18100338-15		

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: HS18100338

QC BATCH REPORT

Batch ID: R325102 **Instrument: Balance1** **Method: ASTM D2216**

DUP Sample ID: **HS18100267-04DUP** Units: **wt%** Analysis Date: **09-Oct-2018 09:58**
Client ID: Run ID: **Balance1_325102** SeqNo: **4765658** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Percent Moisture	23	0.0100					23.2	0.866	20	

The following samples were analyzed in this batch:

HS18100338-02	HS18100338-03	HS18100338-04	HS18100338-05
HS18100338-06	HS18100338-07	HS18100338-08	HS18100338-09
HS18100338-10	HS18100338-11	HS18100338-12	HS18100338-13
HS18100338-14	HS18100338-15		

Client: Weston Solutions, Inc.
Project: FJ Doyle Site
WorkOrder: **HS18100338**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
Date	
mg/Kg-dry	Milligrams per Kilogram- Dry weight corrected
mg/L	Milligrams per Liter
ug/100cm2	micrograms per 100 cm2

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
North Carolina	624-2018	31-Dec-2018
Arkansas	88-0356	27-Mar-2019
Texas	T10470231-18-21	30-Apr-2019
North Dakota	R193 2018-2019	30-Apr-2019
Illinois	004438	29-Jun-2019
Louisiana	03087	30-Jun-2019
Dept of Defense	ANAB L2231	22-Dec-2018
Kentucky	123043 - 2018	30-Apr-2019
Kansas	E-10352 2018-2019	31-Jul-2019
Oklahoma	2018-156	31-Aug-2019

Sample Receipt Checklist

Client Name: Weston Baton Rouge La
Work Order: HS18100338
Date/Time Received: **08-Oct-2018 10:30**
Received by: **JRM**

Checklist completed by: *Jared R. Makan* eSignature 8-Oct-2018 Date
Reviewed by: *Bernadette A. Fini* eSignature 9-Oct-2018 Date

Matrices: **Soil,Water, Wipe**
Carrier name: **ALS Courier**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☐	No ☑	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
TX1005 solids received in hermetically sealed vials?	Yes ☐	No ☐	N/A ☑
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☐	No ☑	
Temperature(s)/Thermometer(s):	24.7c/24.3c UC/C	IR11	
Cooler(s)/Kit(s):	Green		
Date/Time sample(s) sent to storage:	10/08/2018 13:20		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes: Samples received out of temp. Sample collection times differ for the following: DRA31-20181004-12-51 - COC = 11:15, Sx = 11:14. FJD04-09-WS14-20181004-81 - COC = 15:06, Sx = 14:06. Samples logged in per COC.

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

USEPA
DateShipped: 10/4/2018
CarrierName: UPS
AirbillNo: J1797624035

CHAIN OF CUSTODY RECORD
Site #: 1234
Contact Name: Sean Gavlas
Contact Phone: 609-433-8434

No: 6-100318-165808-0031
Cooler #: 1
Lab: ALS - Houston TX
Lab Phone: 281-530-5656

Lab #	Sample #	Location	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container	Preservative	Lab QC
	DRA32-20181004-12-23	FieldQC	PCBs	Water	10/4/2018	11:30	2	250 mL amber	4 C	N
	DRA32-20181004-12-23	FieldQC	SVOC / PAH	Water	10/4/2018	11:30	2	1L amber	4 C	N
	DRA32-20181004-12-23	FieldQC	Metals	Water	10/4/2018	11:30	1	250 mL poly	HN03	N
	DRA29-20181004-01-51	DRA29	PCB (8082A),SVOC+PAH (8270),TAL Metals+Hg (6020)	Soil	10/4/2018	08:42	1	4oz glass	4C	N
	DRA29-20181004-06-51	DRA29	PCB (8082A),SVOC+PAH (8270),TAL Metals+Hg (6020)	Soil	10/4/2018	08:59	1	4oz glass	4C	N
	DRA29-20181004-06-52	DRA29	PCB (8082A),SVOC+PAH (8270),TAL Metals+Hg (6020)	Soil	10/4/2018	08:59	1	4oz glass	4C	N
	DRA29-20181004-12-51	DRA29	PCB (8082A),SVOC+PAH (8270),TAL Metals+Hg (6020)	Soil	10/4/2018	09:17	1	4oz glass	4C	N
	DRA30-20181004-01-51	DRA30	PCB (8082A),SVOC+PAH (8270),TAL Metals+Hg (6020)	Soil	10/4/2018	09:31	1	4oz glass	4C	N
	DRA30-20181004-06-51	DRA30	PCB (8082A),SVOC+PAH (8270),TAL Metals+Hg (6020)	Soil	10/4/2018	09:51	1	4oz glass	4C	Y
	DRA30-20181004-12-51	DRA30	PCB (8082A),SVOC+PAH (8270),TAL Metals+Hg (6020)	Soil	10/4/2018	10:05	1	4oz glass	4C	N
	DRA31-20181004-01-51	DRA31	PCB (8082A),SVOC+PAH (8270),TAL Metals+Hg (6020)	Soil	10/4/2018	10:40	1	4oz glass	4C	N

Special Instructions: Analyze all samples for listed analyses with a 3-day TAT. Send sample results to Jeff Wright (jeff.wright@westonsolutions.com) and Sean Gavlas (sean.gavlas@westonsolutions.com).

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
All Samples All Analyses	[signature]	10/4/18/1900	J. Makan	10/8/18 10:30	Cooler - Green Temp 24.7 1211 CF-04

HS18100338
Weston Solutions, Inc.
FJ Doyle Site

USEPA
DateShipped: 10/4/2018
CarrierName: UPS
AirbillNo: J1797624035

CHAIN OF CUSTODY RECORD
Site #: 1234
Contact Name: Sean Gavlas
Contact Phone: 609-433-8434

No: 6-100318-165808-0031
Cooler #: 1
Lab: ALS - Houston TX
Lab Phone: 281-530-5656

Lab #	Sample #	Location	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container	Preservative	Lab QC
	DRA31-20181004-06-51	DRA31	PCB (8082A),SVOC+PAH (8270),TAL Metals+Hg (6020)	Soil	10/4/2018	11:05	1	4oz glass	4C	N
	DRA31-20181004-12-51	DRA31	PCB (8082A),SVOC+PAH (8270),TAL Metals+Hg (6020)	Soil	10/4/2018	11:15	1	4oz glass	4C	N
	DRA32-20181004-01-51	DRA32	PCB (8082A),SVOC+PAH (8270),TAL Metals+Hg (6020)	Soil	10/4/2018	10:45	1	4oz glass	4C	N
	DRA32-20181004-06-51	DRA32	PCB (8082A),SVOC+PAH (8270),TAL Metals+Hg (6020)	Soil	10/4/2018	10:55	1	4oz glass	4C	N
	DRA32-20181004-06-52	DRA32	PCB (8082A),SVOC+PAH (8270),TAL Metals+Hg (6020)	Soil	10/4/2018	10:55	1	4oz glass	4C	N
	DRA32-20181004-12-51	DRA32	PCB (8082A),SVOC+PAH (8270),TAL Metals+Hg (6020)	Soil	10/4/2018	11:15	1	4oz glass	4C	N
	FJD04-09-PCS01-20181004-81	FJD04-09-PCS01	PCB (Aroclor 1268 ONLY), Pb (6020)	Paint	10/4/2018	16:16	1	4oz glass	4C	N
	FJD04-09-WS01-20181004-81	FJD04-09-WS01	PCBs (8082A)	Wipe	10/4/2018	14:11	1	4 oz. glass	Hexane	N
	FJD04-09-WS01-20181004-82	FJD04-09-WS01	PCBs (8082A)	Wipe	10/4/2018	14:13	1	4 oz. glass	Hexane	N
	FJD04-09-WS02-20181004-81	FJD04-09-WS02	PCBs (8082A)	Wipe	10/4/2018	14:16	1	4 oz. glass	Hexane	N
	FJD04-09-WS03-20181004-81	FJD04-09-WS03	PCBs (8082A)	Wipe	10/4/2018	14:20	1	4 oz. glass	Hexane	N

Special Instructions: Analyze all samples for listed analyses with a 3-day TAT. Send sample results to Jeff Wright (jeff.wright@westonsolutions.com) and Sean Gavlas (sean.gavlas@westonsolutions.com).

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
All Samples All Analyses		10/4/18 1900	J. MARCHAN	10/5/18 10:30	Cooler Green Temp 24.7 IR11 CF-0.4

HS18100338
Weston Solutions, Inc.
FJ Doyle Site

ED_002624_00001155-00123

USEPA
DateShipped: 10/4/2018
CarrierName: UPS
AirbillNo: J1797624035

CHAIN OF CUSTODY RECORD
Site #: 1234
Contact Name: Sean Gavlas
Contact Phone: 609-433-8434

No: 6-100318-165808-0031
Cooler #: 1
Lab: ALS - Houston TX
Lab Phone: 281-530-5656

Lab #	Sample #	Location	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container	Preservative	Lab QC
	FJD04-09-WS13-20181004-81	FJD04-09-WS13	PCBs (8082A)	Wipe	10/4/2018	15:02	1	4 oz. glass	Hexane	N
	FJD04-09-WS14-20181004-81	FJD04-09-WS14	PCBs (8082A)	Wipe	10/4/2018	15:06	1	4 oz. glass	Hexane	N

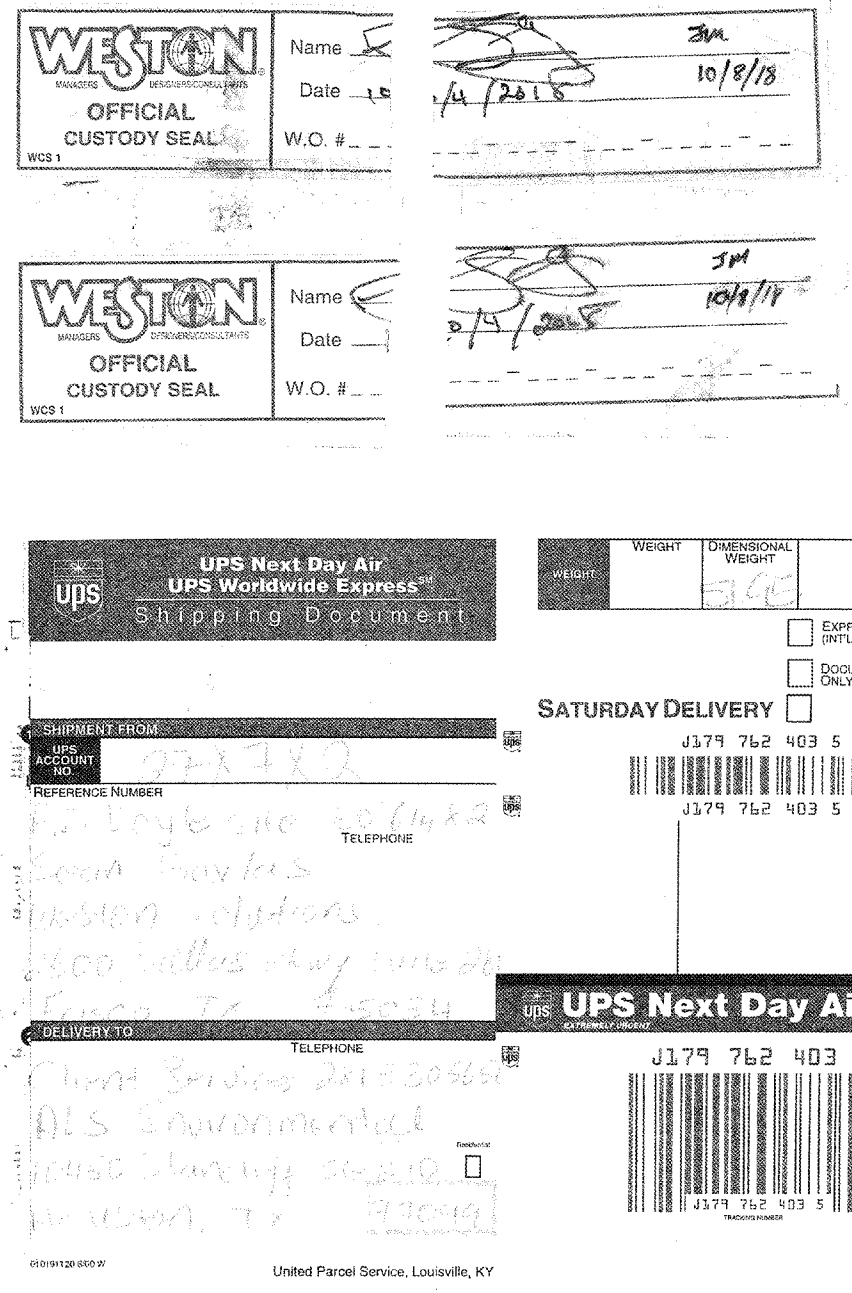
Special Instructions: Analyze all samples for listed analyses with a 3-day TAT. Send sample results to Jeff Wright (jeff.wright@westonsolutions.com) and Sean Gavlas (sean.gavlas@westonsolutions.com).

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
All Samples/ All Analyses		10/4/18/1900	J. Waumm	10/8/18 10:30	Cooler - Green Temp 24.7 Ice cf-0.4

HS18100338
Weston Solutions, Inc.
FJ Doyle Site

ED_002624_00001155-00124



ED_002624_00001155-00125

REPUBLIC SERVICES, INC.

Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

FAX

INCOMPLETE FILE TRANSMITTAL

TO: Cheryl Muegge	**LOG NO.:** 34161818258
FAX:	**File Received:** 10/31/2018
From: Special Waste Dept.	**Response Date:** 10/31/2018
Re: United States Environmental Protection Agency - Region 6 / Construction & Demolition Debris	

SECTION I	SECTION II	SECTION III	SECTION IV	SECTION V	SECTION VI
☐ DisposalFacility	☐ TransporterName	☐ NameOfWaste	☐ USEPA	☐ CharacteristicComponents	☐ GenAuthSignature
☐ GeneratorName	☐ TransporterSiteAddress	☑ ProcessGeneratingWaste	☐ SampleDate	☐ FreeLiquids	☐ GenCoName
☐ GeneratorSiteAddress	☐ TransporterCityStateZip	☐ TypeOfWaste	☐ CompositeGrab	☐ YesNo	☐ NoStateLetter
☐ GeneratorCityStateZip	☐ TransporterMailingAddress	☐ PhysicalState	☐ SampleID	☐ pH_Flash	☐ Name_Title
☐ GeneratorMailingAddress	☐ TransporterContactName	☐ MethodOfShipment			☐ SignatureDate
☐ GeneratorContactName	☐ TransporterTelFax	☐ EstimatedAnnualVolume			
☐ GeneratorTelFax		☐ Frequency			
☐ GeneratorStateID		☐ DisposalConsideration			
☐ WasteCodeTexas					

ANALYTICALS	TCLP TOTAL METALS	TCLP VOLATILES	TCLP SEMI-VOLATILES	PESTICIDES / HERBICIDE	
☐ TotalCyanide	☐ Arsenic	☐ Benzene	☐ Cresols	☐ Chlordane	☐ LabLetterhead
☐ ReactiveCyanide	☐ Barium	☐ CarbonTetrachloride	☐ DichlorobenzeneOne	☐ Endrin	☐ ChainOfCustody
☐ TotalSulfide	☐ Cadmium	☐ Chlorobenzene	☐ DinitrotolueneTwo	☐ Heptachlor	☐ NoLabSignature
☐ ReactiveSulfide	☐ Chromium	☐ Chloroform	☐ Hexachlorobenzene	☐ HeptachlorEpoxide	☐ ReportOneYearOldPlus
☐ TotalPCB	☐ Copper	☐ DichloroethaneOne	☐ Nitrobenzene	☐ Lindane	☐ NoThirdPartyLab
☐ TOX_EOX	☐ Lead	☐ DichloroehyleneTwo	☐ Pentachlorophenol	☐ Methoxychlor	☐ MissingReportPages
☐ Phenols	☐ Mercury	☐ MethylEthylKetone	☐ Pyridine	☐ Toxaphene	☐ MissingMSDSPages
☐ FlashPoint	☐ Selenium	☐ Tetrachloroethylene	☐ TrichlorophenolFive	☐ TwoFourD	☐ TotalSulfates
☐ pH	☐ Silver	☐ Trichlorethylene	☐ TrichlorphenolSix	☐ TwoFourFiveTP	☐ TotalSulfur
☐ PaintFilter	☐ Zinc	☐ VinylChloride			☐ WrongProfile
☐ TPH					
☐ BTEX					☑ GeneratorIncomplete

Notes:

Please have the generator add more details to their process generating waste: for what purpose was the building used on-site? What activities or processes occurred in the building? What possible contaminants may have been used in it? How was it determined that no contamination exists in the material that is to be disposed? Please have the generator describe their process for ensuring no contaminated material is designated for disposal. Additional analytical may be required.

What is the metal that constitutes up to 30% of the waste? Please have the generator describe.

REPUBLIC SERVICES SPECIAL WASTE PROFILE

Requested Disposal Facility: 3416 Maloy Solid Waste LF TX

Waste Profile #
3416 18 18258
Sales Rep #: 533

Saveable fill-in form. Restricted printing until all required (yellow) fields are completed.

I. Generator Information

Generator Name: United States Environmental Protection Agency - Region 6			
Generator Site Address: Personal Address / Ex. 6			
City: Leonard	County: Fannin	State: Texas	Zip: 75452
State ID/Reg No: NA	State Approval/Waste Code: NA (if applicable)		NAICS # :
Generator Mailing Address (if different): ☑ 1445 Ross Avenue, Suite 1200			
City: Dallas	County: Dallas	State: Texas	Zip: 75202-2733
Generator Contact Name: Gary Moore, On-Scene Coordinator (6SF-ER)		Email: moore.gary@epa.gov	
Phone Number: (214) 665-6609	Ext:	Fax Number:	

per G.M. 10/30/18 CM

II. Billing Information

Bill To: Environmental Restoration, LLC		Contact Name: Don Edgington	
Billing Address: 1666 Fabick Drive		Email: d.edgington@erllc.com	
City: Fenton	State: Missouri	Zip: 63026	Phone: (251) 406-0220

III. Waste Stream Information

Name of Waste: Construction & Demolition (C&D) debris	
Process Generating Waste: Demolition and removal of on-site building and foundation.	
Type of Waste:	☐ INDUSTRIAL PROCESS WASTE ☑ POLLUTION CONTROL WASTE
Physical State:	☑ SOLID ☐ SEMI-SOLID ☐ POWDER ☐ LIQUID
Method of Shipment:	☑ BULK ☐ DRUM ☐ BAGGED ☐ OTHER:
Estimated Annual Volume:	150 Tons
Frequency:	☑ ONE TIME ☐ ONGOING
Disposal Consideration:	☑ LANDFILL ☐ SOLIDIFICATION ☐ BIOREMEDIATION

IV. Representative Sample Certification

☑ NO SAMPLE TAKEN

Is the representative sample collected to prepare this profile and laboratory analysis, collected in accordance with U.S. EPA 40 CFR 261.20(c) guidelines or equivalent rules?	☐ YES or ☐ NO
Type of Sample: ☐ COMPOSITE SAMPLE ☐ GRAB SAMPLE	
Sample Date:	

© Republic Services, April 2013

REPUBLIC SERVICES **SPECIAL WASTE PROFILE**

Waste Profile #
3416 18 18258

V. Physical Characteristics of Waste

Characteristic Components	% by Weight (range)
1. Concrete, gravels, rock	80 - 100%
2. Metal, glass, wood	0 - 30%
3. Trash/PPE	0 - 10%
4.	
5.	

Color	Odor (describe)	Does Waste Contain Free Liquids?	% Solids	pH:	Flash Point
varies	none	☐ YES or ☑ NO	100%	n/a	n/a °F

Attach Laboratory Analytical Report (and/or Material Safety Data Sheet) Including Chain of Custody and Required Parameters Provided for this Profile

Does this waste or generating process contain regulated concentrations of the following Pesticides and/or Herbicides: Chlordane, Endrin, Heptachlor (and its epoxides), Lindane, Methoxychlor, Toxaphene, 2,4-D, or 2,4,5-TP Silvex as defined in 40 CFR 261.33?	☐ Yes or ☑ No
Does this waste contain reactive sulfides (greater than 500 ppm) or reactive cyanide (greater than 250 ppm)[reference 40 CFR 261.23(a)(5)]?	☐ Yes or ☑ No
Does this waste contain regulated concentrations of Polychlorinated Biphenyls (PCBs) as defined in 40 CFR Part 761?	☐ Yes or ☑ No
Does this waste contain concentrations of listed hazardous wastes defined in 40 CFR 261.31, 261.32, 261.33, including RCRA F-Listed Solvents?	☐ Yes or ☑ No
Does this waste exhibit a Hazardous Characteristic as defined by Federal and/or State regulations?	☐ Yes or ☑ No
Does this waste contain regulated concentrations of 2,3,7,8-Tetrachlorodibenzodioxin (2,3,7,8-TCCD), or any other dioxin as defined in 40 CFR 261.31?	☐ Yes or ☑ No
Is this a regulated Radioactive Waste as defined by Federal and/or State regulations?	☐ Yes or ☑ No
Is this a regulated Medical or Infectious Waste as defined by Federal and/or State regulations?	☐ Yes or ☑ No
Is this waste a reactive or heat generating waste?	☐ Yes or ☑ No
Does the waste contain sulfur or sulfur by-products?	☐ Yes or ☑ No
Is this waste generated at a Federal Superfund Clean Up Site?	☑ Yes or ☐ No
Is this waste from a TSD facility, TSD like facility or consolidator?	☐ Yes or ☑ No

VI. Certification

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true, complete and accurate description of the waste material being offered for disposal and all known or suspected hazards have been disclosed. All Analytical Results/Material Safety Data Sheets submitted are truthful and complete and are representative of the waste.

I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. I shall immediately give written notice of any change or condition pertaining to the waste not provided herein. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue.

I further certify that the company has not altered the form or content of this profile sheet as provided by Republic Services Inc.

Gary Moore, EPA On-Scene Coordinator
Authorized Representative Name And Title (Type or Print)

U.S. Environmental Protection Agency
Company Name

Authorized Representative Signature

10/29/2018
Date

© Republic Services, April 2013

REPUBLIC SERVICES **SPECIAL WASTE PROFILE**

Requested Disposal Facility: 3416 Maloy Solid Waste LF TX

Waste Profile #
3416 18 18258
Sales Rep #: 533

Saveable fill-in form. Restricted printing until all required (yellow) fields are completed.

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City: Dallas	County: Dallas	State: Texas	Zip: 75202-2733
Generator Contact Name: Gary Moore, On-Scene Coordinator (6SF-ER)		Email: moore.gary@epa.gov	
Phone Number: (214) 665-6609	Ext:	Fax Number:	

per G.M. 10/30/18 CA

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Estimated Annual Volume:	150 Tons
Frequency:	☑ ONE TIME ☐ ONGOING
Disposal Consideration:	☑ LANDFILL ☐ SOLIDIFICATION ☐ BIOREMEDIATION

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Sample Date:	

© Republic Services, April 2013

REPUBLIC SERVICES **SPECIAL WASTE PROFILE**

Waste Profile #
3416 18 18258

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4.	
5.	

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varies	none	☐ YES or ☑ NO	100%	n/a	n/a °F

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Is this waste a reactive or heat generating waste?	☐ Yes or ☑ No
Does the waste contain sulfur or sulfur by-products?	☐ Yes or ☑ No
Is this waste generated at a Federal Superfund Clean Up Site?	☑ Yes or ☐ No
Is this waste from a TSD facility, TSD like facility or consolidator?	☐ Yes or ☑ No

VI. Certification

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I further certify that the company has not altered the form or content of this profile sheet as provided by Republic Services Inc.

Gary Moore, EPA On-Scene Coordinator
Authorized Representative Name And Title (Type or Print)

U.S. Environmental Protection Agency
Company Name

Authorized Representative Signature

10/29/2018
Date

© Republic Services, April 2013

Message

From: Moore, Gary [Moore.Gary@epa.gov]
Sent: 12/18/2018 12:28:57 AM
To: Don Edgington [d.edgington@erllc.com]
CC: 'Angela Harbin' [a.harbin@erllc.com]; Delgado, Paige [Delgado.Paige@epa.gov]
Subject: RE: F6-308 DWO 12-17-18
Attachments: 12.17.18 DWO No. 33 - F.J. Doyle Salvage Site - 12.17.18-signed.pdf

Don:

As I am sure you heard today from Paige that we have received concerns from a property owner about properties at Personal Address / Ex. 6 We need to do whatever we can to get all backfill and topsoil into these properties before we depart for the break. I am sure you know that the drainage ditches need to be formed with the clay and then topped with topsoil – maybe more clay here than topsoil covering.

We also need to get most of Personal Address / Ex. 6 done especially the FJD02 portion and at least the grids along the east side of his house on FJD03. Thanks for your effort.

Gary Moore

From: Angela Harbin <a.harbin@erllc.com>
Sent: Monday, December 17, 2018 4:27 PM
To: Moore, Gary <Moore.Gary@epa.gov>; Delgado, Paige <Delgado.Paige@epa.gov>
Cc: Don Edgington <d.edgington@erllc.com>
Subject: F6-308 DWO 12-17-18

Hello again,

The DWO for today is attached.

Thanks,

Angela Harbin
Field Cost Accountant
Environmental Restoration, LLC
1666 Fabick Drive
Fenton, MO 63026
Cell: 850-247-9317
Direct Fax: 636-680-2547
a.harbin@erllc.com

Confidentiality Warning: This e-mail and any attachments contain information intended only for the use of the individual or entity named above. If the reader of this e-mail is not the intended recipient or the employee or agent responsible for delivering it to the intended recipient, any dissemination, publication or copying of this e-mail is strictly prohibited. Although this email has been scanned for malware, the sender does not accept any responsibility for any loss, disruption or damage to your data or computer system that may occur while using data contained in, or transmitted with, this e-mail. If you have received this e-mail in error, please immediately notify by return e-mail. Thank you.

United States Environmental Protection Agency
Region 6
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733

SEP - 7 2018

MEMORANDUM

SUBJECT: Approval and Funding for a Time-Critical Removal Action at the F.J. Doyle Salvage Site, Leonard, Fannin County, Texas

FROM: /s/ Gary Moore, On-Scene Coordinator
Emergency Management Branch (6SF-ER)

TO: Carl E. Edlund, P.E., Director
Superfund Division (6SF)

THRU: Ronnie Crossland, Chief
Emergency Management Branch (6SF-E)

I. PURPOSE

The purpose of this action memorandum is to request and document approval of the selected removal action described herein in accordance with the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), 42 U.S.C. § 9604, for the F.J. Doyle Salvage site (Site), Leonard, Fannin County, Texas. This time-critical removal action will involve the excavation and disposal of soils from the Site, city rights-of-ways, and residential properties contaminated by runoff from the Site. This action will remove the threat to human health and the environment posed by the identified contaminants of concern listed herein that were a result of the actions conducted at the Site.

The proposed plan of action meets the criteria for initiating a removal action under Section 300.415 of the National Contingency Plan (NCP), 40 C.F.R. § 300.415. This action is expected to require less than twelve months (from mobilization) and $2 million to complete.

II. SITE CONDITIONS AND BACKGROUND

CERCLIS:	TXD980865109
Category of Removal:	Time Critical
Site ID:	061D
Latitude:	33.389530° North
Longitude:	96.243160° West

ED_002624_00001240-00001

A. Site Description

1. Removal Site Evaluation

The Site is located at the southwest corner of North Poplar and East Cottonwood Street in Leonard, Fannin County, Texas, 75452. The previous address for the site was Ex. 6 Personal Privacy (PP) however, the current address is 905 North Poplar Street, Leonard, Texas 75452. The Site consists of approximately 0.344 acres.

F.J. Doyle Salvage conducted salvage operations by stripping out-of-service power transmission transformers for recoverable metals. The facility consisted of a transformer storage shop/office with a surrounding yard used for transformer off-loading and storage. A concrete secondary containment pad was used for the storage of 55-gallon drums and oil storage tanks (1-375 gal and 2-500 gal) containing fluids drained from the transformers.

The facility also used a high-temperature oven to burn residual oils, paper and varnish from the copper and aluminum transformer cores. It was reported that Mr. Frank Doyle used the oil in the past for weed control and distributed the oil to various individuals for use as a weed killer in the 1970s. The past use of polychlorinated biphenyls (PCBs) in electrical equipment such as transformers and capacitors was common until 1979 when PCBs were banned in the United States and became regulated under 40 C.F.R. Part 761.

The transformer storage shop and concrete pad used for transformer off-loading and storage remain at the Site. The Site is directly bordered by residential properties and a Leonard Independent School District (LISD) Daycare Facility to the south with the LISD Intermediate and Elementary schools just south of the Daycare Facility; residences on the north and west; and Leonard High School to the East. The Site predominantly drains to the southeast; south along roadside ditches on North Poplar Street toward the Leonard Elementary school, then east along East Hackberry Street.

The Site is located within non-designated Segment No. 0306 at the western extreme of the Sulphur River Basin, which flows east joining the Middle and North Sulphur Rivers and converges with the Red River 308 miles downstream in Arkansas. The major tributaries of the Sulphur River are Days Creek and White Oak Bayou.

The average annual precipitation of Leonard, Texas is 43 inches with approximately 230 sunny days per year. The average temperature ranges from 33 degrees Fahrenheit in the winter to 93 degrees Fahrenheit in the summer. The average annual snowfall is 1 inch.

The Site lies approximately 700 feet above sea level with an apparent gentle slope to the south. The Site is within Fannin County, which lies in the northern fringe of the Texas Blackland Prairie, which extends through North Central Texas and is characterized by broad flood plains and shallow stream valleys. Information obtained from the U.S. Department of Agriculture (USDA) indicated that the soils generally consist of shallow, well-drained, moderately permeable, loamy soils that are formed in chalk or in chalk interbedded with marl.

The EPA removal program conducted an investigation of the Site in May 2018 and determined that various contaminants of concern (COCs), including PCBs, semi-volatile organic compounds (SVOCs), polycyclic aromatic hydrocarbons (PAHs), and metals, in the soil had migrated off-site.

ED_002624_00001240-00002

2. Physical Location

The Site is located at 905 North Poplar Street, Leonard, Fannin County, Texas 75452. The immediate area surrounding the Site is residential and includes multiple schools and a daycare center.

3. Site Characteristics

The Site is the location where salvage operations were conducted. Historical sampling conducted on the Site has shown PCB soil contamination. The contaminants identified on the on-site areas (industrial facility and associated drainage ditches) and those for the off-site areas (residential, school, daycare, alleyway and associated drainage ditches) during the April/May 2018 assessment are as follows:

Analyte	**On-Site Areas**	**Off-Site Areas**
PCB (total):	up to 175 mg/kg	up to 95.1 mg/kg
Arsenic:	up to 68.2 mg/kg	up to 59.1 mg/kg
Cobalt:	up to 30.9 mg/kg	up to 23.6 mg/kg
Copper:	up to 21,800 mg/kg	up to 6740 mg/kg
Lead:	up to 1,480 mg/kg	up to 402 mg/kg
Manganese:	up to 4,490 mg/kg	up to 3290 mg/kg
Benzo(a)pyrene:	up to 0.13 mg/kg	up to 13.3 mg/kg
Benzo(a)anthracene	less than 1.1 mg/kg	up to 9.8 mg/kg
Benzo(b)fluoranthene	less than 1.1 mg/kg	up to 16.5 mg/kg
Dibenzo(a,h)anthracene	less than 0.11 mg/kg	up to 2.97 mg/kg
Indeno(1,2,3-cd)pyrene	less than 1.1 mg/kg	up to 15.2 mg/kg

The Site and the surrounding alleyway, drainage ditches, residential properties, and school properties immediately surrounding the Site are the subject of this removal action and have been impacted by erosional runoff from the Site with similar contaminant impacts.

4. Release or Threatened Release into the Environment of a Hazardous Substance, or Pollutant or Contaminant

EPA has documented the contamination on the residential properties, alleyway, and drainage ditches surrounding the Site and have determined that it is associated with the operations conducted on the Site. EPA believes that much of the off-site contamination is associated with erosional migration from the Site. PCBs are the primary contaminant of concern although additional contaminants are co-located with the PCB contaminants and will be addressed as part of this response.

The contaminants listed in II.A.3 above, PCBs, arsenic, cobalt compounds, copper, lead, manganese compounds, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene are hazardous substances as defined by Section 101(14) of CERCLA, 42 U.S.C. 9601(14), and further defined at 40 C.F.R. § 302.4.

5. NPL Status

This Site is not on the National Priorities List (NPL). At this time, there is no effort to pursue NPL ranking.

ED_002624_00001240-00003

6. Maps, Pictures and Other Graphic Representations

Attachment 1 Site Location Maps
Attachment 2 Overall Contamination Area Map (Confidential)
Attachment 3 Site and ROW Contamination Area Map
Attachment 4 Enforcement Attachment (Confidential)

B. Other Actions to Date

1. Previous Actions

September 1990 – April 1991: The EPA removal program began a site investigation based upon a citizen complaint of improper handling and salvage of transformers and a referral by the EPA regional Toxic Substance and Control Act (TSCA) program. The goal of the investigation was to determine the presence and extent of on and off-site PCB and dioxin contamination. The results indicated no presence of dioxins, although PCBs were present in both on and offsite areas. The Site was referred back to TSCA program due to its active status.

June 1995: The TSCA program referred the Site back to the removal program due to recent PRP sampling revealing extremely elevated concentration of PCBs in off-site soil areas.

July 1995: The removal program began a site investigation to determine the extent of PCB contamination surrounding the Site. At the time of the investigation, the F.J. Doyle Salvage was still actively operating. The investigation revealed elevated PCB contamination to various depths down to two feet and concentrations of up to 2730 mg/kg. It also confirmed PCB contamination in offsite areas. The facility was still actively operated. EPA did not conduct a removal action at the Site.

May 1997: The EPA remedial program conducted a preliminary assessment to evaluate current information relative to the Site. EPA identified the previous investigations and noted the elevated PCB concentrations both on and offsite. The preliminary assessment indicated that it was unlikely that the City of Leonard drinking water wells would be impacted due to the lithology of the underlying formations and depth to groundwater.

August 1998: TNRCC (predecessor agency to Texas Commission on Environmental Quality (TCEQ)) contacted the EPA removal program and requested assistance to address contamination from the Site that had impacted both on and off-site areas near school, daycare, and residential properties. The TNRCC contacted the Texas Department of Health (TDH) to conduct a health consultation.

September 1998: TNRCC completed a remedial screening site investigation (SSI) under a cooperative agreement with EPA. TNRCC conducted soil sampling and verified elevated concentrations of PCBs in both on and offsite areas. Based upon the SSI and the fact that the Site was active, EPA determined that the Site would not meet the criteria to be listed on the NPL.

April 1999: The TNRCC transmitted the Texas Department of Health consultation to EPA. The consultation indicated that the PCBs in soil and in some of the off-site areas presented a public health hazard. The recommendations were to: remove PCB contamination in the alleyway, remove PCB contamination in the residential properties south of the Site, and remove PCB contamination near the on-site container storage area.

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August 1999: F.J. Doyle Salvage ceased operations.

July 2006 to January 2016: The TCEQ worked with the Site owners to address the issues through an affected property assessment report (APAR). No further actions were taken by F.J. Doyle Salvage as a result of a deficiency letter issued in January 2016.

February 2017: The TCEQ Voluntary Cleanup Program (VCP) requested the EPA Resource Conservation Recovery Act (RCRA) program assistance as the TCEQ was unable to get voluntary cleanup of the Site through the defunct company.

May 2017: The EPA RCRA program requested the EPA Superfund removal program assistance due to non-viability of owners/operators.

May 2018: The EPA removal program reviewed existing information and proceeded with an investigation of the surface and sub-surface soils to determine the lateral and vertical extent of contamination at the Site including off-site areas. Sample locations were based upon the results of earlier sampling investigations completed in the 1990s. The COCs for the Site are, but not limited to, PCBs, SVOCs/PAHs, and metals. The investigation revealed elevated concentrations of metals, SVOCs, and PCBs. EPA has determined that off-site migration of contaminants from the site has occurred.

2. Current Actions

No current ongoing actions are being conducted.

C. State and Local Authorities' Role

1. State and Local Actions to Date

See II.B.1 above.

2. Potential for continued State/Local response

At this time, there are no additional actions anticipated by the State or local government entities except for coordination with EPA on the planned action. After completion of the action, the Site will be referred back to the State. The Site was referred to EPA through the TCEQ VCP as there was no longer an entity available to complete the action.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT AND STATUTORY AND REGULATORY AUTHORITIES

Section 300.415 of the NCP lists the factors to be considered in determining the appropriateness of a removal action. Paragraphs (b)(2)(i), (iv), (v) and (vii) directly apply to the conditions at the Site. Any one of these factors may be sufficient to determine whether a removal action is appropriate.

A. Exposure to Human Populations, Animals or the Food Chain, 40 C.F.R. § 300.415(b)(2)(i).

The Site contaminants are migrating offsite by means of erosion. The Site is bordered by residential properties, school properties, and a daycare facility. Therefore, a threat of exposure to human populations exists from contaminated soils that have and continue to migrate off-site. Exposure to these

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hazardous substances could be from ingestion, skin absorption, and inhalation. Site contaminants include PCBs, arsenic, cobalt compounds, copper, lead, manganese compounds, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene, which are hazardous substances as defined at Section 101(14) of CERCLA, 42 U.S.C. 9601(14) and further defined at 40 C.F.R. § 302.4.

B. High Levels of Hazardous Substances or Pollutants or Contaminants Soils Largely at or Near the Surface, that May Migrate, 40 C.F.R. § 300.415(b)(2)(iv).

The hazardous substances and the concentrations located within the residential soils are identified in II.A.3 above. Those concentrations are elevated above EPA regional screening levels.

C. Weather Conditions that may cause Hazardous Substances or Pollutants or Contaminants to Migrate or be Released, 40 C.F.R. § 300.415(b)(2)(v)

Contaminants from the Site have migrated downgradient from the Site. These actions will continue during heavy rainfall events when sediment is displaced and moved by erosional forces.

D. Availability of Other Response Mechanisms, 40 C.F.R. § 300.415(b)(2)(vii)

There are no other response mechanisms available to conduct this action except for the EPA Superfund removal program. The State indicated it does not have the resources to conduct the cleanup, and F.J. Doyle Salvage is a defunct company. EPA will work with the TCEQ to determine areas where it may assist in this action.

IV. ENDANGERMENT DETERMINATION

Actual or threatened releases of hazardous substances, pollutants or contaminants from this Site, if not addressed by implementing the response action selected in this action memorandum, may present an imminent and substantial endangerment to the public health, welfare, or the environment.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed Action Description

EPA anticipates the excavation of soils from the Site and the surrounding properties believed to be impacted by the F.J. Doyle Salvage facility. In addition, this action will dismantle the existing structure and concrete slabs on the property to facilitate a complete cleanup. The excavated soils and related debris will be disposed within an appropriate and approved landfill followed by restoration of the properties to pre-removal conditions. The cleanup levels to be used for this action are:

Contaminant	Cleanup Level
PCB (Total):	< 1mg/kg
Arsenic:	< 20 mg/kg*
Cobalt:	< 23 mg/kg*
Copper	< 3,100 mg/kg*
Lead:	< 400 mg/kg*

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Manganese:	< 1,800 mg/kg*
Benzo(a)anthracene:	< 11 mg/kg*
Benzo(a)pyrene:	< 1.1 mg/kg*
Benzo(b)fluoranthene:	< 11 mg/kg*
DiBenzo(a,h)anthracene:	< 1.1 mg/kg*
Indeno(1,2,3-cd)pyrene:	< 11 mg/kg*

*EPA will be addressing areas with analytical results above or equal to 1 mg/kg total PCBs. Areas with analytical results that exceed site-specific action levels for PAH and metals will also be addressed if they are co-located with levels of total PCBs that are above or equal to 1 mg/kg. The soils at the Site will be excavated to maximum depth of two (2) feet below ground surface.

2. Contribution to Remedial Performance

The Site is not currently being evaluated for inclusion on the NPL although the removal actions being proposed in this action memorandum would be consistent with a potential remedial action that would be conducted.

3. Applicable or Relevant and Appropriate Requirements

This removal action will be conducted to eliminate the actual or potential release of a hazardous substance, pollutant, or contaminant to the environment, pursuant to CERCLA, 42 U.S.C. § 9601 *et seq.*, in a manner consistent with the NCP, 40 C.F.R. Part 300. As per 40 C.F.R. § 300.415(j), Fund-financed removal actions pursuant to CERCLA Section 104, 42 U.S.C. § 9604, and removal actions pursuant to CERCLA Section 106, 42 U.S.C. § 9606, shall, to the extent practicable considering the exigencies of the situation, attain the applicable or relevant and appropriate requirements under federal environmental law or state environmental law or facility siting laws.

Because consolidation and offsite disposal are the principal elements of this removal action, RCRA waste analysis requirements in 40 C.F.R. §§ 261.20 and 261.30, RCRA manifesting requirements in 40 C.F.R. § 262.20, and RCRA packaging and labeling requirements in 40 C.F.R. §§ 262.30 and 262.31 are deemed to be relevant and appropriate requirements for this removal action. All hazardous substances, pollutants, or contaminants removed offsite for treatment, storage, or disposal shall be treated, stored, or disposed at a facility in compliance, as determined by EPA, pursuant to 40 C.F.R. § 300.440. All offsite transportation of hazardous materials will be performed in conformity with U.S. Department of Transportation (DOT) requirements 49 C.F.R. Part 172. Because this action will involve disposal of PCB waste, it will be conducted in accordance with the substantive requirements of 40 C.F.R. Part 761.

4. Project Schedule

The EPA anticipates initiating such actions in September/October 2018 and take approximately three to four months to complete.

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B. Estimated Costs

Extramural Costs:

ERRS	$1,619,000
START-4	$ 200,000
Contingency	$ 161,000
TOTAL EXTRAMURAL COSTS	$1,980,000

VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

If this response action is not taken, residents will continue to be exposed to the contaminated soils. In addition, these contaminated soils may migrate by wind, water, and mechanical means which could result in the contamination of additional areas around the Site.

VII. OUTSTANDING POLICY ISSUES

There are no known outstanding policy issues associated with this Site.

VIII. ENFORCEMENT

See Enforcement Attachment.

The total EPA costs for this removal action based on full-cost accounting practices that will be eligible for cost recovery are estimated to be **$ 3,106,329.**

((Direct Extramural + Direct Intramural {Direct Costs}) + (45.02% of Direct Costs {Indirect Cost}) = Estimated EPA Cost for a Removal Action

$ 1,980,000 + 162,000 + (47.09% x $ 2,142,000) = **$ 3,150,667**

Direct costs include direct extramural costs and direct intramural costs. Indirect costs are calculated based on an estimated indirect cost rate expressed as a percentage of site-specific direct costs, consistent with the full cost accounting methodology effective October 2, 2002. These estimates do not include pre-judgment interest, do not take into account other enforcement costs, including Department of Justice costs, and may be adjusted during the course of a removal action. The estimates are for illustrative purposes only, and their use is not intended to create any rights for responsible parties. Neither the lack of a total cost estimate nor the deviation of actual total costs from this estimate will affect the United States' right to cost recovery.

IX. RECOMMENDATION

This decision documents the selected removal action for the F.J. Doyle Salvage Site, Leonard, Fannin County, Texas and surrounding areas identified by the EPA to have been impacted by such operations or otherwise migrated off the site. This action was developed in accordance with CERCLA, 42 U.S.C. § 9601 et seq., and not inconsistent with the NCP, 40 C.F.R. Part 300. This action was based on the administrative record for the Site. Because the conditions at the Site meet the criteria defined in Section

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300.415 of the NCP, I recommend your approval of the proposed removal action. The total CERCLA extramural project ceiling if approved will be $ 1,980,000. Of this, an estimated $1,619,000 (without contingency) will come from the Regional Removal Allowance.

APPROVED: _____ DATE: 09/07/18

Carl E. Edlund, P.E., Director
Superfund Division

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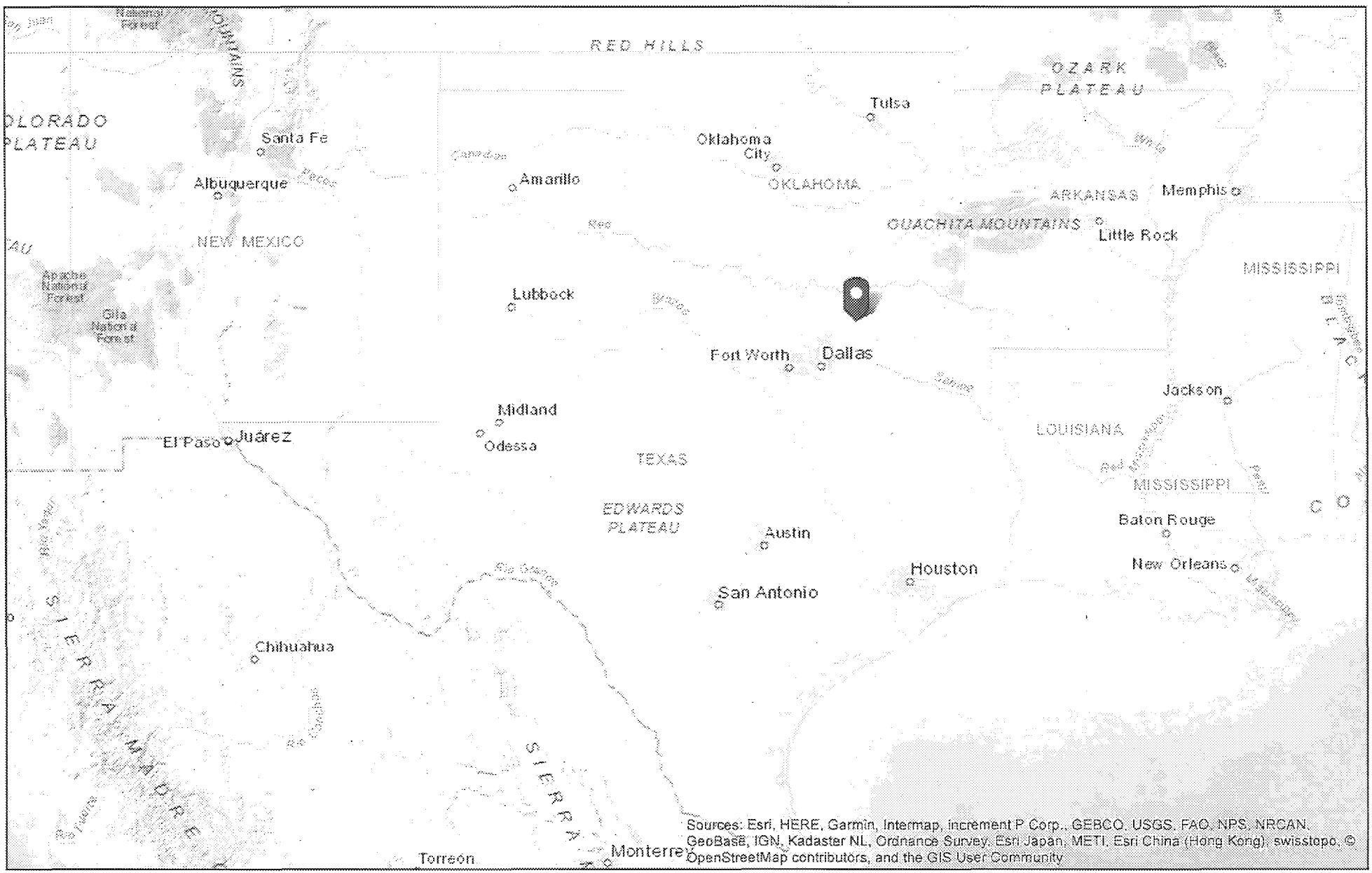

Legend

US EPA

F.J. Doyle Site Location Map (Attachment 1)

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EPA

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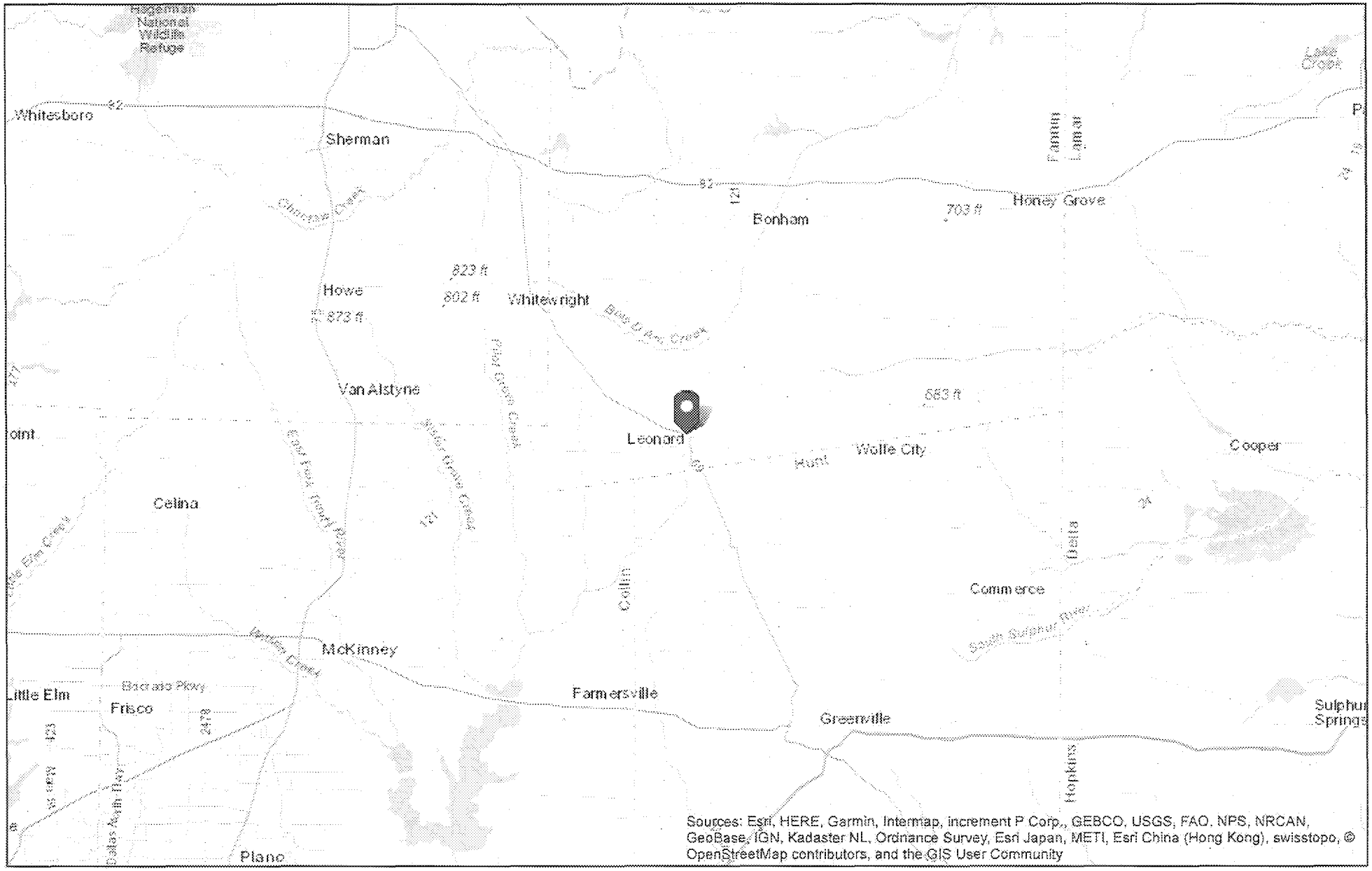

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US EPA

F.J. Doyle Site Location Map (Attachment 1)

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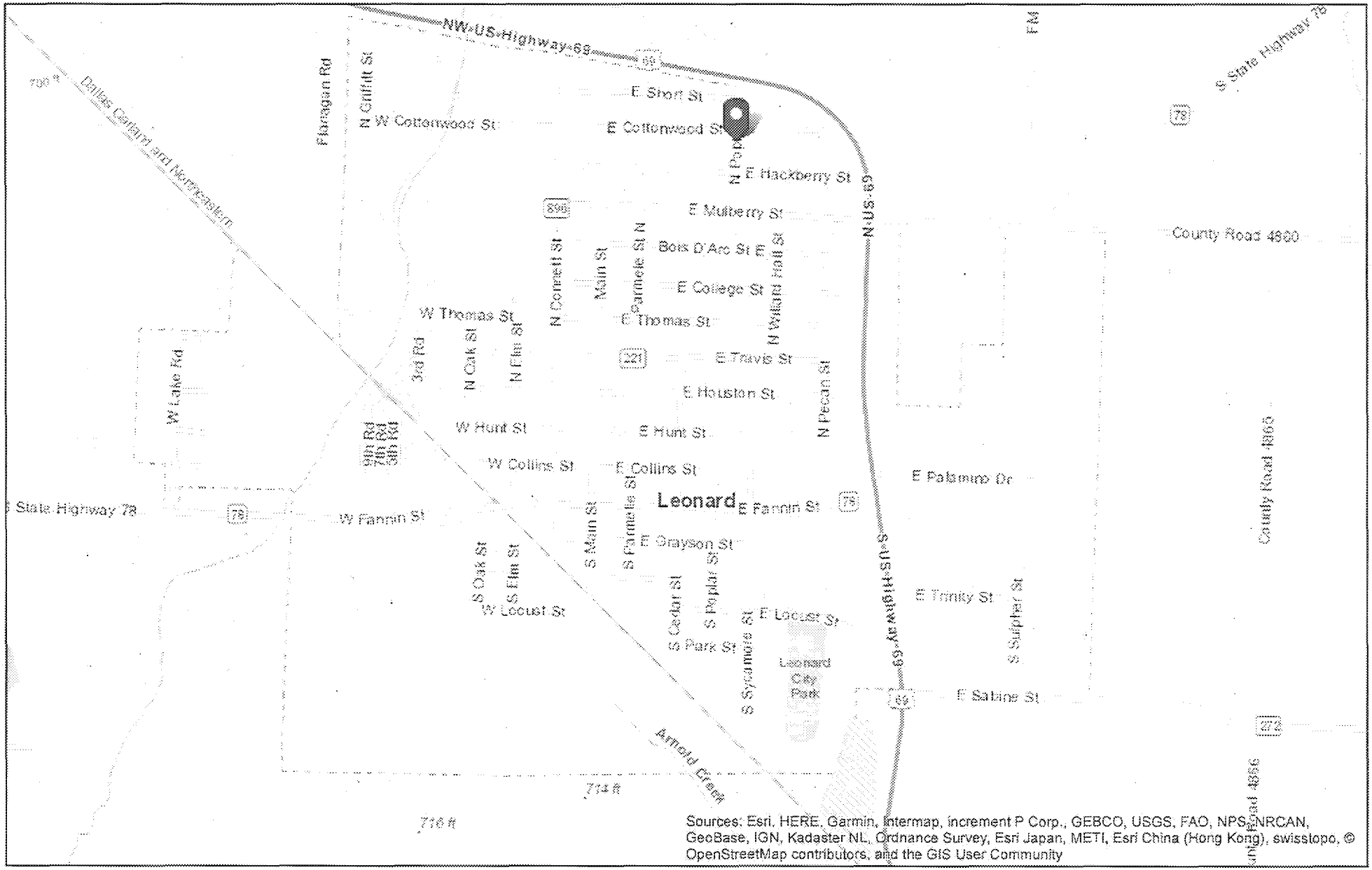

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

Legend

US EPA

F.J. Doyle Site Location Map (Attachment 1)

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SiteSketchA...

Site Area

US EPA

F.J. Doyle Site Location Map (Attachment 1)

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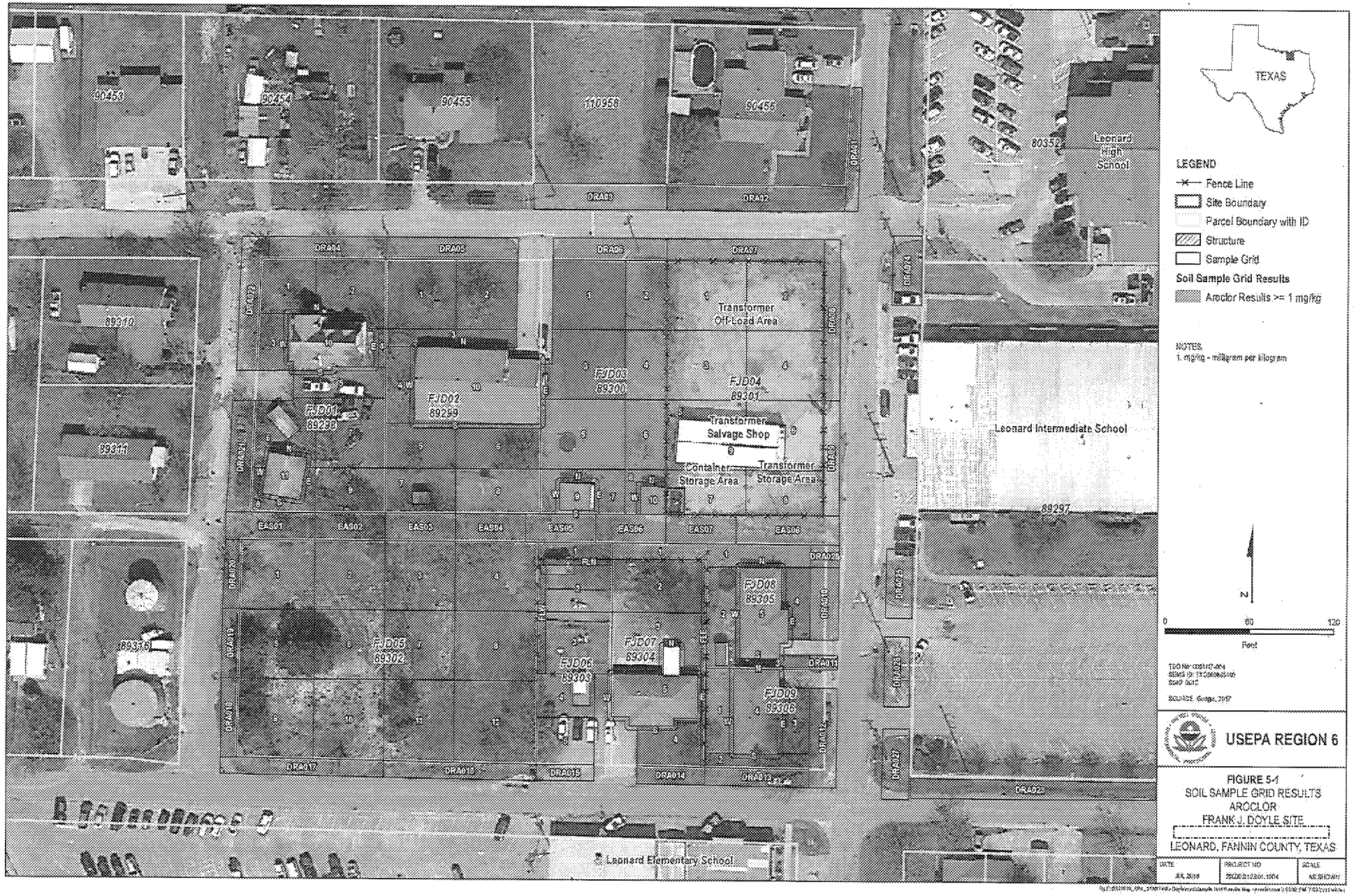
ATTACHMENT 2



REPUBLIC SERVICES SPECIAL WASTE PROFILE

Requested Disposal Facility: 3416 Maloy Solid Waste LF TX

Waste Profile #
Sales Rep #:

Saveable fill-in form. Restricted printing until all required (yellow) fields are completed.

I. Generator Information

Generator Name: United States Environmental Protection Agency - Region 6			
Generator Site Address: Personal Address / Ex. 6			
City: Leonard	County: Fannin	State: Texas	Zip: 75452
State ID/Reg No:	State Approval/Waste Code: (if applicable)		NAICS # :
Generator Mailing Address (if different): ☑ 1445 Ross Avenue, Suite 1200			
City: Dallas	County: Dallas	State: Texas	Zip: 75202-2733
Generator Contact Name: Gary Moore, On-Scene Coordinator (6SF-ER)		Email: moore.gary@epa.gov	
Phone Number: (214) 665-6609	Ext:	Fax Number:	

II. Billing Information

Bill To: Environmental Restoration, LLC		Contact Name: Don Edgington	
Billing Address: 1666 Fabick Drive		Email: d.edgington@erllc.com	
City: Fenton	State: Missouri	Zip: 63026	Phone: (251) 406-0220

III. Waste Stream Information

Name of Waste: Construction & Demolition (C&D) debris	
Process Generating Waste: Demolition and removal of on-site building and foundation.	
Type of Waste:	☐ INDUSTRIAL PROCESS WASTE ☑ POLLUTION CONTROL WASTE
Physical State:	☑ SOLID ☐ SEMI-SOLID ☐ POWDER ☐ LIQUID
Method of Shipment:	☑ BULK ☐ DRUM ☐ BAGGED ☐ OTHER:
Estimated Annual Volume:	150 Tons
Frequency:	☑ ONE TIME ☐ ONGOING
Disposal Consideration:	☑ LANDFILL ☐ SOLIDIFICATION ☐ BIOREMEDIATION

IV. Representative Sample Certification

☑ NO SAMPLE TAKEN

Is the representative sample collected to prepare this profile and laboratory analysis, collected in accordance with U.S. EPA 40 CFR 261.20(c) guidelines or equivalent rules?	☐ YES or ☐ NO
Type of Sample: ☐ COMPOSITE SAMPLE ☐ GRAB SAMPLE	
Sample Date:	

© Republic Services, April 2013

Waste Profile #

V. Physical Characteristics of Waste

Characteristic Components	% by Weight (range)
1. Concrete, gravels, rock	80 - 100%
2. Metal, glass, wood	0 - 30%
3. Trash/PPE	0 - 10%
4.	
5.	

Color	Odor (describe)	Does Waste Contain Free Liquids?	% Solids	pH:	Flash Point
varies	none	☐ YES or ☑ NO	100%	n/a	n/a °F

Attach Laboratory Analytical Report (and/or Material Safety Data Sheet) Including Chain of Custody and Required Parameters Provided for this Profile

Does this waste or generating process contain regulated concentrations of the following Pesticides and/or Herbicides: Chlordane, Endrin, Heptachlor (and its epoxides), Lindane, Methoxychlor, Toxaphene, 2,4-D, or 2,4,5-TP Silvex as defined in 40 CFR 261.33?	☐ Yes or ☑ No
Does this waste contain reactive sulfides (greater than 500 ppm) or reactive cyanide (greater than 250 ppm)[reference 40 CFR 261.23(a)(5)]?	☐ Yes or ☑ No
Does this waste contain regulated concentrations of Polychlorinated Biphenyls (PCBs) as defined in 40 CFR Part 761?	☐ Yes or ☑ No
Does this waste contain concentrations of listed hazardous wastes defined in 40 CFR 261.31, 261.32, 261.33, including RCRA F-Listed Solvents?	☐ Yes or ☑ No
Does this waste exhibit a Hazardous Characteristic as defined by Federal and/or State regulations?	☐ Yes or ☑ No
Does this waste contain regulated concentrations of 2,3,7,8-Tetrachlorodibenzodioxin (2,3,7,8-TCCD), or any other dioxin as defined in 40 CFR 261.31?	☐ Yes or ☑ No
Is this a regulated Radioactive Waste as defined by Federal and/or State regulations?	☐ Yes or ☑ No
Is this a regulated Medical or Infectious Waste as defined by Federal and/or State regulations?	☐ Yes or ☑ No
Is this waste a reactive or heat generating waste?	☐ Yes or ☑ No
Does the waste contain sulfur or sulfur by-products?	☐ Yes or ☑ No
Is this waste generated at a Federal Superfund Clean Up Site?	☑ Yes or ☐ No
Is this waste from a TSD facility, TSD like facility or consolidator?	☐ Yes or ☑ No

VI. Certification

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true, complete and accurate description of the waste material being offered for disposal and all known or suspected hazards have been disclosed. All Analytical Results/Material Safety Data Sheets submitted are truthful and complete and are representative of the waste.

I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. I shall immediately give written notice of any change or condition pertaining to the waste not provided herein. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue.

I further certify that the company has not altered the form or content of this profile sheet as provided by Republic Services Inc.

Gary Moore, EPA On-Scene Coordinator	U.S. Environmental Protection Agency
Authorized Representative Name And Title (Type or Print)	Company Name
Authorized Representative Signature	10/29/2018
	Date

© Republic Services, April 2013

REPUBLIC SERVICES SPECIAL WASTE PROFILE

Requested Disposal Facility: 4074 Pleasant Oaks LF TX

Waste Profile #
Sales Rep #:

Saveable fill-in form. Restricted printing until all required (yellow) fields are completed.

I. Generator Information

Generator Name: EPA Region 6 / FJ Doyle Salvage Site			
Generator Site Address: Personal Address / Ex. 6			
City: Leonard	County: Fannin	State: Texas	Zip: 75452
State ID/Reg No:	State Approval/Waste Code: (if applicable)		NAICS # :
Generator Mailing Address (if different): ☑ 1445 Ross Avenue, Suite 1200			
City: Dallas	County: Dallas	State: Texas	Zip: 75202-2733
Generator Contact Name: Gary Moore, On-Scene Coordinator (6SF-ER)		Email: moore.gary@epa.gov	
Phone Number: (214) 789-1627	Ext:	Fax Number:	

II. Billing Information

Bill To: Environmental Restoration, LLC		Contact Name: Don Edgington	
Billing Address: 1666 Fabick Drive		Email: d.edgington@erllc.com	
City: Fenton	State: Missouri	Zip: 63026	Phone: (251) 406-0220

III. Waste Stream Information

Name of Waste: Non-Regulated Contaminated Soil	
Process Generating Waste: Federal cleanup of former scrap metal recycler. Excavation and removal of non-regulated, non-hazardous soils (less than 50 ppm PCB). Soil is Non-RCRA characteristic and Non-TSCA regulated as demonstrated by attached analysis.	
Type of Waste:	☑ INDUSTRIAL PROCESS WASTE ☐ POLLUTION CONTROL WASTE
Physical State:	☑ SOLID ☐ SEMI-SOLID ☐ POWDER ☐ LIQUID
Method of Shipment:	☑ BULK ☐ DRUM ☐ BAGGED ☐ OTHER:
Estimated Annual Volume:	5,000 Tons
Frequency:	☑ ONE TIME ☐ ONGOING
Disposal Consideration:	☑ LANDFILL ☐ SOLIDIFICATION ☐ BIOREMEDIATION

IV. Representative Sample Certification

☐ NO SAMPLE TAKEN

Is the representative sample collected to prepare this profile and laboratory analysis, collected in accordance with U.S. EPA 40 CFR 261.20(c) guidelines or equivalent rules?	☑ YES or ☐ NO
Type of Sample: ☑ COMPOSITE SAMPLE ☐ GRAB SAMPLE	
Sample Date: 10/04/18	
Pace Laboratory Report 7595992 - Sample No. FJD-WP2-20181004 and FJD-WP3-20181004.	

© Republic Services, April 2013

Waste Profile #

V. Physical Characteristics of Waste

Characteristic Components	% by Weight (range)
1. Soil	80 - 100%
2. Debris, concrete, metal, glass, wood	0 - 20%
3. Trash, PPE	0 - 5%
4.	
5.	

Color	Odor (describe)	Does Waste Contain Free Liquids?	% Solids	pH:	Flash Point
varies	none	☐ YES or ☑ NO	100%	n/a	n/a °F

Attach Laboratory Analytical Report (and/or Material Safety Data Sheet) Including Chain of Custody and Required Parameters Provided for this Profile

Does this waste or generating process contain regulated concentrations of the following Pesticides and/or Herbicides: Chlordane, Endrin, Heptachlor (and its epoxides), Lindane, Methoxychlor, Toxaphene, 2,4-D, or 2,4,5-TP Silvex as defined in 40 CFR 261.33?	☐ Yes or ☑ No
Does this waste contain reactive sulfides (greater than 500 ppm) or reactive cyanide (greater than 250 ppm)[reference 40 CFR 261.23(a)(5)]?	☐ Yes or ☑ No
Does this waste contain regulated concentrations of Polychlorinated Biphenyls (PCBs) as defined in 40 CFR Part 761?	☐ Yes or ☑ No
Does this waste contain concentrations of listed hazardous wastes defined in 40 CFR 261.31, 261.32, 261.33, including RCRA F-Listed Solvents?	☐ Yes or ☑ No
Does this waste exhibit a Hazardous Characteristic as defined by Federal and/or State regulations?	☐ Yes or ☑ No
Does this waste contain regulated concentrations of 2,3,7,8-Tetrachlorodibenzodioxin (2,3,7,8-TCCD), or any other dioxin as defined in 40 CFR 261.31?	☐ Yes or ☑ No
Is this a regulated Radioactive Waste as defined by Federal and/or State regulations?	☐ Yes or ☑ No
Is this a regulated Medical or Infectious Waste as defined by Federal and/or State regulations?	☐ Yes or ☑ No
Is this waste a reactive or heat generating waste?	☐ Yes or ☑ No
Does the waste contain sulfur or sulfur by-products?	☐ Yes or ☑ No
Is this waste generated at a Federal Superfund Clean Up Site?	☑ Yes or ☐ No
Is this waste from a TSD facility, TSD like facility or consolidator?	☐ Yes or ☑ No

VI. Certification

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true, complete and accurate description of the waste material being offered for disposal and all known or suspected hazards have been disclosed. All Analytical Results/Material Safety Data Sheets submitted are truthful and complete and are representative of the waste.

I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. I shall immediately give written notice of any change or condition pertaining to the waste not provided herein. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue.

I further certify that the company has not altered the form or content of this profile sheet as provided by Republic Services Inc.

Gary Moore, EPA On-Scene Coordinator	U.S. Environmental Protection Agency
Authorized Representative Name And Title (Type or Print)	Company Name
Authorized Representative Signature	10/29/2018
	Date

© Republic Services, April 2013

REPUBLIC SERVICES SPECIAL WASTE PROFILE

Requested Disposal Facility: 3416 Maloy Solid Waste LF TX

Waste Profile #
Sales Rep #:

Savable fill-in form. Restricted printing until all required (yellow) fields are completed.

I. Generator Information

Generator Name: EPA Region 6 / FJ Doyle Salvage Site			
Generator Site Address: Personal Address / Ex. 6			
City: Leonard	County: Fannin	State: Texas	Zip: 75452
State ID/Reg No:	State Approval/Waste Code: N/A (if applicable)		NAICS # : 562910
Generator Mailing Address (if different): ☑ 1445 Ross Avenue, Suite 1200			
City: Dallas	County: Dallas	State: Texas	Zip: 75202-2733
Generator Contact Name: Gary Moore, On-Scene Coordinator (6SF-ER)		Email: moore.gary@epa.gov	
Phone Number: (214) 789-1627	Ext:	Fax Number:	

II. Billing Information

Bill To: Environmental Restoration, LLC		Contact Name: Don Edgington	
Billing Address: 1666 Fabick Drive		Email: d.edgington@erllc.com	
City: Fenton	State: Missouri	Zip: 63026	Phone: (251) 406-0220

III. Waste Stream Information

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Type of Waste:	☑ INDUSTRIAL PROCESS WASTE ☐ POLLUTION CONTROL WASTE
Physical State:	☑ SOLID ☐ SEMI-SOLID ☐ POWDER ☐ LIQUID
Method of Shipment:	☑ BULK ☐ DRUM ☐ BAGGED ☐ OTHER:
Estimated Annual Volume:	5,000 Tons
Frequency:	☑ ONE TIME ☐ ONGOING
Disposal Consideration:	☑ LANDFILL ☐ SOLIDIFICATION ☐ BIOREMEDIATION

IV. Representative Sample Certification

☐ NO SAMPLE TAKEN

Is the representative sample collected to prepare this profile and laboratory analysis, collected in accordance with U.S. EPA 40 CFR 261.20(c) guidelines or equivalent rules?	☑ YES or ☐ NO
Type of Sample: ☑ COMPOSITE SAMPLE ☐ GRAB SAMPLE	
Sample Date: 10/04/18	
Pace Laboratory Report 7595992 - Sample No. FJD-WP2-20181004 and FJD-WP3-20181004.	

© Republic Services, April 2013

Waste Profile #

V. Physical Characteristics of Waste

Characteristic Components	% by Weight (range)
1. Soil	80 - 100%
2. Debris, concrete, metal, glass, wood, rock	0 - 20%
3. Trash, PPE	0 - 5%
4.	
5.	

Color	Odor (describe)	Does Waste Contain Free Liquids?	% Solids	pH:	Flash Point
varies	none	☐ YES or ☑ NO	100%	n/a	n/a °F

Attach Laboratory Analytical Report (and/or Material Safety Data Sheet) Including Chain of Custody and Required Parameters Provided for this Profile

Does this waste or generating process contain regulated concentrations of the following Pesticides and/or Herbicides: Chlordane, Endrin, Heptachlor (and its epoxides), Lindane, Methoxychlor, Toxaphene, 2,4-D, or 2,4,5-TP Silvex as defined in 40 CFR 261.33?	☐ Yes or ☑ No
Does this waste contain reactive sulfides (greater than 500 ppm) or reactive cyanide (greater than 250 ppm)[reference 40 CFR 261.23(a)(5)]?	☐ Yes or ☑ No
Does this waste contain regulated concentrations of Polychlorinated Biphenyls (PCBs) as defined in 40 CFR Part 761?	☐ Yes or ☑ No
Does this waste contain concentrations of listed hazardous wastes defined in 40 CFR 261.31, 261.32, 261.33, including RCRA F-Listed Solvents?	☐ Yes or ☑ No
Does this waste exhibit a Hazardous Characteristic as defined by Federal and/or State regulations?	☐ Yes or ☑ No
Does this waste contain regulated concentrations of 2,3,7,8-Tetrachlorodibenzodioxin (2,3,7,8-TCCD), or any other dioxin as defined in 40 CFR 261.31?	☐ Yes or ☑ No
Is this a regulated Radioactive Waste as defined by Federal and/or State regulations?	☐ Yes or ☑ No
Is this a regulated Medical or Infectious Waste as defined by Federal and/or State regulations?	☐ Yes or ☑ No
Is this waste a reactive or heat generating waste?	☐ Yes or ☑ No
Does the waste contain sulfur or sulfur by-products?	☐ Yes or ☑ No
Is this waste generated at a Federal Superfund Clean Up Site?	☑ Yes or ☐ No
Is this waste from a TSD facility, TSD like facility or consolidator?	☐ Yes or ☑ No

VI. Certification

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true, complete and accurate description of the waste material being offered for disposal and all known or suspected hazards have been disclosed. All Analytical Results/Material Safety Data Sheets submitted are truthful and complete and are representative of the waste.

I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. I shall immediately give written notice of any change or condition pertaining to the waste not provided herein. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue.

I further certify that the company has not altered the form or content of this profile sheet as provided by Republic Services Inc.

Gary Moore, EPA On-Scene Coordinator	U.S. Environmental Protection Agency
Authorized Representative Name And Title (Type or Print)	Company Name
Authorized Representative Signature	10/29/2018 Date

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REPUBLIC SERVICES **SPECIAL WASTE PROFILE**

PRINT

Requested Disposal Facility: 3416 Maloy Solid Waste LF TX

Waste Profile #
Sales Rep #:

Saveable fill-in form. Restricted printing until all required (yellow) fields are completed.

I. Generator Information

Generator Name: United States Environmental Protection Agency - Region 6			
Generator Site Address: Personal Address / Ex. 6			
City: Leonard	County: Fannin	State: Texas	Zip: 75452
State ID/Reg No:	State Approval/Waste Code: (if applicable)		NAICS # :
Generator Mailing Address (if different): ☐ 1445 Ross Avenue			
City: Dallas	County: Dallas	State: Texas	Zip: 75202-2733
Generator Contact Name: Gary Moore, Federal On-Scene Coordinator		Email: moore.gary@epa.gov	
Phone Number: (214) 665-6609	Ext:	Fax Number:	

II. Billing Information

Bill To: Environmental Restoration, LLC		Contact Name: Don Edgington	
Billing Address: 1666 Fabick Drive		Email: d.edgington@erllc.com	
City: Fenton	State: Missouri	Zip: 63026	Phone: (251) 406-0220

III. Waste Stream Information

Name of Waste: Construction & demolition (C&D) debris	
Process Generating Waste: Demolition and removal of on-site building and foundation.	
Type of Waste:	☐ INDUSTRIAL PROCESS WASTE ☐ POLLUTION CONTROL WASTE
Physical State:	☐ SOLID ☐ SEMI-SOLID ☐ POWDER ☐ LIQUID
Method of Shipment:	☐ BULK ☐ DRUM ☐ BAGGED ☐ OTHER:
Estimated Annual Volume:	150 Tons
Frequency:	☐ ONE TIME ☐ ONGOING
Disposal Consideration:	☐ LANDFILL ☐ SOLIDIFICATION ☐ BIOREMEDIATION

IV. Representative Sample Certification ☐ NO SAMPLE TAKEN

Is the representative sample collected to prepare this profile and laboratory analysis, collected in accordance with U.S. EPA 40 CFR 261.20(c) guidelines or equivalent rules?	☐ YES or ☐ NO
Type of Sample: ☐ COMPOSITE SAMPLE ☐ GRAB SAMPLE	
Sample Date:	
Sample ID Numbers:	

© Republic Services, April 2013

REPUBLIC SERVICES **SPECIAL WASTE PROFILE**

PRINT

Waste Profile #

V. Physical Characteristics of Waste

Characteristic Components	% by Weight (range)
1. Concrete, gravels, rock	80 - 100%
2. Metal, glass, wood	0 - 30%
3. Trash/PPE	0 - 10%
4.	
5.	

Color	Odor (describe)	Does Waste Contain Free Liquids?	% Solids	pH:	Flash Point
varies	none	☐ YES or ☐ NO	100%	n/a	n/a °F

Attach Laboratory Analytical Report (and/or Material Safety Data Sheet) Including Chain of Custody and Required Parameters Provided for this Profile

Does this waste or generating process contain regulated concentrations of the following Pesticides and/or Herbicides: Chlordane, Endrin, Heptachlor (and its epoxides), Lindane, Methoxychlor, Toxaphene, 2,4-D, or 2,4,5-TP Silvex as defined in 40 CFR 261.33?	☐ Yes or ☐ No
Does this waste contain reactive sulfides (greater than 500 ppm) or reactive cyanide (greater than 250 ppm)[reference 40 CFR 261.23(a)(5)]?	☐ Yes or ☐ No
Does this waste contain regulated concentrations of Polychlorinated Biphenyls (PCBs) as defined in 40 CFR Part 761?	☐ Yes or ☐ No
Does this waste contain concentrations of listed hazardous wastes defined in 40 CFR 261.31, 261.32, 261.33, including RCRA F-Listed Solvents?	☐ Yes or ☐ No
Does this waste exhibit a Hazardous Characteristic as defined by Federal and/or State regulations?	☐ Yes or ☐ No
Does this waste contain regulated concentrations of 2,3,7,8-Tetrachlorodibenzodioxin (2,3,7,8-TCCD), or any other dioxin as defined in 40 CFR 261.31?	☐ Yes or ☐ No
Is this a regulated Radioactive Waste as defined by Federal and/or State regulations?	☐ Yes or ☐ No
Is this a regulated Medical or Infectious Waste as defined by Federal and/or State regulations?	☐ Yes or ☐ No
Is this waste a reactive or heat generating waste?	☐ Yes or ☐ No
Does the waste contain sulfur or sulfur by-products?	☐ Yes or ☐ No
Is this waste generated at a Federal Superfund Clean Up Site?	☐ Yes or ☐ No
Is this waste from a TSD facility, TSD like facility or consolidator?	☐ Yes or ☐ No

VI. Certification

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true, complete and accurate description of the waste material being offered for disposal and all known or suspected hazards have been disclosed. All Analytical Results/Material Safety Data Sheets submitted are truthful and complete and are representative of the waste.

I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. I shall immediately give written notice of any change or condition pertaining to the waste not provided herein. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue.

I further certify that the company has not altered the form or content of this profile sheet as provided by Republic Services Inc.

Authorized Representative Name And Title (Type or Print)

Company Name

Authorized Representative Signature

Date

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REPUBLIC SERVICES **SPECIAL WASTE PROFILE**

PRINT

Requested Disposal Facility: 4074 Pleasant Oaks LF TX

Waste Profile #

Saveable fill-in form. Restricted printing until all required (yellow) fields are completed.

Sales Rep #:

I. Generator Information

Generator Name: EPA Region 6 / FJ Doyle Salvage Site			
Generator Site Address: Personal Address / Ex. 6			
City: Leonard	County: Fannin	State: Texas	Zip: 75452
State ID/Reg No:	State Approval/Waste Code: (if applicable)		NAICS # :
Generator Mailing Address (if different): ☐ 1445 Ross Avenue, Suite 1200			
City: Dallas	County: Dallas	State: Texas	Zip: 75202-2733
Generator Contact Name: Gary Moore, Federal On-Scene Coordinator		Email: moore.gary@epa.gov	
Phone Number: (214) 665-6609	Ext:	Fax Number:	

II. Billing Information

Bill To: Environmental Restoration, LLC		Contact Name: Don Edgington	
Billing Address: 1666 Fabick Drive		Email: d.edgington@erllc.com	
City: Fenton	State: Missouri	Zip: 63026	Phone: (251) 406-0220

III. Waste Stream Information

Name of Waste: Non-Regulated Contaminated Soil

Process Generating Waste:

Federal cleanup of former scrap metal recycler. Excavation and removal of non-regulated, non-hazardous soils (less than 50 ppm PCB). Soil is Non-RCRA characteristic and Non-TSCA regulated as demonstrated by attached analysis.

Type of Waste:	☐ INDUSTRIAL PROCESS WASTE ☐ POLLUTION CONTROL WASTE
Physical State:	☐ SOLID ☐ SEMI-SOLID ☐ POWDER ☐ LIQUID
Method of Shipment:	☐ BULK ☐ DRUM ☐ BAGGED ☐ OTHER:
Estimated Annual Volume:	5,000 Tons
Frequency:	☐ ONE TIME ☐ ONGOING
Disposal Consideration:	☐ LANDFILL ☐ SOLIDIFICATION ☐ BIOREMEDIATION

IV. Representative Sample Certification

☐ NO SAMPLE TAKEN

Is the representative sample collected to prepare this profile and laboratory analysis, collected in accordance with U.S. EPA 40 CFR 261.20(c) guidelines or equivalent rules?	☐ YES or ☐ NO

Type of Sample: ☐ COMPOSITE SAMPLE ☐ GRAB SAMPLE

Sample Date: 10/04/18

Sample ID Numbers: Pace Laboratory Report 7595992 - Sample No. FJD-WP2-20181004 and FJD-WP3-20181004.

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REPUBLIC SERVICES **SPECIAL WASTE PROFILE**

PRINT

Waste Profile #

V. Physical Characteristics of Waste

Characteristic Components	% by Weight (range)
1. Soil	80 - 100%
2. Debris, concrete, metal, glass, wood	0 - 20%
3. Trash, PPE	0 - 5%
4.	
5.	

Color	Odor (describe)	Does Waste Contain Free Liquids?	% Solids	pH:	Flash Point
varies	none	☐ YES or ☐ NO	100%	n/a	n/a °F

Attach Laboratory Analytical Report (and/or Material Safety Data Sheet) Including Chain of Custody and Required Parameters Provided for this Profile

Does this waste or generating process contain regulated concentrations of the following Pesticides and/or Herbicides: Chlordane, Endrin, Heptachlor (and its epoxides), Lindane, Methoxychlor, Toxaphene, 2,4-D, or 2,4,5-TP Silvex as defined in 40 CFR 261.33?	☐ Yes or ☐ No
Does this waste contain reactive sulfides (greater than 500 ppm) or reactive cyanide (greater than 250 ppm)[reference 40 CFR 261.23(a)(5)]?	☐ Yes or ☐ No
Does this waste contain regulated concentrations of Polychlorinated Biphenyls (PCBs) as defined in 40 CFR Part 761?	☐ Yes or ☐ No
Does this waste contain concentrations of listed hazardous wastes defined in 40 CFR 261.31, 261.32, 261.33, including RCRA F-Listed Solvents?	☐ Yes or ☐ No
Does this waste exhibit a Hazardous Characteristic as defined by Federal and/or State regulations?	☐ Yes or ☐ No
Does this waste contain regulated concentrations of 2,3,7,8-Tetrachlorodibenzodioxin (2,3,7,8-TCCD), or any other dioxin as defined in 40 CFR 261.31?	☐ Yes or ☐ No
Is this a regulated Radioactive Waste as defined by Federal and/or State regulations?	☐ Yes or ☐ No
Is this a regulated Medical or Infectious Waste as defined by Federal and/or State regulations?	☐ Yes or ☐ No
Is this waste a reactive or heat generating waste?	☐ Yes or ☐ No
Does the waste contain sulfur or sulfur by-products?	☐ Yes or ☐ No
Is this waste generated at a Federal Superfund Clean Up Site?	☐ Yes or ☐ No
Is this waste from a TSD facility, TSD like facility or consolidator?	☐ Yes or ☐ No

VI. Certification

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true, complete and accurate description of the waste material being offered for disposal and all known or suspected hazards have been disclosed. All Analytical Results/Material Safety Data Sheets submitted are truthful and complete and are representative of the waste.

I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. I shall immediately give written notice of any change or condition pertaining to the waste not provided herein. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue.

I further certify that the company has not altered the form or content of this profile sheet as provided by Republic Services Inc.

Authorized Representative Name And Title (Type or Print) | Company Name

Authorized Representative Signature | Date

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Message

From: Moore, Gary [Moore.Gary@epa.gov]
Sent: 11/16/2018 1:40:26 AM
To: 'Don Edgington' [d.edgington@erllc.com]; Delgado, Paige [Delgado.Paige@epa.gov]; Martin, John [martin.john@epa.gov]
CC: Angela Harbin [a.harbin@erllc.com]
Subject: RE: DWO(s)
Attachments: 11.14.18 DWO No. 10 - F.J. Doyle Salvage Site - 11.14.18-signed.pdf; 11.15.18 DWO No. 11 - F.J. Doyle Salvage Site - 11.15.18-signed.pdf

Don:

I made some changes to the 11/14/18 DWO. You missed some grids completed. The 11/15/18 DWO looked fine.

Also, I would like to work the following in this order with hopefully the bulk of this done by Saturday.

Team 1 (Oscar): EAS04, FJD05-04A, FJD06-01, EAS05, FJD03-07 (west of building), EAS06

Team 2 (Dee): Remove concrete breaker and install bucket, put some of the concrete from the east side of property on the west side of property, continue excavations: FJD03-07 (north and east side of building), FJD03-08, FJD03-05, FJD03-06 (TSCA), FJD03-02, FJD03-04. Once these are completed, wattles need to be placed between FJD03 and FJD04

Other items: Put chain-link temp fence at Ex. 6 Personal Privacy (PP) where we have orange construction fencing as well as the backyard where we have construction fencing.

It is supposed to rain Saturday night so we need to button up property for rain (check weather).

From: Don Edgington <d.edgington@erllc.com>
Sent: Thursday, November 15, 2018 7:03 PM
To: Moore, Gary <Moore.Gary@epa.gov>; Delgado, Paige <Delgado.Paige@epa.gov>
Cc: Angela Harbin <a.harbin@erllc.com>
Subject: DWO(s)

Hi, Gary.

Attached please find a revised DWO for 11/14/18 and one for 11/15/18.

If you have any questions, please let me know at your convenience.

Regards,

Don

Confidentiality Warning: This e-mail and any attachments contain information intended only for the use of the individual or entity named above. If the reader of this e-mail is not the intended recipient or the employee or agent responsible for delivering it to the intended recipient, any dissemination, publication or copying of this e-mail is strictly prohibited. Although this email has been scanned for malware, the sender does not accept any responsibility for any loss, disruption or damage to your data or computer system that may occur while using data contained in, or transmitted with, this e-mail. If you have received this e-mail in error, please immediately notify by return e-mail. Thank you.

Message

From: Delgado, Paige [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=07420756531343D5BC51D20DDCC90B99-DELGADO, PAIGE]
Sent: 2/15/2019 11:02:02 PM
To: Austin.Lindsey@westonsolutions.com
Subject: Fwd: Water Source

Paige Delgado
EPA Region 6 OSC
469.371.2529

Begin forwarded message:

Resent-From: <Delgado.Paige@epa.gov>
From: Terry McCalpin <tmccalpin@cityofleonard.net>
Date: October 24, 2018 at 4:43:26 AM CDT
To: Don Edgington <d.edgington@erllc.com>
Cc: "moore.gary@epa.gov" <moore.gary@epa.gov>, "Delgado, Paige" <Delgado.Paige@epa.gov>, Public Works <publicworks@cityofleonard.net>, Municipal Court <court@cityofleonard.net>
Subject: Re: Water Source

Don,

Please call Brandon at Ex. 6 Personal Privacy (PP) to request a bulk meter. We currently have one in service near North Oak Street at US 69.

If we have another one, Brandon will get you set up with a location and our Utility Clerk, Jodi, at City Hall.

If not, you will have to piggy-back and record your pulls from our bulk meter in use.

Please advise if you have more questions.

My mobile number is Ex. 6 Personal Privacy (PP) if you need to reach me.

Terry McCalpin, PWD
111 West Collin Street
Leonard d, Texas 75452
(903) 587-3334 office

On Oct 23, 2018, at 9:35 AM, Don Edgington <d.edgington@erllc.com> wrote:

> Good morning, Terry.
>
> I emailed you last week regarding discussing access of a fire hydrant when EPA begins work at the F.J. Doyle Salvage site on Poplar Street. I realize you are probably very busy but we would appreciate it if you could provide us the contact person or persons we would need to work with for water use during the demolition and excavation to be conducted at the property.

Thank you again for your help.

Regards,

Don

Confidentiality Warning: This e-mail and any attachments contain information intended only for the use of the individual or entity named above. If the reader of this e-mail is not the intended recipient or the employee or agent responsible for delivering it to the intended recipient, any dissemination, publication or copying of this e-mail is strictly prohibited. Although this email has been scanned for malware, the sender does not accept any responsibility for any loss, disruption or damage to your data or computer system that may occur while using data contained in, or transmitted with, this e-mail. If you have received this e-mail in error, please immediately notify by return e-mail. Thank you.

RECORD OF COMMUNICATION

☑ PHONE CALL ☐ DISCUSSION ☐ FIELD TRIP ☐ CONFERENCE
☐ OTHER (SPECIFY)

(Record of item checked above)

TO: Donna Mullins

Privacy Info in Enforcement Records / Ex. 7(c)

DATE 8-29-90

TIME 1100

SUBJECT

Transformer Salvage Site, Leonard, Tx.

SUMMARY OF COMMUNICATION

I spoke with Privacy Info in Enforcement Records / Ex. 7(c) about a transformer salvage site next door to her residence Personal Address / Ex. 6 Privacy Info in Enforcement Records / Ex. 7(c) stated that Frank Doyle of 309 E. Cottonwood is bringing transformers in from La. & disassembling them & burning/smelting the dismantled pieces for metal recovery. Privacy Info in Enforcement Records / Ex. 7(c) stated that he operates a furnace a couple days a week & the emissions from the furnace may the cause

CONCLUSIONS, ACTION TAKEN OR REQUIRED

INFORMATION COPIES TO:

Mullins 6E-EL, Nixon 6T-DT

R6-123 (2-84)

FD-002624-00003920-00001

RECORD OF COMMUNICATION	☐ PHONE CALL ☐ DISCUSSION ☐ FIELD TRIP ☐ CONFERENCE ☐ OTHER (SPECIFY) (Record of item checked above)	
TO:	FROM:	DATE TIME

SUBJECT

SUMMARY OF COMMUNICATION

Some Health problems for Her family. Her family has experienced headaches & rashes. They are in the process of moving because of the situation next door. Privacy Info in Enforcement Records / Ex. 7(c) wanted information on how or where to get blood tests & she wanted a regulatory agency to investigate this matter. After 9/1, Privacy Info in Enforcement Records / Ex. 7(c) can be reached at Her daughters phone Privacy Info in Enforcement Records / Ex. 7(c)

CONCLUSIONS, ACTION TAKEN OR REQUIRED

1. Refer ROC to Emergency Response for immediate investigation
2. Refer Health questions to Michael Nicas 6-PP
3. Schedule PCB inspection dependent upon information collected by Emergency Response.

INFORMATION COPIES TO:

R6-123 (2-84)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS TX 75202-2733

February 15, 2019

CERCLA 104(e) INFORMATION REQUEST
URGENT LEGAL MATTER: PROMPT REPLY REQUESTED
CERTIFIED MAIL, RETURN RECEIPT REQUESTED #7014 0150 0000 2406 4848

Mr. Brian Tierney
Director
Southwestern Electric Power Company
428 Travis Street
Shreveport, Louisiana 71156-0001

Re: F. J. Doyle Salvage Superfund Site (SSID 061D), Leonard, Fannin County, Texas 75452

Dear Sir/Madam:

The U.S. Environmental Protection Agency (EPA) seeks cooperation from Southwestern Electric Power Company in providing information and documents relating to the F. J. Doyle Salvage Superfund Site (Site), located at 905 North Poplar Street, Leonard, Fannin County, Texas. Obtained information will aid the EPA in its investigation of the release or threat of release of certain hazardous substances, pollutants or contaminants at the Site. Your response will also help the EPA develop a better understanding of activities that occurred at the Site.

This information request is not a determination that you are responsible or potentially responsible for contamination that occurred at the Site. The EPA is sending this letter as part of its investigation of the Site and does not expect you to pay for or perform any site-related activities at this time. If the EPA determines that you are responsible or potentially responsible for response activities at the Site, you will receive a separate letter clearly stating such a determination as well as the EPA's basis for such determination.

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), section 104(e), 42 U.S.C. § 9604(e), gives the EPA the authority to require the respondent to respond to this information request (see Enclosure 1). We encourage you to give this matter your full attention, and we respectfully request you to respond to this request for information within thirty (30) days of receipt of this letter. You may designate another official with the requisite authority to respond on behalf of yourself. However, failure to respond to this information request may result in the EPA seeking penalties of up to $57,317 per day of violation. In addition, furnishing false, fictitious or fraudulent statements or representations is subject to criminal penalty under 18 U.S.C. § 1001.

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Please provide a written response to Mr. David Eppler, Enforcement Officer, at the address included in the Information Request. You may refer to Enclosure 2 for important instructions and definitions and Enclosure 3 for specific questions that require your response to this Information Request.

If you have any questions regarding this letter or the information requested, please contact Mr. Eppler at (214) 665-6529 or eppler.david@epa.gov. For legal questions concerning this letter, please have your legal counsel contact Mr. Leonard Schilling, Assistant Regional Counsel, at (214) 665-7166 or schilling.leonard@epa.gov. Thank you for your attention to this matter.

Sincerely yours,

Ben Banipal, P.E., Chief
Technical and Enforcement Branch
Superfund Division

ENCLOSURE 1

F. J. DOYLE SALVAGE SUPERFUND SITE
INFORMATION REQUEST

RESPONSE TO INFORMATION REQUEST

Under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as the federal "Superfund" law, the U.S. Environmental Protection Agency (EPA) responds to the release or threat of release of hazardous substances, pollutants or contaminants into the environment to stop additional contamination and to clean-up or otherwise address any prior contamination.

The EPA is requesting information under CERCLA section 104(e). Section 104(e) may be found in the United States Code (U.S.C.) at Title 42 section (section is denoted by the symbol "§") 9604(e), 42 U.S.C. § 9604(e).

Pursuant to the authority of CERCLA § 104(e), you are hereby requested to respond to the enclosed information request. If you have any questions concerning the F. J. Doyle Salvage Superfund Site (Site) or this information request letter, please contact Mr. David Eppler, the enforcement officer for the Site, at phone number (214) 665-6529, fax number (214) 665-6660, or via email at eppler.david@epa.gov. Please mail your response within 30 calendar days of your receipt of this request to the following address:

Mr. David Eppler, Enforcement Officer
Superfund Enforcement Assessment Section (6SF-TE)
U.S. EPA, Region 6
1445 Ross Avenue
Dallas, Texas 75202-2733

If you or your attorney has legal questions that pertain to this information letter request, please contact Mr. Leonard Schilling at phone number (214) 665-7166, fax number (214) 665-6460 or via email at schilling.leonard@epa.gov. For contact via mail, use the following address:

Mr. Leonard Schilling
Office of Regional Counsel (6RC-S)
U.S. EPA Region 6
1445 Ross Avenue
Dallas, Texas 75202-2733

BACKGROUND INFORMATION

The Site is a former metal salvage and recycling facility. As part of the salvage process, operators at the Site obtained electrical transformers and other components from companies such as LPL. Site operators

drained oil containing polychlorinated biphenyls (PCBs) from the transformers, dismantled the transformers and used a high-temperature oven to burn residual oils, paper and varnish from the copper and aluminum transformer cores. PCBs are a listed hazardous substance pursuant to section 102(a) of CERCLA, 42 U.S.C. § 9602, and 40 C.F.R. § 302.4.

Historical sampling has indicated PCB contamination in on-site and off-site soils. The EPA conducted a removal action on the Site beginning on November 5, 2018, removing and disposing of PCB-contaminated soils and building elements.

ENCLOSURE 2

F. J. DOYLE SALVAGE SUPERFUND SITE
INFORMATION REQUEST

INSTRUCTIONS and DEFINITIONS

1. Please provide a separate narrative response for each and every Question and subpart of a Question set forth in this Information Request.

2. Precede each answer with the Question (or subpart) and the number of the Question (and the letter of a subpart of a Question, if applicable) to which it corresponds.

3. If information or documents not known or not available to you as of the date of submission of a response to this Information Request should later become known or available to you, ***you must supplement*** your response to the U.S. Environmental Protection Agency (EPA). Moreover, should you find, at any time, after submission of your response, that any portion of the submitted information is false or misrepresents the truth, or, though correct when made, is no longer true, you must notify the EPA of this fact as soon as possible and provide the EPA with a corrected response.

4. For each document produced in response to this Information Request, indicate on the document, or in some other reasonable manner, the number of the Question (and the letter of a subpart of a Question, if applicable) to which it responds.

5. You may assert a business confidentiality claim covering part or all of the information which you submit in response to this request. Any such claim must be made by placing on (or attaching to) the information, at the time it is submitted to the EPA, a cover sheet or a stamped or typed legend or other suitable form of notice employing language such as "trade secret," "proprietary," or "company confidential." Confidential portions of otherwise non-confidential documents should be clearly identified and may be submitted separately to facilitate identification and handling by the EPA. If you make such a claim, the information covered by that claim will be disclosed by the EPA only to the extent, and by means of the procedures, set forth in subpart B of 40 C.F.R. Part 2. If no such claim accompanies the information when it is received by the EPA, it may be made available to the public by the EPA without further notice to you. The requirements of 40 C.F.R. Part 2 regarding business confidentiality claims were published in the Federal Register on September 1, 1976, and were amended September 8, 1976, and December 18, 1985.

6. Personal Privacy Information; Personnel and medical files, and similar files the disclosure of which to the general public may constitute an invasion of privacy should be segregated from your responses, included on separate sheet(s), and clearly marked as "Personal Privacy Information."

7. Objections to questions; Regardless of any objections you may have to some or all of the questions within this Information Request Letter, you are still required to respond to each of the questions.

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DEFINITIONS

The following definitions shall apply to the following words as they appear in this enclosure:

1. "Agreement" means every separate contract, transaction, or invoice, whether written or oral.

2. The terms "and" and "or" shall be construed either disjunctively or conjunctively as necessary to bring within the scope of this Information Request any information which might otherwise be construed to be outside its scope.

3. The term "any," as in "any documents" for example, shall mean "any and all."

4. "Disposal" shall mean the discharge, deposit, injection, dumping, spilling, leaking, or placing of any material and/or hazardous substance into or on any land or water so that such material and/or hazardous substance or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including ground waters.

5. The terms "document(s)" and "documentation" shall mean any object that records, stores, or presents information, and includes writings of any kind, formal or informal, whether or not wholly or partially in handwriting, including by way of illustration and not by way of limitation, any invoice, manifest, bill of lading, receipt, endorsement, check, bank draft, canceled check, deposit slip, withdrawal slip, order, correspondence, record book, minutes, memorandum of telephone and other conversations including meetings, agreements and the like, diary, calendar, desk pad, scrapbook, notebook, bulletin, circular, form, pamphlet, statement, journal, postcard, letter, telegram, telex, telecopy, telefax, report, notice, message, analysis, comparison, graph, chart, map, interoffice or intra office communications, photostat or other copy of any documents, microfilm or other film record, any photograph, sound recording on any type of device, any punch card, disc pack; any tape or other type of memory generally associated with computers and data processing (together with the programming instructions and other written material necessary to use such punch card, disc, or disc pack, tape or other type of memory and together with the printouts of such punch card, disc, or disc pack, tape or other type of memory); and (a) every copy of each document which is not an exact duplicate of a document which is produced, (b) every copy which has any writing, figure or notation, annotation or the like on it, (c) drafts, (d) attachments to or enclosures with any document and (e) every document referred to in any other document.

6. "Facility" shall have the same definition as that contained in section 101(9) of CERCLA, and includes (A) any building, structure, installation, equipment, pipe or pipeline (including any pipe into a sewer or publicly owned treatment works), well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock, or aircraft, or (B) any site or area where a hazardous substance has been deposited, stored, disposed of, or placed, or otherwise come to be located; but does not include any consumer product in consumer use or any vessel.

7. "FJ Doyle" means Frank Doyle, Gary Doyle, Danny Doyle and any entity created by or associated with the Doyles that owned or operated the Site from approximately 1975 to1999, including F.J. Doyle Salvage, Frank J. Doyle Transformer Salvage and Frank J. Doyle & Sons.

8. "Hazardous Substance" or "Hazardous Substances" shall have the same definition as that contained in Section 101(14) of CERCLA and includes any mixtures of such hazardous substances with any other substances, including mixtures of hazardous substances with petroleum products or other nonhazardous substances. Hazardous substances include polychlorinated biphenyls (PCBs).

9. The term "identify" means, with respect to a natural person, to set forth the person's name, present or last known business and personal addresses, email address(es), and telephone numbers, and present or last known job title, position or business. Also provide e-mail addresses.

10. The term "identify" means, with respect to a corporation, partnership, business trust or other association or business entity (including, but not limited to, a sole proprietorship), to set forth its full name, address, and legal form (e.g. corporation [including state of incorporation], partnership, etc.), organization, if any, a brief description of its business, and to indicate whether or not it is still in existence and, if it is no longer in existence, to explain how its existence was terminated and to indicate the date on which it ceased to exist. Also provide e-mail addresses.

11. The term "identify" means, with respect to a document, to provide the type of document, to provide its customary business description, its date, its number, if any (invoice or purchase order number), subject matter, the identity of the author, addressor, addressee and/or recipient, and the present location of such document.

12. "Material" or "Materials" shall mean any and all objects, goods, products, by-products, substances, or matter of any kind, including but not limited to wastes.

13. The term "person" shall have the same definition as in section 101(21) of CERCLA, 42 U.S.C. § 9601(21).

14. The term "Site" or "facility" shall mean and include the F. J. Doyle Salvage Superfund Site at 905 North Poplar Street (previously Personal Address / Ex. 6), Leonard, Texas 75452.

15. The term "you" or "Respondent" shall mean the addressee of this Request, the addressee's officers, managers, employees, contractors, trustees, partners, successors and agents.

16. Words in the masculine shall be construed in the feminine, and vice versa, and words in the singular shall be construed in the plural, and vice versa, where appropriate in the context of a particular question or questions as necessary to bring within the scope of this Information Request any information which might otherwise be construed to be outside its scope.

17. All terms not defined herein shall have their ordinary meaning, unless such terms are defined in CERCLA, RCRA, 40 C.F.R. Part 300 or 40 C.F.R. Parts 260-280, in which case the statutory or regulatory definitions shall apply.

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ENCLOSURE 3

F. J. DOYLE SALVAGE SUPERFUND SITE
INFORMATION REQUEST

QUESTIONS

1. Please provide the full legal name, mailing address, and phone number of the Respondent.

2. For each person answering these questions on behalf of the Respondent, provide full name, title, business address, business telephone and facsimile number.

3. If the Respondent wishes to designate an individual for all future correspondence concerning this Site, including legal notices, please provide the individual's name, address, telephone number, and facsimile number.

4. Has any material or equipment owned or used by Respondent ever been sold to, supplied to, or otherwise turned over to FJ Doyle for scrapping, salvage, repair, consignment, resale or any other purpose?

5. Has any material or equipment owned or used by Respondent ever been sent to the Site for scrapping, salvage, repair, consignment, resale, or any other purpose?

6. If your answer to either or both questions is yes, provide a complete list of all such material or equipment, as well as any and all shipments thereof; include the following information with your response:
    a. The reason and approximate date(s) the material or equipment was taken out of service, and the date(s) sold, scrapped, disposed of, or otherwise turned over to FJ Doyle, or the date sent to the Site, if applicable.
    b. Describe the condition of the material or equipment when it was sold, scrapped, disposed of, or otherwise turned over to FJ Doyle, or sent to the Site, if applicable.
    c. List any amount of money paid or received by Respondent in relation to the sale, transfer, or delivery of the material or equipment. Indicate whether the price was reduced because of the inclusion of hazardous substances in the material or equipment.
    d. For each item of material or equipment, indicate whether it contained any oil when turned over to FJ Doyle. Supply any and all records that may indicate the contents of the oil, in particular whether the oil may have contained any PCBs. Indicate what steps were taken to determine whether the oil contained any PCBs at the time of taking out of service or of disposal, and explain what precautions were taken to ensure that any PCBs in the equipment were disposed of properly.
    e. Supply all documents pertaining to the transaction, and to the movement or shipment of the material or equipment from your property, or from property where you operate.

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f. For each instance of equipment or material turned over to FJ Doyle or sent to the Site, indicate whether the equipment or material was transported by FJ Doyle, or by a separate company. In the case of the latter, identify both the individual and the company supplying the transportation services.
g. Identify all persons who controlled and/or transported the material or equipment prior to delivery to the Site. Include job title, duties, dates performing those duties, supervisors for those duties, current position, and if applicable, the date of the individual's resignation or termination.
h. Provide the correct name and addresses of Respondent's plants and other facilities from which Respondent sold or supplied equipment or material to FJ Doyle or otherwise sent equipment or material to the Site.
i. Provide a brief description of the nature of Respondent's operations at each plant or facility referenced above, including: the date such operations commenced and concluded; and types of work performed at each plant or facility, including but not limited to the industrial, chemical, or institutional processes and treatments undertaken at each plant or facility

7. List, describe, and provide all documents relating to the information requested above. If any such documents have been destroyed, provide the dates of destruction.

8. Did Respondent ever sell or supply transformers or any other oil-containing equipment to FJ Doyle or otherwise send transformers or any other oil-containing electrical equipment to the Site? If so, provide the following details for each item that was sold or supplied to FJ Doyle or may have been sent to the Site:
   a. the name of the manufacturer and serial number;
   b. the quantity of oil contained in the equipment;
   c. the concentration of PCBs contained in the oil;
   d. the purpose of the shipment (e.g, salvage, repair or resale);
   e. the date on which the equipment left your facility;
   f. the company name, address, and telephone number of the transporter; and
   g. the names, addresses, telephone numbers, and dates of ownership of any and all prior owners.

9. Provide legible copies of any and all contracts, invoices, receipts, or other documents describing the transactions that Respondent implemented with FJ Doyle for each item identified in the question above.

10. Provide legible copies of any and all contracts, invoices, receipts, or other documents related to the transaction that Respondent implemented with transporters to transport the items in the question above.

11. Describe how both PCB-contaminated oil and uncontaminated oil were emptied from electrical transformers and capacitors or other electrical equipment and stored at Respondent's facilities.

12. Identify and describe, and provide all documents that refer or relate to, the following:
    a. How were hazardous substances or materials containing hazardous substances used or planned to be used at the Site?
    b. What was done to any hazardous substances once they were sent to the Site, including any service, repair, recycling, treatment, or disposal?
    c. What activities were typically conducted at the Site? What were the common business practices at the Site? How and when did Respondent obtain this information?
    d. How were hazardous substances typically used, handled, or disposed of at the Site?
    e. Did Respondent ever travel to the Site? If so, how many times and when did Respondent travel to the Site? When travelling to the Site, explain the details of the visit, including how long Respondent stayed, who Respondent met with, and the nature of the visit.
    f. Did Respondent know that hazardous substances were disposed of at the Site? If not, why not?
    g. Did Respondent have any influence over waste disposal activities at the Site? If so, how?
    h. Did Respondent know if the owner(s) and/or operator(s) of the Site were removing a hazardous substance from the transferred material?
    i. Did Respondent know, based on general industry knowledge, if the hazardous substances would need to be removed from the transferred material in order for that material to be useful?
    j. What percentage of Respondent's total hazardous substances went to the Site?
    k. What steps did Respondent take to dispose of or treat any hazardous substances among the materials transferred to the Site? Provide any agreements and documents, including waste logs, journals, or notes, reflecting these steps.
    l. What involvement (if any) did Respondent have in selecting the particular means and method of disposal of the hazardous substances at the Site?
    m. At the time Respondent transferred the materials containing hazardous substances to the Site, what did Respondent intend to happen to the hazardous substances? Provide any agreements and documents, including waste logs, journals, or notes, reflecting the intention of the parties. If Respondent does not have such documents and/or materials, please so state.
    n. With respect to all arrangements involving materials containing hazardous substances, at the time of the arrangement, specify the measures Respondent took to determine the actual means of treatment, disposal or other uses of hazardous substances at the Site. Provide information Respondent had about the treatment and disposal practices at the Site. What assurances, if any, were Respondent given by the owners/operators at the Site regarding the proper handling and ultimate disposition of the materials Respondent sent there?
    o. What efforts, if any, did Respondent take to investigate the nature of the operations conducted at the Site and the environmental compliance of the Site prior to selling, transferring, delivering (e.g., for repair, consignment, or joint-venture), disposing of, or arranging for the treatment or disposal of any hazardous substances.
    p. How long did Respondent have a relationship with the owner(s) and/or operator(s) of the Site?

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q. Provide names, addresses, telephone numbers, and email addresses of any individuals, including former and current employees, who may be knowledgeable of Respondent's operations and practices concerning the handling, storage and disposal of hazardous substances at the Site.

13. If any documents solicited in this information request are no longer available, please indicate the reason why they are no longer available.

14. If you believe there may be any person(s) able to provide a more detailed or complete response to any of the preceding questions and/or sub-questions or any person(s) who may be able to provide additional responsive documents, please identify such person(s) and the additional information you believe they may have.

ED_002624_00003966-00012

Message

From: Omar Valdez [omar.valdez@tceq.texas.gov]
Sent: 11/19/2018 7:03:03 PM
To: Cook, Brenda [cook.brenda@epa.gov]; Moore, Gary [Moore.Gary@epa.gov]
Subject: RE: FJ Doyle Is 1:00 today fine with everyone call in information below

I'm on the conference call line now….

From: Cook, Brenda <cook.brenda@epa.gov>
Sent: Monday, November 19, 2018 7:49 AM
To: Moore, Gary <Moore.Gary@epa.gov>; Omar Valdez <Omar.Valdez@tceq.texas.gov>
Subject: FJ Doyle Is 1:00 today fine with everyone call in information below

Conference Number(s): Conference Line/Code / Ex. 6
Participant Code: Conference Line/Code / Ex. 6

Brenda Nixon Cook
EPA Region 6 Site Assessment Team
R6 NPL Coordinator
SAM Louisiana
1445 Ross Avenue
Dallas, Texas 75202
214-665-7436
cook.brenda@epa.gov

Owner	Address	Parcel ID	Grid ID
Personal Privacy / Ex. 6		FJD03	FJD03-01
		FJD03	FJD03-02
		FJD03	FJD03-03
		FJD03	FJD03-04
		FJD03	FJD03-05
		FJD03	FJD03-06
		FJD03	FJD03-07
		FJD03	FJD03-08
		FJD03	FJD03-09
		FJD03	FJD03-09NSEW
		FJD03	FJD03-10
		FJD03	FJD03-10NW
		FJD02	FJD02-01
		FJD02	FJD02-02
		FJD02	FJD02-03
		FJD02	FJD02-04
		FJD02	FJD02-05A
		FJD02	FJD02-05B
		FJD02	FJD02-06
		FJD02	FJD02-07
		FJD02	FJD02-08
		FJD02	FJD02-09
		FJD02	FJD02-10
		FJD02	FJD02-10E
		FJD02	FJD02-10N
		FJD02	FJD02-10S
		FJD02	FJD02-10W
City of Leonard	Easement	EAS08	EAS08
City of Leonard	Easement	EAS07	EAS07
City of Leonard	Easement	EAS06	EAS06
City of Leonard	Easement	EAS05	EAS05
City of Leonard	Easement	EAS04	EAS04
City of Leonard	Easement	EAS03	EAS03
City of Leonard	Easement	EAS02	EAS02
City of Leonard	Easement	EAS01	EAS01
City of Leonard	Drainage	DRA32	DRA32
City of Leonard	Drainage	DRA31	DRA31
City of Leonard	Drainage	DRA30	DRA30
City of Leonard	Drainage	DRA29	DRA29
City of Leonard	Drainage	DRA28	DRA28
City of Leonard	Drainage	DRA27	DRA27
City of Leonard	Drainage	DRA26	DRA26
City of Leonard	Drainage	DRA25	DRA25
City of Leonard	Drainage	DRA24	DRA24
City of Leonard	Drainage	DRA23	DRA23
City of Leonard	Drainage	DRA22	DRA22

Associated City of Leonard owned Drainage (DRA0-_)
DRA06
DRA06
DRA05
DRA05

Associated City of Leonard owned Easement (EAS0-_)
EAS05, EAS06
EAS06
EAS05
EAS05
EAS06
EAS06
EAS03
EAS04

City of Leonard	Drainage	DRA21	DRA21
City of Leonard	Drainage	DRA20	DRA20
City of Leonard	Drainage	DRA19	DRA19
City of Leonard	Drainage	DRA18	DRA18
City of Leonard	Drainage	DRA17	DRA17
City of Leonard	Drainage	DRA16	DRA16
City of Leonard	Drainage	DRA15	DRA15
City of Leonard	Drainage	DRA14	DRA14
City of Leonard	Drainage	DRA13	DRA13
City of Leonard	Drainage	DRA12	DRA12
City of Leonard	Drainage	DRA11	DRA11
City of Leonard	Drainage	DRA10	DRA10
City of Leonard	Drainage	DRA09	DRA09
City of Leonard	Drainage	DRA08	DRA08
City of Leonard	Drainage	DRA07W	DRA07W
City of Leonard	Drainage	DRA07E	DRA07E
City of Leonard	Drainage	DRA06	DRA06
City of Leonard	Drainage	DRA05	DRA05
City of Leonard	Drainage	DRA04	DRA04
City of Leonard	Drainage	DRA03	DRA03
City of Leonard	Drainage	DRA02	DRA02
City of Leonard	Drainage	DRA01	DRA01
Danny Doyle, Garry Doyle, Lynda Kaylor	905 N. Poplar	FJD04	FJD04-01
Danny Doyle, Garry Doyle, Lynda Kaylor	905 N. Poplar	FJD04	FJD04-02
Danny Doyle, Garry Doyle, Lynda Kaylor	905 N. Poplar	FJD04	FJD04-03
Danny Doyle, Garry Doyle, Lynda Kaylor	905 N. Poplar	FJD04	FJD04-04
Danny Doyle, Garry Doyle, Lynda Kaylor	905 N. Poplar	FJD04	FJD04-05
Danny Doyle, Garry Doyle, Lynda Kaylor	905 N. Poplar	FJD04	FJD04-06
Danny Doyle, Garry Doyle, Lynda Kaylor	905 N. Poplar	FJD04	FJD04-07
Danny Doyle, Garry Doyle, Lynda Kaylor	905 N. Poplar	FJD04	FJD04-08
Danny Doyle, Garry Doyle, Lynda Kaylor	905 N. Poplar	FJD04	FJD04-09
Personal Address / Ex. 6		FJD09	FJD09-01
		FJD09	FJD09-02
		FJD09	FJD09-03
		FJD09	FJD09-04
		FJD09	FJD09-04NSEW
		FJD08	FJD08-01
		FJD08	FJD08-02
		FJD08	FJD08-03
		FJD08	FJD08-04
		FJD08	FJD08-05
		FJD08	FJD08-05ESW
Leonard ISD	310 E. Hackberry	FJD07	FJD07-01
Leonard ISD	310 E. Hackberry	FJD07	FJD07-02
Leonard ISD	310 E. Hackberry	FJD07	FJD07-03
Leonard ISD	310 E. Hackberry	FJD07	FJD07-04
Leonard ISD	310 E. Hackberry	FJD07	FJD07-05

DRA07W
DRA07E, DRA08N
DRA08S
DRA09
DRA09
DRA012, DRA013
DRA012
DRA028
DRA011
DRA010
DRA014

EAS07
EAS08
EAS07, EAS08
EAS06, EAS07

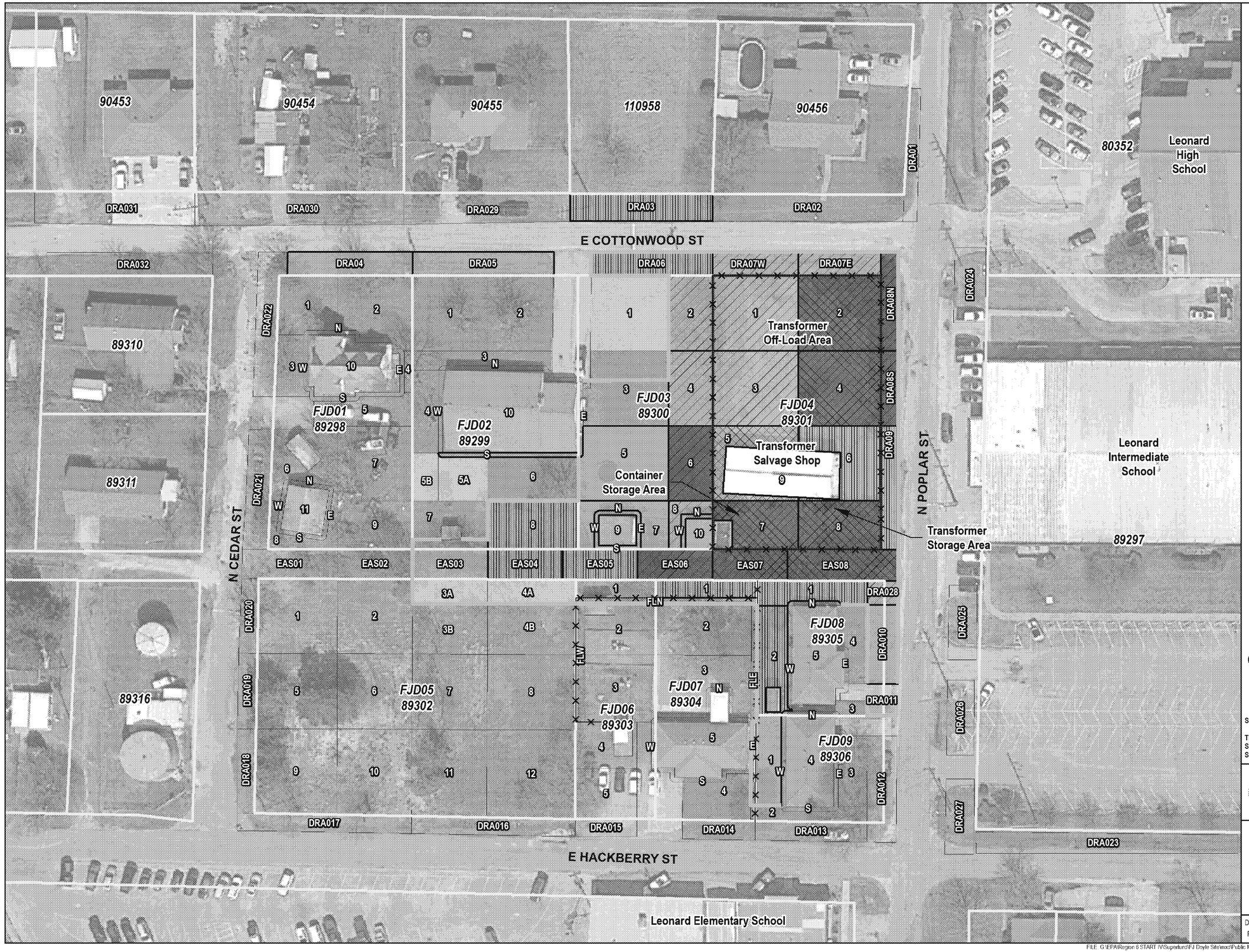
Leonard ISD	310 E. Hackberry	FJD07	FJD07-05NSEW
Leonard ISD	308 E. Hackberry	FJD06	FJD06-01
Leonard ISD	308 E. Hackberry	FJD06	FJD06-02
Leonard ISD	308 E. Hackberry	FJD06	FJD06-03
Leonard ISD	308 E. Hackberry	FJD06	FJD06-04
Leonard ISD	308 E. Hackberry	FJD06	FJD06-05
Leonard ISD	308 E. Hackberry	FJD06	FJD06-FLN
Leonard ISD	308 E. Hackberry	FJD06	FJD06-FLW
Leonard ISD	900 N. Cedar	FJD05	FJD05-01
Leonard ISD	900 N. Cedar	FJD05	FJD05-02
Leonard ISD	900 N. Cedar	FJD05	FJD05-03A
Leonard ISD	900 N. Cedar	FJD05	FJD05-03B
Leonard ISD	900 N. Cedar	FJD05	FJD05-04A
Leonard ISD	900 N. Cedar	FJD05	FJD05-04B
Leonard ISD	900 N. Cedar	FJD05	FJD05-05
Leonard ISD	900 N. Cedar	FJD05	FJD05-06
Leonard ISD	900 N. Cedar	FJD05	FJD05-07
Leonard ISD	900 N. Cedar	FJD05	FJD05-08
Leonard ISD	900 N. Cedar	FJD05	FJD05-09
Leonard ISD	900 N. Cedar	FJD05	FJD05-10
Leonard ISD	900 N. Cedar	FJD05	FJD05-11
Leonard ISD	900 N. Cedar	FJD05	FJD05-12
Personal Address / Ex. 6		FJD01	FJD01-01
		FJD01	FJD01-02
		FJD01	FJD01-03
		FJD01	FJD01-04
		FJD01	FJD01-05
		FJD01	FJD01-06
		FJD01	FJD01-07
		FJD01	FJD01-08
		FJD01	FJD01-09
		FJD01	FJD01-10
		FJD01	FJD01-10DLNSEW
		FJD01	FJD01-11
		FJD01	FJD01-11NSEW

DRA015
DRA020
DRA019
DRA017, DRA018
DRA017
DRA016
DRA016
DRA04, DRA022
DRA04
DRA022
DRA021
DRA021

EAS05, EAS06
EAS01
EAS02
EAS03
EAS04
EAS01
EAS02

Frank J. Doyle Transformer Site

Site ID	Parcel ID	Address	Legal	Owner	Owner Mailing Address	Owner Mailing City	State / Zip	Type/Direction
FJD04	89301	905 N. Poplar	COLLEGE ADDN, BLOCK 14, LOT 7,8, ACRES .344	Danny Doyle, Lynda Kaylor, Garry Doyle	Personal Address / Ex. 6	LEONARD	TX / 75452	Site
FJD03	89300	Personal Address / Ex. 6				LEONARD	TX / 75452	Personal Address / Ex. 6
FJD02	89299					LEONARD	TX / 75452	
FJD01	89298					LEONARD	TX / 75452	
FJD05	89302	900 N. Cedar	COLLEGE ADDN, BLOCK 14, LOT 9-12	Leonard ISD	1 TIGER ALLEY	LEONARD	TX / 75452	Residence, southwest of the site
FJD06	89303	308 E. Hackberry	COLLEGE ADDN, BLOCK 14, LOT 13	Leonard ISD	1 TIGER ALLEY	LEONARD	TX / 75452	Residence, southwest of the site
FJD07	89304	310 E. Hackberry	COLLEGE ADDN, BLOCK 14, LOT 14 & W 20' OF 15	Leonard ISD	1 TIGER ALLEY	LEONARD	TX / 75452	Residence, southwest of the site
FDJ08	89305	Personal Address / Ex. 6				LEONARD	Personal Address / Ex. 6	
FJD09	89306					LEONARD		



TEXAS

LEGEND

- Waddles
- Fence Line
- Site Boundary
- Parcel Boundary with ID
- Sample Grid

Soil Sample Grid Results, Total PCBs

- Precautionary
- TCEQ Grids
- Non-TSCA, Total PCBs Results ≥ 1 mg/kg
- TSCA, Total PCBs Results ≥ 50 mg/kg

Excavation Depth (inches)

- 0-6"
- 6-12"
- 12-24"
- 24-36"

NOTE:
1. mg/kg - milligram per kilogram

N

0 60 120

FEET

SOURCE: © GOOGLE EARTH, 2017

TDD: 0001/17-004
SEMS: TXD980865109
SSID: 061D

USEPA REGION 6

FIGURE 5-1
PROPOSED EXCAVATION MAP
F.J. DOYLE SITE
Personal Address / Ex. 6
LEONARD, FANNIN COUNTY, TEXAS

DATE	PROJECT NO	SCALE
FEBRUARY 2019	20600.012.001.1004	AS SHOWN

FILE: G:\EPA\Region 6 START IV\Superfund\FJ Doyle Site\mxd\Public Meeting\Proposed Excavation Map Addendum- 11x17.mxd 3:59:34 PM 2/7/2019 baye

ED_002624_00005714-00001

Message

From: Moore, Gary [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=D9494EB3B37241B09CE3BDEAFF4C557A-MOORE, GARY]
Sent: 2/27/2019 9:41:48 PM
To: Lindsey, Austin [Austin.Lindsey@westonsolutions.com]
Subject: Re: FJ Doyle Salvage

Yes but call them by FJD numbers

Sent from my iPhone

On Feb 27, 2019, at 3:06 PM, Lindsey, Austin <Austin.Lindsey@westonsolutions.com> wrote:

> Gary,
>
> Would you like me to upload photos of ERRS cleaning and disinfecting the sewer lines behind Personal Address / Ex. 6 to response.epa.gov?
>
> Austin
>
> **From:** Lindsey, Austin
> **Sent:** Tuesday, February 26, 2019 4:00 PM
> **To:** 'Delgado, Paige' <Delgado.Paige@epa.gov>
> **Cc:** 'Moore, Gary' <Moore.Gary@epa.gov>
> **Subject:** RE: FJ Doyle Salvage
>
> Also here's photos of ERRS disinfecting and removing sewage waste from the cleanouts if ya'll need them again.
>
> **From:** Lindsey, Austin
> **Sent:** Tuesday, February 26, 2019 3:52 PM
> **To:** 'Delgado, Paige' <Delgado.Paige@epa.gov>
> **Cc:** Moore, Gary <Moore.Gary@epa.gov>; Criner, Jeffrey J. <Jeff.Criner@WestonSolutions.com>
> **Subject:** RE: FJ Doyle Salvage
>
> Paige,
>
> See attached for photos of the restored Personal Address / Ex. 6 backyards.
>
> Unfortunately one photo has a plumber onsite at Personal Address / Ex. 6
>
> Respectfully,
>
> ***Austin Lindsey***
> **Project Scientist - START**
> Weston Solutions, Inc.
> 2600 Dallas Pkwy, Suite 280
> Frisco, TX 75034-8697
> (469) 666-5514 (Office)
> (817) 637-4262 (Cell)

austin.lindsey@westonsolutions.com

From: Delgado, Paige [mailto:Delgado.Paige@epa.gov]
Sent: Tuesday, February 26, 2019 3:34 PM
To: Moore, Gary <Moore.Gary@epa.gov>; Lindsey, Austin <Austin.Lindsey@WestonSolutions.com>
Subject: RE: FJ Doyle Salvage

**** External Email ****
Can you also send a picture of the completely restored yard? Thanks!

From: Moore, Gary
Sent: Tuesday, February 26, 2019 3:19 PM
To: 'Lindsey, Austin' <Austin.Lindsey@WestonSolutions.com>
Cc: Delgado, Paige <Delgado.Paige@epa.gov>
Subject: FJ Doyle Salvage

Austin:

Can you send us pictures of the backyard of the excavated backyards for Personal Address / Ex. 6 (FJD08 and FJD09)? We are trying to see where the the sewer line is located.

Thanks

Gary W. Moore (6SF-ER)
Federal On-Scene Coordinator
U.S EPA Region 6
1445 Ross Ave, Suite 1200
Dallas, TX 75202-2733
Cell: 214.789.1627
moore.gary@epa.gov

WARNING: External Email: This email originated outside of Weston Solutions. DO NOT CLICK on any links or attachments unless you recognize the sender and are expecting the email.
CONFIDENTIALITY: This email and attachments may contain information which is confidential and proprietary. Disclosure or use of any such confidential or proprietary information without the written permission of Weston Solutions, Inc. is strictly prohibited. If you received this email in error, please notify the sender by return e-mail and delete this email from your system. Thank you.

Message

From: Webster, Susan [webster.susan@epa.gov]
Sent: 2/27/2019 3:14:40 PM
To: Moore, Gary [Moore.Gary@epa.gov]
CC: Petersen, Chris [petersen.chris@epa.gov]
Subject: Re: FJ Doyle Salvage Site

Thank you for all your work on this site.

Sent from my iPhone

On Feb 27, 2019, at 8:03 AM, Moore, Gary <Moore.Gary@epa.gov> wrote:

> FYI
>
> **From:** Danny Doyle Personal Email / Ex. 6
> **Sent:** Wednesday, February 27, 2019 7:02 AM
> **To:** Moore, Gary <Moore.Gary@epa.gov>
> **Subject:** Re: FJ Doyle Salvage Site
>
> Mr. Moore,
>
> I am thrilled that this may soon be coming to a close. You are an absolute gentleman and have been wonderful to deal with. I hate that it will take a few more months for the paperwork to be done but, it is still progress. Let me know if Garry or myself can help in any way. Please keep me updated as the paperwork moves along. This is the last item in dad's estate that must be dealt with and I can be done with that after almost 13 years. Again, Thank you!
>
> On Fri, Feb 22, 2019 at 7:51 AM Moore, Gary <Moore.Gary@epa.gov> wrote:
>
> > Hello Danny,
> >
> > We are close to being complete with the cleanup actions. We only have punch list items remaining to be complete. Those are:
> >
> > 1. Placing a fence between the Personal Address / Ex. 6 and 905 N. Poplar (Site);
> > 2. Fixing the valve extension near the roadway – to be done by City of Leonard;
> > 3. Placing sod behind eastern most shed and near red shed at Personal Address / Ex. 6
> > 4. Hydroseeding the lot across from the elementary school that we used for material storage;
> > 5. The city has invoiced us for roadway repairs and they will be taking care of that;
> >
> > I have talked with Mr. Maxwell and he indicates that the school is willing to accept the donation of the land but wants to get all the paperwork completed which shows no further actions are necessary on the site. EPA is in the process of putting together our cleanup report which will include a cleanup letter to the property owners for their records. I am working with TCEQ to see what kind of letter they can

provide and/or eliminate the site from their data base as being cleaned up. This will probably take several months to complete but I will be pushing this forward.

Thanks

Gary W. Moore (6SF-ER)

Federal On-Scene Coordinator

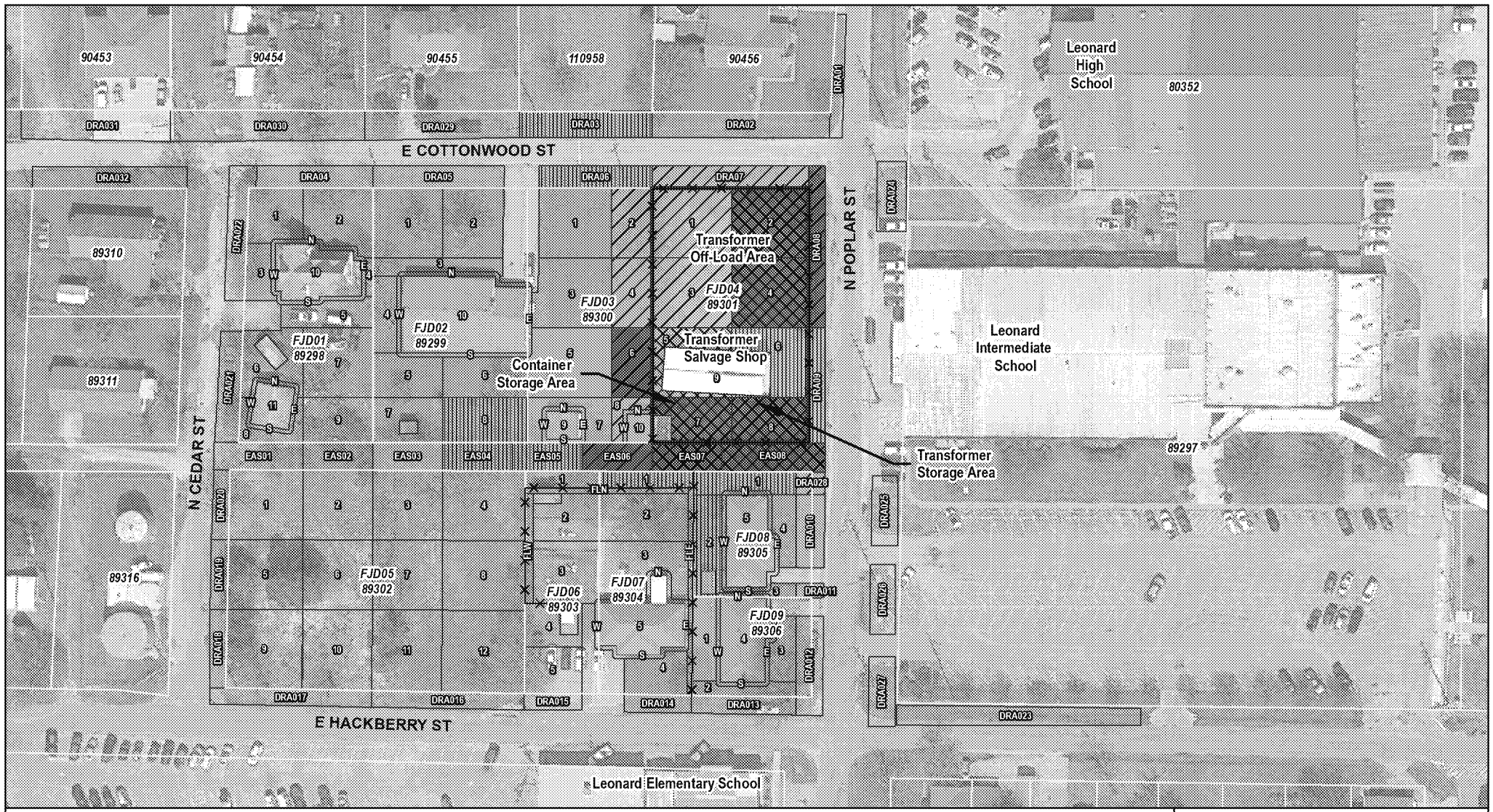
U.S EPA Region 6

1445 Ross Ave, Suite 1200

Dallas, TX 75202-2733

Cell: 214.789.1627

moore.gary@epa.gov



LEGEND

- Fence Line
- Site Boundary
- Parcel Boundary with ID
- Sample Grid

Excavation Depth (inches)

- 0-6"
- 6-12"
- 12-24"
- 24-36"

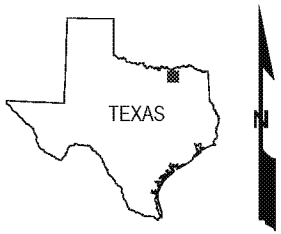
Soil Sample Grid Results, Total PCBs

- Non-TSCA, Total PCBs Results ≥ 1 mg/kg
- TSCA, Total PCBs Results ≥ 50 mg/kg

NOTE:
1. mg/kg - milligram per kilogram

SOURCE: © GOOGLE EARTH, 2017

TDD: 0001/17-004
SEMS: TXD980665109
SSID: 061D

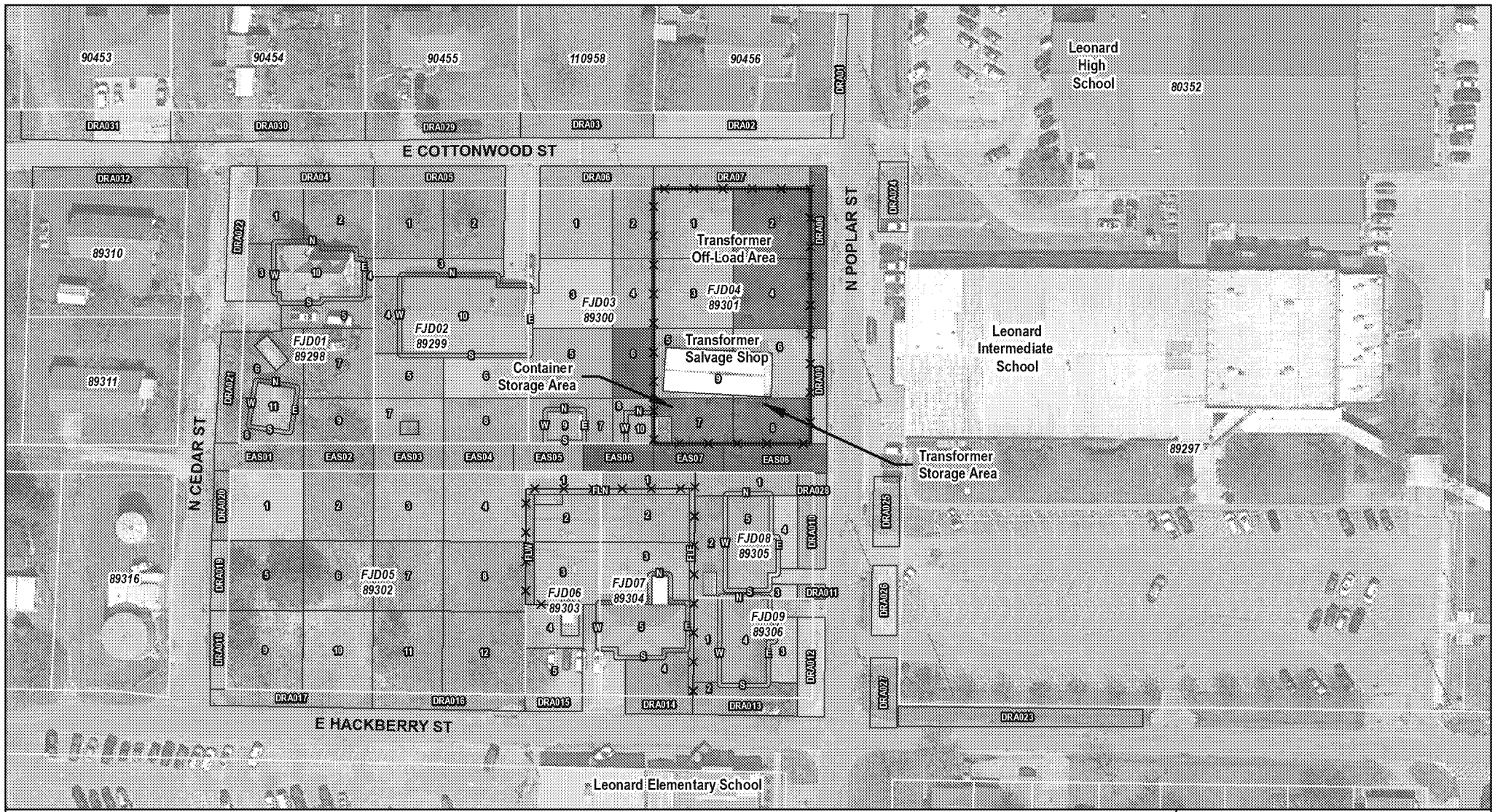


USEPA REGION 6

FIGURE 5-1
PROPOSED EXCAVATION MAP
F.J. DOYLE SITE
Personal Address / Ex. 6
LEONARD, FANNIN COUNTY, TEXAS

DATE	PROJECT NO	SCALE
NOVEMBER 2018	20600.012.001.1004	AS SHOWN

FILE: D:\20600_EPA_START4\FJ Doyle\mxd\Public Meeting\Proposed Excavation Map - Letter.mxd 11:27:53 AM 11/1/2018 wilder



SOURCE: © GOOGLE EARTH, 2017

TDD: 0001/17-004
SEMS: TXD980665109
SSID: 061D

NOTE:
1. mg/kg - milligram per kilogram

USEPA REGION 6

FIGURE 5-2

TOTAL PCBS RESULTS
F.J. DOYLE SITE
Personal Address / Ex. 6
LEONARD, FANNIN COUNTY, TEXAS

DATE	PROJECT NO	SCALE
NOVEMBER 2018	20600.012.001.1004	AS SHOWN

FILE: D:\20600_EPA_START4\FJ Doyle\mxd\Public Meeting\Total PCBs Breakout Map - Letter.mxd 11:26:32 AM 11/1/2018 wilderj

REPUBLIC SERVICES **SPECIAL WASTE PROFILE**

PRINT

Requested Disposal Facility: 3416 Maloy Solid Waste LF TX

Waste Profile #

Saveable fill-in form. Restricted printing until all required (yellow) fields are completed.

Sales Rep #:

I. Generator Information

Generator Name: United States Environmental Protection Agency - Region 6			
Generator Site Address: Personal Address / Ex. 6			
City: Leonard	County: Fannin	State: Texas	Zip: 75452
State ID/Reg No:	State Approval/Waste Code: (if applicable)		NAICS # :
Generator Mailing Address (if different): ☐ 1445 Ross Avenue, Suite 1200			
City: Dallas	County: Dallas	State: Texas	Zip: 75202-2733
Generator Contact Name: Gary Moore, On-Scene Coordinator (6SF-ER)		Email: moore.gary@epa.gov	
Phone Number: (214) 665-6609	Ext:	Fax Number:	

II. Billing Information

Bill To: Environmental Restoration, LLC		Contact Name: Don Edgington	
Billing Address: 1666 Fabick Drive		Email: d.edgington@erllc.com	
City: Fenton	State: Missouri	Zip: 63026	Phone: (251) 406-0220

III. Waste Stream Information

Name of Waste: Construction & Demolition (C&D) debris	
Process Generating Waste: Demolition and removal of on-site building and foundation.	
Type of Waste:	☐ INDUSTRIAL PROCESS WASTE ☐ POLLUTION CONTROL WASTE
Physical State:	☐ SOLID ☐ SEMI-SOLID ☐ POWDER ☐ LIQUID
Method of Shipment:	☐ BULK ☐ DRUM ☐ BAGGED ☐ OTHER:
Estimated Annual Volume:	150 Tons
Frequency:	☐ ONE TIME ☐ ONGOING
Disposal Consideration:	☐ LANDFILL ☐ SOLIDIFICATION ☐ BIOREMEDIATION

IV. Representative Sample Certification

☐ NO SAMPLE TAKEN

Is the representative sample collected to prepare this profile and laboratory analysis, collected in accordance with U.S. EPA 40 CFR 261.20(c) guidelines or equivalent rules?	☐ YES or ☐ NO
Type of Sample: ☐ COMPOSITE SAMPLE ☐ GRAB SAMPLE	
Sample Date:	
Sample ID Numbers:	

© Republic Services, April 2013

REPUBLIC SERVICES **SPECIAL WASTE PROFILE**

PRINT

Waste Profile #

V. Physical Characteristics of Waste

Characteristic Components	% by Weight (range)
1. Concrete, gravels, rock	80 - 100%
2. Metal, glass, wood	0 - 30%
3. Trash/PPE	0 - 10%
4.	
5.	

Color	Odor (describe)	Does Waste Contain Free Liquids?	% Solids	pH:	Flash Point
varies	none	☐ YES or ☐ NO	100%	n/a	n/a °F

Attach Laboratory Analytical Report (and/or Material Safety Data Sheet) Including Chain of Custody and Required Parameters Provided for this Profile

Does this waste or generating process contain regulated concentrations of the following Pesticides and/or Herbicides: Chlordane, Endrin, Heptachlor (and its epoxides), Lindane, Methoxychlor, Toxaphene, 2,4-D, or 2,4,5-TP Silvex as defined in 40 CFR 261.33?	☐ Yes or ☐ No
Does this waste contain reactive sulfides (greater than 500 ppm) or reactive cyanide (greater than 250 ppm)[reference 40 CFR 261.23(a)(5)]?	☐ Yes or ☐ No
Does this waste contain regulated concentrations of Polychlorinated Biphenyls (PCBs) as defined in 40 CFR Part 761?	☐ Yes or ☐ No
Does this waste contain concentrations of listed hazardous wastes defined in 40 CFR 261.31, 261.32, 261.33, including RCRA F-Listed Solvents?	☐ Yes or ☐ No
Does this waste exhibit a Hazardous Characteristic as defined by Federal and/or State regulations?	☐ Yes or ☐ No
Does this waste contain regulated concentrations of 2,3,7,8-Tetrachlorodibenzodioxin (2,3,7,8-TCCD), or any other dioxin as defined in 40 CFR 261.31?	☐ Yes or ☐ No
Is this a regulated Radioactive Waste as defined by Federal and/or State regulations?	☐ Yes or ☐ No
Is this a regulated Medical or Infectious Waste as defined by Federal and/or State regulations?	☐ Yes or ☐ No
Is this waste a reactive or heat generating waste?	☐ Yes or ☐ No
Does the waste contain sulfur or sulfur by-products?	☐ Yes or ☐ No
Is this waste generated at a Federal Superfund Clean Up Site?	☐ Yes or ☐ No
Is this waste from a TSD facility, TSD like facility or consolidator?	☐ Yes or ☐ No

VI. Certification

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true, complete and accurate description of the waste material being offered for disposal and all known or suspected hazards have been disclosed. All Analytical Results/Material Safety Data Sheets submitted are truthful and complete and are representative of the waste.

I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. I shall immediately give written notice of any change or condition pertaining to the waste not provided herein. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue.

I further certify that the company has not altered the form or content of this profile sheet as provided by Republic Services Inc.

Gary Moore, EPA On-Scene Coordinator	U.S. Environmental Protection Agency
Authorized Representative Name And Title (Type or Print)	Company Name
	10/29/2018
Authorized Representative Signature	Date

© Republic Services, April 2013

REPUBLIC SERVICES **SPECIAL WASTE PROFILE**

PRINT

Requested Disposal Facility: 4074 Pleasant Oaks LF TX

Waste Profile #

Saveable fill-in form. Restricted printing until all required (yellow) fields are completed.

Sales Rep #:

I. Generator Information

Generator Name: EPA Region 6 / FJ Doyle Salvage Site			
Generator Site Address: Personal Address / Ex. 6			
City: Leonard	County: Fannin	State: Texas	Zip: 75452
State ID/Reg No:	State Approval/Waste Code: (if applicable)		NAICS # :
Generator Mailing Address (if different): ☐ 1445 Ross Avenue, Suite 1200			
City: Dallas	County: Dallas	State: Texas	Zip: 75202-2733
Generator Contact Name: Gary Moore, On-Scene Coordinator (6SF-ER)		Email: moore.gary@epa.gov	
Phone Number: (214) 789-1627	Ext:	Fax Number:	

II. Billing Information

Bill To: Environmental Restoration, LLC		Contact Name: Don Edgington	
Billing Address: 1666 Fabick Drive		Email: d.edgington@erllc.com	
City: Fenton	State: Missouri	Zip: 63026	Phone: (251) 406-0220

III. Waste Stream Information

Name of Waste: Non-Regulated Contaminated Soil

Process Generating Waste:

Federal cleanup of former scrap metal recycler. Excavation and removal of non-regulated, non-hazardous soils (less than 50 ppm PCB). Soil is Non-RCRA characteristic and Non-TSCA regulated as demonstrated by attached analysis.

Type of Waste:	☐ INDUSTRIAL PROCESS WASTE ☐ POLLUTION CONTROL WASTE
Physical State:	☐ SOLID ☐ SEMI-SOLID ☐ POWDER ☐ LIQUID
Method of Shipment:	☐ BULK ☐ DRUM ☐ BAGGED ☐ OTHER:
Estimated Annual Volume:	5,000 Tons
Frequency:	☐ ONE TIME ☐ ONGOING
Disposal Consideration:	☐ LANDFILL ☐ SOLIDIFICATION ☐ BIOREMEDIATION

IV. Representative Sample Certification

☐ NO SAMPLE TAKEN

Is the representative sample collected to prepare this profile and laboratory analysis, collected in accordance with U.S. EPA 40 CFR 261.20(c) guidelines or equivalent rules?	☐ YES or ☐ NO

Type of Sample: ☐ COMPOSITE SAMPLE ☐ GRAB SAMPLE

Sample Date: 10/04/18

Sample ID Numbers: Pace Laboratory Report 7595992 - Sample No. FJD-WP2-20181004 and FJD-WP3-20181004.

© Republic Services, April 2013

REPUBLIC SERVICES **SPECIAL WASTE PROFILE**

PRINT

Waste Profile #

V. Physical Characteristics of Waste

Characteristic Components	% by Weight (range)
1. Soil	80 - 100%
2. Debris, concrete, metal, glass, wood	0 - 20%
3. Trash, PPE	0 - 5%
4.	
5.	

Color	Odor (describe)	Does Waste Contain Free Liquids?	% Solids	pH:	Flash Point
varies	none	☐ YES or ☐ NO	100%	n/a	n/a °F

Attach Laboratory Analytical Report (and/or Material Safety Data Sheet) Including Chain of Custody and Required Parameters Provided for this Profile

Does this waste or generating process contain regulated concentrations of the following Pesticides and/or Herbicides: Chlordane, Endrin, Heptachlor (and its epoxides), Lindane, Methoxychlor, Toxaphene, 2,4-D, or 2,4,5-TP Silvex as defined in 40 CFR 261.33?	☐ Yes or ☐ No
Does this waste contain reactive sulfides (greater than 500 ppm) or reactive cyanide (greater than 250 ppm)[reference 40 CFR 261.23(a)(5)]?	☐ Yes or ☐ No
Does this waste contain regulated concentrations of Polychlorinated Biphenyls (PCBs) as defined in 40 CFR Part 761?	☐ Yes or ☐ No
Does this waste contain concentrations of listed hazardous wastes defined in 40 CFR 261.31, 261.32, 261.33, including RCRA F-Listed Solvents?	☐ Yes or ☐ No
Does this waste exhibit a Hazardous Characteristic as defined by Federal and/or State regulations?	☐ Yes or ☐ No
Does this waste contain regulated concentrations of 2,3,7,8-Tetrachlorodibenzodioxin (2,3,7,8-TCCD), or any other dioxin as defined in 40 CFR 261.31?	☐ Yes or ☐ No
Is this a regulated Radioactive Waste as defined by Federal and/or State regulations?	☐ Yes or ☐ No
Is this a regulated Medical or Infectious Waste as defined by Federal and/or State regulations?	☐ Yes or ☐ No
Is this waste a reactive or heat generating waste?	☐ Yes or ☐ No
Does the waste contain sulfur or sulfur by-products?	☐ Yes or ☐ No
Is this waste generated at a Federal Superfund Clean Up Site?	☐ Yes or ☐ No
Is this waste from a TSD facility, TSD like facility or consolidator?	☐ Yes or ☐ No

VI. Certification

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true, complete and accurate description of the waste material being offered for disposal and all known or suspected hazards have been disclosed. All Analytical Results/Material Safety Data Sheets submitted are truthful and complete and are representative of the waste.

I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. I shall immediately give written notice of any change or condition pertaining to the waste not provided herein. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue.

I further certify that the company has not altered the form or content of this profile sheet as provided by Republic Services Inc.

Gary Moore, EPA On-Scene Coordinator	U.S. Environmental Protection Agency
Authorized Representative Name And Title (Type or Print)	Company Name
	10/29/2018
Authorized Representative Signature	Date

© Republic Services, April 2013

REPUBLIC SERVICES **SPECIAL WASTE PROFILE**

PRINT

Requested Disposal Facility: 3416 Maloy Solid Waste LF TX

Waste Profile #

Saveable fill-in form. Restricted printing until all required (yellow) fields are completed.

Sales Rep #:

I. Generator Information

Generator Name: EPA Region 6 / FJ Doyle Salvage Site			
Generator Site Address: Personal Address / Ex. 6			
City: Leonard	County: Fannin	State: Texas	Zip: 75452
State ID/Reg No:	State Approval/Waste Code: N/A (if applicable)		NAICS # : 562910
Generator Mailing Address (if different): ☐ 1445 Ross Avenue, Suite 1200			
City: Dallas	County: Dallas	State: Texas	Zip: 75202-2733
Generator Contact Name: Gary Moore, On-Scene Coordinator (6SF-ER)		Email: moore.gary@epa.gov	
Phone Number: (214) 789-1627	Ext:	Fax Number:	

II. Billing Information

Bill To: Environmental Restoration, LLC		Contact Name: Don Edgington	
Billing Address: 1666 Fabick Drive		Email: d.edgington@erllc.com	
City: Fenton	State: Missouri	Zip: 63026	Phone: (251) 406-0220

III. Waste Stream Information

Name of Waste: Non-Regulated Contaminated Soil

Process Generating Waste:

Federal cleanup of former scrap metal recycler. Excavation and removal of non-regulated, non-hazardous soils (less than 50 ppm PCB). Soil is Non-RCRA characteristic and Non-TSCA regulated as demonstrated by attached analysis.

Type of Waste:	☐ INDUSTRIAL PROCESS WASTE ☐ POLLUTION CONTROL WASTE
Physical State:	☐ SOLID ☐ SEMI-SOLID ☐ POWDER ☐ LIQUID
Method of Shipment:	☐ BULK ☐ DRUM ☐ BAGGED ☐ OTHER:
Estimated Annual Volume:	5,000 Tons
Frequency:	☐ ONE TIME ☐ ONGOING
Disposal Consideration:	☐ LANDFILL ☐ SOLIDIFICATION ☐ BIOREMEDIATION

IV. Representative Sample Certification

☐ NO SAMPLE TAKEN

Is the representative sample collected to prepare this profile and laboratory analysis, collected in accordance with U.S. EPA 40 CFR 261.20(c) guidelines or equivalent rules?	☐ YES or ☐ NO

Type of Sample: ☐ COMPOSITE SAMPLE ☐ GRAB SAMPLE

Sample Date: 10/04/18

Sample ID Numbers: Pace Laboratory Report 7595992 - Sample No. FJD-WP2-20181004 and FJD-WP3-20181004.

© Republic Services, April 2013

REPUBLIC SERVICES **SPECIAL WASTE PROFILE**

PRINT

Waste Profile #

V. Physical Characteristics of Waste

Characteristic Components	% by Weight (range)
1. Soil	80 - 100%
2. Debris, concrete, metal, glass, wood, rock	0 - 20%
3. Trash, PPE	0 - 5%
4.	
5.	

Color	Odor (describe)	Does Waste Contain Free Liquids?	% Solids	pH:	Flash Point
varies	none	☐ YES or ☐ NO	100%	n/a	n/a °F

Attach Laboratory Analytical Report (and/or Material Safety Data Sheet) Including Chain of Custody and Required Parameters Provided for this Profile

Does this waste or generating process contain regulated concentrations of the following Pesticides and/or Herbicides: Chlordane, Endrin, Heptachlor (and its epoxides), Lindane, Methoxychlor, Toxaphene, 2,4-D, or 2,4,5-TP Silvex as defined in 40 CFR 261.33?	☐ Yes or ☐ No
Does this waste contain reactive sulfides (greater than 500 ppm) or reactive cyanide (greater than 250 ppm)[reference 40 CFR 261.23(a)(5)]?	☐ Yes or ☐ No
Does this waste contain regulated concentrations of Polychlorinated Biphenyls (PCBs) as defined in 40 CFR Part 761?	☐ Yes or ☐ No
Does this waste contain concentrations of listed hazardous wastes defined in 40 CFR 261.31, 261.32, 261.33, including RCRA F-Listed Solvents?	☐ Yes or ☐ No
Does this waste exhibit a Hazardous Characteristic as defined by Federal and/or State regulations?	☐ Yes or ☐ No
Does this waste contain regulated concentrations of 2,3,7,8-Tetrachlorodibenzodioxin (2,3,7,8-TCCD), or any other dioxin as defined in 40 CFR 261.31?	☐ Yes or ☐ No
Is this a regulated Radioactive Waste as defined by Federal and/or State regulations?	☐ Yes or ☐ No
Is this a regulated Medical or Infectious Waste as defined by Federal and/or State regulations?	☐ Yes or ☐ No
Is this waste a reactive or heat generating waste?	☐ Yes or ☐ No
Does the waste contain sulfur or sulfur by-products?	☐ Yes or ☐ No
Is this waste generated at a Federal Superfund Clean Up Site?	☐ Yes or ☐ No
Is this waste from a TSD facility, TSD like facility or consolidator?	☐ Yes or ☐ No

VI. Certification

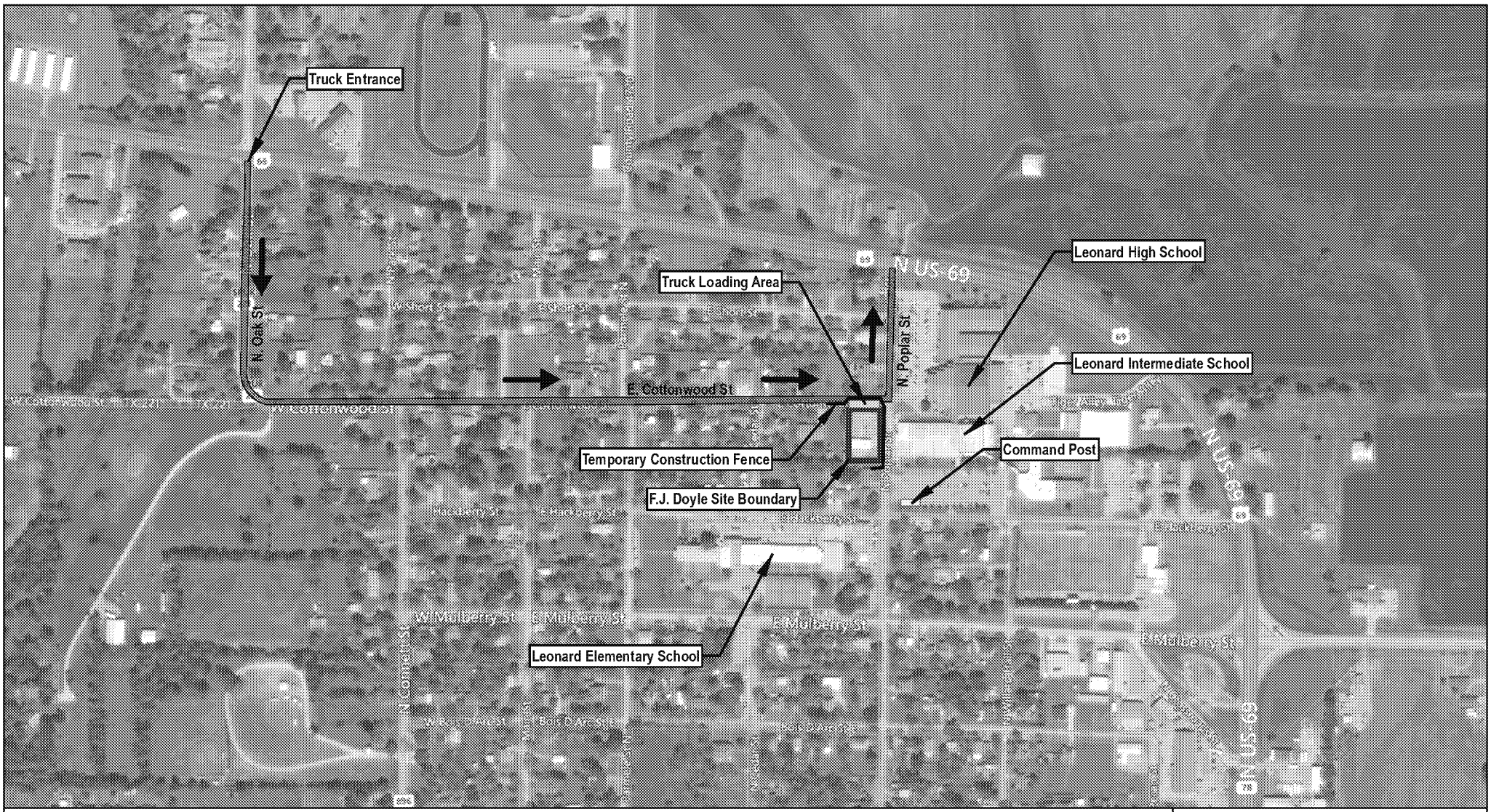
I hereby certify that to the best of my knowledge and belief, the information contained herein is a true, complete and accurate description of the waste material being offered for disposal and all known or suspected hazards have been disclosed. All Analytical Results/Material Safety Data Sheets submitted are truthful and complete and are representative of the waste.

I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. I shall immediately give written notice of any change or condition pertaining to the waste not provided herein. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue.

I further certify that the company has not altered the form or content of this profile sheet as provided by Republic Services Inc.

Gary Moore, EPA On-Scene Coordinator	U.S. Environmental Protection Agency
Authorized Representative Name And Title (Type or Print)	Company Name
	10/29/2018
Authorized Representative Signature	Date

© Republic Services, April 2013



ED_002624_00005857-00001

REPUBLIC SERVICES **SPECIAL WASTE PROFILE**

Requested Disposal Facility: 3416 Maloy Solid Waste LF TX

Waste Profile #
Sales Rep #:

Saveable fill-in form. Restricted printing until all required (yellow) fields are completed.

I. Generator Information

Generator Name: EPA Region 6 / FJ Doyle Salvage Site			
Generator Site Address: Personal Address / Ex. 6			
City: Leonard	County: Fannin	State: Tennessee	Zip: 75452
State ID/Reg No: 80951	State Approval/Waste Code: N/A (If applicable)		NAICS # : 562910
Generator Mailing Address (if different): ☑ 1445 Ross Avenue, Suite 1200			
City: Dallas	County: Dallas	State: Texas	Zip: 75202-2733
Generator Contact Name: Gary Moore, On-Scene Coordinator (6SF-ER)		Email: moore.gary@epa.gov	
Phone Number: (214) 665-6609	Ext:	Fax Number:	

II. Billing Information

Bill To: Environmental Restoration, LLC		Contact Name: Don Edgington	
Billing Address: 1666 Fabick Drive		Email: d.edgington@erllc.com	
City: Fenton	State: Missouri	Zip: 63026	Phone: (251) 406-0220

III. Waste Stream Information

Name of Waste: Non-Regulated Contaminated Soil	
Process Generating Waste: Federal cleanup of former scrap metal recycler. Excavation and removal of non-regulated, non-hazardous soils (less than 50 ppm PCB). Soil is Non-RCRA characteristic and Non-TSCA regulated as demonstrated by attached analysis.	
Type of Waste:	☐ INDUSTRIAL PROCESS WASTE ☑ POLLUTION CONTROL WASTE
Physical State:	☑ SOLID ☐ SEMI-SOLID ☐ POWDER ☐ LIQUID
Method of Shipment:	☑ BULK ☐ DRUM ☐ BAGGED ☐ OTHER:
Estimated Annual Volume:	5,000 Cubic Yards
Frequency:	☑ ONE TIME ☐ ONGOING
Disposal Consideration:	☑ LANDFILL ☐ SOLIDIFICATION ☐ BIOREMEDIATION

IV. Representative Sample Certification

☐ NO SAMPLE TAKEN

Is the representative sample collected to prepare this profile and laboratory analysis, collected in accordance with U.S. EPA 40 CFR 261.20(c) guidelines or equivalent rules?	☑ YES or ☐ NO
Type of Sample: ☑ COMPOSITE SAMPLE ☐ GRAB SAMPLE	
Sample Date: 10/04/18	
Sample ID Numbers: Pace Laboratory Report 7595992 - Sample No. FJD-WP2-20181004 and FJD-WP3-20181004.	

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Does the waste contain sulfur or sulfur by-products?	☐ Yes or ☑ No
Is this waste generated at a Federal Superfund Clean Up Site?	☑ Yes or ☐ No
Is this waste from a TSD facility, TSD like facility or consolidator?	☐ Yes or ☑ No

Message

From: Moore, Gary [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=D9494EB3B37241B09CE3BDEAFF4C557A-MOORE, GARY]
Sent: 10/26/2018 3:13:43 PM
To: Danny Doyle [Personal Email / Ex. 6
Subject: Re: work on shop area

Thank you Danny

Sent from my iPhone

On Oct 26, 2018, at 8:43 AM, Danny Doyle Personal Email / Ex. 6 wrote:

> Yes I figured she was a problem. That's why I asked about your schedule. I will move it If I have to, but it will be out of there on time.
> Thanks,
> Danny
>
> On Oct 26, 2018 8:38 AM, "Moore, Gary" <Moore.Gary@epa.gov> wrote:
>
> > Hello Danny,
> >
> > We will begin mobilizing on November 5. I have communicated with you sister and she indicated that due to the rain she has been unable to move her stuff. I told her that if she could get it removed by Nov 2 that would be helpful.
> >
> > Thanks
> >
> > Gary Moore
> >
> > **From:** Danny Doyle [mailto Personal Email / Ex. 6
> > **Sent:** Friday, October 26, 2018 7:31 AM
> > **To:** Moore, Gary <Moore.Gary@epa.gov>
> > **Subject:** work on shop area
> >
> > Good Morning Gary,
> >
> > I have been out of town for about a week and in the mountains with no cell phone service and no computer. So, I am just checking to see if the work has started and if not, when you are scheduled to start.

Danny Doyle

Message

From: Danny Doyle Personal Address / Ex. 6
Sent: 10/26/2018 1:43:42 PM
To: Moore, Gary [Moore.Gary@epa.gov]
Subject: RE: work on shop area

Yes I figured she was a problem. That's why I asked about your schedule. I will move it If I have to, but it will be out of there on time.
Thanks,
Danny

On Oct 26, 2018 8:38 AM, "Moore, Gary" <Moore.Gary@epa.gov> wrote:

> Hello Danny,
>
> We will begin mobilizing on November 5. I have communicated with you sister and she indicated that due to the rain she has been unable to move her stuff. I told her that if she could get it removed by Nov 2 that would be helpful.
>
> Thanks
>
> Gary Moore
>
> **From:** Danny Doyle [mailto: Personal Address / Ex. 6
> **Sent:** Friday, October 26, 2018 7:31 AM
> **To:** Moore, Gary <Moore.Gary@epa.gov>
> **Subject:** work on shop area
>
> Good Morning Gary,
>
> I have been out of town for about a week and in the mountains with no cell phone service and no computer. So, I am just checking to see if the work has started and if not, when you are scheduled to start.
>
> Danny Doyle

Message

From: Moore, Gary [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=D9494EB3B37241B09CE3BDEAFF4C557A-MOORE, GARY]
Sent: 10/26/2018 1:38:49 PM
To: 'Danny Doyle' Personal Address / Ex. 6
Subject: RE: work on shop area

Hello Danny,

We will begin mobilizing on November 5. I have communicated with you sister and she indicated that due to the rain she has been unable to move her stuff. I told her that if she could get it removed by Nov 2 that would be helpful.

Thanks
Gary Moore

From: Danny Doyle Personal Address / Ex. 6
Sent: Friday, October 26, 2018 7:31 AM
To: Moore, Gary <Moore.Gary@epa.gov>
Subject: work on shop area

Good Morning Gary,

I have been out of town for about a week and in the mountains with no cell phone service and no computer. So, I am just checking to see if the work has started and if not, when you are scheduled to start.

Danny Doyle

REPUBLIC SERVICES **SPECIAL WASTE PROFILE**

PRINT

Requested Disposal Facility: 3416 Maloy Solid Waste LF TX

Waste Profile #

Saveable fill-in form. Restricted printing until all required (yellow) fields are completed.

Sales Rep #:

I. Generator Information

Generator Name: EPA Region 6 / FJ Doyle Salvage Site			
Generator Site Address: **Personal Address / Ex. 6**			
City: Leonard	County: Fannin	State: Texas	Zip: 75452
State ID/Reg No:	State Approval/Waste Code: N/A (if applicable)		NAICS # : 562910
Generator Mailing Address (if different): ☐ 1445 Ross Avenue, Suite 1200			
City: Dallas	County: Dallas	State: Texas	Zip: 75202-2733
Generator Contact Name: Gary Moore, Federal On-Scene Coordinator		Email: moore.gary@epa.gov	
Phone Number: (214) 665-6609	Ext:	Fax Number:	

II. Billing Information

Bill To: Environmental Restoration, LLC		Contact Name: Don Edgington	
Billing Address: 1666 Fabick Drive		Email: d.edgington@erllc.com	
City: Fenton	State: Missouri	Zip: 63026	Phone: (251) 406-0220

III. Waste Stream Information

Name of Waste: Non-Regulated Contaminated Soil	
Process Generating Waste: Federal cleanup of former scrap metal recycler. Excavation and removal of non-regulated, non-hazardous soils (less than 50 ppm PCB). Soil is Non-RCRA characteristic and Non-TSCA regulated as demonstrated by attached analysis.	
Type of Waste:	☐ INDUSTRIAL PROCESS WASTE ☐ POLLUTION CONTROL WASTE
Physical State:	☐ SOLID ☐ SEMI-SOLID ☐ POWDER ☐ LIQUID
Method of Shipment:	☐ BULK ☐ DRUM ☐ BAGGED ☐ OTHER:
Estimated Annual Volume:	5,000 Tons
Frequency:	☐ ONE TIME ☐ ONGOING
Disposal Consideration:	☐ LANDFILL ☐ SOLIDIFICATION ☐ BIOREMEDIATION

IV. Representative Sample Certification

☐ NO SAMPLE TAKEN

Is the representative sample collected to prepare this profile and laboratory analysis, collected in accordance with U.S. EPA 40 CFR 261.20(c) guidelines or equivalent rules?	☐ YES or ☐ NO
Type of Sample: ☐ COMPOSITE SAMPLE ☐ GRAB SAMPLE	
Sample Date: 10/04/18	
Sample ID Numbers: Pace Laboratory Report 7595992 - Sample No. FJD-WP2-20181004 and FJD-WP3-20181004.	

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REPUBLIC SERVICES **SPECIAL WASTE PROFILE**

PRINT

Waste Profile #

V. Physical Characteristics of Waste

Characteristic Components	% by Weight (range)
1. Soil	80 - 100%
2. Debris, concrete, metal, glass, wood, rock	0 - 20%
3. Trash, PPE	0 - 5%
4.	
5.	

Color	Odor (describe)	Does Waste Contain Free Liquids?	% Solids	pH:	Flash Point
varies	none	☐ YES or ☐ NO	100%	n/a	n/a °F

Attach Laboratory Analytical Report (and/or Material Safety Data Sheet) Including Chain of Custody and Required Parameters Provided for this Profile

Does this waste or generating process contain regulated concentrations of the following Pesticides and/or Herbicides: Chlordane, Endrin, Heptachlor (and its epoxides), Lindane, Methoxychlor, Toxaphene, 2,4-D, or 2,4,5-TP Silvex as defined in 40 CFR 261.33?	☐ Yes or ☐ No
Does this waste contain reactive sulfides (greater than 500 ppm) or reactive cyanide (greater than 250 ppm)[reference 40 CFR 261.23(a)(5)]?	☐ Yes or ☐ No
Does this waste contain regulated concentrations of Polychlorinated Biphenyls (PCBs) as defined in 40 CFR Part 761?	☐ Yes or ☐ No
Does this waste contain concentrations of listed hazardous wastes defined in 40 CFR 261.31, 261.32, 261.33, including RCRA F-Listed Solvents?	☐ Yes or ☐ No
Does this waste exhibit a Hazardous Characteristic as defined by Federal and/or State regulations?	☐ Yes or ☐ No
Does this waste contain regulated concentrations of 2,3,7,8-Tetrachlorodibenzodioxin (2,3,7,8-TCCD), or any other dioxin as defined in 40 CFR 261.31?	☐ Yes or ☐ No
Is this a regulated Radioactive Waste as defined by Federal and/or State regulations?	☐ Yes or ☐ No
Is this a regulated Medical or Infectious Waste as defined by Federal and/or State regulations?	☐ Yes or ☐ No
Is this waste a reactive or heat generating waste?	☐ Yes or ☐ No
Does the waste contain sulfur or sulfur by-products?	☐ Yes or ☐ No
Is this waste generated at a Federal Superfund Clean Up Site?	☐ Yes or ☐ No
Is this waste from a TSD facility, TSD like facility or consolidator?	☐ Yes or ☐ No

VI. Certification

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true, complete and accurate description of the waste material being offered for disposal and all known or suspected hazards have been disclosed. All Analytical Results/Material Safety Data Sheets submitted are truthful and complete and are representative of the waste.

I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. I shall immediately give written notice of any change or condition pertaining to the waste not provided herein. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue.

I further certify that the company has not altered the form or content of this profile sheet as provided by Republic Services Inc.

Authorized Representative Name And Title (Type or Print) | Company Name

Authorized Representative Signature | Date

© Republic Services, April 2013

Message

From: Rita Engblom **Personal Email / Ex. 6**
Sent: 10/24/2018 5:59:54 PM
To: Moore, Gary [Moore.Gary@epa.gov]
Subject: Re: F.J. Doyle Salvage
Attachments: WEEK.1; WEEK.2

I sorry I'm just now getting around to responding. I can't even imagine an emergency response branch without Fife, Martin, Mason, and Zehner. Maybe one without Ender...

Looking at your email/attachments, I remember two things:

1) I probably drafted that summary; and,

2) I was happy to work on a site named after a character from *Angel*.

I'm sorry, I realize neither of those things are helpful. ;-)

I know I'm not supposed to have any files from work but after doing a search I found 2 weeklies attached below. Good Luck.

On Tuesday, September 18, 2018, 11:19:26 PM EDT, Moore, Gary <Moore.Gary@epa.gov> wrote:

Hello Rita,

I hope you are doing well and we miss you here at EPA. I am becoming one of the oldest OSCs now. It looks like Fife, Martin, Mason, Rhotenberry, and Zehner may be retiring in the next couple of years. Of course, Ender will probably never retire. Anyway, I wanted to see if you remembered this site and what transpired. I can't find very good information from the people that I have talked with so far (Foster, Petersen). As you can see, I also reached out the K. Clark but have not heard from him as of yet.

From the record, it appears that sampling was done both on and off site and we found contamination in both areas. It looks like we referred it back to TSCA to take action. Then it came back to us and it looks like you and Ken Clark were involved with Ken being the lead. Ken wanted to take action but it got delayed due to enforcement first and from there it seems to have dropped off the table. TNRCC requests us to take a removal action in 1998 because of the extremely high levels of PCBs in the soils both on and off site and a Texas Department of Health consultation (paid for by ATSDR) confirms that some action needs to be taken. Althea reviewed the health consultation but no action was taken and it appears that it may have been pushed to RCRA but really no confirmation. The company shut down in 1999 and the owner died in 2006 and the contamination is still there. We have been approved to do a removal action and I am afraid that I will have to discuss why it took so long for us to take an action (27 years since the first removal assessment).

What I am trying to understand is: Why did we not continue to pursue the removal action if we were so adamant that one should be done as referenced in the "Request for Site Team"? What do you remember, if anything?

Thanks

Gary Moore

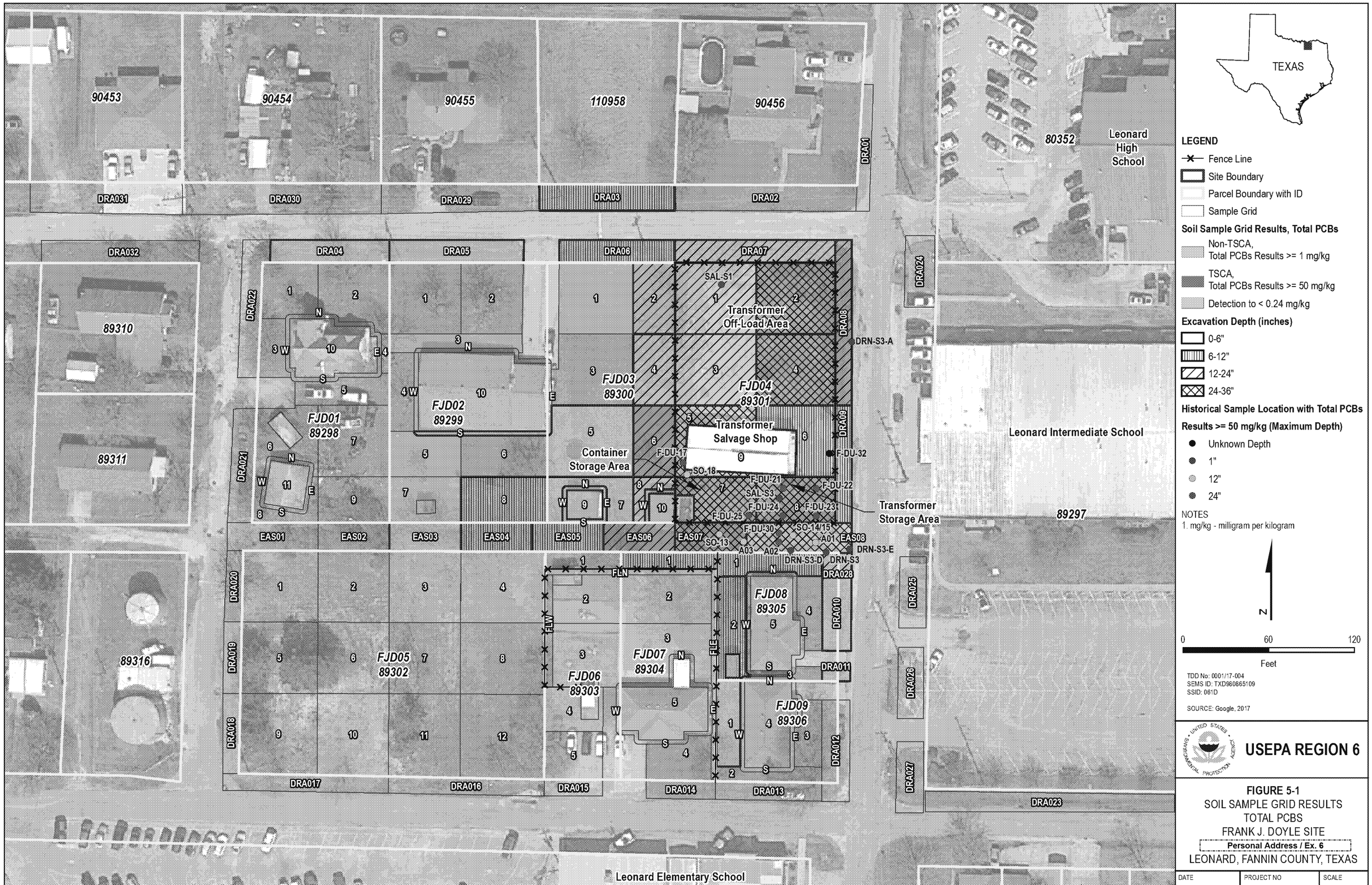


FIGURE 5-1
SOIL SAMPLE GRID RESULTS
TOTAL PCBS
FRANK J. DOYLE SITE
Personal Address / Ex. 6
LEONARD, FANNIN COUNTY, TEXAS

DATE	PROJECT NO	SCALE
OCT 2018	20600.012.001.1004	AS SHOWN

FILE: D:\20600_EPA_START4\FJ Doyle\mxd\Sample Grid Results Map - Total PCBs.mxd 4:02:34 PM 10/22/2018 wilderj

LEGEND

- Fence Line
- Site Boundary
- Parcel Boundary with ID
- Sample Grid

Soil Sample Grid Results, Total PCBs

- Non-TSCA, Total PCBs Results ≥ 1 mg/kg
- TSCA, Total PCBs Results ≥ 50 mg/kg

Excavation Depth (inches)

- 0-6"
- 6-12"
- 12-24"
- 24-36"

Utility Lines

- Communications
- Gas
- Sewer
- Water
- Unknown

Utility Locations

- Hydrant
- Water Valve
- Gas Valve
- Comms Vault

NOTE:
1. mg/kg - milligram per kilogram

N

0 25 50
FEET

SOURCE: © GOOGLE EARTH, 2017

TDD: 0001/17-004
SEMS: TXD980865109
SSID: 061D

USEPA REGION 6

FIGURE 5-4
PROPOSED EXCAVATION AND UTILITY LOCATION MAP
F.J. DOYLE SITE
Personal Address / Ex. 6
LEONARD, FANNIN COUNTY, TEXAS

DATE	PROJECT NO	SCALE
NOVEMBER 2018	20600.012.001.1004	AS SHOWN

FILE: D:\2018_EPA_STARTS\FJ Doyle\mxd\Public Meeting\Proposed Excavation and Utility Location Map - 24x36.mxd 1:33:57 PM 10/30/18 wilson

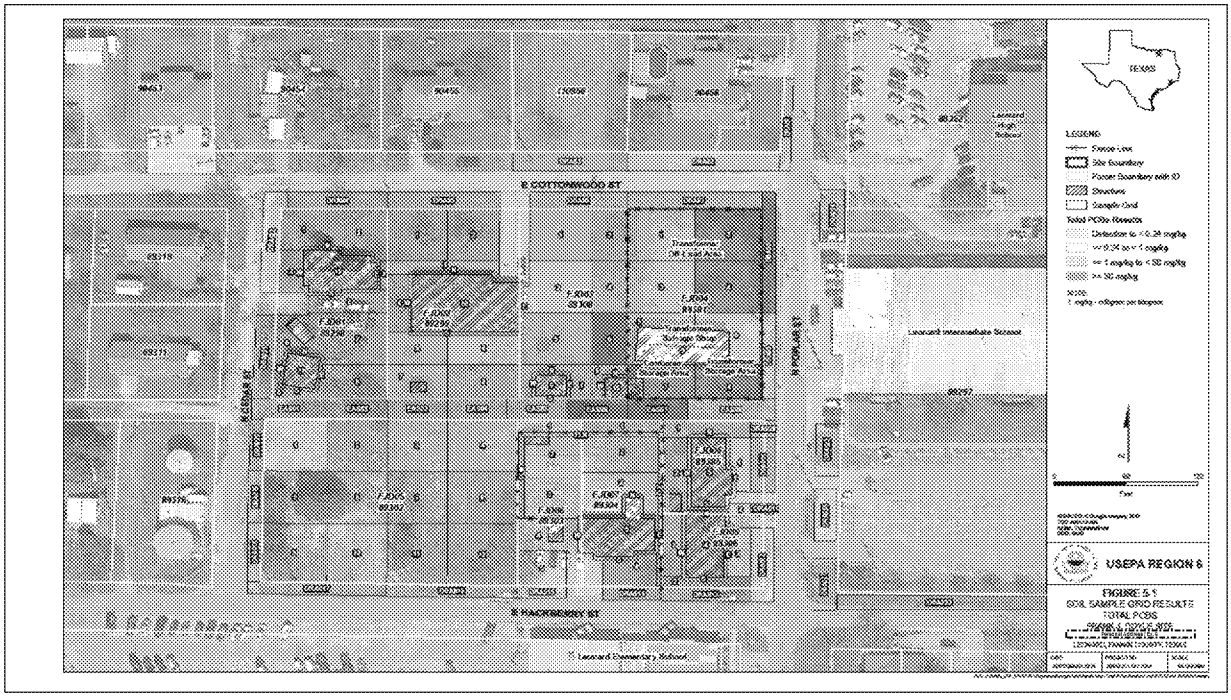
F.J. Doyle Salvage

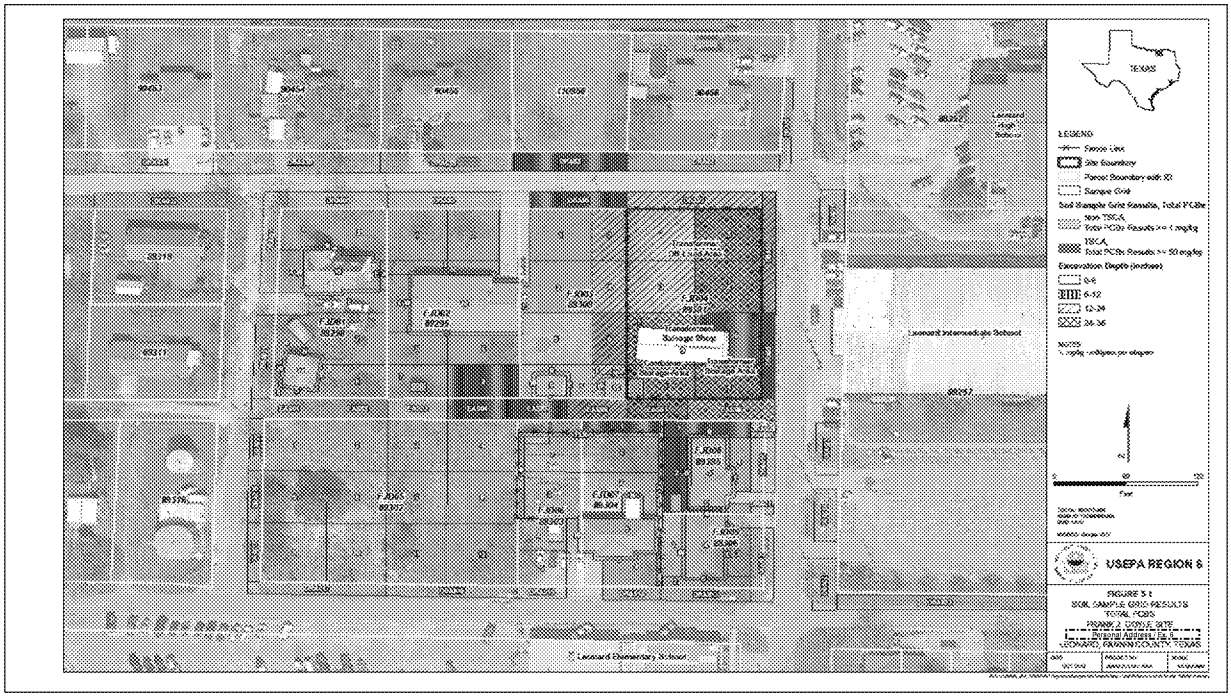
Leonard, Fannin County, TX

10/24/2018

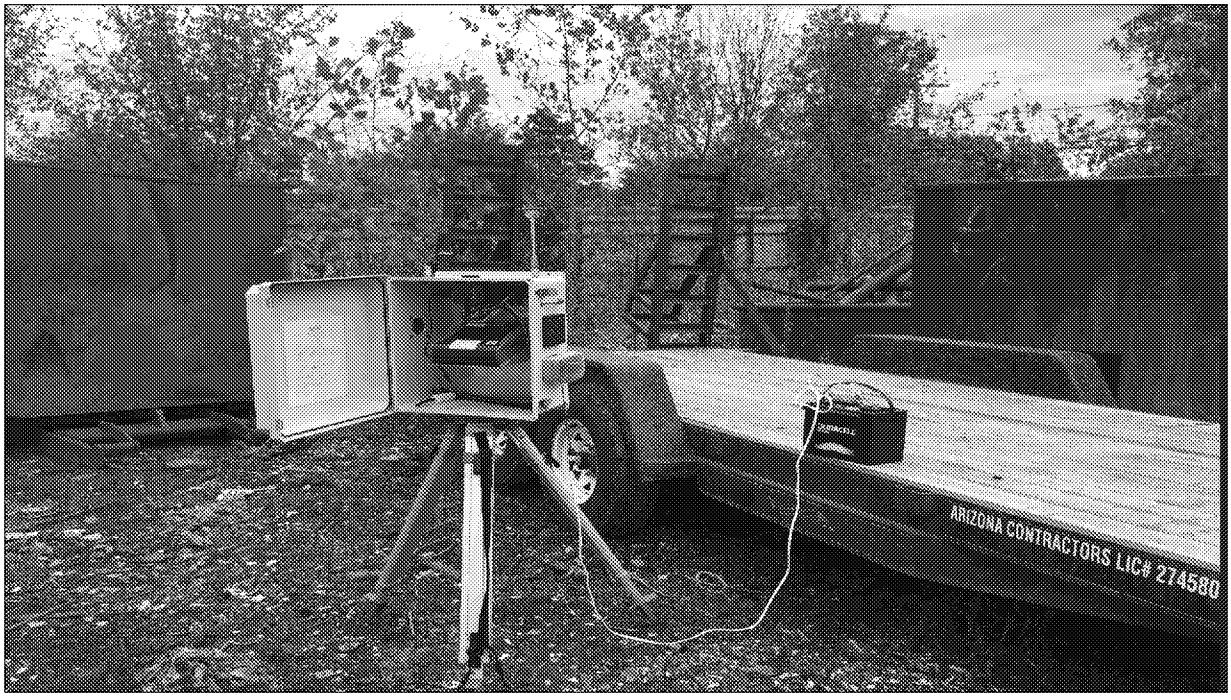
Contaminant	10-6 Risk Screening/HQ=1	EPA Cleanup Level	10-5 Risk Screening	10-4 Risk Screening
Arochlor 1260 (PCB)	0.24 mg/kg	< 1 mg/kg	2.4 mg/kg	24 mg/kg
Arsenic (co-located)	0.68 mg/kg	20 mg/kg	6.8 mg/kg	68 mg/kg
Cobalt (co-located)	23 mg/kg *	23 mg/kg	NA	NA
Copper (co-located)	3100 mg/kg *	3100 mg/kg	NA	NA
Lead (co-located)	400 mg/kg *	400 mg/kg	NA	NA
Manganese (co-located)	1800 mg/kg *	1800 mg/kg	NA	NA
Benz(a)Anthracene (co-located)	1.1 mg/kg	11 mg/kg	11 mg/kg	110 mg/kg
Benzo(a)Pyrene (co-located)	0.11 mg/kg	1.1 mg/kg	1.1 mg/kg	11 mg/kg
Benzo(b)Fluoranthene (co-located)	1.1 mg/kg	11 mg/kg	11 mg/kg	110 mg/kg
Dibenz(a,h)Anthracene (co-located)	0.11 mg/kg	1.1 mg/kg	1.1 mg/kg	11 mg/kg
Indeno(1,2,3-cd)pyrene (co-located)	1.1 mg/kg	11 mg/kg	11 mg/kg	110 mg/kg

- Daycare Facility
  - Max PCB Concentration: 0.22 mg/kg
  - Average PCB Concentration:
    - 0-1 inch: 0.067 mg/kg
    - 0-6 inch: 0.084 mg/kg
    - 6-12 inch: 0.037 mg/kg


E COTTONWOOD ST
E HACKBERRY ST
N CEDAR ST
N POPLAR ST
Leonard Intermediate School
Leonard Elementary School
TEXAS
LEGEND
Fence Line
Site Boundary
Parcel Boundary with ID
Structure
Sample Grid
Total PCBs Results
Detection to < 0.24 mg/kg
>= 0.24 to < 1 mg/kg
>= 1 mg/kg to < 50 mg/kg
>= 50 mg/kg
Feet
USEPA REGION 6
FIGURE 5-1
SOIL SAMPLE GRID RESULTS
TOTAL PCBS


TEXAS
LEGEND
Fence Line
Site Boundary
Parcel Boundary with ID
Sample Grid
Soil Sample Grid Results, Total PCBs
Non TSCA
Total PCBs Results >= 1 mg/kg
TSCA
Total PCBs Results >= 50 mg/kg
Excavation Depth (inches)
0-6
6-12
12-24
24-36
NOTES
% mg/kg = milligrams per kilogram
Transformer Storage Area
Transformer Storage Area
Transformer Storage Area
Leonard Intermediate School
Leonard Elementary School
USEPA REGION 6
FIGURE 5-1
SOIL SAMPLE GRID RESULTS
TOTAL PCBS
FRANK 2 CONVE SITE
Personal Address: Ex. 6
LEONARD, FANNIN COUNTY, TEXAS

FJ Doyle Salvage Site
905 N. Poplar Street
Legend
Chain Link Contruction Fencing
Fire Hydrant
FJ Doyle Salvage Site
Office Trailer Location
Truck Loading
Truck Route - N. Oak to Cottonwood to N. Poplar
Cottonwood St
E Hackberry St
Fire Hydrant
Google Earth


ARIZONA CONTRACTORS LIC# 274580

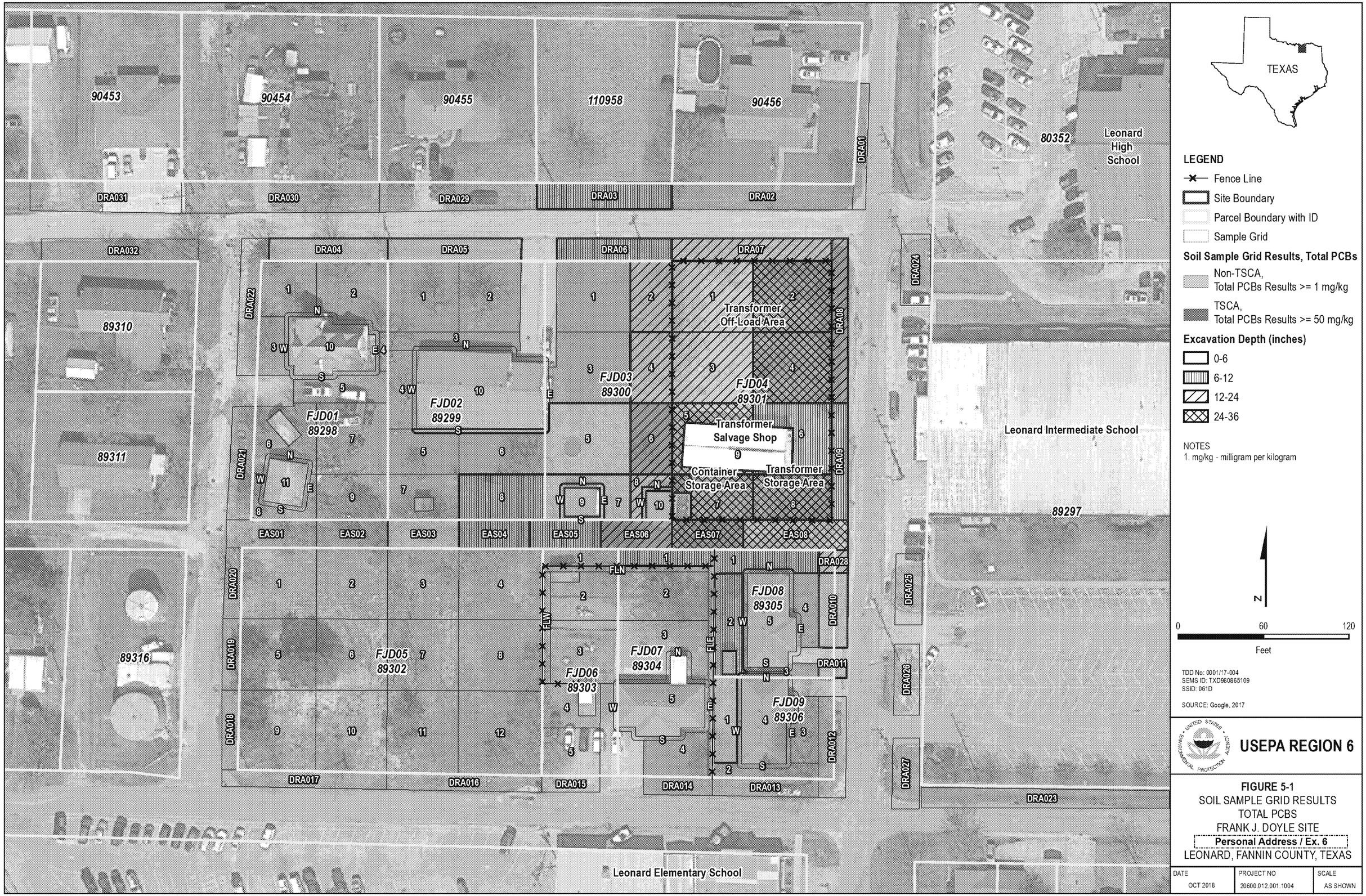
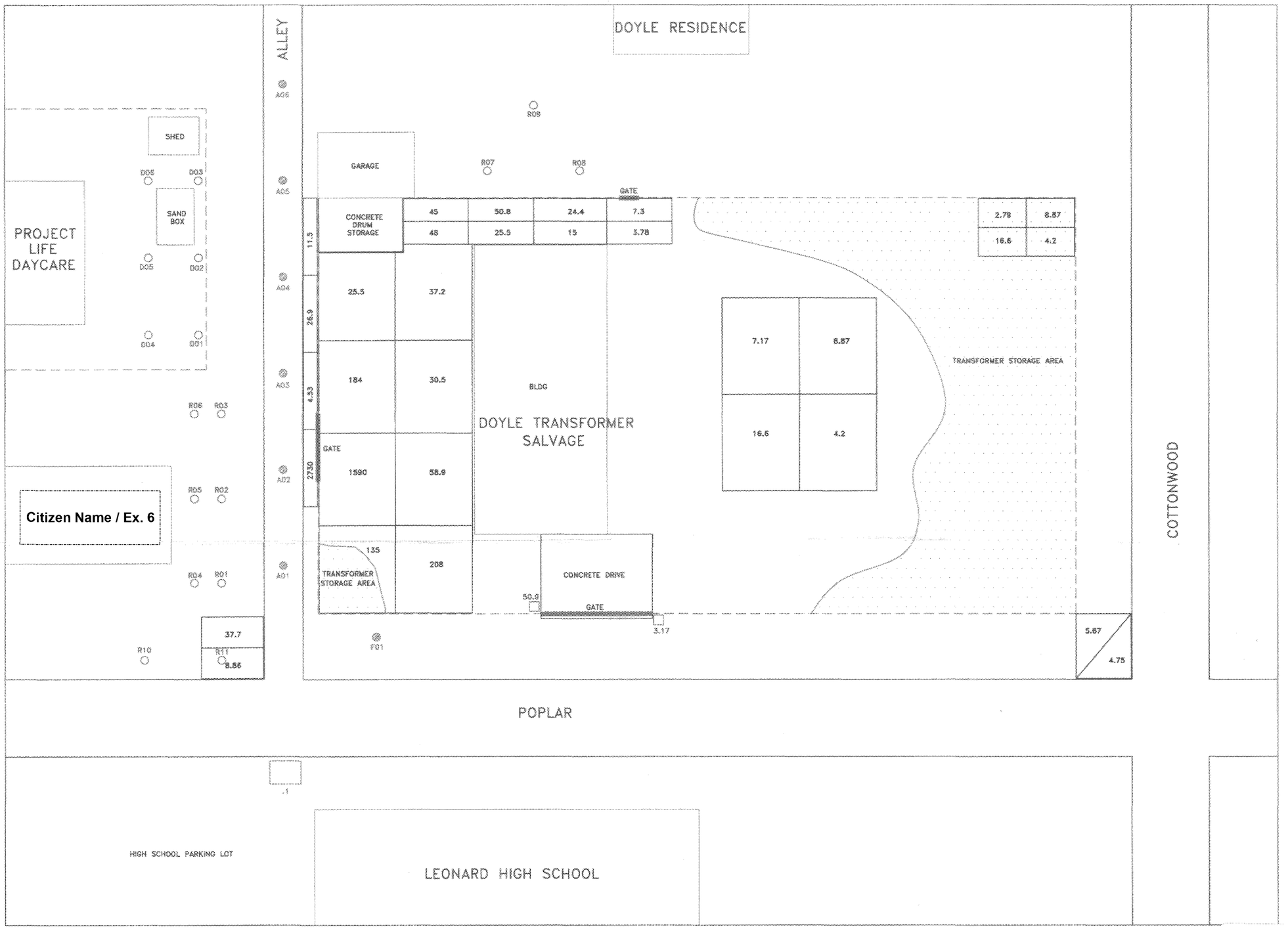


FIGURE 5-1
SOIL SAMPLE GRID RESULTS
TOTAL PCBS
FRANK J. DOYLE SITE
Personal Address / Ex. 6
LEONARD, FANNIN COUNTY, TEXAS

DATE	PROJECT NO	SCALE
OCT 2018	20600.012.001.1004	AS SHOWN

FILE: D:\20600_EPA_START4\FJ Doyle\mxd\Sample Grid Results Map - Total PCBs.mxd 10:04:03 AM 10/3/2018 wilderj

TX1204-A.DWG



Citizen Name / Ex. 6

TAT SAMPLE #	CONCENTRATIONS PCB (PPM) DEPTH (INCHES) 0-6	6-12	12-18	18-24
F01	2.98	14	4.81	ND
A01	5.7	74.60	48.2	ND
A02	1.57	852	22	115
A03	ND	59	ND	ND
A04	ND	8.54	ND	ND
A05	2.31	ND	ND	ND
A06	ND	7.35	ND	ND
R01	27.9	ND		
R02	3.75	ND		
R03	4.07	ND		
R04	3.62	ND		
R05	ND	ND		
R06	ND	ND		
R07	10.4	2.19		
R08	6.97	ND		
R09	2	ND		
R10	ND	ND		
R11	13.6	ND		

TAT SITE ASSESSMENT SAMPLES

- 2 FT DEPTH SOIL SAMPLE
- 1 FT DEPTH SOIL SAMPLE
- FENCE

5-23-95 WORLWIDE RECLAMATION SAMPLING GRIDS AND PCB CONCENTRATIONS IN PPM

- GRAB SURFACE SOIL SAMPLE
- COMPOSITE SUBSURFACE SOIL SAMPLE; COMBINED DEPTH FROM UPPERMOST DEPTH UNDER FILL MATERIAL TO 24 IN.

0' 20'

9457025

ecology and environment, inc.
Dallas, Texas
International Specialists in the Environment

SAMPLE RESULTS MAP
DOYLE TRANSFORMER SALVAGE
CERCLIS # TXD980865109

TDD# T06-9507-002 | Date: JULY 12, 1995
PAN# ETX1204SCA | P.M.: MELISSA STALLINGS

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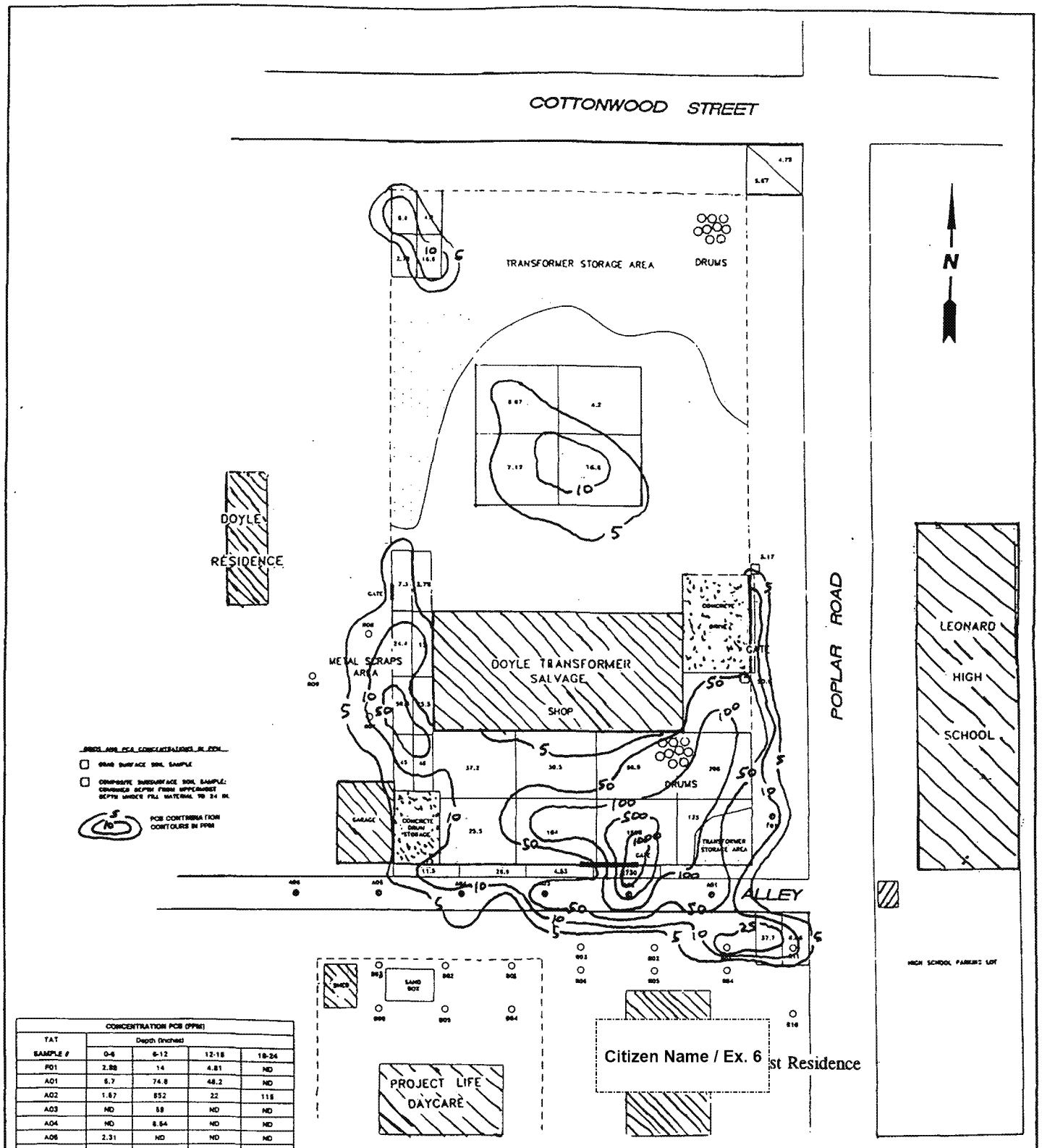

CONCENTRATION PCB (PPM)				
TAT	Depth (Inches)			
SAMPLE #	0-6	6-12	12-18	18-24
F01	2.88	14	4.81	ND
A01	6.7	74.8	48.2	ND
A02	1.67	852	22	115
A03	ND	58	ND	ND
A04	ND	8.54	ND	ND
A05	2.31	ND	ND	ND
A06	ND	7.35	ND	ND
R01	27.9	ND		
R02	3.76	ND		
R03	4.07	ND		
R04	3.62	ND		
R05	ND	ND		
R06	ND	ND		
R07	10.4	2.19		
R08	6.87	ND		
R09	2	ND		
R10	ND	ND		
R11	13.8	ND		

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION
Region No. 4

FIGURE 2

Prior Sample Results Location Map
Frank J. Doyle Transformer

ED_002624_00006015-00001

2015 APAR

CHRONOLOGY OF EVENTS

FORMER F.J. DOYLE SALVAGE TRANSFORMERS
Personal Address / Ex. 6
LEONARD, FANNIN COUNTY, TEXAS

EPA CERCLIS NO. TXD980865109 / TCEQ SWR 80951
TERRA-SOLVE PROJECT NO. 09724

DATE	ACTIVITY
1974-1989	
1974	Mr. Frank Doyle began operations at the site for reclamation of electrical transformers. The wiring and scrap metal were recycled and the residual oil was used for weed killer both on site and was distributed to others within the City of Leonard. **[Note that Terra-Solve was informed by the owner the site began operations in 1976].**
1976	Mr. Doyle indicated that after this date, no transformers containing PCBs were accepted at the facility.
01/21/88	Mr. Doyle began application to the Texas Air Control Board (TACB) for a special air operating permit to allow for operation of a heat cleaning unit at the site.
03/22/88	A public hearing was held on the above air permit application.
06/27/88	TACB issued an Agreement and Stipulation of Facts in lieu of the hearing on June 28, 1988.
07/15/88	TACB issued an order so the permit could not later be challenged by its opponents.
08/23/88	TACB issued the permit
04/22/89	Mr. Doyle applied for the air operating permit
1990	
07/20/90	EPA conducted a **PCB Inspection** at the site. *No record of this work has been located by subsequent EPA contractors even as early as May 1997.*
10/12/90	Ecology & Environment Technical Assistance Team (TAT), an EPA contractor, conducted a **Site Assessment** sampling investigation. *No record of this work has been located by subsequent EPA contractors even as early as May 1997.*
1991 - 1992	
04/05/91	Texas Air Control Board (TACB) issued an air permit to allow for operation of a combustion unit at the site.
04/19/91	Ecology & Environment TAT, an EPA contractor, conducted another **Site Assessment** sampling investigation. *No record of this work has been located by subsequent EPA contractors even as early as May 1997.*

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1993-1994	
1993	Mr. Frank Doyle registered the site with TCEQ for various non-hazardous waste disposal for non-PCB oil, ash residue, plant refuse, various storage containers, and a Dumpster.
09/07/94	EPA conducted another **PCB Inspection** at the site. *No record of this work has been located by subsequent EPA contractors even as early as May 1997.*
1995-1996	
05/23-24/95	Worldwide Reclamation, a Doyle contractor, under supervision of EPA, conducted surface and subsurface **soil sampling**. *No record of this work has been located by subsequent EPA contractors even as early as May 1997.*
07/10-12/95	Ecology and Environment TAT, an EPA contractor, conducted a **Site Assessment (SA)** sampling investigation. A total of 68 samples were collected from the site, the alleyway, and the neighboring residences to the south, west, and east. Elevated levels of PCBs were found both on- and off-site. On-site levels ranged from 50.9 ppm to 2,730 ppm. Alleyway levels ranged from 5.7 ppm top 857 ppm while off-site residence levels ranged from 10.44 ppm to 37.7 ppm
07/95	Site was entered in CERCLIS database.
08/31/95	Ecology and Environment, EPA TAT, issued a **Site Assessment (SA) Report** recounting the above findings and requested a meeting with Mr. Frank Doyle at their offices no later than 09/15/95 to discuss *"removing and disposing of this contamination in an expeditious manner."*
10/4/95	Mr. Doyle met with three EPA officials as requested above. The contents of this meeting are unknown. However, files indicate calculations regarding the cubic yardage of affected materials were made by hand; these calculations show 94.21 cubic yards of on-site soil and 86.98 cubic yards of off-site soil for a total of 181.19 cubic yards would be needed to be removed presumably to meet the above requirements.
1997	
01/97	Frank Doyle retired and Gary Doyle, his son, became the operator of the site.
05/20/97	Fluor Daniel, EPA TAT, conducted a site reconnaissance. EPA issued its **Preliminary Assessment Report (PA)** later that month. This report set that groundwater and soil exposure pathways were the only exposure pathways of concern.
07/21/97	EPA Screening Site Inspection (SSI) was approved to evaluate these pathways.
12/18/97	TCEQ issued a **Screening Site Inspection (SSI) Work Plan** to allow for further evaluation of the site using the above pathways of concern.
1998 - 1999	
01/13-14/98	TCEQ personnel conducted SSI work with sampling of city water supply wells and collection of on- and off-site soil samples. The groundwater samples did not contain metals or PCBs. Analysis of soil samples from 17 locations indicated that

ED_002624_00006018-00002

	moderate levels of copper were detected at two on-site sample locations. PCBs were found on site and along drainage ditches away from the site.
09/98	TCEQ issued **SSI Report** on the above findings.
08/99	The site ceased operations.
2000-2009	
06/29/00	The Texas Department of Health (TDH), under a cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR), issued a **Health Consultation Report** which recommended that further delineation of the extent of PCB-affected soil be conducted, or that the soil be removed.
2001	Based on the above, the ATSDR chose not to enter the site into National Priorities List (NPL) for superfund sites.
07/14/06	TCEQ issued Unit Closure Request Letter to Mr. Frank J. Doyle.
10/23/06	Danny Doyle responded to the above letter noting the passing of his father earlier that year and requesting clarification on what TCEQ was specifically requesting.
01/26/07	TCEQ responded to the above letter directing that a closure report for the waste management units (WMUs) be submitted and that an **Affected Property Assessment Report (APAR)** be completed.
02/09/07	Mr. Danny Doyle emailed a response to the above letter.
09/05/08	TCEQ issued Second Request Letter reiterating the 01/26/07 letter requirements above.
08/10/09	TCEQ created a Case File Memorandum which noted that due to the lack of response to the above letters, the case was being considered for Notice of Violation (NOV) and that the 3rd letter would be the NOV.
08/24/09	Mr. Danny Doyle emailed again to TCEQ regarding the above letter in anticipation of a potential sale of the property.
09/11/09	TCEQ responded to the above email with a new point of contact, Mr. Pindy Lall.
11/05/09	A client contracted with Terra-Solve to conduct a Phase I ESA of the site.
11/20/09	Terra-Solve conducted site reconnaissance for the Phase I ESA and met with Mr. Gary Doyle at the site.
11/30/09	Terra-Solve issued Freedom of Information Act (FOIA) request to EPA.
12/04/09	EPA issued response letter to the above FOIA request and Terra-Solve issued the Phase I ESA Report to the client noting this response.
12/15/09	EPA requested an extension in response time to 12/30/10.

ED_002624_00006018-00003

2010 - 2013	
01/08/10	The client faxed additional information from Mr. Doyle to Terra-Solve. This information consisted of the items above with asterisks (*) next to the dates. Terra-Solve contacted Mr. Pindy Lall of TCEQ, the latest point of contact, and he requested a few days to familiarize himself with the case file.
01/19/10	Mr. Pindy Lall of TCEQ contacted Terra-Solve to discuss the case. He indicated that the items requested in the 01/26/07 letter (WMU closure reports and APAR investigation) are still required to complete work on the site.
01/30/10	Terra-Solve received a CD-ROM from EPA with the various reports referred to in the above entries and assembled this comprehensive chronology of site events.
02/03/10	Terra-Solve submitted a proposal to the client to arrange for and attend a meeting with TCEQ to discuss
02/08/10	Terra-Solve received a copy of the Central File Registry records from TCEQ and updated this chronology.
03/22/10	Terra-Solve received authorization to send the above information to TCEQ from the client and its attorney, Abernathy Roeder.
04/14/10	Terra-Solve submitted this information to Mr. Pindy Lall of TCEQ after several weeks of attempted contacts. Mr. Lall later contacted Terra-Solve regarding the above email submissions of EPA documents and directed Terra-Solve to submit a formal letter requesting review of this information.
04/15/10	Terra-Solve submitted the above-requested letter.
06/18/10	TCEQ issued a letter to Terra-Solve which outlined a "path to closure" for the site. Specifically, the letter directed the following:

(1) Surface soils be delineated horizontally to 1.1 ppm PCBs and copper and hexachlorobenzene to their Risk-Based levels;
(2) Vertical soil delineation to method quantitation limits (MQLs) or collect groundwater samples, in which case the entire soil column is assumed to be contaminated;
(3) If the site enters the Voluntary Cleanup Program (VCP), a groundwater sample will be required;
(4) If the entire soil column is assumed to be contaminated, a control such as a parking lot that serves as impervious cover may be implemented to prevent exposure, but such a measure would require maintenance to ensure integrity of the lot, and any uncovered areas would have to be removed, decontaminated, and/or otherwise controlled; and
(5) Demonstration that the drainage ditches are not impacting surface water will be needed.

ED_002624_00006018-00004

2014	
04/24/14	Terra-Solve contacted by Abernathy Roeder regarding a possible sale of the subject property and asked to facilitate a meeting between all regulatory parties.
06/26/14	Terra-Solve and Abernathy Roeder met with Mr. James Sales of EPA Region VI at his office and also teleconferenced in Mr. Pindy Lall of TCEQ.
08/11/14	Terra-Solve and Abernathy Roeder met with other interested parties at the site to go over probably boring and well locations. It was determined that if the likely amount of agency-directed assessment and analysis was going to ultimately be required, the cost of such work would likely make the project untenable based on the value of the property. It was agreed that Terra-Solve would contact Pindy Lall to discuss these concerns.
08/13/14	After receiving non-deliverable replies to emails to Pindy Lall, Terra-Solve learned that Mr. Lall left the agency a few days previously. Terra-Solve attempted to find who the new coordinator is by telephone and in person on 08/14/14.
08/22/14	Terra-Solve submitted a letter to Mr. Richard Scharlach of TCEQ recapping the recent (2014) events and requesting a new case coordinator be assigned.
08/25/14	TCEQ assigned a new coordinator, Mr. Rodney Bryant.
09/02/14	TCEQ assigned a different coordinator, Ms. Eleanor Wehner, PG. Terra-Solve conferred with Ms. Wehner and wrote an update letter dated 09/10/14 which gave some hope for a reduced sampling scheme, particularly if the site did NOT go into the VCP. She did note, however, that a Drinking Water Survey was needed.
09/12/14	Terra-Solve conferred with Ms. Stephanie Kirschner of TCEQ regarding the availability of brownfields funds for the site. As the site is being contemplated for purchase by a non-profit group, these monies are available. A letter providing this information was submitted to the parties on 09/15/14 and a proposal for completion of the forms was submitted on 09/16/14.
10/21/14	Terra-Solve was engaged to complete the Brownfields Site Assessment (BSA) application.
10/23/14	Terra-Solve submitted the BSA application to Abernathy Roeder and the client. →rejected.
2015	
04/21/15	Terra-Solve contacted by Citizen Name / Ex. 6 regarding redevelopment of the site. Terra-Solve confirmed with Leonard ISD that no conflict of interest exists.
04/24/15	Terra-Solve spoke with Ms. Wehner who confirmed that she sent a letter to Mr. Doyle on 03/30/15 directing that the APAR and WMU Closure be conducted forthwith or that enforcement procedures would begin.
04/27/15	Terra-Solve met with Citizen Name / Ex. 6 to discuss the site.

5/27/15 - Unit Closure Request + Facility Registration Inactivation, &
11/16/15 - TCEQ approved of NOR 003 closure; comments to closure demonstration for NOR 001 + 002.

10/13/15 - Affected Property Assessment Report
11/17/15 - TCEQ NOD comments to APAR + closure request (WMU 001 + 002)

ED_002624_00006018-00005

Message

From: Hall,Emily (DSHS) [Emily.Hall@dshs.texas.gov]
Sent: 10/18/2018 10:11:53 PM
To: Moore, Gary [Moore.Gary@epa.gov]
Subject: Re: F.J. Doyle Salvage - Updated Draft Letter

Hi Gary,

Heidi's number is **Phone / Ex. 6**

Thanks,
Emily

From: Hall,Emily (DSHS)
Sent: Monday, October 15, 2018 2:01:02 PM
To: Moore, Gary
Subject: RE: F.J. Doyle Salvage - Updated Draft Letter

Thanks, Gary.

I would also suggest adding clarification that DSHS can answer general health-related questions about PCBs, but can't provide information related to the clean-up.

Also, I imagine that parents would want to know more about the air monitoring, such as the plan to cease operations immediately if PM levels pass your monitoring threshold.

Thanks,
Emily

From: Moore, Gary [mailto:Moore.Gary@epa.gov]
Sent: Friday, October 12, 2018 4:31 PM
To: Hall,Emily (DSHS) <Emily.Hall@dshs.texas.gov>
Subject: RE: F.J. Doyle Salvage - Updated Draft Letter

Emily:

I would like to have you guys in the letter so that they know that we are working with the health department on this and you guys are familiar with the data and can assist if they need assistance.

I changed the letter a little so if you could review again, it would be appreciated.

Thanks
Gary Moore

From: Hall,Emily (DSHS)
Sent: Friday, October 12, 2018 1:48 PM
To: Moore, Gary <Moore.Gary@epa.gov>
Subject: RE: F.J. Doyle Salvage - Updated Draft Letter

Hi Gary,

It would be better to have EPA be the sole point of contact named in the letter, and to remove my info. Then if community members contact you all and have health concerns, you can refer them to us and we will be happy to speak with them. The best number to give them is: **Phone / Ex. 6** this is our program's main line, so they can reach one of our other team members if I happen to be unavailable.

Thanks!
Emily

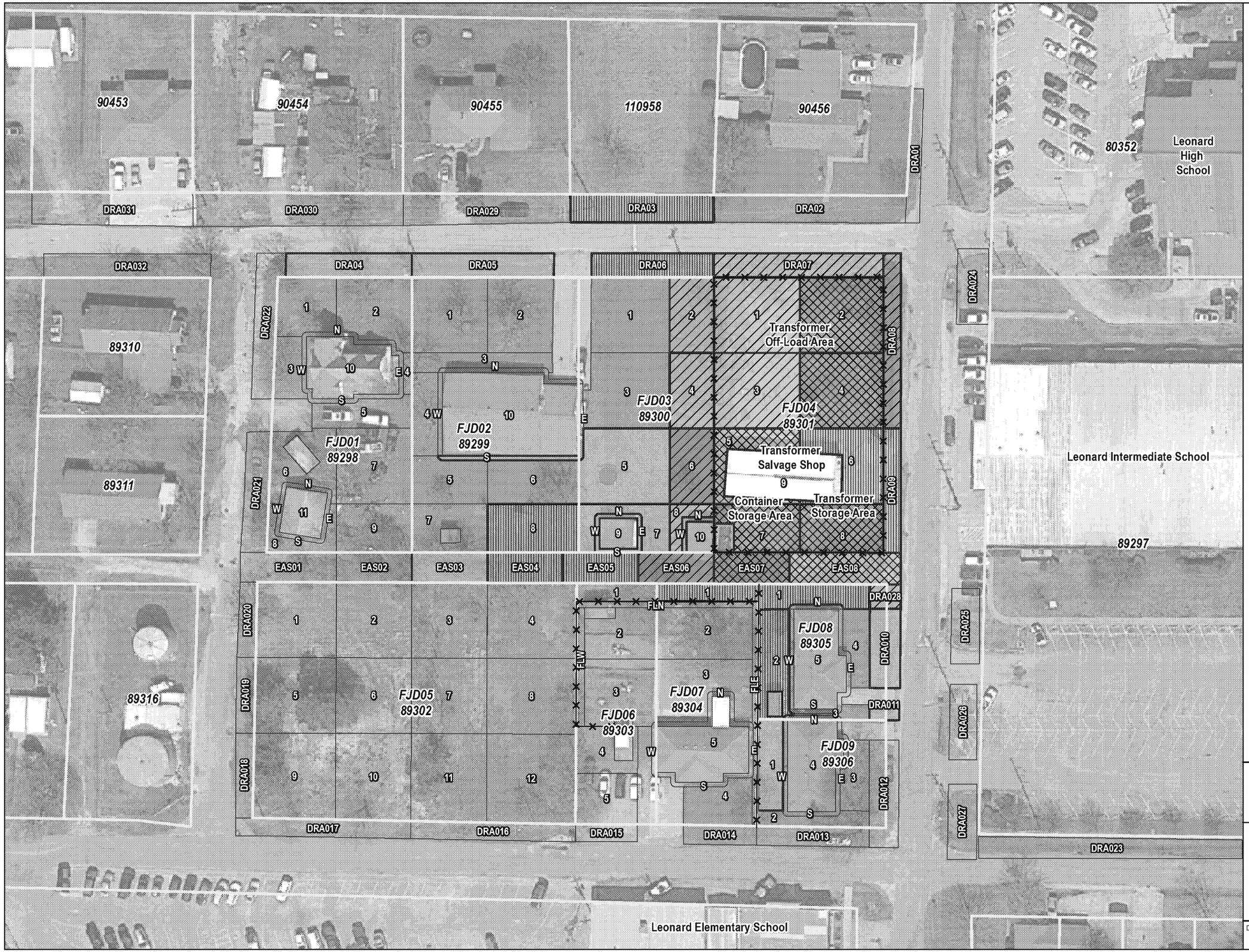
From: Moore, Gary [mailto:Moore.Gary@epa.gov]
Sent: Tuesday, October 02, 2018 5:07 PM
To: Hall,Emily (DSHS) <Emily.Hall@dshs.texas.gov>
Subject: F.J. Doyle Salvage - Updated Draft Letter

WARNING: This email is from outside the HHS system. Do not click on links or attachments unless you expect them from the sender and know the content is safe.

See attached. Comments appreciated.

Gary W. Moore (6SF-ER)
Federal On-Scene Coordinator
U.S EPA Region 6
1445 Ross Ave, Suite 1200
Dallas, TX 75202-2733
Cell: 214.789.1627
moore.gary@epa.gov

Please note My email address has changed to reflect @dshs.texas.gov domain. Please be sure to update your contact information with the new address.
Please note My email address has changed to reflect @dshs.texas.gov domain. Please be sure to update your contact information with the new address.


90453
90454
90455
110958
90456
80352
Leonard High School
DRA031
DRA030
DRA029
DRA03
DRA02
DRA01
DRA032
DRA04
DRA05
DRA06
DRA07
DRA021
DRA022
DRA006
89310
Transformer Off-Load Area
FJD03 89300
FJD04 89301
FJD02 89299
FJD01 89298
Transformer Salvage Shop
Leonard Intermediate School
89311
Container Storage Area
Transformer Storage Area
DRA009
89297
EAS01
EAS02
EAS03
EAS04
EAS05
EAS06
EAS07
EAS08
DRA020
DRA028
DRA023
FJD08 89305
DRA010
89316
FJD05 89302
FJD07 89304
FJD06 89303
DRA019
DRA011
DRA026
FJD09 89306
DRA018
DRA012
DRA027
DRA017
DRA016
DRA015
DRA014
DRA013
DRA023
Leonard Elementary School
TEXAS
LEGEND
Fence Line
Site Boundary
Parcel Boundary with ID
Sample Grid
Soil Sample Grid Results, Total PCBs
Non-TSCA, Total PCBs Results >= 1 mg/kg
TSCA, Total PCBs Results >= 50 mg/kg
Excavation Depth (inches)
0-6
6-12
12-24
24-36
NOTES
1. mg/kg - milligram per kilogram
N
0
60
120
Feet
TDD No: 0001/17-004
SEMS ID: TXD980865109
SSID: 061D
SOURCE: Google, 2017
USEPA REGION 6
FIGURE 5-1
SOIL SAMPLE GRID RESULTS
TOTAL PCBS
FRANK J. DOYLE SITE
Personal Address / Ex. 6
LEONARD, FANNIN COUNTY, TEXAS
DATE
OCT 2018
PROJECT NO
20600.012.001.1004
SCALE
AS SHOWN
FILE: D:\20600_EPA_START4\FJ Doyle\mxd\Sample Grid Results Map - Total PCBs.mxd 10:04:03 AM 10/3/2018 wilder

Message

From: William Linn [wlinn@cityofleonard.net]
Sent: 10/11/2018 2:48:07 PM
To: Moore, Gary [Moore.Gary@epa.gov]
Subject: Re: F.J. Doyle Salvage Cleanup

Good Morning Mr. Moore:

Thank you for the map. Please allow me to partner with my Public Works Director and Police Chief to make certain they have no objections.

Sincerely,

William Linn
City Administrator
City of Leonard Texas

"Determine that thing that can and shall be done, and then we will find a way." ---- Abraham Lincoln

---

From: Moore, Gary <Moore.Gary@epa.gov>
Sent: Wednesday, October 10, 2018 9:58 PM
To: William Linn
Cc: Terry McCalpin; Delgado, Paige
Subject: F.J. Doyle Salvage Cleanup

Mr. Linn:

The following is a depiction of how I would like to set up the site. The things that will interest you are as follows:

1. The truck route (empty trucks will come in on N. Oak to Cottonwood and exit loaded to N. Poplar;
2. We would like to make N. Poplar from the school parking lot to Cottonwood one-way in front of the middle school to the North;
3. We would like to close Cottonwood from about the east of the driveway at Personal Address / Ex. 6 to N. Poplar (It does not look like it will really impact anyones access to their homes);

Please let me know what you think about this request.

Thanks

Gary W. Moore (6SF-ER)
Federal On-Scene Coordinator

U.S EPA Region 6
1445 Ross Ave, Suite 1200
Dallas, TX 75202-2733
Cell: 214.789.1627
moore.gary@epa.gov

Message

From: Moore, Gary [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=D9494EB3B37241B09CE3BDEAFF4C557A-MOORE, GARY]
Sent: 10/11/2018 12:47:04 AM
To: Evan Wortman [e.wortman@erllc.com]
CC: 'Don Edgington' [d.edgington@erllc.com]
Subject: F.J. Doyle

Evan:

I am in the process of reviewing the Work Plan. I may take me a few days. One thing that I noticed is you used Liberty Sand and Gravel as your source. Did you happen to contact N-Tex Sand and Gravel (Owner is Tom – Personal Phone / Ex. 6 Also, I believe we need to load on E. Cottonwood on the roadway which will prevent us from having to back the trucks onto the industrial property.

I will try to review and get back in touch with you.

Thanks
Gary Moore

Gary W. Moore (6SF-ER)
Federal On-Scene Coordinator
U.S EPA Region 6
1445 Ross Ave, Suite 1200
Dallas, TX 75202-2733
Cell: 214.789.1627
moore.gary@epa.gov

Message

From: Danny Doyle Personal Email / Ex. 6
Sent: 10/3/2018 12:09:44 PM
To: Moore, Gary [Moore.Gary@epa.gov]
Subject: Re: access forms

Mail is up around 11 am. I hope it comes today and I can get it to you.

On Wed, Oct 3, 2018 at 7:05 AM Moore, Gary <Moore.Gary@epa.gov> wrote:
I would assume you would have it by Thursday if actually mailed. If not I will call her and drop by and have her sign.

Thanks
Gary

Sent from my iPhone

On Oct 3, 2018, at 7:00 AM, Danny Doyle < Personal Email / Ex. 6 > wrote:

> Yeah, she told me the same thing. However, she has been known to tell you what you want to hear just because she wants to. If she has mailed it, as soon as I get it, I will send it to you.
>
> On Tue, Oct 2, 2018 at 4:27 PM Moore, Gary <Moore.Gary@epa.gov> wrote:
>
> > Danny:
> >
> > I just talked with your sister and she said that she mailed it to you. Please email me a copy once you get it.
> >
> > Thanks for your help
> >
> > Gary Moore
> >
> > **From:** Danny Doyle [mailt Personal Email / Ex. 6
> > **Sent:** Tuesday, October 02, 2018 9:10 AM
> > **To:** Moore, Gary <Moore.Gary@epa.gov>
> > **Subject:** Re: access forms
> >
> > I have her address. I am not sure that she has an email address.

Lynda Kaylor

Personal Address / Ex. 6

McKinney Texas 75070

On Tue, Oct 2, 2018 at 8:53 AM Moore, Gary <Moore.Gary@epa.gov> wrote:

> Danny,
>
> Thank you for the information, I have reached out and left a message. Hopefully she will return my call. Do you happen to have all of her contact information including addresss and email address?
>
> Thanks
>
> Gary Moore
>
> **From:** Danny Doyle [mailto: Personal Email / Ex. 6
> **Sent:** Tuesday, October 02, 2018 7:30 AM
> **To:** Moore, Gary <Moore.Gary@epa.gov>
> **Subject:** access forms
>
> Mr. Moore,
>
> I suppose that my sister has decided that she is not going to sign the access sheet.
>
> She won't even discuss it period. She can be a major pain when she wants to. It might help if you spoke with her. Her name is Lynda Kaylor. Phone Number is Personal Phone / Ex. 6
>
> She had told me that she would sign it and mail it right back to me and that did not happen. I am sorry. Let me know if there is anything else you need me to do.
>
> Danny Doyle

Message

From: Danny Doyle Personal Email / Ex. 6
Sent: 10/3/2018 12:00:45 PM
To: Moore, Gary [Moore.Gary@epa.gov]
Subject: Re: access forms

Yeah, she told me the same thing. However, she has been known to tell you what you want to hear just because she wants to. If she has mailed it, as soon as I get it, I will send it to you.

On Tue, Oct 2, 2018 at 4:27 PM Moore, Gary <Moore.Gary@epa.gov> wrote:

> Danny:
>
> I just talked with your sister and she said that she mailed it to you. Please email me a copy once you get it.
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> Thanks for your help
>
> Gary Moore
>
> **From:** Danny Doyle [mailto: Personal Email / Ex. 6
> **Sent:** Tuesday, October 02, 2018 9:10 AM
> **To:** Moore, Gary <Moore.Gary@epa.gov>
> **Subject:** Re: access forms
>
> I have her address. I am not sure that she has an email address.
>
> Lynda Kaylor
>
> Personal Address / Ex. 6
>
> McKinney Texas 75070
>
> On Tue, Oct 2, 2018 at 8:53 AM Moore, Gary <Moore.Gary@epa.gov> wrote:
>
> > Danny,

Thank you for the information, I have reached out and left a message. Hopefully she will return my call. Do you happen to have all of her contact information including addresss and email address?

Thanks

Gary Moore

From: Danny Doyle [mailto Personal Email / Ex. 6
Sent: Tuesday, October 02, 2018 7:30 AM
To: Moore, Gary <Moore.Gary@epa.gov>
Subject: access forms

Mr. Moore,

I suppose that my sister has decided that she is not going to sign the access sheet.

She won't even discuss it period. She can be a major pain when she wants to. It might help if you spoke with her. Her name is Lynda Kaylor. Phone Number is Personal Phone / Ex. 6

She had told me that she would sign it and mail it right back to me and that did not happen. I am sorry. Let me know if there is anything else you need me to do.

Danny Doyle

Message

From: Danny Doyle Personal Address / Ex. 6
Sent: 10/2/2018 2:10:04 PM
To: Moore, Gary [Moore.Gary@epa.gov]
Subject: Re: access forms

I have her address. I am not sure that she has an email address.

Lynda Kaylor
Personal Address / Ex. 6
McKinney Texas 75070

On Tue, Oct 2, 2018 at 8:53 AM Moore, Gary <Moore.Gary@epa.gov> wrote:

> Danny,
>
> Thank you for the information, I have reached out and left a message. Hopefully she will return my call. Do you happen to have all of her contact information including addresss and email address?
>
> Thanks
>
> Gary Moore
>
> **From:** Danny Doyle [mailto: Personal Email / Ex. 6
> **Sent:** Tuesday, October 02, 2018 7:30 AM
> **To:** Moore, Gary <Moore.Gary@epa.gov>
> **Subject:** access forms
>
> Mr. Moore,
>
> I suppose that my sister has decided that she is not going to sign the access sheet.
>
> She won't even discuss it period. She can be a major pain when she wants to. It might help if you spoke with her. Her name is Lynda Kaylor. Phone Number is Personal Phone / Ex. 6
>
> She had told me that she would sign it and mail it right back to me and that did not happen. I am sorry. Let me know if there is anything else you need me to do.

Danny Doyle

Message

From: Danny Doyle Personal Email / Ex. 6
Sent: 10/2/2018 12:30:29 PM
To: Moore, Gary [Moore.Gary@epa.gov]
Subject: access forms

Mr. Moore,

I suppose that my sister has decided that she is not going to sign the access sheet.
She won't even discuss it period. She can be a major pain when she wants to. It might help if you spoke with her. Her name is Lynda Kaylor. Phone Number is Personal Phone / Ex. 6
She had told me that she would sign it and mail it right back to me and that did not happen. I am sorry. Let me know if there is anything else you need me to do.

Danny Doyle

Message

From: Moore, Gary [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=D9494EB3B37241B09CE3BDEAFF4C557A-MOORE, GARY]
Sent: 2/10/2019 5:12:33 PM
To: Personal Email / Ex. 6
Subject: Re: FJ Doyle Salvage Site: Personal Address / Ex. 6

If you can't flush, open up the clean out. We will look at it on Monday

Sent from my iPhone

On Feb 10, 2019, at 11:04 AM, Personal Email / Ex. 6 > wrote:

> Good morning
> It backed up gain this weekend and I think my neighbors are having issues now.
>
> Sent from my iPhone
>
> On Feb 8, 2019, at 3:54 PM, Moore, Gary <Moore.Gary@epa.gov> wrote:
>
> > Hello Citizen Name / Ex. 6
> >
> > I know this is a subject that people do not like to really talk about but I hope this explanation helps. The blockage was in the portion of the sewer line from your house. Your sewer line connects with your neighbors sewer line near the alley before it goes into the city sewer line which is in the alley.
> >
> > The sewer line from your house has some areas that are flat (not sloping) which helps it retain some water in the line which could be a congregation point for thicker debris that doesn't break down in the water. I only mentioned the paper towels because that is what the plumber indicated that he found as part of the debris clogging the line from your house (along with some plastic wrappers, hair pins, and rubber bands). You are correct that normally paper towels and those other objects are not flushed down the toilet but sometimes kids don't understand this or it happens by accident. As you know paper towels and tissue paper are thicker than toilet paper and don't break down with water as quickly and can be slowed down in the flat portions of the sewer line and can cause a clog in the home sewer line.
> >
> > Thanks
> > Gary Moore
>
> **From:** Personal Email / Ex. 6
> **Sent:** Friday, February 08, 2019 2:56 PM
> **To:** Moore, Gary <Moore.Gary@epa.gov>
> **Subject:** Re: FJ Doyle Salvage Site: Personal Address / Ex. 6
>
> Ok I'm confused about the paper towels because we only use them in the kitchen not the bathroom. So I hope it's not coming from somewhere else. I appreciate the update.
> Sent from my iPhone
>
> On Feb 8, 2019, at 2:42 PM, Moore, Gary <Moore.Gary@epa.gov> wrote:

Hello Citizen Name / Ex. 6

I am not really sure at this point. We need to see if it is because of the paper towels and plastic wrappers or if it is something else. The plumber did say that it was flowing but that it is retaining a little water in the line. This typically happens when the line is not sloped perfectly. He indicated that he sees this all the time in this area. I am hoping that it will not happen again but if it does, we may have to re-slope the line. Please keep me updated if you have any additional problems and make sure you notify your landlord. Both you and Citizen Name / Ex. 6 have my contact information.

Thanks
Gary Moore
214.789.1627
Moore.gary@epa.gov

From: Personal Email / Ex. 6
Sent: Friday, February 08, 2019 12:15 PM
To: Moore, Gary <Moore.Gary@epa.gov>
Subject: Re: FJ Doyle Salvage Site Personal Address / Ex. 6

Yes we have but I don't remember how many times but it was never this bad. Do you think its something else?

On Fri, Feb 8, 2019 at 11:55 AM Moore, Gary <Moore.Gary@epa.gov> wrote:

> Hello Citizen Name / Ex. 6
>
> Can you tell me if you guys have had issues with blockages in the past? And if so how often?
>
> Thanks
>
> Gary Moore

From: Personal Email / Ex. 6
Sent: Thursday, February 07, 2019 4:25 PM
To: Moore, Gary <Moore.Gary@epa.gov>
Subject: Re: FJ Doyle Salvage Site Personal Address / Ex. 6

Thank you and I will let them know

Sent from my iPhone

On Feb 7, 2019, at 4:19 PM, Moore, Gary <Moore.Gary@epa.gov> wrote:

Hello Citizen Name / Ex. 6

I wanted to let you know that the Plumber was able to remove the blockage in the sewer line and it appears to be functioning properly at this time. Fortunately, the line was not collapsed. The plumber indicated that the blockage was a result of paper towels, hair pins, some plastic wrappers, rubber bands and hair. Please let your family know to be careful to avoid putting paper towels, plastic wrappers, or other similar items down the toilet or sinks to avoid a similar type blockage.

Thanks,

Gary W. Moore (6SF-ER)

Federal On-Scene Coordinator

U.S EPA Region 6

1445 Ross Ave, Suite 1200

Dallas, TX 75202-2733

Cell: 214.789.1627

moore.gary@epa.gov

Message

From: Moore, Gary [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=D9494EB3B37241B09CE3BDEAFF4C557A-MOORE, GARY]
Sent: 2/10/2019 5:10:25 PM
To: Don Edgington [d.edgington@erllc.com]
Subject: Fwd: FJ Doyle Salvage Site: Personal Address / Ex. 6

FYI

Sent from my iPhone

Begin forwarded message:

From: Personal Address / Ex. 6
Date: February 10, 2019 at 11:04:50 AM CST
To: "Moore, Gary" <Moore.Gary@epa.gov>
Subject: Re: FJ Doyle Salvage Site: Personal Address / Ex. 6

Good morning
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Sent from my iPhone

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Thanks
Gary Moore

From Personal Email / Ex. 6
Sent: Friday, February 08, 2019 2:56 PM
To: Moore, Gary <Moore.Gary@epa.gov>
Subject: Re: FJ Doyle Salvage Site: Personal Address / Ex. 6

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Sent from my iPhone

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>
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>
> Thanks
> Gary Moore
> 214.789.1627
> Moore.gary@epa.gov

From: Personal Email / Ex. 6
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> Thanks
>
> Gary Moore

From: Personal Address / Ex. 6
Sent: Thursday, February 07, 2019 4:25 PM

To: Moore, Gary <Moore.Gary@epa.gov>
Subject: Re: FJ Doyle Salvage Site: Personal Address / Ex. 6

Thank you and I will let them know

Sent from my iPhone

On Feb 7, 2019, at 4:19 PM, Moore, Gary <Moore.Gary@epa.gov> wrote:

> Hello Citizen Name / Ex. 6
>
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>
> Thanks,
>
> **Gary W. Moore (6SF-ER)**
>
> **Federal On-Scene Coordinator**
>
> **U.S EPA Region 6**
>
> **1445 Ross Ave, Suite 1200**
>
> **Dallas, TX 75202-2733**
>
> **Cell: 214.789.1627**
>
> moore.gary@epa.gov

Message

From: Moore, Gary [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=D9494EB3B37241B09CE3BDEAFF4C557A-MOORE, GARY]
Sent: 9/28/2018 1:26:40 AM
To: Danny Doyle [Personal Email / Ex. 6]
CC: Sean Gavlas [Sean.Gavlas@WestonSolutions.com]
Subject: Re: F.J. Doyle Salvage

Mr. Doyle:

We have to do an asbestos inspection prior to doing a demolition of a building. Have to confirm that building materials are not asbestos containing. Normal requirement.

Thank you,
Gary Moore

Sent from my iPhone

On Sep 27, 2018, at 7:25 PM, Danny Doyle <[Personal Email / Ex. 6]> wrote:

> I am pretty sure that Garry or I should be available.
> Question - What would cause you to look for asbestos? That seems unlikely from what I know about what dad worked on.
> Here is the signed access form from Garry. I received a text today from Lynda. She said that she would sign it and mail it back to me right away.
>
> see attachment
>
> On Thu, Sep 27, 2018 at 11:29 AM Moore, Gary <Moore.Gary@epa.gov> wrote:
>
> > Hello Danny and Garry:
> >
> > We are making necessary plans for proceeding with the project and would like to get access to the building next week to perform and asbestos inspection since the current plan is to demo the building. In addition, we may also need to take some wipe samples of the walls to determine how to deal with the metal (recycle/dispose). Please let me know how we can meet to obtain the key to perform this activity.
> >
> > Thanks you so much.
> >
> > **Gary W. Moore (6SF-ER)**
> >
> > **Federal On-Scene Coordinator**
> >
> > **U.S EPA Region 6**

1445 Ross Ave, Suite 1200

Dallas, TX 75202-2733

Cell: 214.789.1627

moore.gary@epa.gov

<epa.jpeg>

Message

From: Danny Doyle Personal Email / Ex. 6
Sent: 9/28/2018 12:24:50 AM
To: Moore, Gary [Moore.Gary@epa.gov]
Subject: Re: F.J. Doyle Salvage
Attachments: epa.jpeg

I am pretty sure that Garry or I should be available.
Question - What would cause you to look for asbestos? That seems unlikely from what I know about what dad worked on.
Here is the signed access form from Garry. I received a text today from Lynda. She said that she would sign it and mail it back to me right away.

see attachment

On Thu, Sep 27, 2018 at 11:29 AM Moore, Gary <Moore.Gary@epa.gov> wrote:

> Hello Danny and Garry:
>
> We are making necessary plans for proceeding with the project and would like to get access to the building next week to perform and asbestos inspection since the current plan is to demo the building. In addition, we may also need to take some wipe samples of the walls to determine how to deal with the metal (recycle/dispose). Please let me know how we can meet to obtain the key to perform this activity.
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> Thanks you so much.
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> **Gary W. Moore (6SF-ER)**
>
> **Federal On-Scene Coordinator**
>
> **U.S EPA Region 6**
>
> **1445 Ross Ave, Suite 1200**
>
> **Dallas, TX 75202-2733**
>
> **Cell: 214.789.1627**
>
> **moore.gary@epa.gov**

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TEXAS 75202-2733

CONSENT FOR ACCESS TO PROPERTY

Name of Owner: Frank J. and Marie Doyle

Address/Description of Property:
905 N. Poplar
Leonard, TX 75452
(Former Frank J. Doyle Salvage)

I consent to officers, employees, contractors, and authorized representatives of the U.S. Environmental Protection Agency (EPA) entering and having continued access to my property for:

1. Conducting cleanup of hazardous substances spilled to the soil as a result of historic salvage operations conducted by Frank J. Doyle Salvage as determined appropriate by the EPA;
2. Conducting demolition of the onsite structures on the property including the building, slab, concrete containment, and any other structures on the property;
3. Utilizing the property as a consolidation point for off-site contaminated soils prior to transportation for disposal;
4. Utilizing the property for equipment storage while cleanup actions are ongoing;
5. Restoring the property to grade with clean soil and/or rock as determined appropriate by the EPA;
6. Taking of such samples as may be determined necessary by the EPA during the course of its cleanup actions;
7. Conduct of other actions as may be deemed necessary by EPA to protect human health and the environment;

I recognize that these actions by the EPA are undertaken in accordance with its response and enforcement authorities contained in the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"), 42 U.S.C. § 9601 *et seq.*

I am the property owner, and I warrant that I have the authority to enter into this access agreement. This written permission is given by me voluntarily with knowledge of my right to refuse and without threats or promises of any kind.

9-27-16
Date

Gary Doyle
Print & Sign

Title

Personal Phone / Ex. 6
Phone Number

Please indicate if you are allowing access and your decision about sharing your results:
(X) Yes, I will allow EPA to have access.
( ) No, I do not want the EPA to have access.

Message

From: Moore, Gary [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=D9494EB3B37241B09CE3BDEAFF4C557A-MOORE, GARY]
Sent: 10/12/2018 9:31:07 PM
To: Hall,Emily (DSHS) [Emily.Hall@dshs.texas.gov]
Subject: RE: F.J. Doyle Salvage - Updated Draft Letter
Attachments: 10.12.18 LISD School Letter (DRAFT - Gary Moore).docx

Emily:

I would like to have you guys in the letter so that they know that we are working with the health department on this and you guys are familiar with the data and can assist if they need assistance.

I changed the letter a little so if you could review again, it would be appreciated.

Thanks
Gary Moore

From: Hall,Emily (DSHS)
Sent: Friday, October 12, 2018 1:48 PM
To: Moore, Gary <Moore.Gary@epa.gov>
Subject: RE: F.J. Doyle Salvage - Updated Draft Letter

Hi Gary,

It would be better to have EPA be the sole point of contact named in the letter, and to remove my info. Then if community members contact you all and have health concerns, you can refer them to us and we will be happy to speak with them. The best number to give them is: Personal Phone / Ex. 6 this is our program's main line, so they can reach one of our other team members if I happen to be unavailable.

Thanks!
Emily

From: Moore, Gary [mailto:Moore.Gary@epa.gov]
Sent: Tuesday, October 02, 2018 5:07 PM
To: Hall,Emily (DSHS) <Emily.Hall@dshs.texas.gov>
Subject: F.J. Doyle Salvage - Updated Draft Letter

WARNING: This email is from outside the HHS system. Do not click on links or attachments unless you expect them from the sender and know the content is safe.

See attached. Comments appreciated.

Gary W. Moore (6SF-ER)
Federal On-Scene Coordinator
U.S EPA Region 6
1445 Ross Ave, Suite 1200
Dallas, TX 75202-2733
Cell: 214.789.1627

moore.gary@epa.gov

Please note My email address has changed to reflect @dshs.texas.gov domain. Please be sure to update your contact information with the new address.

Message

From: Hall,Emily (DSHS) [Emily.Hall@dshs.texas.gov]
Sent: 10/12/2018 6:47:43 PM
To: Moore, Gary [Moore.Gary@epa.gov]
Subject: RE: F.J. Doyle Salvage - Updated Draft Letter

Hi Gary,

It would be better to have EPA be the sole point of contact named in the letter, and to remove my info. Then if community members contact you all and have health concerns, you can refer them to us and we will be happy to speak with them. The best number to give them is: Personal Phone / Ex. 6; this is our program's main line, so they can reach one of our other team members if I happen to be unavailable.

Thanks!
Emily

From: Moore, Gary [mailto:Moore.Gary@epa.gov]
Sent: Tuesday, October 02, 2018 5:07 PM
To: Hall,Emily (DSHS) <Emily.Hall@dshs.texas.gov>
Subject: F.J. Doyle Salvage - Updated Draft Letter

WARNING: This email is from outside the HHS system. Do not click on links or attachments unless you expect them from the sender and know the content is safe.

See attached. Comments appreciated.

Gary W. Moore (6SF-ER)
Federal On-Scene Coordinator
U.S EPA Region 6
1445 Ross Ave, Suite 1200
Dallas, TX 75202-2733
Cell: 214.789.1627
moore.gary@epa.gov

Please note My email address has changed to reflect @dshs.texas.gov domain. Please be sure to update your contact information with the new address.

80951 F J DOYLE

Solid Waste Registration #: 80951 EPA ID:TXD980865109 CN: CN600359095 RN: RN100649227

Company Name: F J DOYLE SALVAGE TRANSFORMERS
Region: 4
Initial Registration Date: 07/21/1993

Site Name: F J DOYLE
County: 147 FANNIN
Last Amendment Date: 04/24/2006

Site Location: LEONARD, TX **Personal Address / Ex. 6**
Land Type: PRIVATE
Last Update Date: 04/27/2006

Primary Contact: DOYLE, F J
Title: ENVIRONMENTAL MANAGER

Mailing Address: PO BOX 312
Phone:903-587-3342

LEONARD, TX, 75452-0312

Registration Status: CLOSURE REQUEST HW Permit: IW Permit: MW Permit:

Registration Type: GENERATOR,TRANSPORTER

Generator Type:

Hazardous Waste Generation Type:

Receiver Type: null

Transporter Business Type: Transport own waste only

Transport Waste Class: 1

Universal Waste Activity:

Large Quantity Handler of Universal Waste (you accumulate 5,000 kg or more):

Destination Facility for Universal Waste:

NAICS Code:

Tax ID: 0

80951 F J DOYLE

Owner Information

Name: F J DOYLE SALVAGE TRANSFORMERS,
Phone: 903-587-3342
Address: PO BOX 312
LEONARD, TX, 75452-0312

Operator Information

Billing Contact:

Title:

As of 04/24/2006 - The next unassigned sequence number for WASTES is 0004.

The next unassigned sequence number for UNITS is 004.

80951 F J DOYLE

**** WASTE INFORMATION ****

Texas Waste Code	Waste Class	Status	Waste Status Code Change Date	Mixed Radioactive	TCEQ Audit Complete	Waste Update Date	Inactive Reason
****** Active Wastes ******							
00012061	1	Active		N	No	9/8/11	

Waste Description: Used oil from non-PCB Transformers being scrapped out for salvage; initial generation: 1/86
Date of Generation: 7/27/93
Texas Form Code: 206 - Waste oil
EPA Form Code: null null
EPA Hazardous Waste Numbers: None
Current Management Units: 22 - Miscellaneous Storage Containers: 001, OFF-SITE
Origin Codes: 3 - Derived from on-site management of a nonhazardous waste
NAICS Code:
New Chemical Substance: N

00023041	1	Active		N	No	9/8/11	

Waste Description: Ash residue from furnace used to remove varnish from copper wire; initial generation: 1/86
Date of Generation: 7/27/93
Texas Form Code: 304 - Other 'dry' ash, slag or thermal residue
EPA Form Code: null null
EPA Hazardous Waste Numbers: None
Current Management Units: 08 - Thermal Processing Unit, other than Incinerator: 002, OFF-SITE
Origin Codes: 3 - Derived from on-site management of a nonhazardous waste
NAICS Code:
New Chemical Substance: N

00039012	2	Active		N	No	9/8/11	

80951 F J DOYLE

Texas Waste Code	Waste Class	Status	Waste Status Code Change Date	Mixed Radioactive	TCEQ Audit Complete	Waste Update Date	Inactive Reason
****** Active Wastes ******							

Waste Description: General plant refuse from office and shop
Date of Generation: 7/27/93
Texas Form Code: 901 - Plant production refuse
EPA Form Code: null null
EPA Hazardous Waste Numbers: None
Current Management Units: 22 - Miscellaneous Storage Containers: 003, OFF-SITE
Origin Codes: 1 - Generated on-site from a product process or service activity
NAICS Code:
New Chemical Substance: N

Texas Waste Code	Waste Class	Status	Waste Status Code Change Date	Mixed Radioactive	TCEQ Audit Complete	Waste Update Date	Inactive Reason
** No Longer Generated Wastes **							

80951 F J DOYLE

**** UNITS AT THIS SITE MANAGING WASTE ****

WMU Sequence Number	Unit Capacity	Capacity UOM	Unit Status	Date of Unit Regis	Class of Waste from Offsite	UIC Permit Number	Unit Number on Permit	Unit Update Date	Deed Record Date
** 'Active', 'Closure Pending' & 'Closure Request' Units **									
001			CLOSURE REQUEST	4/24/06				9/14/11	

Unit Type: Miscellaneous Storage Containers
Unit Regulatory Status: 05 Non-Hazardous Regulated
Unit Description: Various storage containers 1 x375 gallon, 2 x 500 gallon and 55 gallon drums. Stored on concrete pad
Billing Class:
System Type Cd: 141 Storage

Wastes Currently Managed in Unit: 00012061 Used oil from non-PC
Wastes Previously Managed in Unit: None

002			CLOSURE REQUEST	4/24/06				9/14/11	

Unit Type: Thermal Processing Unit, other than Incinerator
Unit Regulatory Status: 05 Non-Hazardous Regulated
Unit Description: High temperature oven to burn varnish off copper
Billing Class:
System Type Cd: 010 Metals recovery including retorting, smelting, chemical, etc.

Wastes Currently Managed in Unit: 00023041 Ash residue from fur
Wastes Previously Managed in Unit: None

003			CLOSURE REQUEST	4/24/06				9/14/11	

80951 F J DOYLE

WMU Sequence Number	Unit Capacity	Capacity UOM	Unit Status	Date of Unit Regis	Class of Waste from Offsite	UIC Permit Number	Unit Number on Permit	Unit Update Date	Deed Record Date
** 'Active', 'Closure Pending' & 'Closure Request' Units **									

Unit Type: Miscellaneous Storage Containers

Unit Regulatory Status: 05 Non-Hazardous Regulated

Unit Description: Dumpster, 4 yd for accumulation of plant trash

Billing Class:

System Type Cd: 141 Storage

Wastes Currently Managed in Unit: 00039012 General plant refuse

Wastes Previously Managed in Unit: None

WMU Sequence Number	Unit Capacity	Capacity UOM	Unit Status	Date of Unit Regis	Class of Waste from Offsite	UIC Permit Number	Unit Number on Permit	Unit Update Date	Deed Record Date
** 'Inactive', 'Closed', 'Post Closure Care', 'Never Built' & 'Not Required' Units **									

WMU Sequence Number	Unit Capacity	Capacity UOM	Unit Status	Date of Unit Regis	Class of Waste from Offsite	UIC Permit Number	Unit Number on Permit	Unit Update Date	Deed Record Date
** 'Not Yet Built' & 'Under Construction' Units **									

Message

From: Moore, Gary [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=D9494EB3B37241B09CE3BDEAFF4C557A-MOORE, GARY]
Sent: 9/27/2018 4:58:16 PM
To: 'Gavlas, Sean' [Sean.Gavlas@WestonSolutions.com]
Subject: RE: F.J. Doyle Salvage
Attachments: wipe-samp.pdf

I am checking with our TSCA guy and will get back with you. See attached.

From: Gavlas, Sean [mailto:Sean.Gavlas@WestonSolutions.com]
Sent: Thursday, September 27, 2018 11:44 AM
To: Moore, Gary <Moore.Gary@epa.gov>
Subject: RE: F.J. Doyle Salvage

Gary,

Are we moving forward with the wipe sampling? I'll need to set up a lab (with specified analyses and detection limits) and have them send me the wipes. Let me know ASAP so I can get that lined up.

Thanks,

Sean Gavlas
Weston Solutions, Inc.
Region 6 Superfund Technical Assessment and Response Team (START)
2600 Dallas Parkway, Suite 280
Frisco, TX 75034

Cell: 609-433-8434
Office: 469-666-5560
sean.gavlas@westonsolutions.com

From: Moore, Gary [mailto:Moore.Gary@epa.gov]
Sent: Thursday, September 27, 2018 11:29 AM
To: 'Danny Doyle' [Personal Email Address / Ex. 6]
Cc: Gavlas, Sean <Sean.Gavlas@WestonSolutions.com>
Subject: F.J. Doyle Salvage

Hello Danny and Garry:

We are making necessary plans for proceeding with the project and would like to get access to the building next week to perform and asbestos inspection since the current plan is to demo the building. In addition, we may also need to take some wipe samples of the walls to determine how to deal with the metal (recycle/dispose). Please let me know how we can meet to obtain the key to perform this activity.

Thanks you so much.

Gary W. Moore (6SF-ER)
Federal On-Scene Coordinator
U.S EPA Region 6

1445 Ross Ave, Suite 1200
Dallas, TX 75202-2733
Cell: 214.789.1627
moore.gary@epa.gov

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Message

From: Gavlas, Sean [Sean.Gavlas@WestonSolutions.com]
Sent: 9/27/2018 4:43:53 PM
To: Moore, Gary [Moore.Gary@epa.gov]
Subject: RE: F.J. Doyle Salvage

Gary,

Are we moving forward with the wipe sampling? I'll need to set up a lab (with specified analyses and detection limits) and have them send me the wipes. Let me know ASAP so I can get that lined up.

Thanks,

Sean Gavlas
Weston Solutions, Inc.
Region 6 Superfund Technical Assessment and Response Team (START)
2600 Dallas Parkway, Suite 280
Frisco, TX 75034

Cell: 609-433-8434
Office: 469-666-5560
sean.gavlas@westonsolutions.com

From: Moore, Gary [mailto:Moore.Gary@epa.gov]
Sent: Thursday, September 27, 2018 11:29 AM
To: 'Danny Doyle' [Personal Email Address / Ex. 6]
Cc: Gavlas, Sean <Sean.Gavlas@WestonSolutions.com>
Subject: F.J. Doyle Salvage

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CONFIDENTIALITY: This email and attachments may contain information which is confidential and proprietary. Disclosure or use of any such confidential or proprietary information without the written

permission of Weston Solutions, Inc. is strictly prohibited. If you received this email in error, please notify the sender by return e-mail and delete this email from your system. Thank you.

Message

From: Moore, Gary [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=D9494EB3B37241B09CE3BDEAFF4C557A-MOORE, GARY]
Sent: 9/27/2018 4:29:20 PM
To: 'Danny Doyle' Personal Email / Ex. 6
CC: 'Gavlas, Sean' [Sean.Gavlas@WestonSolutions.com]
Subject: F.J. Doyle Salvage

Hello Danny and Garry:

We are making necessary plans for proceeding with the project and would like to get access to the building next week to perform and asbestos inspection since the current plan is to demo the building. In addition, we may also need to take some wipe samples of the walls to determine how to deal with the metal (recycle/dispose). Please let me know how we can meet to obtain the key to perform this activity.

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Gary W. Moore (6SF-ER)
Federal On-Scene Coordinator
U.S EPA Region 6
1445 Ross Ave, Suite 1200
Dallas, TX 75202-2733
Cell: 214.789.1627
moore.gary@epa.gov

Message

From: Danny Doyle **Personal Address / Ex. 6**
Sent: 10/5/2018 11:51:07 AM
To: Moore, Gary [Moore.Gary@epa.gov]
Subject: access form
Attachments: Image.jpg

Gary,

Here is the signed form from Lynda. Let me know when you get ready to start.
see attachment

ED 002624_00006197-00001

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TEXAS 75202-2733

CONSENT FOR ACCESS TO PROPERTY

Name of Owner: Frank J. and Marie Doyle

Address/Description of Property:
905 N. Poplar
Leonard, TX 75452
(Former Frank J. Doyle Salvage)

I consent to officers, employees, contractors, and authorized representatives of the U.S. Environmental Protection Agency (EPA) entering and having continued access to my property for:

1. Conducting cleanup of hazardous substances spilled to the soil as a result of historic salvage operations conducted by Frank J. Doyle Salvage as determined appropriate by the EPA;
2. Conducting demolition of the onsite structures on the property including the building, slab, concrete containment, and any other structures on the property;
3. Utilizing the property as a consolidation point for off-site contaminated soils prior to transportation for disposal;
4. Utilizing the property for equipment storage while cleanup actions are ongoing;
5. Restoring the property to grade with clean soil and/or rock as determined appropriate by the EPA;
6. Taking of such samples as may be determined necessary by the EPA during the course of its cleanup actions;
7. Conduct of other actions as may be deemed necessary by EPA to protect human health and the environment;

I recognize that these actions by the EPA are undertaken in accordance with its response and enforcement authorities contained in the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"), 42 U.S.C. § 9601 *et seq.*

I am the property owner, and I warrant that I have the authority to enter into this access agreement. This written permission is given by me voluntarily with knowledge of my right to refuse and without threats or promises of any kind.

9-20-18
Date

Lynda Kaylor
Print & Sign

Title

Personal Phone / Ex. 6
Phone Number

Please indicate if you are allowing access and your decision about sharing your results:
(✓) Yes, I will allow EPA to have access.
( ) No, I do not want the EPA to have access

Message

From: Moore, Gary [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=D9494EB3B37241B09CE3BDEAFF4C557A-MOORE, GARY]
Sent: 10/4/2018 3:54:21 PM
To: Personal Email / Ex. 6
Subject: FJ Doyle Cleanup

Hello Citizen Name / Ex. 6

I guess we have not actually met. For some reason I thought you were Citizen Name / Ex. 6 I think Citizen Name / Ex. 6 just provided me with your information. Anyway, I think I have everything straight hopefully.

We plan on mobilizing to begin the setup for the cleanup on Nov 5. We will likely be moving the shed in your backyard so if your have items in their I would appreciate it if you could relocate them. I have talked with the Citizen Name / Ex. 6 about this as well.

If you have questions, please don' t hesitate to call.

Thanks
Gary Moore
2147891627
Moore.gary@epa.gov

Sent from my iPhone

Message

From: Moore, Gary [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=D9494EB3B37241B09CE3BDEAFF4C557A-MOORE, GARY]
Sent: 10/4/2018 3:49:33 PM
To: Personal Email / Ex. 6
Subject: Fwd: F.J. Doyle (905 N. Poplar) Cleanup
Attachments: Figure 5-1 Sample Grid Results Map - Excavation Depths.pdf; ATT00001.htm; Figure 5-1 Sample Grid Results Map - Total PCBs Breakout.pdf; ATT00002.htm; FJDoyle_20180919_Table 1.pdf; ATT00003.htm

Citizen Name / Ex. 6

See the information that I sent to Citizen Name / Ex. 6 I actually thought I was sending to you originally. So glad that I now have your information. Please send me Personal Email / Ex. 6 email and telephone number as well.

Please call if you have any questions. We plan to mobilize on Nov 5 to begin set up and start cleanup. We do plan to move the storage building in backyard so if you could clean it out around our arrival date that would be great.

Thanks
Gary Moore
2147891627
Moore.gary@epa.gov

Sent from my iPhone

Begin forwarded message:

From: "Moore, Gary" <Moore.Gary@epa.gov>
To: Personal Email / Ex. 6
Subject: FW: F.J. Doyle (905 N. Poplar) Cleanup

See below

From: Moore, Gary
Sent: Friday, September 21, 2018 6:36 PM
To: Personal Email / Ex. 6
Cc: Delgado, Paige <Delgado.Paige@epa.gov>
Subject: F.J. Doyle (905 N. Poplar) Cleanup

Hello Citizen Name / Ex. 6

I met with Citizen Name / Ex. 6 today and received access to do a cleanup on his properties that were contaminated by the operations conducted at the former Frank J. Doyle Salvage facility. I am providing some documents to you that give you information about the location of the contamination and actions that are planned by the EPA. The EPA cleanup level is 1 mg/kg Total PCBs. The EPA did identify locations where the PCB levels were less than this amount for which we do not plan to address as part of this cleanup. Please see the attached documents.

1. Map showing all PCB detections throughout the evaluation area;
2. Map showing the areas to be excavated and the proposed depths of excavation;
3. Table with all sample results from the EPA investigation.

I have contacted the Texas Department of State Health Services (DSHS) through our EPA contact. I will provide you with the name of the person with DSHS as soon as I am able to talk with them and obtain their contact information.

The EPA anticipates beginning cleanup operations at the end of October or the beginning of November. If you have your neighbors information, please provide that to me so that I can reach out to them as well.

Thank you and if you need anything, please do not hesitate to contact me

Gary W. Moore (6SF-ER)
Federal On-Scene Coordinator
U.S EPA Region 6
1445 Ross Ave, Suite 1200
Dallas, TX 75202-2733
Cell: 214.789.1627
moore.gary@epa.gov

Message

From: Moore, Gary [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=D9494EB3B37241B09CE3BDEAFF4C557A-MOORE, GARY]
Sent: 9/24/2018 5:27:22 PM
To: 'Danny Doyle' Personal Email / Ex. 6
Subject: F.J. Doyle Site

Mr. Doyle:

When I met with the school they had mentioned that they were going to talk with you guys about the property. They had mentioned that they wanted to use it as overflow parking for the school. I know you guys want to get rid of the property and its stigma and this may be an opportunity to donate it to the school and possibly get a tax break. I am not an accountant so not for sure that you could get a tax break but it seems reasonable to me. The EPA is limited to an approximate 2 ft excavation so the property may have to have a deed restriction which limits the ability to dig on the property an possibly expose contamination at depth. It would appear that a parking lot would be a reasonable future use. I will let you and the school discuss this potential option.

Thanks for working with me on this issue.

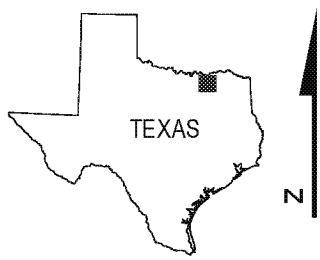
Gary W. Moore (6SF-ER)
Federal On-Scene Coordinator
U.S EPA Region 6
1445 Ross Ave, Suite 1200
Dallas, TX 75202-2733
Cell: 214.789.1627
moore.gary@epa.gov

0 50 100

Feet

LEGEND

- Fence Line
- Parcel Line
- Property Boundary
- Sample Grid
- Structure
- Aroclor Results >= 1 mg/kg



SOURCE: Google, 2017

TDD No: 0001/17-004
SEMS ID: TXD980665109
SSID: 061D

USEPA REGION 6

FIGURE 1
SOIL SAMPLE GRID RESULTS - AROCLOR
FJD01
FRANK J. DOYLE SITE
Personal Address / Ex. 6
LEONARD, FANNIN COUNTY, TEXAS

DATE	PROJECT NO	SCALE
AUGUST 2018	20600.012.001.1004	AS SHOWN

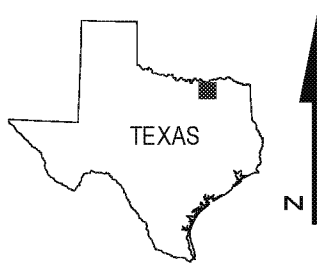
FILE: D:\20600_EPA_START4\FJ Doyle\mxd\Property Maps\FJD01.mxd 11:01:50 AM 8/21/2018 wilderj

0 50 100

Feet

LEGEND

- Fence Line
- Parcel Line
- Property Boundary
- Site Boundary
- Sample Grid
- Structure
- Aroclor Results >= 1 mg/kg



SOURCE: Google, 2017

TDD No: 0001/17-004
SEMS ID: TXD980665109
SSID: 061D

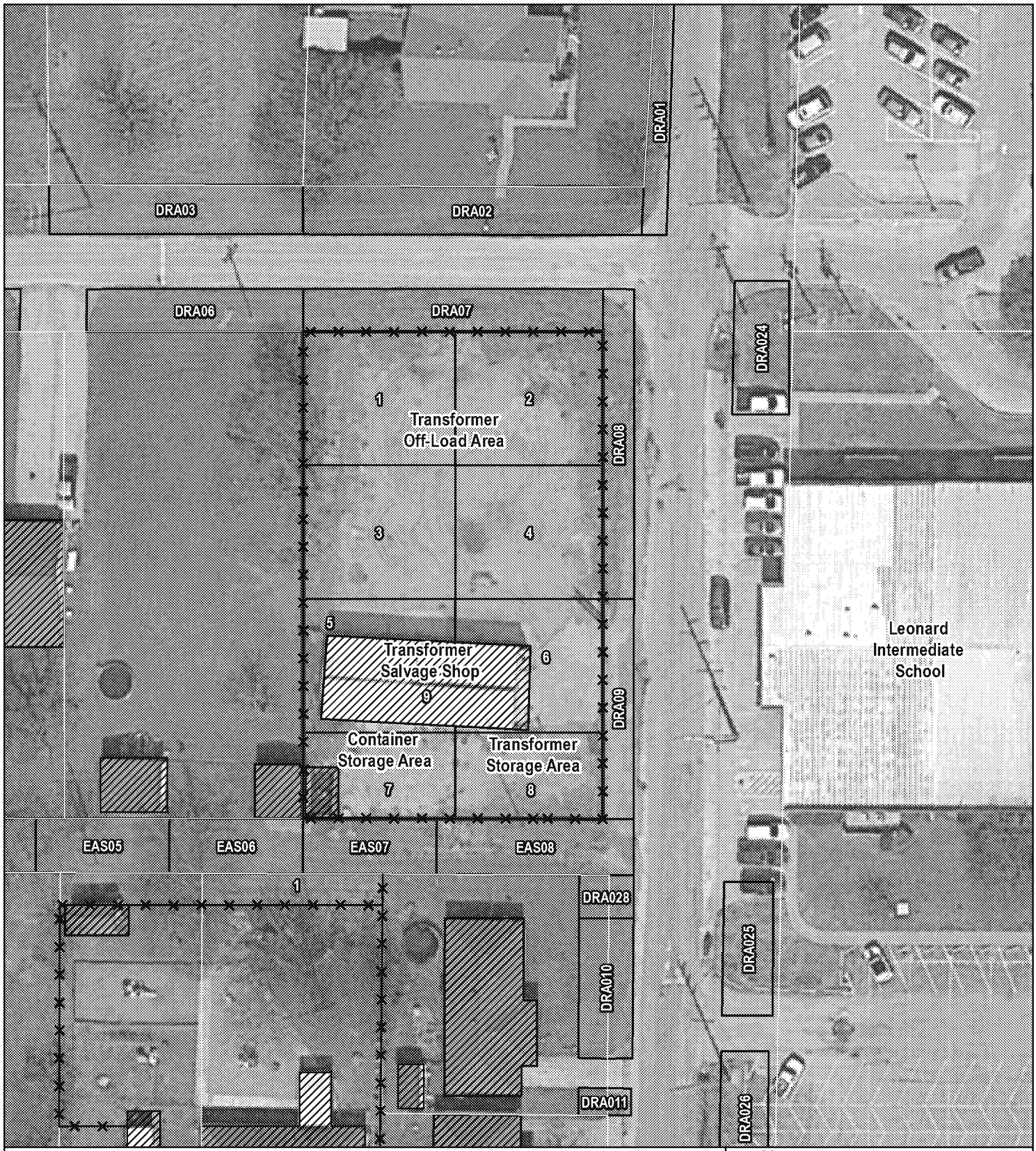
USEPA REGION 6

FIGURE 1
SOIL SAMPLE GRID RESULTS - AROCLOR
FJD02/FJD03
FRANK J. DOYLE SITE
Personal Address / Ex. 6
LEONARD, FANNIN COUNTY, TEXAS

DATE	PROJECT NO	SCALE
AUGUST 2018	20600.012.001.1004	AS SHOWN

FILE: D:\20600_EPA_START4\FJ Doyle\mxd\Property Maps\FJD02_03.mxd 11:01:08 AM 8/21/2018 wilderj

ED_002624_00006248-00001

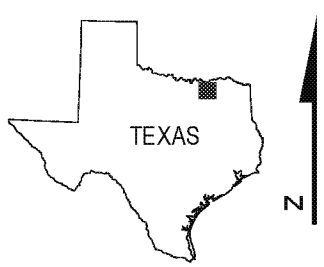


0 50 100

Feet

LEGEND

- Fence Line
- Parcel Line
- Site Boundary
- Sample Grid
- Structure
- Aroclor Results >= 1 mg/kg



SOURCE: Google, 2017

TDD No: 0001/17-004
SEMS ID: TXD980665109
SSID: 061D

USEPA REGION 6

FIGURE 1
SOIL SAMPLE GRID RESULTS - AROCLOR
FJD04
FRANK J. DOYLE SITE
Personal Address / Ex. 6
LEONARD, FANNIN COUNTY, TEXAS

DATE	PROJECT NO	SCALE
AUGUST 2018	20600.012.001.1004	AS SHOWN

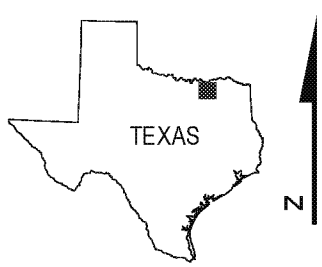
FILE: D:\20600_EPA_START4\FJ Doyle\mxd\Property Maps\FJD04.mxd 10:58:58 AM 8/21/2018 wilder

0 50 100

Feet

LEGEND

- Fence Line
- Parcel Line
- Property Boundary
- Site Boundary
- Sample Grid
- Structure
- Aroclor Results >= 1 mg/kg



SOURCE: Google, 2017

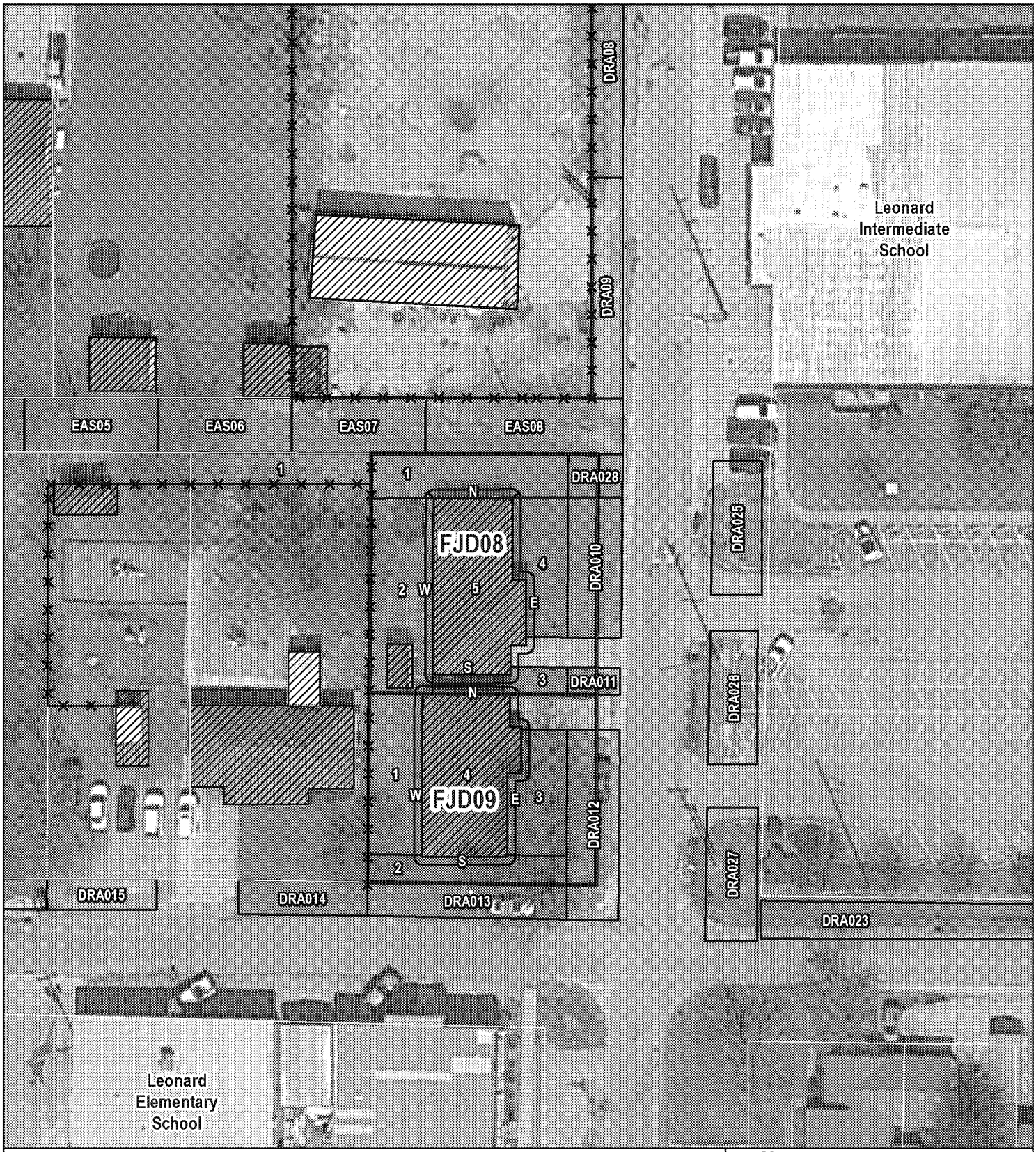
TDD No: 0001/17-004
SEMS ID: TXD980665109
SSID: 061D

USEPA REGION 6

FIGURE 1
SOIL SAMPLE GRID RESULTS - AROCLOR
FJD05/FJD06/FJD07
FRANK J. DOYLE SITE
Personal Address / Ex. 6
LEONARD, FANNIN COUNTY, TEXAS

DATE	PROJECT NO	SCALE
AUGUST 2018	20600.012.001.1004	AS SHOWN

FILE: D:\20600_EPA_START4\FJ Doyle\mxd\Property Maps\FJD05_06_07.mxd 10:57:35 AM 8/21/2018 wilder

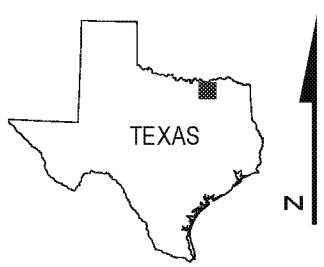


0 50 100

Feet

LEGEND

- Fence Line
- Parcel Line
- Property Boundary
- Site Boundary
- Sample Grid
- Structure
- Aroclor Results >= 1 mg/kg



SOURCE: Google, 2017

TDD No: 0001/17-004
SEMS ID: TXD980865109
SSID: 061D

USEPA REGION 6

FIGURE 1
SOIL SAMPLE GRID RESULTS - AROCLOR
FJD08/FJD09
FRANK J. DOYLE SITE
Personal Address / Ex. 6
LEONARD, FANNIN COUNTY, TEXAS

DATE	PROJECT NO	SCALE
AUGUST 2018	20600.012.001.1004	AS SHOWN

FILE: D:\20600_EPA_START4\FJ Doyle\mxd\Property Maps\FJD08_09.mxd 10:55:50 AM 8/21/2018 wilder

Message

From: Gavlas, Sean [Sean.Gavlas@WestonSolutions.com]
Sent: 9/24/2018 2:41:00 PM
To: Moore, Gary [Moore.Gary@epa.gov]
Subject: RE: F.J. Doyle Salvage

Sounds good.

Sean Gavlas
Weston Solutions, Inc.
Region 6 Superfund Technical Assessment and Response Team (START)
2600 Dallas Parkway, Suite 280
Frisco, TX 75034

Cell: 609-433-8434
Office: 469-666-5560
sean.gavlas@westonsolutions.com

From: Moore, Gary [mailto:Moore.Gary@epa.gov]
Sent: Monday, September 24, 2018 9:23 AM
To: Gavlas, Sean <Sean.Gavlas@WestonSolutions.com>
Subject: RE: F.J. Doyle Salvage

Sean:

We will meet at 9:00 am @ 905 N. Poplar. I would like you to bring the maps. I have already met with the Citizen Name / Ex. 6 and got access and have gotten 1 or 3 access agreements from the Doyle's. I have talked wit the Citizen Name / Ex. 6 City, and School. Hopefully we will get the remainder of the agreements this week.

You do need to start working on the plan of action from the START perspective if you have received the Removal TDD.

Thanks
Gary Moore

From: Gavlas, Sean [mailto:Sean.Gavlas@WestonSolutions.com]
Sent: Monday, September 24, 2018 9:18 AM
To: Moore, Gary <Moore.Gary@epa.gov>
Subject: RE: F.J. Doyle Salvage

Good Morning Gary,

Sorry for the delay in getting back to you. I was in Mexico over the weekend.

I'm in. Let me know if you need me to prepare anything today in advance of our site visit. Also, what time do you want to meet up there?

Thanks,

Sean Gavlas
Weston Solutions, Inc.
Region 6 Superfund Technical Assessment and Response Team (START)
2600 Dallas Parkway, Suite 280
Frisco, TX 75034

Cell: 609-433-8434
Office: 469-666-5560
sean.gavlas@westonsolutions.com

From: Moore, Gary [mailto:Moore.Gary@epa.gov]
Sent: Friday, September 21, 2018 9:31 AM
To: Gavlas, Sean <Sean.Gavlas@WestonSolutions.com>
Subject: F.J. Doyle Salvage

Sean:

We are planning on having a site walk with the ERRS Contractor on 9/25/18. I will need you there for this site walk.

Gary W. Moore (6SF-ER)
Federal On-Scene Coordinator
U.S EPA Region 6
1445 Ross Ave, Suite 1200
Dallas, TX 75202-2733
Cell: 214.789.1627
moore.gary@epa.gov

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WARNING: External Email: This email originated outside of Weston Solutions. DO NOT CLICK on any links or attachments unless you recognize the sender and are expecting the email.
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Message

From: Moore, Gary [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=D9494EB3B37241B09CE3BDEAFF4C557A-MOORE, GARY]
Sent: 9/24/2018 2:23:26 PM
To: 'Gavlas, Sean' [Sean.Gavlas@WestonSolutions.com]
Subject: RE: F.J. Doyle Salvage

Sean:

We will meet at 9:00 am @ 905 N. Poplar. I would like you to bring the maps. I have already met with the Citizen Name / Ex. 6 Citizen Name / Ex. 6 and got access and have gotten 1 or 3 access agreements from the Doyle's. I have talked wit the Citizen Name / Ex. 6 City, and School. Hopefully we will get the remainder of the agreements this week.

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Gary Moore

From: Gavlas, Sean [mailto:Sean.Gavlas@WestonSolutions.com]
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To: Moore, Gary <Moore.Gary@epa.gov>
Subject: RE: F.J. Doyle Salvage

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Frisco, TX 75034

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sean.gavlas@westonsolutions.com

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Federal On-Scene Coordinator
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moore.gary@epa.gov

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Message

From: Danny Doyle Personal Email / Ex. 6
Sent: 9/24/2018 12:04:11 PM
To: Moore, Gary [Moore.Gary@epa.gov]
Subject: Re: Frank J. Doyle Salvage - EPA Cleanup Access Request
Attachments: epa.jpeg

Mr. Moore,

Here is my access form. Garry was out of town this weekend and I mailed one to my sister. I will get those 2 to you as soon as I can. I will be out of town tomorrow and Wednesday.

See attachment

On Fri, Sep 21, 2018 at 9:44 AM Moore, Gary <Moore.Gary@epa.gov> wrote:

> Hello Mr. Doyle:
>
> You can sign on the same document or sign a separate on individually (your preference). Yes, we are working on getting consent for access from the other owners.
>
> We are anticipating starting the work on October 22 or 29.
>
> Thanks
>
> Gary Moore
>
> 2147891627
>
> **From:** Danny Doyle Personal Email / Ex. 6
> **Sent:** Thursday, September 20, 2018 8:34 PM
> **To:** Moore, Gary <Moore.Gary@epa.gov>
> **Subject:** Re: Frank J. Doyle Salvage - EPA Cleanup Access Request
>
> Mr. Moore,

Got my computer this afternoon. The property is in my brother's, my sister's and my name. Should we all sign one document or each sign a separate sheet? Also, I assume that you folks are getting consent for access from the the other owners.

Garry wanted to know if you had an estimated time when this would start since he must move his things he has stored in the shop.

On Thu, Sep 20, 2018 at 12:59 PM Moore, Gary <Moore.Gary@epa.gov> wrote:

Mr. Doyle:

It was nice talking with you this morning. As I mentioned, I am sending you a request for access for EPA to clean-up the former Frank J. Doyle Salvage Site. Also, I am sending you some maps that show the PCB contamination throughout the area (Total PCB Breakout) and then a map which shows the areas that we anticipate cleaning up (Excavation Depths). The EPA cleanup level is less than 1 mg/kg Total PCBs. Please call if you have questions.

Thanks

Gary W. Moore (6SF-ER)

Federal On-Scene Coordinator

U.S EPA Region 6

1445 Ross Ave, Suite 1200

Dallas, TX 75202-2733

Cell: 214.789.1627

moore.gary@epa.gov

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TEXAS 75202-2733

CONSENT FOR ACCESS TO PROPERTY

Name of Owner: Frank J. and Marie Doyle

Address/Description of Property:
905 N. Poplar
Leonard, TX 75452
(Former Frank J. Doyle Salvage)

I consent to officers, employees, contractors, and authorized representatives of the U.S. Environmental Protection Agency (EPA) entering and having continued access to my property for:

1. Conducting cleanup of hazardous substances spilled to the soil as a result of historic salvage operations conducted by Frank J. Doyle Salvage as determined appropriate by the EPA;
2. Conducting demolition of the onsite structures on the property including the building, slab, concrete containment, and any other structures on the property;
3. Utilizing the property as a consolidation point for off-site contaminated soils prior to transportation for disposal;
4. Utilizing the property for equipment storage while cleanup actions are ongoing;
5. Restoring the property to grade with clean soil and/or rock as determined appropriate by the EPA;
6. Taking of such samples as may be determined necessary by the EPA during the course of its cleanup actions;
7. Conduct of other actions as may be deemed necessary by EPA to protect human health and the environment;

I recognize that these actions by the EPA are undertaken in accordance with its response and enforcement authorities contained in the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"), 42 U.S.C. § 9601 *et seq.*

I am the property owner, and I warrant that I have the authority to enter into this access agreement. This written permission is given by me voluntarily with knowledge of my right to refuse and without threats or promises of any kind.

9-21-18
Date

DANNY DOYLE Danny Doyle
Print & Sign

Heir
Title

Personal Phone / Ex. 6
Phone Number

Please indicate if you are allowing access and your decision about sharing your results:
(✓) Yes, I will allow EPA to have access.
( ) No, I do not want the EPA to have access

Message

From: Moore, Gary [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=D9494EB3B37241B09CE3BDEAFF4C557A-MOORE, GARY]
Sent: 9/22/2018 1:22:11 AM
To: Personal Email / Ex. 6
Subject: Re: F.J. Doyle (905 N. Poplar) Cleanup

No

Sent from my iPhone

On Sep 21, 2018, at 7:20 PM, Carla Murandu <Personal Email / Ex. 6> wrote:

> Will my landlord be compensated for any of this?
>
> Sent from my iPhone
>
> On Sep 21, 2018, at 6:41 PM, Moore, Gary <Moore.Gary@epa.gov> wrote:
>
> > See below
> >
> > **From:** Moore, Gary
> > **Sent:** Friday, September 21, 2018 6:36 PM
> > **To:** Personal Address / Ex. 6
> > **Cc:** Delgado, Paige <Delgado.Paige@epa.gov>
> > **Subject:** F.J. Doyle (905 N. Poplar) Cleanup
> >
> > Hello Citizen Name / Ex. 6
> >
> > I met with Citizen Name / Ex. 6 today and received access to do a cleanup on his properties that were contaminated by the operations conducted at the former Frank J. Doyle Salvage facility. I am providing some documents to you that give you information about the location of the contamination and actions that are planned by the EPA. The EPA cleanup level is 1 mg/kg Total PCBs. The EPA did identify locations where the PCB levels were less than this amount for which we do not plan to address as part of this cleanup. Please see the attached documents.
> >
> > 1. Map showing all PCB detections throughout the evaluation area;
> > 2. Map showing the areas to be excavated and the proposed depths of excavation;
> > 3. Table with all sample results from the EPA investigation.
> >
> > I have contacted the Texas Department of State Health Services (DSHS) through our EPA contact. I will provide you with the name of the person with DSHS as soon as I am able to talk with them and obtain their contact information.
> >
> > The EPA anticipates beginning cleanup operations at the end of October or the beginning of November. If you have your neighbors information, please provide that to me so that I can reach out to them as well.
> >
> > Thank you and if you need anything, please do not hesitate to contact me
> >
> > **Gary W. Moore (6SF-ER)**

Federal On-Scene Coordinator
U.S EPA Region 6
1445 Ross Ave, Suite 1200
Dallas, TX 75202-2733
Cell: 214.789.1627
moore.gary@epa.gov

<Figure 5-1 Sample Grid Results Map - Excavation Depths.pdf>

<Figure 5-1 Sample Grid Results Map - Total PCBs Breakout.pdf>

<FJDoyle_20180919_Table 1.pdf>

Message

From: Personal Email / Ex. 6
Sent: 9/22/2018 12:19:33 AM
To: Moore, Gary [Moore.Gary@epa.gov]
Subject: Re: F.J. Doyle (905 N. Poplar) Cleanup

Will my landlord be compensated for any of this?

Sent from my iPhone

On Sep 21, 2018, at 6:41 PM, Moore, Gary <Moore.Gary@epa.gov> wrote:

> See below
>
> **From:** Moore, Gary
> **Sent:** Friday, September 21, 2018 6:36 PM
> **To:** Personal Email / Ex. 6
> **Cc:** Delgado, Paige <Delgado.Paige@epa.gov>
> **Subject:** F.J. Doyle (905 N. Poplar) Cleanup
>
> Hello Citizen Name / Ex. 6
>
> I met with Citizen Name / Ex. 6 today and received access to do a cleanup on his properties that were contaminated by the operations conducted at the former Frank J. Doyle Salvage facility. I am providing some documents to you that give you information about the location of the contamination and actions that are planned by the EPA. The EPA cleanup level is 1 mg/kg Total PCBs. The EPA did identify locations where the PCB levels were less than this amount for which we do not plan to address as part of this cleanup. Please see the attached documents.
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> **U.S EPA Region 6**
> **1445 Ross Ave, Suite 1200**
> **Dallas, TX 75202-2733**
> **Cell: 214.789.1627**
> moore.gary@epa.gov

<Figure 5-1 Sample Grid Results Map - Excavation Depths.pdf>

<Figure 5-1 Sample Grid Results Map - Total PCBs Breakout.pdf>

<FJDoyle_20180919_Table 1.pdf>

Message

From: Moore, Gary [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=D9494EB3B37241B09CE3BDEAFF4C557A-MOORE, GARY]
Sent: 9/22/2018 12:07:49 AM
To: Personal Email / Ex. 6
Subject: F.J. Doyle Salvage (905 N. Poplar) Cleanup
Attachments: Figure 5-1 Sample Grid Results Map - Excavation Depths.pdf; Figure 5-1 Sample Grid Results Map - Total PCBs Breakout.pdf; FJDoyle_20180919_Table 1.pdf

Hello Citizen Name / Ex. 6

Attached you will find maps and analytical data for the sampling that we did in May 2018. Your property was determined not to need a cleanup although the drainage ditch along Cottonwood in front of your house will. Additionally, we did have a detection for PCBs in the drainage ditch along Cedar but the level that was detected does not require cleanup. For your benefit, our cleanup level is 1 mg/kg Total PCBs. The maps being provide will show you the extent of contamination resulting from the historic operations at the former F.J. Doyle Salvage facility as well as the areas/depth of proposed actions.

1. Map showing all PCB detections throughout the evaluation area;
2. Map showing the areas to be excavated and the proposed depths of excavation;
3. Table with all sample results from the EPA investigation;

We anticipate starting the cleanup by the end of October or beginning of November.

Thank you and if you need anything, please do not hesitate to contact me

Gary W. Moore (6SF-ER)
Federal On-Scene Coordinator
U.S EPA Region 6
1445 Ross Ave, Suite 1200
Dallas, TX 75202-2733
Cell: 214.789.1627
moore.gary@epa.gov

Message

From: Moore, Gary [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=D9494EB3B37241B09CE3BDEAFF4C557A-MOORE, GARY]
Sent: 9/21/2018 11:41:07 PM
To: Personal Email / Ex. 6
Subject: FW: F.J. Doyle (905 N. Poplar) Cleanup
Attachments: Figure 5-1 Sample Grid Results Map - Excavation Depths.pdf; Figure 5-1 Sample Grid Results Map - Total PCBs Breakout.pdf; FJDoyle_20180919_Table 1.pdf

See below

From: Moore, Gary
Sent: Friday, September 21, 2018 6:36 PM
To: Personal Email / Ex. 6
Cc: Delgado, Paige <Delgado.Paige@epa.gov>
Subject: F.J. Doyle (905 N. Poplar) Cleanup

Hello Citizen Name / Ex. 6

I met with Citizen Name / Ex. 6 today and received access to do a cleanup on his properties that were contaminated by the operations conducted at the former Frank J. Doyle Salvage facility. I am providing some documents to you that give you information about the location of the contamination and actions that are planned by the EPA. The EPA cleanup level is 1 mg/kg Total PCBs. The EPA did identify locations where the PCB levels were less than this amount for which we do not plan to address as part of this cleanup. Please see the attached documents.

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Thank you and if you need anything, please do not hesitate to contact me

Gary W. Moore (6SF-ER)
Federal On-Scene Coordinator
U.S EPA Region 6
1445 Ross Ave, Suite 1200
Dallas, TX 75202-2733
Cell: 214.789.1627
moore.gary@epa.gov

Message

From: Personal Email / Ex. 6
Sent: 9/21/2018 1:33:58 AM
To: Moore, Gary [Moore.Gary@epa.gov]
Subject: Re: Frank J. Doyle Salvage - EPA Cleanup Access Request

Mr. Moore,

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Garry wanted to know if you had an estimated time when this would start since he must move his things he has stored in the shop.

On Thu, Sep 20, 2018 at 12:59 PM Moore, Gary <Moore.Gary@epa.gov> wrote:

> Mr. Doyle:
>
> It was nice talking with you this morning. As I mentioned, I am sending you a request for access for EPA to clean-up the former Frank J. Doyle Salvage Site. Also, I am sending you some maps that show the PCB contamination throughout the area (Total PCB Breakout) and then a map which shows the areas that we anticipate cleaning up (Excavation Depths). The EPA cleanup level is less than 1 mg/kg Total PCBs. Please call if you have questions.
>
> Thanks
>
> **Gary W. Moore (6SF-ER)**
>
> **Federal On-Scene Coordinator**
>
> **U.S EPA Region 6**
>
> **1445 Ross Ave, Suite 1200**
>
> **Dallas, TX 75202-2733**
>
> **Cell: 214.789.1627**
>
> **moore.gary@epa.gov**

Message

From: Moore, Gary [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=D9494EB3B37241B09CE3BDEAFF4C557A-MOORE, GARY]
Sent: 9/20/2018 5:59:25 PM
To: Personal Email / Ex. 6
CC: Personal Email / Ex. 6
BCC: Delgado, Paige [Delgado.Paige@epa.gov]
Subject: Frank J. Doyle Salvage - EPA Cleanup Access Request
Attachments: 905 N Poplar (F.J. Doyle Salvage Property) Removal Access Agreement (DRAFT).pdf; Figure 5-1 Sample Grid Results Map - Excavation Depths.pdf; Figure 5-1 Sample Grid Results Map - Total PCBs Breakout.pdf

Mr. Doyle:

It was nice talking with you this morning. As I mentioned, I am sending you a request for access for EPA to clean-up the former Frank J. Doyle Salvage Site. Also, I am sending you some maps that show the PCB contamination throughout the area (Total PCB Breakout) and then a map which shows the areas that we anticipate cleaning up (Excavation Depths). The EPA cleanup level is less than 1 mg/kg Total PCBs. Please call if you have questions.

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Cell: 214.789.1627
moore.gary@epa.gov

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Sent: 9/19/2018 3:19:22 AM
To: Personal Email / Ex. 6
Subject: FW: F.J. Doyle Salvage
Attachments: 1995 .06.27 Historic Chronology.pdf; 1995.07.19 Request for EPA Site Team.pdf; 1995.07.20 Site Activity Log.pdf; 1995.08.31 EPA Letter to Doyle Salvage.pdf

Hello Rita,

I hope you are doing well and we miss you here at EPA. I am becoming one of the oldest OSCs now. It looks like Fife, Martin, Mason, Rhotenberry, and Zehner may be retiring in the next couple of years. Of course, Ender will probably never retire. Anyway, I wanted to see if you remembered this site and what transpired. I can't find very good information from the people that I have talked with so far (Foster, Petersen). As you can see, I also reached out the K. Clark but have not heard from him as of yet.

From the record, it appears that sampling was done both on and off site and we found contamination in both areas. It looks like we referred it back to TSCA to take action. Then it came back to us and it looks like you and Ken Clark were involved with Ken being the lead. Ken wanted to take action but it got delayed due to enforcement first and from there it seems to have dropped off the table. TNRCC requests us to take a removal action in 1998 because of the extremely high levels of PCBs in the soils both on and off site and a Texas Department of Health consultation (paid for by ATSDR) confirms that some action needs to be taken. Althea reviewed the health consultation but no action was taken and it appears that it may have been pushed to RCRA but really no confirmation. The company shut down in 1999 and the owner died in 2006 and the contamination is still there. We have been approved to do a removal action and I am afraid that I will have to discuss why it took so long for us to take an action (27 years since the first removal assessment).

What I am trying to understand is: Why did we not continue to pursue the removal action if we were so adamant that one should be done as referenced in the "Request for Site Team"? What do you remember, if anything?

Thanks
Gary Moore

From: Moore, Gary
Sent: Tuesday, September 18, 2018 2:48 PM
To: 'kennethg.clark@dhs.gov' <kennethg.clark@dhs.gov>
Subject: F.J. Doyle Salvage

Ken:

I am trying to jog your memory about this site. Do you remember why EPA did not do a removal action based upon your best recollection? See attachments.

Do you think it just fell through the cracks because EPA decided to pursue enforcement? Or was there something else that caused EPA to not go through with the action?

Thanks

Gary W. Moore (6SF-ER)
Federal On-Scene Coordinator
U.S EPA Region 6
1445 Ross Ave, Suite 1200

Dallas, TX 75202-2733
Cell: 214.789.1627
moore.gary@epa.gov

2015 APAR

CHRONOLOGY OF EVENTS

FORMER F.J. DOYLE SALVAGE TRANSFORMERS
Personal Address / Ex. 6
LEONARD, FANNIN COUNTY, TEXAS

EPA CERCLIS NO. TXD980865109 / TCEQ SWR 80951
TERRA-SOLVE PROJECT NO. 09724

DATE	ACTIVITY
1974-1989	
1974	Mr. Frank Doyle began operations at the site for reclamation of electrical transformers. The wiring and scrap metal were recycled and the residual oil was used for weed killer both on site and was distributed to others within the City of Leonard. **[Note that Terra-Solve was informed by the owner the site began operations in 1976].**
1976	Mr. Doyle indicated that after this date, no transformers containing PCBs were accepted at the facility.
01/21/88	Mr. Doyle began application to the Texas Air Control Board (TACB) for a special air operating permit to allow for operation of a heat cleaning unit at the site.
03/22/88	A public hearing was held on the above air permit application.
06/27/88	TACB issued an Agreement and Stipulation of Facts in lieu of the hearing on June 28, 1988.
07/15/88	TACB issued an order so the permit could not later be challenged by its opponents.
08/23/88	TACB issued the permit
04/22/89	Mr. Doyle applied for the air operating permit
1990	
07/20/90	EPA conducted a **PCB Inspection** at the site. *No record of this work has been located by subsequent EPA contractors even as early as May 1997.*
10/12/90	Ecology & Environment Technical Assistance Team (TAT), an EPA contractor, conducted a **Site Assessment** sampling investigation. *No record of this work has been located by subsequent EPA contractors even as early as May 1997.*
1991 - 1992	
04/05/91	Texas Air Control Board (TACB) issued an air permit to allow for operation of a combustion unit at the site.
04/19/91	Ecology & Environment TAT, an EPA contractor, conducted another **Site Assessment** sampling investigation. *No record of this work has been located by subsequent EPA contractors even as early as May 1997.*

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1993-1994	
1993	Mr. Frank Doyle registered the site with TCEQ for various non-hazardous waste disposal for non-PCB oil, ash residue, plant refuse, various storage containers, and a Dumpster.
09/07/94	EPA conducted another **PCB Inspection** at the site. *No record of this work has been located by subsequent EPA contractors even as early as May 1997.*
1995-1996	
05/23-24/95	Worldwide Reclamation, a Doyle contractor, under supervision of EPA, conducted surface and subsurface **soil sampling**. *No record of this work has been located by subsequent EPA contractors even as early as May 1997.*
07/10-12/95	Ecology and Environment TAT, an EPA contractor, conducted a **Site Assessment (SA)** sampling investigation. A total of 68 samples were collected from the site, the alleyway, and the neighboring residences to the south, west, and east. Elevated levels of PCBs were found both on- and off-site. On-site levels ranged from 50.9 ppm to 2,730 ppm. Alleyway levels ranged from 5.7 ppm top 857 ppm while off-site residence levels ranged from 10.44 ppm to 37.7 ppm
07/95	Site was entered in CERCLIS database.
08/31/95	Ecology and Environment, EPA TAT, issued a **Site Assessment (SA) Report** recounting the above findings and requested a meeting with Mr. Frank Doyle at their offices no later than 09/15/95 to discuss *"removing and disposing of this contamination in an expeditious manner."*
10/4/95	Mr. Doyle met with three EPA officials as requested above. The contents of this meeting are unknown. However, files indicate calculations regarding the cubic yardage of affected materials were made by hand; these calculations show 94.21 cubic yards of on-site soil and 86.98 cubic yards of off-site soil for a total of 181.19 cubic yards would be needed to be removed presumably to meet the above requirements.
1997	
01/97	Frank Doyle retired and Gary Doyle, his son, became the operator of the site.
05/20/97	Fluor Daniel, EPA TAT, conducted a site reconnaissance. EPA issued its **Preliminary Assessment Report (PA)** later that month. This report set that groundwater and soil exposure pathways were the only exposure pathways of concern.
07/21/97	EPA Screening Site Inspection (SSI) was approved to evaluate these pathways.
12/18/97	TCEQ issued a **Screening Site Inspection (SSI) Work Plan** to allow for further evaluation of the site using the above pathways of concern.
1998 - 1999	
01/13-14/98	TCEQ personnel conducted SSI work with sampling of city water supply wells and collection of on- and off-site soil samples. The groundwater samples did not contain metals or PCBs. Analysis of soil samples from 17 locations indicated that

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	moderate levels of copper were detected at two on-site sample locations. PCBs were found on site and along drainage ditches away from the site.
09/98	TCEQ issued **SSI Report** on the above findings.
08/99	The site ceased operations.
2000-2009	
06/29/00	The Texas Department of Health (TDH), under a cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR), issued a **Health Consultation Report** which recommended that further delineation of the extent of PCB-affected soil be conducted, or that the soil be removed.
2001	Based on the above, the ATSDR chose not to enter the site into National Priorities List (NPL) for superfund sites.
07/14/06	TCEQ issued Unit Closure Request Letter to Mr. Frank J. Doyle.
10/23/06	Danny Doyle responded to the above letter noting the passing of his father earlier that year and requesting clarification on what TCEQ was specifically requesting.
01/26/07	TCEQ responded to the above letter directing that a closure report for the waste management units (WMUs) be submitted and that an **Affected Property Assessment Report (APAR)** be completed.
02/09/07	Mr. Danny Doyle emailed a response to the above letter.
09/05/08	TCEQ issued Second Request Letter reiterating the 01/26/07 letter requirements above.
08/10/09	TCEQ created a Case File Memorandum which noted that due to the lack of response to the above letters, the case was being considered for Notice of Violation (NOV) and that the 3rd letter would be the NOV.
08/24/09	Mr. Danny Doyle emailed again to TCEQ regarding the above letter in anticipation of a potential sale of the property.
09/11/09	TCEQ responded to the above email with a new point of contact, Mr. Pindy Lall.
11/05/09	A client contracted with Terra-Solve to conduct a Phase I ESA of the site.
11/20/09	Terra-Solve conducted site reconnaissance for the Phase I ESA and met with Mr. Gary Doyle at the site.
11/30/09	Terra-Solve issued Freedom of Information Act (FOIA) request to EPA.
12/04/09	EPA issued response letter to the above FOIA request and Terra-Solve issued the Phase I ESA Report to the client noting this response.
12/15/09	EPA requested an extension in response time to 12/30/10.

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01/08/10 The client faxed additional information from Mr. Doyle to Terra-Solve. This information consisted of the items above with asterisks (*) next to the dates. Terra-Solve contacted Mr. Pindy Lall of TCEQ, the latest point of contact, and he requested a few days to familiarize himself with the case file.

01/19/10 Mr. Pindy Lall of TCEQ contacted Terra-Solve to discuss the case. He indicated that the items requested in the 01/26/07 letter (WMU closure reports and APAR investigation) are still required to complete work on the site.

01/30/10 Terra-Solve received a CD-ROM from EPA with the various reports referred to in the above entries and assembled this comprehensive chronology of site events.

02/03/10 Terra-Solve submitted a proposal to the client to arrange for and attend a meeting with TCEQ to discuss

02/08/10 Terra-Solve received a copy of the Central File Registry records from TCEQ and updated this chronology.

03/22/10 Terra-Solve received authorization to send the above information to TCEQ from the client and its attorney, Abernathy Roeder.

04/14/10 Terra-Solve submitted this information to Mr. Pindy Lall of TCEQ after several weeks of attempted contacts. Mr. Lall later contacted Terra-Solve regarding the above email submissions of EPA documents and directed Terra-Solve to submit a formal letter requesting review of this information.

04/15/10 Terra-Solve submitted the above-requested letter.

06/18/10 TCEQ issued a letter to Terra-Solve which outlined a "path to closure" for the site. Specifically, the letter directed the following:

(1) Surface soils be delineated horizontally to 1.1 ppm PCBs and copper and hexachlorobenzene to their Risk-Based levels;
(2) Vertical soil delineation to method quantitation limits (MQLs) or collect groundwater samples, in which case the entire soil column is assumed to be contaminated;
(3) If the site enters the Voluntary Cleanup Program (VCP), a groundwater sample will be required;
(4) If the entire soil column is assumed to be contaminated, a control such as a parking lot that serves as impervious cover may be implemented to prevent exposure, but such a measure would require maintenance to ensure integrity of the lot, and any uncovered areas would have to be removed, decontaminated, and/or otherwise controlled; and
(5) Demonstration that the drainage ditches are not impacting surface water will be needed.

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2014	
04/24/14	Terra-Solve contacted by Abernathy Roeder regarding a possible sale of the subject property and asked to facilitate a meeting between all regulatory parties.
06/26/14	Terra-Solve and Abernathy Roeder met with Mr. James Sales of EPA Region VI at his office and also teleconferenced in Mr. Pindy Lall of TCEQ.
08/11/14	Terra-Solve and Abernathy Roeder met with other interested parties at the site to go over probably boring and well locations. It was determined that if the likely amount of agency-directed assessment and analysis was going to ultimately be required, the cost of such work would likely make the project untenable based on the value of the property. It was agreed that Terra-Solve would contact Pindy Lall to discuss these concerns.
08/13/14	After receiving non-deliverable replies to emails to Pindy Lall, Terra-Solve learned that Mr. Lall left the agency a few days previously. Terra-Solve attempted to find who the new coordinator is by telephone and in person on 08/14/14.
08/22/14	Terra-Solve submitted a letter to Mr. Richard Scharlach of TCEQ recapping the recent (2014) events and requesting a new case coordinator be assigned.
08/25/14	TCEQ assigned a new coordinator, Mr. Rodney Bryant.
09/02/14	TCEQ assigned a different coordinator, Ms. Eleanor Wehner, PG. Terra-Solve conferred with Ms. Wehner and wrote an update letter dated 09/10/14 which gave some hope for a reduced sampling scheme, particularly if the site did NOT go into the VCP. She did note, however, that a Drinking Water Survey was needed.
09/12/14	Terra-Solve conferred with Ms. Stephanie Kirschner of TCEQ regarding the availability of brownfields funds for the site. As the site is being contemplated for purchase by a non-profit group, these monies are available. A letter providing this information was submitted to the parties on 09/15/14 and a proposal for completion of the forms was submitted on 09/16/14.
10/21/14	Terra-Solve was engaged to complete the Brownfields Site Assessment (BSA) application.
10/23/14	Terra-Solve submitted the BSA application to Abernathy Roeder and the client. →rejected.
2015	
04/21/15	Terra-Solve contacted by **Citizen Name / Ex. 6** egarding redevelopment of the site. Terra-Solve confirmed with Leonard ISD that no conflict of interest exists.
04/24/15	Terra-Solve spoke with Ms. Wehner who confirmed that she sent a letter to Mr. Doyle on 03/30/15 directing that the APAR and WMU Closure be conducted forthwith or that enforcement procedures would begin.
04/27/15	Terra-Solve met with **Citizen Name / Ex. 6** to discuss the site.

5/27/15 - Unit Closure Request + Facility Registration Inactivation, &
11/16/15 - TCEQ approved of NOR 003 closure; comments to closure demonstration for NOR 001 + 002.

10/13/15 - Affected Property Assessment Report
11/17/15 - TCEQ NOD comments to APAR + closure request (WMU 001 + 002)

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Message

From: Personal Email / Ex. 6
Sent: 2/10/2019 5:04:50 PM
To: Moore, Gary [Moore.Gary@epa.gov]
Subject: Re: FJ Doyle Salvage Site: Personal Address / Ex. 6

Good morning
It backed up gain this weekend and I think my neighbors are having issues now.

Sent from my iPhone

On Feb 8, 2019, at 3:54 PM, Moore, Gary <Moore.Gary@epa.gov> wrote:

> Hello Citizen Name / Ex. 6
>
> I know this is a subject that people do not like to really talk about but I hope this explanation helps. The blockage was in the portion of the sewer line from your house. Your sewer line connects with your neighbors sewer line near the alley before it goes into the city sewer line which is in the alley.
>
> The sewer line from your house has some areas that are flat (not sloping) which helps it retain some water in the line which could be a congregation point for thicker debris that doesn't break down in the water. I only mentioned the paper towels because that is what the plumber indicated that he found as part of the debris clogging the line from your house (along with some plastic wrappers, hair pins, and rubber bands). You are correct that normally paper towels and those other objects are not flushed down the toilet but sometimes kids don't understand this or it happens by accident. As you know paper towels and tissue paper are thicker than toilet paper and don't break down with water as quickly and can be slowed down in the flat portions of the sewer line and can cause a clog in the home sewer line.
>
> Thanks
> Gary Moore

From: Personal Email / Ex. 6
Sent: Friday, February 08, 2019 2:56 PM
To: Moore, Gary <Moore.Gary@epa.gov>
Subject: Re: FJ Doyle Salvage Site: Personal Address / Ex. 6

Ok I'm confused about the paper towels because we only use them in the kitchen not the bathroom. So I hope it's not coming from somewhere else. I appreciate the update.
Sent from my iPhone

On Feb 8, 2019, at 2:42 PM, Moore, Gary <Moore.Gary@epa.gov> wrote:

> Hello Citizen Name / Ex. 6
>
> I am not really sure at this point. We need to see if it is because of the paper towels and plastic wrappers or if it is something else. The plumber did say that it was flowing but that it is retaining a little water in the line. This typically happens when the line is not sloped perfectly. He indicated that he sees this all the time in this area. I am hoping that it will not happen again but if it does, we may have to re-slope the line. Please keep me updated if you have any additional problems and make sure you notify your landlord. Both you and Citizen Name / Ex. 6 have my contact information.

Thanks
Gary Moore
214.789.1627
Moore.gary@epa.gov

From: Citizen Name / Ex. 6 < **Personal Email / Ex. 6**
Sent: Friday, February 08, 2019 12:15 PM
To: Moore, Gary <Moore.Gary@epa.gov>
Subject: Re: FJ Doyle Salvage Site Personal Address / Ex. 6

Yes we have but I don't remember how many times but it was never this bad. Do you think its something else?

On Fri, Feb 8, 2019 at 11:55 AM Moore, Gary <Moore.Gary@epa.gov> wrote:

> Hello Citizen Name / Ex. 6
>
> Can you tell me if you guys have had issues with blockages in the past? And if so how often?
>
> Thanks
>
> Gary Moore

From: **Personal Email / Ex. 6**
Sent: Thursday, February 07, 2019 4:25 PM
To: Moore, Gary <Moore.Gary@epa.gov>
Subject: Re: FJ Doyle Salvage Site: Personal Address / Ex. 6

Thank you and I will let them know

Sent from my iPhone

On Feb 7, 2019, at 4:19 PM, Moore, Gary <Moore.Gary@epa.gov> wrote:

> > Hello Citizen Name / Ex. 6
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this time. Fortunately, the line was not collapsed. The plumber indicated that the blockage was a result of paper towels, hair pins, some plastic wrappers, rubber bands and hair. Please let your family know to be careful to avoid putting paper towels, plastic wrappers, or other similar items down the toilet or sinks to avoid a similar type blockage.

Thanks,

Gary W. Moore (6SF-ER)

Federal On-Scene Coordinator

U.S EPA Region 6

1445 Ross Ave, Suite 1200

Dallas, TX 75202-2733

Cell: 214.789.1627

moore.gary@epa.gov

Message

From: Personal Email / Ex. 6
Sent: 2/8/2019 10:42:03 PM
To: Moore, Gary [Moore.Gary@epa.gov]
Subject: Re: FJ Doyle Salvage Site: Personal Address / Ex. 6

Thanks this was a big help

Sent from my iPhone

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U.S EPA Region 6

1445 Ross Ave, Suite 1200

Dallas, TX 75202-2733

Cell: 214.789.1627

moore.gary@epa.gov

Message

From: Moore, Gary [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=D9494EB3B37241B09CE3BDEAFF4C557A-MOORE, GARY]
Sent: 2/8/2019 9:54:44 PM
To: Personal Email / Ex. 6
BCC: Brescia, Nicolas [brescia.nicolas@epa.gov]; Delgado, Paige [Delgado.Paige@epa.gov]
Subject: RE: FJ Doyle Salvage Site: Personal Address / Ex. 6

Hello Citizen Name / Ex. 6

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Dallas, TX 75202-2733

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>
> Thanks,
>
> **Gary W. Moore (6SF-ER)**
>
> **Federal On-Scene Coordinator**
>
> **U.S EPA Region 6**
>
> **1445 Ross Ave, Suite 1200**
>
> **Dallas, TX 75202-2733**
>
> **Cell: 214.789.1627**
>
> moore.gary@epa.gov

Message

From: Personal Email / Ex. 6
Sent: 2/8/2019 6:14:59 PM
To: Moore, Gary [Moore.Gary@epa.gov]
Subject: Re: FJ Doyle Salvage Site Personal Address / Ex. 6

Yes we have but I don't remember how many times but it was never this bad. Do you think its something else?

On Fri, Feb 8, 2019 at 11:55 AM Moore, Gary <Moore.Gary@epa.gov> wrote:

Hello Citizen Name / Ex. 6

Can you tell me if you guys have had issues with blockages in the past? And if so how often?

Thanks

Gary Moore

From: Personal Email / Ex. 6
Sent: Thursday, February 07, 2019 4:25 PM
To: Moore, Gary <Moore.Gary@epa.gov>
Subject: Re: FJ Doyle Salvage Site: Personal Address / Ex. 6

Thank you and I will let them know

Sent from my iPhone

On Feb 7, 2019, at 4:19 PM, Moore, Gary <Moore.Gary@epa.gov> wrote:

> Hello Citizen Name / Ex. 6
>
> I wanted to let you know that the Plumber was able to remove the blockage in the sewer line and it appears to be functioning properly at this time. Fortunately, the line was not collapsed. The plumber indicated that the blockage was a result of paper towels, hair pins, some plastic wrappers, rubber bands and hair. Please let your family know to be careful to avoid putting paper towels, plastic wrappers, or other similar items down the toilet or sinks to avoid a similar type blockage.

Thanks,

Gary W. Moore (6SF-ER)

Federal On-Scene Coordinator

U.S EPA Region 6

1445 Ross Ave, Suite 1200

Dallas, TX 75202-2733

Cell: 214.789.1627

moore.gary@epa.gov

Message

From: Moore, Gary [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=D9494EB3B37241B09CE3BDEAFF4C557A-MOORE, GARY]
Sent: 2/8/2019 5:55:43 PM
To: Personal Email / Ex. 6
BCC: Brescia, Nicolas [brescia.nicolas@epa.gov]; Delgado, Paige [Delgado.Paige@epa.gov]
Subject: RE: FJ Doyle Salvage Site: Personal Address / Ex. 6

Hello Citizen Name / Ex. 6

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Thanks
Gary Moore

From: Personal Address / Ex. 6
Sent: Thursday, February 07, 2019 4:25 PM
To: Moore, Gary <Moore.Gary@epa.gov>
Subject: Re: FJ Doyle Salvage Site Personal Address / Ex. 6

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Sent from my iPhone

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> Thanks,
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> **Gary W. Moore (6SF-ER)**
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> **U.S EPA Region 6**
> **1445 Ross Ave, Suite 1200**
> **Dallas, TX 75202-2733**
> **Cell: 214.789.1627**
> moore.gary@epa.gov

Message

From: Moore, Gary [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=D9494EB3B37241B09CE3BDEAFF4C557A-MOORE, GARY]
Sent: 2/7/2019 10:19:45 PM
To: Personal Email / Ex. 6
BCC: Brescia, Nicolas [brescia.nicolas@epa.gov]; Delgado, Paige [Delgado.Paige@epa.gov]; 'Don Edgington' [d.edgington@erllc.com]
Subject: FJ Doyle Salvage Site: Personal Address / Ex. 6

Hello Citizen Name / Ex. 6

I wanted to let you know that the Plumber was able to remove the blockage in the sewer line and it appears to be functioning properly at this time. Fortunately, the line was not collapsed. The plumber indicated that the blockage was a result of paper towels, hair pins, some plastic wrappers, rubber bands and hair. Please let your family know to be careful to avoid putting paper towels, plastic wrappers, or other similar items down the toilet or sinks to avoid a similar type blockage.

Thanks,

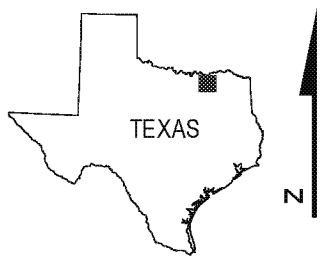
Gary W. Moore (6SF-ER)
Federal On-Scene Coordinator
U.S EPA Region 6
1445 Ross Ave, Suite 1200
Dallas, TX 75202-2733
Cell: 214.789.1627
moore.gary@epa.gov

0 50 100

Feet

LEGEND

- Fence Line
- Parcel Line
- Property Boundary
- Sample Grid
- Structure
- Aroclor Results >= 1 mg/kg



SOURCE: Google, 2017

TDD No: 0001/17-004
SEMS ID: TXD980665109
SSID: 061D

USEPA REGION 6

FIGURE 1
SOIL SAMPLE GRID RESULTS - AROCLOR
FJD01
FRANK J. DOYLE SITE
Personal Address / Ex. 6
LEONARD, FANNIN COUNTY, TEXAS

DATE	PROJECT NO	SCALE
AUGUST 2018	20600.012.001.1004	AS SHOWN

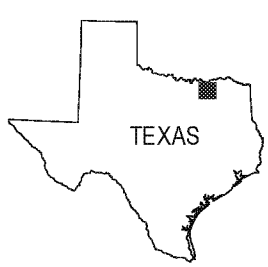
FILE: D:\20600_EPA_START4\FJ Doyle\mxd\Property Maps\FJD01.mxd 11:01:50 AM 8/21/2018 wilderj

0 50 100

Feet

LEGEND

- Fence Line
- Parcel Line
- Property Boundary
- Site Boundary
- Sample Grid
- Structure
- Aroclor Results >= 1 mg/kg



SOURCE: Google, 2017

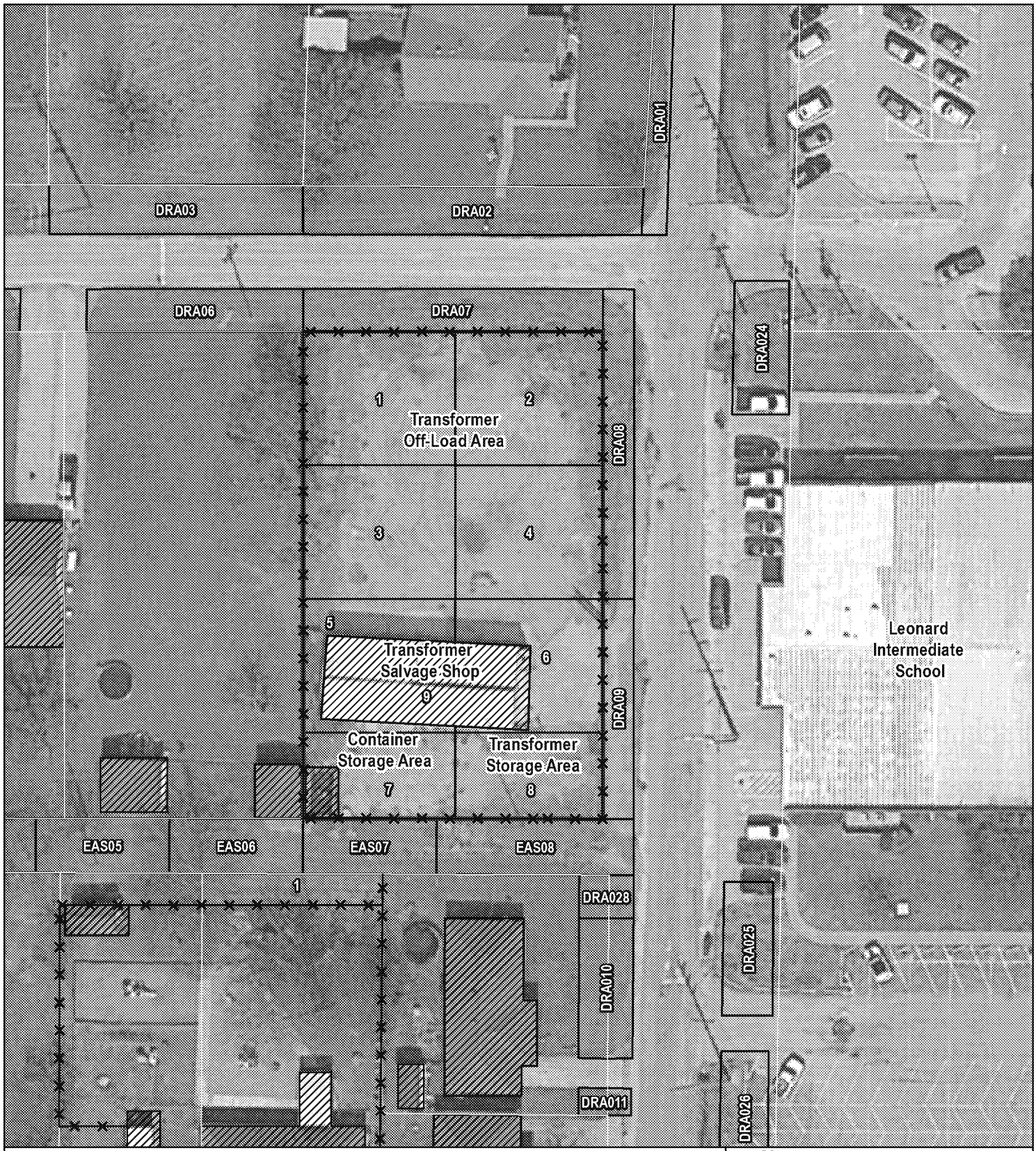
TDD No: 0001/17-004
SEMS ID: TXD980665109
SSID: 061D

USEPA REGION 6

FIGURE 1
SOIL SAMPLE GRID RESULTS - AROCLOR
FJD02/FJD03
FRANK J. DOYLE SITE
Personal Address / Ex. 6
LEONARD, FANNIN COUNTY, TEXAS

DATE	PROJECT NO	SCALE
AUGUST 2018	20600.012.001.1004	AS SHOWN

FILE: D:\20600_EPA_START4\FJ Doyle\mxd\Property Maps\FJD02_03.mxd 11:01:08 AM 8/21/2018 wilderj

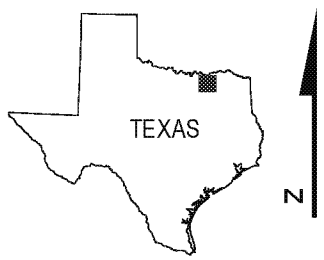


0 50 100

Feet

LEGEND

- Fence Line
- Parcel Line
- Site Boundary
- Sample Grid
- Structure
- Aroclor Results >= 1 mg/kg



SOURCE: Google, 2017

TDD No: 0001/17-004
SEMS ID: TXD980665109
SSID: 061D

USEPA REGION 6

FIGURE 1
SOIL SAMPLE GRID RESULTS - AROCLOR
FJD04
FRANK J. DOYLE SITE
Personal Address / Ex. 6
LEONARD, FANNIN COUNTY, TEXAS

DATE	PROJECT NO	SCALE
AUGUST 2018	20600.012.001.1004	AS SHOWN

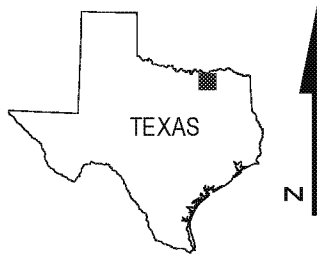
FILE: D:\20600_EPA_START4\FJ Doyle\mxd\Property Maps\FJD04.mxd 10:58:58 AM 8/21/2018 wilder

0 50 100

Feet

LEGEND

- Fence Line
- Parcel Line
- Property Boundary
- Site Boundary
- Sample Grid
- Structure
- Aroclor Results >= 1 mg/kg



SOURCE: Google, 2017

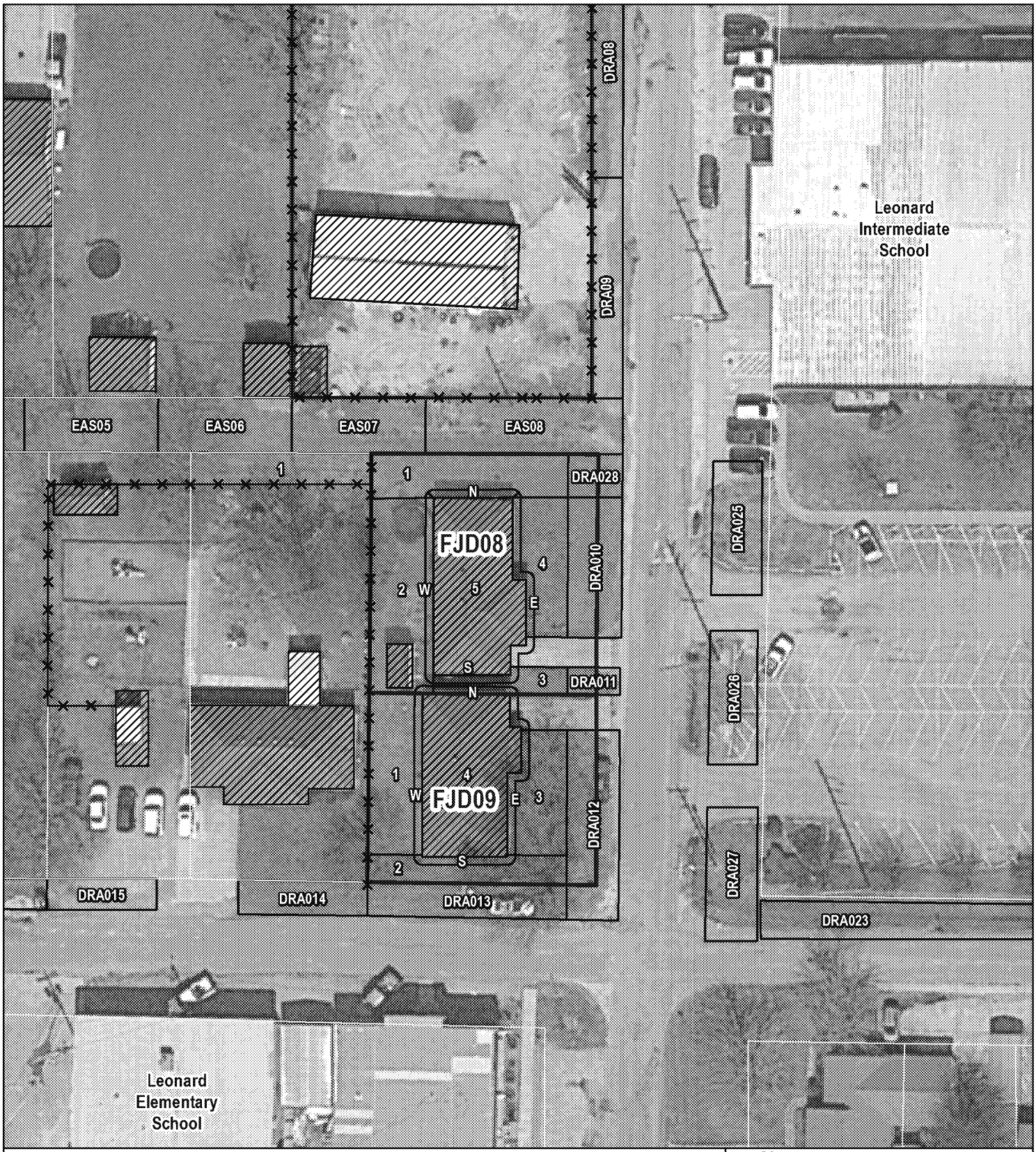
TDD No: 0001/17-004
SEMS ID: TXD980665109
SSID: 061D

USEPA REGION 6

FIGURE 1
SOIL SAMPLE GRID RESULTS - AROCLOR
FJD05/FJD06/FJD07
FRANK J. DOYLE SITE
Personal Address / Ex. 6
LEONARD, FANNIN COUNTY, TEXAS

DATE	PROJECT NO	SCALE
AUGUST 2018	20600.012.001.1004	AS SHOWN

FILE: D:\20600_EPA_START4\FJ Doyle\mxd\Property Maps\FJD05_06_07.mxd 10:57:35 AM 8/21/2018 wilder

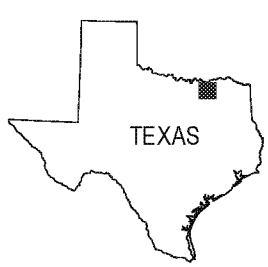


0 50 100

Feet

LEGEND

- Fence Line
- Parcel Line
- Property Boundary
- Site Boundary
- Sample Grid
- Structure
- Aroclor Results >= 1 mg/kg



SOURCE: Google, 2017

TDD No: 0001/17-004
SEMS ID: TXD980865109
SSID: 061D

USEPA REGION 6

FIGURE 1
SOIL SAMPLE GRID RESULTS - AROCLOR
FJD08/FJD09
FRANK J. DOYLE SITE
Personal Address / Ex. 6
LEONARD, FANNIN COUNTY, TEXAS

DATE	PROJECT NO	SCALE
AUGUST 2018	20600.012.001.1004	AS SHOWN

FILE: D:\20600_EPA_START4\FJ Doyle\mxd\Property Maps\FJD08_09.mxd 10:55:50 AM 8/21/2018 wilder

REMOVAL ASSESSMENT
QUALITY ASSURANCE SAMPLING PLAN

FOR

FRANK J. DOYLE SITE

Personal Address / Ex. 6

LEONARD, FANNIN COUNTY, TEXAS

Prepared for
U.S. Environmental Protection Agency Region 6
Will Lombard, Project Officer
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202

Contract No. EP-S5-17-02
Technical Direction Document No. 0001/17-004
WESTON Work Order No. 20600.012.001.1004
NRC No: N/A
SEMS ID: TXD980865109
FPN: N/A
SSID: 061D
EPA OSC: Gary Moore
START PTL: Sean Gavlas

Prepared by

Weston Solutions, Inc.
Cecilia Shappee, P.E., Program Manager
5599 San Felipe, Suite 700
Houston, Texas 77056
(713) 985-6600

April 2018

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1. INTRODUCTION

Weston Solutions, Inc. (WESTON®), the Superfund Technical Assessment and Response Team (START) contractor, has been tasked by the U.S. Environmental Protection Agency (EPA) Region 6 Emergency Management Branch (EMB) under Region 6 Contract No. EP-S5-17-02 as part of Technical Direction Document (TDD) No. 0001/17-004 (Appendix D) to conduct a removal assessment at the Frank J. Doyle (Site) The Site operations included recycling transformers by draining the oil and by separating the recoverable metals. The current address for the site is at 905 Poplar Street (historic address was Personal Address / Ex. 6 which encompasses the owners residential properties and the site) in Leonard, Fannin County, Texas, and a Site Location Map is provided as Figure 1-1. All figures are provided as separate portable document format (PDF) files. The Superfund Enterprise Management System (SEMS) Identification Number assigned to the Site is TXD980865109. The Site coordinates are Latitude 33.389530° North and Longitude -96.243160° West. START has prepared this Quality Assurance Sampling Plan (QASP) to describe the technical scope of work and activities tasked for completion as part of TDD No. 0001/17-004.

1.1 PROJECT OBJECTIVE

START is providing technical assistance to EPA Region 6 for the performance of a Removal Assessment and to collect data necessary to support a determination by EPA that the Frank J. Doyle Site presents a threat to public health and/or welfare of the United States or the environment in accordance with *40 Code of Federal Regulations (CFR) 300.415.*

The primary objective of the removal assessment is to determine the nature and extent of potential site-related contaminants of concern (COCs), including polychlorinated biphenyls (PCBs), semivolatile organic compounds (SVOCs), and metals in both the surface and subsurface soils at the Frank J. Doyle Site and off-site vicinity based upon earlier sampling investigations completed in the 1990s. To achieve the objective, samples will be collected from on- and off-site locations identified through use of a grid system that overlays the area. The analytical results of this removal assessment will be evaluated along with historical results from previous sampling investigations to determine the presence of site-related COCs. Soil results will be compared to the minimum EPA Residential Soil Carcinogenic and Non-carcinogenic (THQ=1.0 and THQ=0.1) 2017

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Regional Screening Levels (RSLs) (Appendix C) of pre-selected analytes. The analytes include PCBs, SVOCs/polycyclic aromatic hydrocarbons (PAHs), and Target Analyte List (TAL) metals, including mercury.

1.2 PROJECT TEAM

The Project Team will consist of Jeff Criner, the START Deputy Program Manager/Scope of Work (SOW) Leader; Sean Gavlas, the Project Team Leader (PTL) and Field Team Leader (FTL); a Field Safety Officer (FSO); a Data Manager (DM); and additional START personnel as necessary. The PTL will be responsible for the technical quality of work performed in the field, for documentation of site operations, and will serve as the START liaison to the EPA Region 6 On-scene Coordinator (OSC) Gary Moore. The PTL, in collaboration with EPA OSC Moore, will determine the location for sample collection in the field, collect samples as necessary, log the activities at each sample location in the field logbook, and verify the sample documentation. The PTL will oversee the packaging and shipping of samples to the EPA-approved laboratory. The FSO will be responsible for providing overall site health and safety support. Data management will include entering samples collected into EPA Scribe Environmental Sampling Data Management System (SCRIBE); producing accurate chain-of-custody documentation for the samples during the removal action; entering daily operations and sample collection data into the Regional Response Center–Enterprise Data Management System (RRC-EDMS) Response Manager software; and shipping samples. START will conduct sample collection, preparation, and documentation and will document site activities in field logbooks and data sheets. The START SOW Leader, Jeff Criner, will provide technical support to START during project activities.

1.3 QASP FORMAT

This QASP has been organized in a format that is intended to facilitate and effectively meet the objective of the removal assessment. The QASP is organized as follows:

- Section 1 – Introduction
- Section 2 – Site Background
- Section 3 – Sampling Approach and Procedures
- Section 4 – Analytical Methods and Data Validation
- Section 5 – Quality Assurance

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Tables are included at the end of each respective section. All figures are provided as separate Portable Document Format (PDF) files. Appendices are attached with the following information.

- Appendix A Site-Specific Data Quality Objective
- Appendix B Standard Operating Procedures
- Appendix C 2017 EPA Residential Soil Regional Screening Levels – THQ=1.0 and 0.1
- Appendix D TDD No. 0001/17-004

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2. SITE BACKGROUND

This section presents a summary of background information for the Frank J. Doyle Site including site location and description, operational and regulatory history, previous investigations, and sources of contamination.

2.1 SITE LOCATION AND DESCRIPTION

The Frank J. Doyle site is a former transformer salvage yard (formerly called FJ Doyle Salvage Transformers) of approximately 0.6 acre in size, located at 905 North Poplar Street in Leonard, Fannin County, Texas (listed on the TDD as Personal Address / Ex. 6 The geographic coordinates of the site are Latitude 33.389530° North and Longitude -96.243160° West. A Site Area Map is provided as Figure 2-1.

The site is located within a residential neighborhood, and bounded to the east by North Poplar Street, to the north by Cottonwood Street, and to the south and west by residential properties. There is one shop building with concrete slab. Historically, the property had a 6-foot wooden perimeter fence surrounding the property but it no longer exists. The yard of the site consists of a concrete drive and gravel ground cover as well as a concrete containment structure. A Site Layout Map is provided as Figure 2-2.

Leonard High School and Leonard Intermediate School are located adjacent to the east portion of the Site across from North Poplar Street. An alleyway on the southern boundary of the Site tracks east to west from North Poplar Street to North Cedar Street. The properties located adjacent to the southern portion of the Site include residences and a day-care facility. Residences are also located to the north and west of the site. Additionally, the Leonard Elementary School lies due south of the site on the south side of East Hackberry Street.

The Doyle site lies approximately 700 feet above sea level with an apparent gentle slope to the south. The site within Fannin County lies in the northern fringe of the Texas Blackland Prairie, which extends through North Central Texas and is characterized by broad flood plains and shallow stream valleys. Information obtained from the U.S. Department of Agriculture (USDA) indicated

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that the soils generally consist of shallow, well-drained, moderately permeable, loamy soils that are formed in chalk or in chalk interbedded with marl.

2.2 OPERATIONAL AND REGULATORY HISTORY

The site, known as the Frank J. Doyle Site (also known as FJ Doyle Site, FJ Doyle Salvage), operated under the ownership of Mr. Frank J. Doyle from 1974 until January 1997 when his son, Gary Doyle, took over the operation. During its operation in the 1990s, the site employed a few workers, but not more than five. Frank Doyle received transformers from companies in Texas, Oklahoma, Louisiana, and Arkansas. Site operations included recovering oil, wiring, and scrap metal from the transformers. Based on historical record, the north central portion of the site was utilized to off-load out of service transformers from suppliers and for temporary storage. The southeastern portion of the site was used for long-term storage of transformers, and the southwestern portion of the site was used for storage of numerous containers of drums and tanks containing transformer oil. Various storage containers were utilized on-site to store drained liquids from the transformers including one 375-gallon container, two 500-gallon containers, and numerous 55-gallon drums. After the transformer cores had been drained of their remaining liquids, they were placed in an oven to bake off remaining oil, paper, and varnish. The baked cores were then stripped for recoverable metals, which were primarily copper and aluminum. Occasionally, transformer oil was transferred from the storage tanks to trucks and shipped off-site to a disposal facility by an authorized waste oil transporter. It was reported that Mr. Frank Doyle used the oil in the past for weed control and distributed the oil to various individuals for use as a weed killer in the 1970s.

The past use of PCBs in electrical equipment such as transformers and capacitors was common until 1979 when PCBs were banned in the United States and became regulated under *40 Code of Federal Regulations 761*.

2.3 SUMMARY OF PREVIOUS INVESTIGATIONS

Over the past two decades, numerous investigations were performed at the Site. Ecology & Environment, Inc. (E&E) conducted an initial site assessment at Site from September to October 1991 in response to a citizen's complaint concerning the improper handling and salvage of

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transformers. Samples collected from areas both north and south of the salvage shop, where transformers were stored, contained detections of PCB Aroclor-1260 above 50 part per million (ppm). E&E performed additional off-site sampling in April 1991 that confirmed high detections of Aroclor-1260 along a drainage pathway south of the site that were approximately 270 ppm. Due to further residential concerns, the EPA Technical Assistance Team (TAT) collected 94 soil samples at the site in 1995. PCB Aroclor-1260 concentrations were detected adjacent to the south gate at a concentration of 2,730 ppm (approximately located in property FJ04 grid 7 and 8). PCBs were also detected in the east side transformer storage area, the southwest container storage area, the northern transformer off-load area, and areas in the alleyway south of the site. In May 1997, EPA conducted a Preliminary Assessment investigation and noted the presence of yellow-green stains where transformer oil was stored and transferred for shipment. In September 1998, a Screening Site Inspection (SSI) was conducted by the Texas Natural Resource Conservation Commission (now the Texas Commission on Environmental Quality) on behalf of EPA. The maximum concentration PCB Aroclor-1260 concentration was 4,100 ppm (approximately located in the alley [grid EAS08]). During the SSI, approximately 20 soil samples and 3 drinking water well samples were collected. The SSI concluded that the presence of contaminants likely originated from on-site sources. Results of the analyses available for review indicated that some of the samples contained concentrations of PCBs, SVOCs/PAHs and Resource Conservation and Recovery Act (RCRA) metals above state and/or EPA guidelines.

2.4 POTENTIAL SOURCES OF HAZARDOUS MATERIALS

Information concerning the known or potential hazardous substance source areas at the Site and the COCs thought to be associated with each source is presented in the following section. Former Site activities that contributed to potential sources include the following:

- Storage and improper recycling of electrical transformers.
- Storage and transfer of transformer oil into tanks and drums.

2.5 SITE CONCERNS

Site concerns regarding public health and the environment were determined based on the following site conditions.

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- Based on previous on-site and off-site investigations, surface and subsurface soils were determined to be contain concentrations of PCBs, SVOCs/PAHs, and metals that exceeded residential EPA Region 6 RSLs.
- Chance exposure to COCs by ingestion, skin absorption, and inhalation was determined to be a site concern.

The COCs for the site are, but not limited to, PCBs, SVOCs/PAHs, and metals associated with transformer salvage yards.

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3. SAMPLING APPROACH AND PROCEDURES

The specific field investigation activities that will be conducted during the Frank J. Doyle assessment are described in the following subsections. Specifically, sampling procedures, locations, quality assurance (QA), and the analytical approach that will be used during the removal assessment are discussed. Relevant Standard Operating Procedures (SOPs) for field sampling methods are included as Appendix B to this QASP. START will use EPA SCRIBE software to manage sample data.

3.1 OVERVIEW OF SAMPLING ACTIVITIES

START and the EPA OSC developed a sampling strategy intended to collect data necessary to evaluate and meet the objective of the removal assessment. START will collect up to approximately 360 composite soil samples (including quality assurance/quality control samples) from 50- by 50-foot grids established throughout the site. The locations of the 98 proposed sampling grids are illustrated on Figure 3-1. Samples will be collected from grids established on-site (FJD04), within residential properties (FJD01, FJD02, FJD03, FJD05, FJD06, FJD07, FJD08, and FJD09), easements (EAS01-EAS08) south of the site, right-of-ways east of the site (ROW01-ROW04), and drainages areas that may have been impacted by site activities (DRA01-DRA22). Additional impromptu samples may be taken along fencelines and building slabs to determine if PCB oils may have been used as weed control along those areas. A Data Quality Objective (DQO), as well as an overview of the health and safety and field activities required to complete removal assessment activities, are presented in the following subsections.

3.1.1 Data Quality Objective

The objective of soil sampling is to further define the nature and extent of site-related contaminants concern (COCs) in surface and subsurface soils at off-site residential properties south and west of the Frank J. Doyle site as well as nearby easements, right-of-ways and drainage areas. To accomplish this, a DQO for determining the extent of site-related contaminated soil has been established and is included as Appendix A. The DQO presented was developed using the seven-step process set out in the *EPA Guidance on Systematic Planning Using the Data Quality*

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Objectives Process: EPA QA/G-4.. Soil sample locations were selected systematically to further delineate the potential for contaminant hotspots.

3.1.2 Health and Safety Implementation

The removal assessment field activities will be conducted in accordance with a site-specific Health and Safety Plan (HASP). The FSO will be responsible for implementation of the HASP during field investigation activities. The field team will be required to conduct work according to the guidelines and requirements of the HASP. In accordance with the general health and safety operating procedures, the field team will also drive the route to the hospital specified in the HASP prior to initiating sampling activities.

3.1.3 Community Relations

Community relations may require additional EPA involvement due to the general nature of the site. Community relations issues will be directed to the EPA OSC. If the EPA OSC is not present, the START PTL, under the guidance of the SOW Leader, will manage community relations in the field as directed by the EPA OSC. If a community relations plan and an implementation program become necessary, START will establish each if requested by the EPA OSC.

3.1.4 Field Activities Review Meeting

The PTL will conduct a meeting with the entire field team to familiarize them with the project scope of work, discuss the planned field activities and roles and responsibilities, and review the project HASP and other relevant SOPs. This meeting will be conducted prior to any site activities.

3.1.5 Mobilization and Command Post Establishment

START will mobilize equipment, including the mobile command trailer, required for the removal assessment from the WESTON Regional Equipment Store warehouse located in Houston, Texas, as necessary.

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3.2 SAMPLING/MONITORING APPROACH

Sampling will be conducted in general accordance with the *EPA Compendium of Emergency Response Team (ERT) Soil Sampling and Surface Geophysics Procedures* and with EPA ERT and START SOPs (Appendix B). WESTON SOPs include SOP No. 0110.01 and 1001.10 (Surface Soil Sampling and Composite Sampling). The specific site preparation, sampling, decontamination, and sample handling procedures, including disposition of investigation-derived waste (IDW), are described in the following subsections. The following subsections also include the proposed sampling, sample handling procedures, and field quality control (QC) samples for the removal assessment activities. The EPA OSC will be notified and concurrence will be obtained if significant deviations from the planned sampling activities are proposed. Details regarding deviations from the QASP will be documented in the START site logbook.

3.2.1 Site Reconnaissance and Soil Sampling

The EPA OSC and START developed a sampling strategy consisting of sample grids of various sizes (not exceeding an area of 50 feet by 50 feet) to be located south of the Frank J. Doyle site (Figure 3-1). START will collect approximately 360 soil samples (including QA/QC samples) from 98 sample grids. The grids are established along residential drainages, city easements and right-of-ways, and within residential properties.

At each designated grid, START will utilize Geoprobe® subsurface coring devices, trowels, hand augers, or slam bars to collect surface and subsurface soil samples. Principal care will be taken to ensure the identification of utilities prior to subsurface sampling. Prior to conducting subsurface soil sampling, the GeoProbe operator will contact One-Call and START will also subcontract a private utility locate in order to properly identify and flag potential utility lines, including electric, gas, telephone, water, and sewer lines. Sample that will be collected from grids along drainages, easements, or right-of-ways, will have the highest concentration of utility lines. Each sample will consist of a five-point composite sample collected at three depth intervals: 0 to 1 inches below ground surface (bgs), 1 to 6 inches bgs, and 6 to 12 inches bgs. In addition to the aforementioned sampling depths, samples will be collected from a depth greater than 12 inches in grids determined by the OSC. Grids FJD03-02, FJD03-04, FJD03-06, FJD03-08, FJD06-01, FJD07-01, EAS06,

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DRA07, DRA08, DRA09, DRA10 will also have samples collected from 12 to 24 inches bgs. All grids within FJD04, EAS07, EAS08 will have samples collected from 12 to 24 inches and 24 to 36 inches bgs. Samples will be composited per interval from the five aliquots within each grid. For example, the 1-to 6-inch depth soils from each of the five sample aliquots will be placed in 1-gallon plastic bags, thoroughly composited and then placed in the appropriate sample container. During sampling and sampling processing, each team will use a Personal Data Ram (PDR) 1000 in order to monitor the degree of airborne particles in work areas. Samples will be collected in appropriate sample containers and submitted to an EPA-approved laboratory for analysis. The laboratory required sample containers, preservation techniques, sample volumes, and holding times are presented in Table 3-1.

3.2.2 Field Quality Control Samples

START will collect field duplicates, MS/MSD samples, and prepare equipment rinsate blank samples as needed during the removal assessment (SOP 1005.01, 1005.02). QA/QC samples will be collected according to the following:

- Blind field duplicate samples will be collected during sample activities for locations selected by the PTL. The data obtained from these samples will be used to ensure the quality assurance of the sampling procedures and laboratory analytical data by following an evaluation of reproducibility of results. Efforts will be made to collect duplicate samples from an area co-located from the original sample location where there is visual evidence of contamination or where contamination is suspected. One duplicate sample will be collected for every 10 samples of the same matrix.

- Matrix Spike (MS)/Matrix Spike Duplicate (MSD) samples will be collected during the sample activities for locations selected by the PTL. The data obtained from these samples will be used to ensure the QA of the sampling procedures and laboratory analytical data by following an evaluation of reproducibility of results. Efforts will be made to collect MS/MSD samples from an area co-located from the original sample location where there is visual evidence of contamination or where contamination is suspected. One MS and one MSD sample will be collected for every 20 samples of the same matrix.

- Equipment rinsate blanks will be prepared by pouring laboratory-grade de-ionized water over non-disposable sampling equipment after it has been decontaminated and by collecting the rinse water in sample containers for analyses. These samples will be prepared to demonstrate that the equipment decontamination procedures for the sampling equipment were performed effectively. The equipment rinsate blanks will be prepared at the end of each day that non-disposable sampling equipment is used.

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- Temperature Blanks will be prepared in the field and will consist of one 40-milliliter glass sample container with a Teflon-lined septum cap. The temperature blank will be packaged along with the field samples in the shipping cooler and will represent the temperature of the incoming cooler upon receipt at the laboratory. Use of these samples within a shipping container enables the laboratory to assess the temperature of the shipment without disturbing any of the field samples.

3.2.3 Investigation-Derived Wastes

Disposal of Investigation-derived Wastes (IDW) such as personal protective equipment (PPE), will be the responsibility of the sampling team. Excess soil generated by GeoProbe® sampling activities will be returned to the location where it was collected from the ground. The IDW will be managed according to EPA's Management of Investigation-Derived Wastes during Site Inspections (EPA/540/G-9/009) and other applicable state requirements and regulations. Following completion of sampling activities, disposable sampling equipment, which includes acetate GeoProbe® sleeves and PPE, will be double bagged and disposed. It is anticipated that minimal amounts of IDW will be generated during this activity.

3.2.4 Sample Handling Procedures

Samples will be collected using equipment and procedures appropriate to the matrix, parameters, and sampling objectives. The volume of the sample collected must be sufficient to perform the analysis requested. Samples must be stored in the proper types of containers and preserved in a manner for the analysis to be performed (SOP 1001.01, 1001.10).

Clean, decontaminated sampling equipment and sample containers will be maintained in a clean, segregated area. Samples will be collected with clean decontaminated equipment (SOP 1201.01). Each sample collected for laboratory analysis will be placed directly into pre-cleaned, unused containers. Sampling personnel will change gloves between each sample collection/handling. Samples will be assembled and catalogued prior to shipping (SOPs 1101.01 and 1102.01) to the designated laboratory.

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3.3 SAMPLE MANAGEMENT

Specific nomenclature that will be used by START will provide a consistent means of facilitating the sampling and overall data management for the project (SOP 0110.05). The START Scope of Work Leader must approve any deviations from the sample nomenclature proposed below.

As stated in SOP 0110.05, sample nomenclature will follow a general format regardless of the type or location of the sample collected. The general nomenclature consists of the following components:

- Property/Site Identification (ID) or Area of Concern
- Grid ID
- Sample Collection Depth
- Collection Type (Soil, Field QC, etc.)
- QA/QC Type (Normal, Duplicate, etc.)

The following presents the sample nomenclature for analytical samples that will generate unique sample names compatible with most data management systems. The sample nomenclature is based upon specific requirements for reporting these results.

SAMPLE NOMENCLATURE - SOIL

Property ID - Grid ID – Date - Depth - Collection Type + QC Type

Where:

Property ID: An identifier used to designate the particular property or Area of Concern (AOC) where the sample was collected.

Grid ID: A two- or three-character alphanumeric code used to designate the particular grid or station within the AOC where the sample was collected.

Date: An identifier used to designate the year and month when the sample was collected.

Depth: A two-digit code used to designate what depth of sample was collected:

01	0 to 1 inches
06	1 to 6 inches
12	6 to 12 inches
24	12 to 24 inches
36	24 to 36 inches

Collection Type: A one-digit code used to designate what type of sample was collected:

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1	Surface Water	6	Oil
2	Groundwater	7	Waste
3	Leachate	8	Other
4	Field QC/Water Sample	9	Drinking Water
5	Soil	0	Sediment

QC Type: A one-digit code used to designate the QC type of the sample:

1	Normal	6	Confirmation
2	Duplicate	7	Confirmation Duplicate
3	Rinsate Blank		
4	Trip Blank		
5	Field Blank		

Examples:

- ***FJD04-04-20180430-06-51***: Represents a normal soil sample collected from Grid 4 within property FJD04 on April 30, 2018 at a depth of 6 inches bgs.
- ***FJD06-06-20180505-12-52***: Represents the duplicate soil sample collected from Grid 6 within property FJD06 on May 5, 2018 at a depth of 12 inches bgs.

Sample data management will be completed utilizing SCRIBE including chain-of-custody and sample documentation needs.

3.4 DECONTAMINATION

The non-disposable sampling equipment, if any, (hand trowels, stainless steel bowls, Geoprobe® coring shoe, etc.) used during the sample collection process will be thoroughly pre-cleaned before initial use, between use, and at the end of the field investigation. Equipment decontamination, as described in SOP 1201.01, will be completed in the following steps:

- Water spray or brush, if needed, to remove soil/sediment from the equipment.
- Nonphosphate detergent and potable water wash to clean the equipment.
- Final potable water rinse.
- Equipment air-dried.

Personnel decontamination procedures will be described in the site-specific HASP that will be prepared by START prior to implementation of activities at the site. Decontamination activities will be conducted at a temporary decontamination pad that will be constructed/designated in an area to be determined by the PTL. Any excess soil and/or fluids generated as a result of equipment

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decontamination will be placed in a drum and staged in an area to be determined by the OSC. The drum will be labelled on the side with the name of the site, the contents, sampling location, and date.

3.5 SAMPLE PRESERVATION, CONTAINERS, AND HOLD TIMES

Sample preservation, containers, and holding times utilized during this removal assessment will be consistent with analytical methods and laboratory volume requirements as provided in Table 3-1. Once collected and placed in an 8-ounce glass jar, samples will be stored in coolers and kept at approximately 4° C while at the site and until they are submitted for analysis. Chain-of-custody forms will be completed for each sample shipment and sent with the samples to the designated laboratory (GCAL) via United Parcel Service (UPS) carrier. Samples that have been analyzed will be disposed of by the designated laboratory in accordance with the laboratory SOPs.

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Table 3-1
Revised Requirements for Containers, Preservation Techniques, Sample Volumes, and Holding Times
Frank J. Doyle
Leonard, Fannin County, Texas

Name	Analytical Methods	Matrix	Container	Preservation	Minimum Volume or Weight	Maximum Holding Time
TAL Metals and Mercury	SW846 6020/6010B/7471A	Soil	1 x 8-oz glass jar[1]	4°C	5 grams	28 days for mercury, 180 days all other metals
PCBs	SW846 8082A	Soil	1 x 8-oz glass jar[1]	4°C	30 grams	N/A
SVOCs/TCL + PAH	SW846 8270-SIM (or 8270 Low-Level)	Soil	1 x 8-oz glass jar[1]	4°C	30 grams	14 days to extraction (soil)/ 40 days after extraction to analysis

Notes: [1]jar – The laboratory will perform all three analyses for each sample from one 8-oz glass jar.

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4. ANALYTICAL METHODS AND DATA VALIDATION

Soil samples will be submitted to a laboratory for analytical analysis. Requested sample analysis will be indicated on the chain-of-custody and will include the following methods on all samples submitted (see Table 3-1):

- TAL Metals plus Mercury by EPA SW846 Method 6020/7471A
- PCBs by EPA SW846 Method 8082A
- SVOCs/PAHs by EPA SW846 Method 8270-SIM (or 8270 Low-Level)

The laboratory and shipping information are as follows:

GCAL Analytical Laboratories
7979 Innovation Park Drive
Baton Rouge, LA 70820
(225)769-4900

Table 4-1 below illustrates the sample description and rationale.

Table 4-1
Sample Description and Rationale
Frank J. Doyle
Leonard, Fannin County, Texas

Sample Location	Sample Collection Method	Sample Depth	No. of Samples	Rationale	EPA Analytical Method
Soil	Disposable Scoop Hand Trowel and/or Geoprobe®	Down to 36 inches bgs	Approximately 360 soil samples[1]	To document the presence of site-specific contaminants of concern in subsurface soil	TAL Metals plus Mercury – EPA SW846 Method 6020/6010B/7471A PCBs – EPA SW846 Method 8082A SVOCs/PAHs – EPA SW846 Method 8270-SIM (or 8270 Low-Level)
Water[2]	Grab	N/A	One for each day non-disposable sampling equipment was used	To demonstrate that equipment decontamination procedures for the sampling equipment were performed effectively	TAL Metals plus Mercury – EPA SW846 Method 6020/6010B/7471A PCBs – EPA SW846 Method 8082A SVOCs/PAHs – EPA SW846 Method 8270-SIM (or 8270 Low-Level)

Notes: [1]Soil Samples – Approximately 327 Normal and 33 QA/QC samples including field duplicates and MS/MSD samples.
Water[2] – Equipment rinsate samples will be collected off the shoe of the GeoProbe.

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Following analysis, the laboratory will provide preliminary deliverables data via email in PDF. The final data deliverable will include a full Contract Laboratory Program (CLP)-like data package (Level IV data package with QC and raw data) in PDF and a final Electronic Data Deliverable (EDD) in Microsoft Excel format. Initial data deliverables (preliminary results) will be based on a standard, 10-business-day Turn-around Time (TAT) starting when the laboratory receives the samples, unless otherwise directed by the EPA OSC. The TAT criteria will be initiated when the sample group is received by the laboratory and continues until the data deliverable is submitted to START. The final Level IV data deliverable will be submitted by the laboratory based on a 10-business-day TAT.

START will validate the analytical data generated by the laboratory and provide an evaluation of QA/QC samples for reporting purposes. Data validation will be conducted in accordance with the EPA CLP *National Functional Guidelines for Organic Superfund Data Review (January 2017),* and the EPA CLP *National Functional Guidelines for Inorganic Superfund Data Review (January 2017)*. A summary of the data validation findings will be presented in Data Validation Summary Reports as part of the final report. The following will be evaluated to verify that the analytical data is within acceptable QA/QC tolerances:

- The completeness of the laboratory reports, verifying that required components of the report are present and that the samples indicated on the accompanying chain-of-custody are addressed in the report.
- The calibration and tuning records for the laboratory instruments used for the sample analyses.
- The results of internal standards analyses.
- The results of laboratory blank analyses.
- The results of laboratory control sample (LCS) analyses.
- The results of MS/MSD analyses.
- The results of surrogate recovery analyses.
- Compound identification and quantification accuracy.
- Laboratory precision, by reviewing the results for blind field duplicates.
- Variances from the QA/QC objectives will be addressed as part of the Data Validation Summary Reports.

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5. QUALITY ASSURANCE

Quality assurance will be conducted in accordance with the WESTON Corporate Quality Management Manual and the WESTON Programmatic Quality Assurance Project Plan (QAPP). Following receipt of the TDD from EPA, a Quality Control officer will be assigned and will monitor work conducted throughout the entire project including reviewing interim report deliverables and field audits. The START PTL will be responsible for QA/QC for the field investigation activities. The designated laboratory utilized during the investigation will be responsible for QA/QC related to the analytical work. START personnel will also collect samples to verify that laboratory QA/QC is consistent with the required standards and to validate the laboratory data received.

5.1 SAMPLE CUSTODY PROCEDURES

Because of the evidentiary nature of sample collection, the possession of samples must be traceable from the time the samples are collected until they are introduced as evidence in legal proceedings. After sample collection and identification, samples will be maintained under COC procedures. If the sample collected is to be split (laboratory QC), the sample will be allocated into similar sample containers. Sample labels completed with the same information as that on the original sample container will be attached to each of the split samples. Personnel required to package and ship coolers containing potentially hazardous material will be trained accordingly.

START personnel will prepare and complete COC forms using the SCRIBE environmental sampling data management system for all samples sent to a START-designated off-site laboratory. The COC procedures are documented and will be made available to personnel involved with the sampling. A typical COC record will be completed each time a sample or group of samples is prepared for shipment to the laboratory. The record will repeat the information on each sample label and will serve as documentation of handling during shipment. A copy of this record will remain with the shipped samples at all times, and another copy will be retained by the member of the sampling team who originally relinquished the samples. During the project and at its completion, the Data Manager will publish the SCRIBE file to SCRIBE.net to establish a permanent record of the samples collected and the data resulting in the analysis of those samples.

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Samples relinquished to the participating laboratories will be subject to the following procedures for transfer of custody and shipment:

- Samples will be accompanied by the COC record. When transferring possession of samples, the individuals relinquishing and receiving the samples will sign, date, and note the time of the sample transfer on the record. The custody record documents the transfer of sample custody from the sampler to another person or to the laboratory.

- Samples will be properly packed for shipment and dispatched to the appropriate laboratory for analysis with separate, signed custody records enclosed in each sample box or cooler. Sample shipping containers will be custody-sealed for shipment to the laboratory. The preferred procedure includes use of a custody seal wrapped across filament tape that is wrapped around the package at least twice. The custody seal will then be sealed to ensure that the only access to the package is by cutting the filament tape or breaking the seal to unwrap the tape.

- If sent by common carrier, a bill of lading or air bill will be used. Bill of lading and air-bill receipts will be retained in the project file as part of the permanent documentation of sample shipping and transfer.

SOPs 1101.01 and 1102.01 describe these procedures in more detail.

5.2 PROJECT DOCUMENTATION

Documents will be completed legibly in ink as well as by entry into field logbooks, Response Manager, or SCRIBE. Response Manager is the Enterprise Data Collection System designed to provide near real-time access to data normally collected in logbooks. Response Manager provides a standard data collection interface for modules of data normally collected by START field personnel while on-site. These modules fall into two basic categories for response and removal. The modules include Emergency Response, Reconnaissance, Facility Assessment, Shipping, Container, Materials, Calls, Household Hazardous Waste (HHW), and General/Site-Specific Data. The system provides users with a standard template for laptop/desktop/tablet PCs that will synchronize to the secure web interface using merge replication technology to provide access to collected data via the RRC-EDMS EPA Web Hub. Response Manager also includes an integrated Global Positioning System (GPS) unit with the secure PDA application, and the coordinates collected in Response Manager are automatically mapped on the RRC-EDMS interactive mapping site. GIS personnel can access this data to provide comprehensive site maps for decision-making support.

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Response Manager also includes an analytical module that is designed to give SCRIBE users the ability to synchronize the SCRIBE field data to the RRC-EDMS Web Hub. This allows analytical data managers and data validators access to data to perform reviews from anywhere with an available Internet connection. The analytical module is designed to take the analytical data management functionality of the EPA SCRIBE software and make it available for multiple users to access on one site. Response Manager also supports EPA standards such as SEDD and will allow users to connect to the database using the SCRIBE desktop interface, thus providing normal SCRIBE desktop-like functionality for multiple users.

5.3 FIELD DOCUMENTATION

The following field documentation will be maintained as described below.

Field Logbook

The field logbook is a descriptive notebook detailing site activities and observations so that an accurate, factual account of field procedures may be reconstructed. Each individual will sign any entry he/she makes. Entries will include, at a minimum, the following:

- Site name and project number.
- Names of on-site personnel.
- Dates and times of all entries.
- Description of all site activities, including site entry and exit times.
- Noteworthy events and discussions.
- Weather conditions.
- Site observations.
- Identification and description of samples and locations.
- Subcontractor information and names of on-site personnel.
- Dates and times of sample collections and chain-of-custody information.
- Records of photographs.
- Site sketches.
- Calibration results.
- Sample Labels.

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Sample labels will be securely affixed to the sample container. The labels will clearly identify the particular sample and will include the following information:

- Site name and project number.
- Date and time the sample was collected.
- Sample preservation method.
- Analysis requested.
- Sampling location.
- Chain-of-Custody Record

A chain-of-custody will be maintained from the time of sample collection until final deposition. Every transfer of custody will be noted and signed for and a copy of each record will be kept by the signing individual. The chain-of-custody is discussed in Subsection 5.1 Sample Custody Procedures.

Custody Seal

Custody seals demonstrate that a sample container has not been tampered with or opened. The individual who has custody of the samples will sign and date the seal and affix it to the container in such a manner that it cannot be opened without breaking the seal.

Photographic Documentation

START personnel will take photographs to document site conditions and activities as work progresses. Initial conditions should be well documented by photographing features that define the site-related contamination or special working conditions. Representative photographs should be taken of each type of site activity. The photographs should show typical operations and operating conditions as well as special situations and conditions that may arise during site activities. Site final conditions should also be documented as a record of how the site appeared at completion of the work.

Photographs should be taken with either a film camera or digital camera capable of recording the date on the image. Each photograph will be recorded in the logbook and within Response Manager with the location of the photographer, direction the photograph was taken, the subject of the photograph, and its significance (i.e., why the picture was taken). Where appropriate, the

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photograph location, direction, and subject will also be shown on a site sketch and recorded within Response Manager.

5.4 RESPONSE MANAGER

START will use the Response Manager module located on the EPA Web Hub, https://solutions.westonproject.net/epawebhub/, to collect and organize the data collected from project activities. The information to be included encompasses some or all of the following depending on the specific project needs:

- General Module – Site-specific data including location and type of site. It also includes an area for all key site locations including geo-spatial data associated with the key site locations.
- Emergency Response Module – includes the following sub-modules: Basic Info, HAZMAT, Release, Timeline Log, Incident Zones, Photos, Sensitive Receptors, Evacuations, Source, Cause, and Weather.
- Reconnaissance Module – provides standard templates with the flexibility of adding any additional questions of values to the drop-down lists for targeted reconnaissance efforts. Typically the data in this module is associated with ESF-10 deployments and the cleanup of orphaned containers and hazardous debris, but the module can be utilized for any and all reconnaissance activities.
- Facility Assessment Module - provides standard templates with the flexibility of adding any additional questions of values to the drop-down lists for assessments of structures. Typically utilized for EPA-regulated program facilities during an ESF-10 deployment of resources. This module can be utilized to track the assessment of any facilities including multiple assessments of the fixed facilities.
- Shipping Module – provides standard templates for creating a cradle-to-grave record of all waste shipments from the site until they are recycled or destroyed. This includes the ability to capture manifest and manifest line items, and upload photos/original documents to support the records.
- Container Module – provides standard templates for cataloging containers including HAZCAT and Layer information in each container. The module also allows for tracking which containers are bulked.
- Properties Module – provides standard templates with the flexibility of adding any additional questions of values to the drop-down lists for collection of property data including access agreements and assessments of the property and current status of property with regard to the site removal action.
- Materials Module – provides standard templates for tracking materials that are brought on-site or that are removed from the site.

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- Daily Reports – provides standard templates for tracking daily site activities, daily site personnel, and daily site notes for reporting back to the OSC in a POLREP or SITREP.
- HHW Module - provides standard templates with the flexibility of adding any additional questions of values to the drop-down lists for tracking the amount of HHW collected at individual collection stations by HHW type.
- Data Files – data files can be uploaded in the photo module section and be associated with individual records or with the site in general. The metadata associated with that data file can be filled in using the photo log fields.

The data stored in the Response Manager database can be viewed and edited by any individual with access rights to those functions. At any time deemed necessary, POLREP and/or SITREPs can be generated by exporting the data out of Response Manager into Microsoft Excel/Word. The database is stored on a secure server and backed up regularly.

5.5 REPORT PREPARATION

At the completion of the project, START personnel will review and validate laboratory data and prepare a draft report of field activities and analytical results for EPA OSC review. Draft deliverable documents will be uploaded to the EPA TeamLink website for EPA OSC review and comment.

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APPENDIX A

SITE-SPECIFIC DATA QUALITY OBJECTIVE

Appendix A

Site-Specific Data Quality Objective
Frank J. Doyle Site
Media of Concern – Soil

STEP 1. STATE THE PROBLEM	
Former site operations associated with the Frank J. Doyle Site, primarily improper transformer recycling, resulted in site-related contaminated soil that was identified as a risk to human health and the environment. The documented contaminants of concern (COCs) include Polychlorinated Biphenyls (PCBs), Semi-Volatile Organic Compounds (SVOCs) and Target Analyte List Metals and Mercury. Assessment soil samples will be collected from both on-site and off-site locations (to the north, south, east, and west of the site) to determine the nature and extent of site-related contamination south of the site. Analytical results will be compared to site-specific action levels as presented in Appendix A of the QASP.	
STEP 2. IDENTIFY THE DECISION	
Are the concentrations of constituents of concern in soils, represented by a sample, above specified action levels?	
IDENTIFY THE ALTERNATIVE ACTIONS THAT MAY BE TAKEN BASED ON THE DECISIONS.	• If any contaminant exceeds the specified action levels or screening levels in soils, the soil represented by that sample will be considered contaminated and will require additional attention. • If no contaminants exceed the specified action levels or screening levels in soils, the soil represented by that sample will not require additional attention.
STEP 3. IDENTIFY INPUTS TO THE DECISION	
IDENTIFY THE INFORMATIONAL INPUTS NEEDED TO RESOLVE A DECISION.	• Concentrations of contaminants in soil samples collected during sampling.
IDENTIFY THE SOURCES FOR EACH INFORMATIONAL INPUT AND LIST THE INPUTS THAT ARE OBTAINED THROUGH ENVIRONMENTAL MEASUREMENTS.	• Soil samples will be collected at locations identified by the EPA within an area, at maximum, of a 50-foot by 50-foot sampling grid. • Analytical results obtained from the laboratory following SW-846 Methods 6010B/6020/7471A (TAL Metals and Mercury), 8082A (PCBs), and 8270-SIMs/8270 Low-Level (SVOCs/PAHs).
BASIS FOR THE CONTAMINANT SPECIFIC ACTION LEVELS.	• Analytical results will be compared to the minimum EPA Residential Soil Carcinogenic and Non-carcinogenic (THQ=1.0 and THQ=0.1) 2017 Regional Screening Levels (RSLs) for TAL Metals, PCBs, SVOCs/PAHs (Appendix C).
IDENTIFY POTENTIAL SAMPLING TECHNIQUES AND APPROPRIATE ANALYTICAL METHODS.	• Soil sampling techniques are described in the Quality Assurance Sampling Plan (QASP). The analytical methods to be performed on samples are as follows: TAL Metals – 6010B/6020/7471A, SVOCs/PAHs – Method 8270-SIMs, PCBs – Method 8082A.

Appendix A

Site-Specific Data Quality Objective
Frank J. Doyle Site
Media of Concern - Soil
(Continued)

STEP 4. DEFINE THE BOUNDARIES OF THE STUDY	
DEFINE THE DOMAIN OR GEOGRAPHIC AREA WITHIN WHICH ALL DECISIONS MUST APPLY.	The soils in the sampled grids within the Study Area, illustrated in Figure 3-1 (Sample Location Map).
SPECIFY THE CHARACTERISTICS THAT DEFINE THE POPULATION OF INTEREST.	Contaminant concentrations in soils.
DEFINE THE SCALE OF DECISION MAKING.	The scale of decision will be for soil represented by each sample collected from the study area.
DETERMINE THE TIME FRAME TO WHICH THE DATA APPLY.	The data will apply until the soil represented by the sample receives appropriate response actions.
DETERMINE WHEN TO COLLECT DATA.	Samples will be collected during the Removal Assessment planned during April-May 2018.
IDENTIFY PRACTICAL CONSTRAINTS ON DATA COLLECTION.	• Inclement weather. • Site access not attainable. • Foundation or structure covering sample locations. • Debris in soils.
STEP 5. DEVELOP A DECISION RULE	
SPECIFY THE PARAMETER THAT CHARACTERIZES THE POPULATION OF INTEREST.	Removal assessment soil samples will be compared to the site action levels (Appendix C).
SPECIFY THE ACTION LEVEL FOR THE DECISION.	Analytical results will be compared to the minimum EPA Residential Soil Carcinogenic and Non-carcinogenic (THQ=1.0 and THQ=0.1) 2017 Regional Screening Levels (RSLs).
DEVELOP A DECISION RULE.	If any result in a soil sample is above the site-specific action level, then the soil represented by that sample will require additional attention; otherwise, the soil does not require additional attention.

Appendix A

Site-Specific Data Quality Objective
Frank J. Doyle Site
Media of Concern - Soil
(Continued)

STEP 6. SPECIFY LIMITS ON DECISION ERRORS	
DETERMINE THE POSSIBLE RANGE OF THE PARAMETER OF INTEREST.	Contaminant concentrations may range from 0 mg/kg to more than the RSL and/ or site-specific action level.
DEFINE BOTH TYPES OF DECISION ERRORS AND IDENTIFY THE POTENTIAL CONSEQUENCES OF EACH.	Type I Error: Deciding that the specified area represented by the soil sample does not exceed the specified action level when, in truth, the soil concentration of the contaminant exceeds its specified action level. The consequence of this decision error is that contaminated soil will remain on-site, possibly endangering human health and the environment. There may also be potential future liability associated with clean-up costs of leaving contaminated soil on-site. This decision error is more severe. Type II Error: Deciding that the specified area represented by the soil sample does exceed the specified action level when, in truth, it does not. The consequences of this decision error are that remediation of the specified area will continue and unnecessary costs will be incurred.
ESTABLISH THE TRUE STATE OF NATURE FOR EACH DECISION RULE.	The true state of nature when the soil is decided to be below the specified action levels when in fact, it is not below the specified action levels, is that the area may need remedial action. The true state of nature when the soil is decided to be above the specified action levels when in fact, it is not above the specified action levels, is that the area may not need remedial action.
DEFINE THE TRUE STATE OF NATURE FOR THE MORE SEVERE DECISION ERROR AS THE BASELINE CONDITION OR THE NULL HYPOTHESIS (H_o) AND DEFINE THE TRUE STATE FOR THE LESS SEVERE DECISION ERROR AS THE ALTERNATIVE HYPOTHESIS (H_a).	H_o: The soil represented by the soil sample of the specified area is above the specified action level. H_a: The soil represented by the soil sample of the specified area is below the specified action level.
ASSIGN THE TERMS "FALSE POSITIVE" AND "FALSE NEGATIVE" TO THE PROPER DECISION ERRORS.	• False Positive Error = Type I • False Negative Error = Type II
ASSIGN PROBABILITY VALUES TO POINTS ABOVE AND BELOW THE ACTION LEVEL THAT REFLECT THE ACCEPTABLE PROBABILITY FOR THE OCCURRENCES OF DECISION ERRORS.	The assignment of probability values is not applicable to this DQO because a non-probabilistic (judgement-based) process has been specified.

Appendix A

Site-Specific Data Quality Objective
Frank J. Doyle Site
Media of Concern - Soil
(Continued)

STEP 7. OPTIMIZE THE DESIGN	
REVIEW THE DQO	The sample size was based on a maximum 50-foot by 50-foot grid, if possible, for areas with a high potential for exposure. In order to select the optimal sampling program that satisfies the DQO and is the most resource effective, other elements were considered.
DEVELOP GENERAL SAMPLING AND ANALYSIS DESIGN. Approximately 360 removal assessment soil samples (including QA/QC samples) will be collected from approximately 98 on and off-site grids to determine the nature and extent of site-related contaminated soil from 0-1 inches, 1-6 inches, and 6-12 inches. A portion of the grids (as directed by EPA OSC) will also have samples collected from 12-24 inches and 24-36 inches bgs. The samples will be analyzed for EPA SW-846 Methods 8082A, 6010B/6020/7471A, and 8270-SIMs/8270 Low-Level. Samples will be collected utilizing sampling procedures described in Section 3.0 of the QASP. A standard turnaround time (TAT) has been requested for the samples as part of the removal assessment.	

APPENDIX B

STANDARD OPERATING PROCEDURES

SOP	**1001.01**				
GROUP	Sampling Procedures				
SUB-GROUP	Soil Sampling Procedures				
TITLE	Surface Soil Sampling				
DATE	11/19/2001	**FILE**	1001-01.DOC	**PAGE**	1 of 3

INTRODUCTION

The following Standard Operating Procedure (SOP) is to describe the procedures for collecting representative soil samples. Analysis of soil samples may determine whether concentrations of specific soil pollutants exceed established action levels, or if the concentrations of soil pollutants present a risk to public health, welfare, or the environment. This SOP is similar to SOP Number 1001.03 for collecting near surface soil samples with a hand auger.

PROCEDURE

Surface soil samples may be collected using a variety of methods and equipment. The methods and equipment used are dependent on the depth of the desired sample, the type of sample required (disturbed versus undisturbed), and the type of soil. Near-surface soils may be easily sampled using a spade, trowel, or hand scoop.

Sample Preservation

Cooling to 4°C ± 2°C, supplemented by a minimal holding time, is suggested.

Interferences and Potential Problems

There are two primary interferences or potential problems associated with soil sampling: cross-contamination of samples and improper sample collection. Cross-contamination problems can be eliminated or minimized through the use of dedicated (disposable) sampling equipment. If this is not possible or practical, then decontamination of sampling equipment is necessary. Improper sample collection can involve using contaminated equipment, disturbance of the matrix resulting in compaction of the sample, or inadequate homogenization of the samples where required, resulting in variable, non-representative results. Homogenization may also affect sample representativeness where the analytical requirements include volatile organic compounds.

Equipment or Apparatus

The equipment used for sampling may be selected from the following list, as appropriate:

- ∞ Tape measure
- ∞ Survey stakes or flags
- ∞ Stainless steel, plastic, or other appropriate homogenization bucket or bowl
- ∞ Ziploc plastic bags
- ∞ Logbook
- ∞ Labels
- ∞ Chain-of-custody forms and seals
- ∞ Coolers
- ∞ Ice
- ∞ Decontamination supplies and equipment
- ∞ Canvas or plastic sheet
- ∞ Spatulas/spades/shovels
- ∞ Scoops

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- ∞ Plastic or stainless steel spoons
- ∞ Trowel

Preparation

1. Determine the extent of the sampling effort, the sampling methods to be employed, and what equipment and supplies are required.
2. Obtain necessary sampling and monitoring equipment from the list above.
3. Prepare schedules, and coordinate with staff, client, and regulatory agencies, if appropriate.
4. Perform a general site survey prior to site entry in accordance with the site-specific health and safety plan.
5. Decontaminate or preclean equipment, and ensure that it is in working order.
6. Use stakes, buoys, or flagging to identify and mark all sampling locations. Consider specific site factors, including extent and nature of contaminant, when selecting sample locations. If required, the proposed locations may be adjusted based on site access, property boundaries, and surface obstructions. All staked locations will be utility-cleared by the property owner or other responsible party prior to soil sampling.
7. Evaluate safety concerns associated with sampling that may require use of personal protective equipment and/or air monitoring.

Surface Soil Sample Collection

Collect samples from the near-surface soil with tools such as spades, shovels, and scoops. Surface material can be removed to the required depth with this equipment, then a stainless steel or plastic scoop can be used to collect the sample. The use of a flat, pointed mason trowel to cut a block of the desired soil can be helpful when undisturbed profiles are required. A stainless steel scoop, lab spoon, or plastic spoon will suffice in most other applications. Avoid the use of devices plated with chrome or other target analyte materials.

The following procedures should be followed when collecting surface soil samples:

1. Carefully remove the top layer of soil or debris to the desired sample depth with a pre-cleaned spade.
2. Using a pre-cleaned, stainless steel scoop, plastic spoon, or trowel, remove and discard a thin layer of soil from the area which came in contact with the spade.
3. If volatile organic analysis is to be performed, transfer a portion of the sample directly into an appropriate, labeled sample container(s) with a stainless steel lab spoon, plastic lab spoon, or equivalent and secure the cap(s) tightly. Place the remainder of the sample into a stainless steel, plastic, or other appropriate homogenization container, and mix thoroughly to obtain a homogenous sample representative of the entire sampling interval. Then, either place the sample into an appropriate, labeled container(s) and secure the cap(s) tightly; or if composite samples are to be collected, place a sample from another sampling interval into the

homogenization container and mix thoroughly. When compositing is complete, place the sample into appropriate, labeled container(s) and secure the cap(s) tightly.

4. Fill hole created through sampling with unused material or other appropriate backfill material (sand).

5. Record applicable information into field log book or appropriate forms as documentation of sampling.

SOP	**1001.10**				
GROUP	Soil Sampling Procedures				
SUB-GROUP					
TITLE	Soil Compositing				
DATE	2/23/2010	**FILE**	1001-10.DOC	**PAGE**	1 of 2

INTRODUCTION

The following Standard Operating Procedure (SOP) describes the procedure for compositing soil samples. Soil samples are typically collected for laboratory analysis, and sometimes it is necessary to composite (mix together) samples from several locations for one combined analysis at the laboratory. This soil sampling procedure is closely related to SOP Nos. 1001.01, 1001.03, and 1001.10 regarding soil sampling procedures. This procedure serves as an alternative method of sample preparation prior to placing the samples in containers, as described in the other named SOPs.

PROCEDURE

Equipment

Equipment that may be used as part of the soil compositing procedure is identified under SOP Nos. 1001.01 and 1001.03 where soil sampling methods are described. Specific equipment typically used during the compositing process after discrete samples are collected includes:

- Mixing bowls or buckets
- Scoops, spatulas, and knives
- Sample containers
- Personal protection clothing
- Plastic Sheeting
- Decontamination equipment and supplies

Method

The procedure to be used to physically collect soil samples are described in SOP Nos. 1001.01 and 1001.03. Reference should be made to these SOPs for specific sampling equipment, procedures, and other general guidelines. As soil samples are collected, the site-specific Sampling and Analysis Plan may required compositing (mixing together) of two or more samples to create a single sample that will be sent to the laboratory for analysis. When this is the case, the following compositing procedure will generally be used:

- The soil will be collected in general accordance with SOP 1001.01 or 1001.03, with the exception that samples from discrete locations will generally not be immediately placed into sample containers and an additional preparation step (i.e., compositing) will be performed.

- As they are collected, soil samples selected for compositing will be staged in a clean mixing bowl or mixing bucket until each sample to be included in the composite sample is obtained. Depending on site requirements and analytical procedures to be requested, it may be necessary to temporarily stage individual discrete-location samples within clean sample jars, aluminum foil, or other appropriate materials for the project. The method for sample staging should be specified in the site-specific sampling and analysis plan.

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- For composite samples that will be analyzed for volatile organic compounds, an equal portion of soil will be removed directly from each discrete-location sample and placed into a final sample jar without homogenizing the soil.

- For analyses other than volatile organics, equal portions of soil will be removed from each discrete-location sample and placed in a clean mixing bowl. The equal portions of the samples will then be broken up and homogenized together using a scoop or spatula. Homogenization will generally continue until the discrete samples being combined are reasonably indistinquishable as indivual individual samples in the soil mixture. However, it is recognized that homogenization can be difficult for highly plastic clays. In this case, equal amounts of the the soil core of each clay sample will be cut into small, roughly cubical pieces using a stainless steel knife, and an equal numbers of pieces of each discrete sample will be placed into the bowl and homogenized to extent practical.

- The composited soil sample will be collected from the mixing bowl containing the individual homogenized samples after homogenization is performed. The composited sample will be collected using a stainless steel or disposable plastic scoop or similar tool. The sample will be placed in a clean sample container and then handled in accordance with soil sampling SOPs 1001.01 and 1001.03.

Variations on this procedure are allowable to accomodate different soil conditions and any site requirements specifically identified in the site-specific Sampling and Analysis Plan.

The number of discrete samples that may be composited into a single sample typically ranges from two to six. The number of discrete samples that may be composited for the project in question will be specified in the site-specific Sampling and Analysis Plan.

REFERENCES

SOP No. 1001.01 - Standard Operating Procedure, Surface Soil Sampling
SOP No. 1001.03 - Standard Operating Procedure, Shallow Subsurface and Near Surface Soil Sampling

SOP	**1005.01**				
GROUP	Sampling Procedures				
SUB-GROUP	Field QA/QC Sampling				
TITLE	Field Duplicate Collection				
DATE	4/27/2005	**FILE**	1005-01.DOC	**PAGE**	1 of 2

INTRODUCTION

The following Standard Operating Procedure (SOP) describes the procedure for collecting field duplicate soil and water samples. When samples are collected for analysis, it is typically desired that independent data allowing evaluation of laboratory precision (i.e., the degree to which a laboratory result can be repeated) on site-specific samples be collected.

A field duplicate sample is a second sample collected at the same location as the original sample. Duplicate samples are collected simultaneously or in immediate succession, using identical recovery techniques, and treated in an identical manner during storage, transportation, and analysis. The sample containers are assigned an identification number in the field such that they cannot be identified (blind duplicate) as duplicated samples by laboratory personnel performing the analysis. Specific locations are designated for collection of field duplicate samples prior to the beginning of sample collection.

The duplicate soil sampling procedure is closely related to SOP Nos. 1001.01, 1001.03, and 1001.10 regarding soil sampling procedures. This procedure serves as an alternative method or extension of sample preparation prior to placing the samples in containers, as described in the 1001 series of the SOPs (e.g. 1001.01 and 1001.03).

DUPLICATE SOIL SAMPLING PROCEDURE

The procedure to be used to physically collect soil samples are described in SOP Nos. 1001.01 and 1001.03. Reference should be made to these SOPs for specific sampling equipment, procedures, and other general guidelines. As soil is collected, the following procedure will be used to prepare a field duplicate sample:

- The soil will be collected in general accordance with SOP 1001.01 or 1001.03, with the exception that samples will generally not be immediately placed into sample containers and an additional preparation step (i.e., sample splitting) will be performed.

- As they are collected, soil samples to be submitted as field duplicates will be staged in a clean mixing bowl or mixing bucket.

- For samples that will be analyzed for volatile organic compounds, the soil sample will be split in half and an equal portion of soil will be placed directly into two or more different sample containers, each container representing a different sample for laboratory analysis. The soil will not be homogenized to minimize the potential for volatilization of the organic compounds potentially in the sample.

- For analyses of chemicals other than volatile organic compounds, the soil removed from the discrete sample location will be homogenized in a clean mixing bowl using a clean scoop or spatula (as described in SOPs 1001.01 and 1001.03). Homogenization will generally continue until the discrete samples being combined are reasonably indistinguishable as individual samples in the soil mixture. However, it is recognized that homogenization can be difficult for highly plastic clays. In this case, equal amounts of the soil core of each clay sample will be cut into small, roughly cubical pieces using a stainless steel knife and placed into a bowl and homogenized to extent practical.

- The field duplicate sample (except for volatiles as note above) will be collected from the mixing bowl containing the homogenized samples after homogenization is performed. The composited sample will be collected using a stainless steel or disposable plastic scoop or similar tool. The sample will be placed in a clean sample container and then handled in accordance with soil sampling SOPs 1001.01 and 1001.03.

Another difference from the referenced SOPs is that additional soil volume may need to be collected from a discrete sample location during the sampling process to provide sufficient sample volume for two or more sets of laboratory analyses. If the collection of additional sample volume will result in the sample interval expanding to greater depths or laterally outward, the sampling tools identified in 1001 series of the SOPs can be used at two immediately vertically or laterally adjacent locations, as appropriate. If sampling from two adjacent but distinct locations is necessary to obtain adequate sample volume, the soil from the two locations should be composited in accordance with SOP 1001.10. Field duplicates of composited samples may also be performed using this SOP for field duplicate samples.

Variations on this procedure are allowable to accommodate different soil conditions and any site requirements specifically identified in the site-specific Sampling and Analysis Plan. Equipment that may be used as part of the soil compositing procedure is identified under SOP Nos. 1001.01 and 1001.03 where soil sampling methods are described.

DUPLICATE WATER SAMPLING PROCEDURES

The procedure to be used to physically collect water samples are described in 1002 series of the SOPs (e.g. 1002.01 and 1002.02). Reference should be made to these SOPs for specific sampling equipment, procedures, and other general guidelines. A duplicate water sample will be collected from the same location as the parent sample and within 15 minutes of the collection of the parent sample.

The number of samples that may be submitted as blind field duplicates for the project in question will be specified in the site-specific sampling plan. Blind field duplicates are typically collected at a frequency of 1 per 10 samples of a given environmental media at sites, especially where laboratory analytical data will be used for evaluating regulatory compliance and other engineering judgments. Sampling in support of a routine monitoring program may not require field duplicates. Reference should be made to the site-specific contract and work plans.

REFERENCES

SOP No. 1001.01 - Standard Operating Procedure, Surface Soil Sampling
SOP No. 1001.03 - Standard Operating Procedure, Soil Sampling - Hand Auger Method
SOP No. 1001.10 - Standard Operating Procedure, Soil Compositing

SOP	**1005.02**				
GROUP	Sampling Procedures				
SUB-GROUP	Field QA/QC Sampling				
TITLE	Rinse Blank Preparation				
DATE	2/6/2009	**FILE**	1005-02.DOC	**PAGE**	1 of 1

INTRODUCTION

The following Standard Operating Procedure (SOP) presents a method to prepare a type of quality control sample specific to the field decontamination process, the equipment rinse blank. The rinse blank provides information on the effectiveness of the decontamination process employed in the field. When used in conjunction with field blanks and trip blanks, the rinse blank can be used to assist in evaluating possible compromise of samples from field related activities.

PROCEDURE

The equipment rinse blank is prepared by passing target analyte-free (i.e., deionized) water over and through a field decontaminated sampling device, then collecting the rinse water in appropriate clean sample containers. Rinse blanks will typically be collected from equipment that comes in contact with samples, such as auger buckets, split spoons, bailers, shelby tubes, and stainless steel spoons/trowels. The collected sample will be coded appropriately prior to logging and shipping. Equipment blanks are not required if dedicated sampling equipment is used. Equipment blanks will be collected periodically during the day immediately after decontamination of the sampling equipment being used.

The frequency for collecting equipment blanks will be determined prior to engaging in field activities, and communicated in site-specific quality assurance project plans, sampling and analyses plans, or a type of work plan. Equipment blanks will be collected at a rate relative to each type of sample collection procedure (i.e., surface sample, sample at depth using a hand auger). Equipment blanks will generally be collected at a frequency of 1 per 20 (normal) samples of a given matrix.

SOP	**1101.01**				
GROUP	Sampling Handling				
SUB-GROUP	Sample Custody				
TITLE	Sample Custody in the Field				
DATE	**11/19/2001**	**FILE**	1101-01.DOC	**PAGE**	1 of 3

INTRODUCTION

The following Standard Operating Procedure (SOP) presents procedures for maintaining sample chain of custody (COC) during activities where samples are collected.

PROCEDURE

Sample custody is defined as being under a person's custody if any of the following conditions exist:

- it is in their possession,
- it is in their view, after being in their possession,
- it was in their possession and they locked it up, or
- it is in a designated secure area.

A designated field sampler will be personally responsible for the care and custody of collected samples until they are transferred to another person or properly dispatched to the laboratory. To the extent practicable, as few people as possible will handle the samples.

Sample tags or labels will be completed and applied to the container of each sample. When the tags or labels are being completed, waterproof ink will be used. If waterproof ink is not used, the tags or labels will be covered by transparent waterproof tape. Sample containers may also be placed in Ziploc-type storage bags to help keep them clean in the cooler. Information typically included on the sample tags or labels will include the following:

- Project Code
- Station Number and Location
- Sample Identification Number
- Date and Time of Sample Collection
- Type of Laboratory Analysis Required
- Preservation Required, if applicable
- Collector's Signature
- Priority (optional)
- Other Remarks

Additonal information may include:

- Anticipated Range of Results (Low, Medium, or High)
- Sample Analysis Priority

A COC form will be completed each time a sample or group of samples is prepared for transfer to the laboratory. The form will repeat the information on each of the sample labels and will serve as documentation of handling during shipment. The minimum information requirements of the COC form are listed in Table 1101.01-A. An example COC form is shown in Figure 1101.01-A. The completed COC must be reviewed by the Field Team Leader or Site Manager prior to sample shipment. The COC form will remain each sample shipping container at all times, and another copy will be retained by the member of the sampling team who originally relinquished the samples or in a project file.

TABLE 1101.01-A CHAIN OF CUSTODY FORM

INFORMATION	COMPLETED BY	DESCRIPTION
COC	Laboratory	enter a unique number for each chain of custody form
SHIP TO	Field Team	enter the laboratory name and address
CARRIER	Field Team	enter the name of the transporter (e.g., FedEx) or handcarried
AIRBILL	Field Team	enter the airbill number or transporter tracking number (if applicable)
PROJECT NAME	Field Team	enter the project name
SAMPLER NAME	Field Team	enter the name of the person collecting the samples
SAMPLER SIGNATURE	Field Team	signature of the person collecting the samples
SEND RESULTS TO	Field Team	enter the name and address of the prime contractor
FIELD SAMPLE ID	Field Team	enter the unique identifying number given to the field sample (includes MS, MSD, field duplicate and field blanks)
DATE	Field Team	enter the year and date the sample was collected in the format M/D (e.g., 6/3)
TIME	Field Team	enter the time the sample was collected in 24 hour format (e.g., 0900)
MATRIX	Field Team	enter the sample matrix (e.g., water, soil)
PRESERVATIVE	Field Team	enter the preservative used (e.g., HNO3) or "none"
FILTERED/ UNFILTERED	Field Team	enter "F" if the sample was filtered or "U" if the sample was not filtered
CONTAINERS	Field Team	enter the number of containers associated with the sample
MS/MSD	Field Team or Laboratory	enter "X" if the sample is designated for the MS/MSD
ANALYSES REQUESTED	Field Team	enter the method name of the analysis requested (e.g., SW6010A)
COMMENTS	Field Team	enter comments
SAMPLE CONDITION UPON RECEIPT AT LABORATORY	Laboratory	enter any problems with the condition of any sample(s)
COOLER TEMPERATURE	Laboratory	enter the internal temperature of the cooler, in degrees C, upon opening
SPECIAL INSTRUCTIONS/COMMENTS	Laboratory	enter any special instructions or comments
RELEASED BY (SIG)	Field Team and Laboratory	enter the signature of the person releasing custody of the samples
COMPANY NAME	Field Team and Laboratory	enter the company name employing the person releasing/receiving custody
RECEIVED BY (SIG)	Field Team and Laboratory	enter the signature of the person receiving custody of the samples
DATE	Field Team and Laboratory	enter the date in the format M/D/YY (e.g., 6/3/96) when the samples were released/received
TIME	Field Team and Laboratory	enter the date in 24 hour format (e.g., 0900) when the samples were released/received

SOP	**1102.01**				
GROUP	Sample Handling				
SUB-GROUP	Sample Shipping				
TITLE	Sample Shipping				
DATE	11/19/2001	**FILE**	1102-01.DOC	**PAGE**	1 of 1

INTRODUCTION

The following Standard Operating Procedure (SOP) presents the procedures for sample shipping that will be implemented during field work involving sampling activities.

TERMS

COC - Chain-of-Custody

PROCEDURE

Prior to shipping or transferring custody of samples, they will be packed according to D.O.T. requirements with sufficient ice to maintain an internal temperature of 4°C ± 2°C during transport to the laboratory. Samples relinquished to the participating laboratories will be subject to the following procedures for transfer of custody and shipment:

1. Samples will be accompanied by a COC record. When transferring possession of samples, the individuals relinquishing and receiving the samples will sign, date, and note the time of the sample transfer on the record. If sent by common carrier, a bill of lading or airbill should be used. Bill of lading and airbill receipts will be retained in the project file as part of the permanent documentation of sample shipping and transfer. This custody record documents transfer of sample custody from the sampler to another person or to the laboratory. The designated laboratory will accept custody in the field upon sample pick-up or at the laboratory if the samples are delivered via field personnel or a courier service.
2. Samples will be properly packed in approved shipping containers for laboratory pick-up by the appropriate laboratory for analysis, with separate, signed custody records enclosed in each sample box or cooler. Sample shipping containers will be padlocked or custody-sealed for transfer to the laboratory. The preferred procedure includes use of a custody seal wrapped across filament tape that is wrapped around the package at least twice. The custody seal will then be folded over and stuck to itself so that the only access to the package is by cutting the filament tape or breaking the seal to unwrap the tape. The seal will then be signed. The designated laboratory will accept custody of the samples upon receipt.
3. Whenever samples are split with state representatives or other parties, the COC record will be marked to indicate with whom the samples were split.
4. The field sampler will call the designated laboratory to inform them of sample shipment and verify sample receipt as necessary.

SOP	**1201.01**				
GROUP	Decontamination				
SUB-GROUP	Sampling Equipment Decontamination				
TITLE	Sampling Equipment Decontamination				
DATE	11/19/2001	**FILE**	1201-01.DOC	**PAGE**	1 of 3

INTRODUCTION

The following Standard Operating Procedure (SOP) presents the methods used for minimizing the potential for cross-contamination, and provides general guidelines for sampling equipment decontamination procedures.

PROCEDURE

As part of the Health and Safety Plan (HASP), develop and set up a decontamination plan before any personnel or equipment enter the areas of potential exposure. The decontamination plan should include the following:

- The number, location, and layout of decontamination stations
- Which decontamination apparatus is needed
- The appropriate decontamination methods
- Methods for disposal of contaminated clothing, apparatus, and solutions

Decontamination Methods

Personnel, samples, and equipment leaving the contaminated area of a site will be decontaminated. Various decontamination methods will be used to either physically remove contaminants, inactivate contaminants by disinfection or sterilization, or both. The physical decontamination techniques appropriate for equipment decontamination can be grouped into two categories: abrasive methods and non-abrasive methods.

Abrasive Cleaning Methods

Abrasive cleaning methods work by rubbing/scrubbing the surface containing the contaminant. This method includes mechanical and wet blasting methods.

Mechanical cleaning methods use brushes of metal or nylon. The amount and type of contaminants removed will vary with the hardness of bristles, length of brushing time, and degree of brush contact.

Cleaning can also be accomplished by water blasting which is also referred to as steam cleaning and pressure washing. Pressure washing utilizes high-pressure that is sprayed from a nozzle onto sampling equipment to physically remove soil or (potentially) contaminated material. Steam cleaning is a modification of pressure washing where the water is heated to temperatures approaching 100°C to assist in removing organic constituents from equipment.

Disinfection/Rinse Methods

Disinfectants are a practical means of inactivating chemicals or contaminants of concern. Standard sterilization methods involve heating the equipment which is impractical for large equipment. Rinsing removes contaminants through dilution, physical attraction, and solubilization.

The use of distilled/deionized water commonly available from commercial vendors may be acceptable for decontamination of sampling equipment provided that it has been verified by laboratory analysis to be target analyte free. Tap water may be used from any municipal water treatment system for mixing of decontamination solutions. An untreated potable water supply is not an acceptable substitute for tap water. Acids and solvents are occasionally utilized in decontamination of equipment to remove metals and organics, respectively, from sampling equipment. Other than ethanol, these are avoided when possible due to the safety, disposal, and transportation concerns associated with them.

Equipment or apparatuses that may be selected for use include the following:

- ∞ Personal protective clothing
- ∞ Non-phosphate detergent
- ∞ Selected solvents for removal of polar and nonpolar organics (ethanol, methanol, hexane)
- ∞ Acid washes for removal of metals (nitric acid)
- ∞ Long-handled brushes
- ∞ Drop cloths or plastic sheeting
- ∞ Paper towels
- ∞ Galvanized tubs or buckets
- ∞ Distilled, deionized, or tap water (as required by the project)
- ∞ Storage containers for spent wash solutions
- ∞ Sprayers (pressurized and non-pressurized)
- ∞ Trash bags
- ∞ Safety glasses or splash shield

Field Sampling Equipment Cleaning Procedures

The following procedures should be followed:

1. Where applicable, follow physical removal procedures previously described (pressure wash, scrub wash)
2. Wash equipment with a non-phosphate detergent solution
3. Rinse with tap water
4. Rinse with distilled or deionized water
5. Rinse with 10% nitric acid if the sample will be analyzed for metals/organics
6. Rinse with distilled or deionized water
7. Use a solvent rinse (pesticide grade) if the sample will be analyzed for organics
8. Air dry the equipment completely
9. Rinse again with distilled or deionized water

10. Place in clean bag or container for storage/transport to subsequent sampling locations.

Selection of the solvent for use in the decontamination process is based on the contaminants present at the site. Solvent rinses are not necessarily required when organics are not a contaminant of concern and may be eliminated from the sequence specified below. Similarly, an acid rinse is not required if the analyses do not include inorganics. Use of a solvent is required when organic contamination is present on-site. Typical solvents used for removal of organic contaminants include acetone, ethanol, hexane, methanol, or water. An acid rinse step is required if metals are present on-site. If a particular contaminant fraction is not present at the site, the ten-step decontamination procedure listed above may be modified for site specificity.

Sampling equipment that requires the use of plastic tubing should be disassembled and the tubing replaced with clean tubing before commencement of sampling and between sampling locations. Plastic tubing should not be reused.

SOP	**1501.01**				
GROUP	Field Documentation				
SUB-GROUP					
TITLE	Field Logbook				
DATE	11/19/2001	**FILE**	1501-01.DOC	**PAGE**	1 of 3

INTRODUCTION

The following Standard Operating Procedure (SOP) presents the procedures for documenting activities observed or completed in the field in a field logbook. The documentation should represent all activities of WESTON personnel and entities under WESTON's supervision.

TERMS

FSP - Field Sampling Plan

SAP - Sampling and Analysis Plan

QAPP - Quality Assurance Project Plan

HASP - Health and Safety Plan

PROCEDURE

Field logbooks will be used and maintained during field activities to document pertinent information observed or completed by WESTON personnel or entities that WESTON is responsible for providing oversight. Field logbooks are legal documents that form the basis for later written reports and may serve as evidence in legal proceedings. The Site Manager or Field Team Leader will review field log entries daily and initial each page of entries. Field logbooks will be maintained by the Site Manager or Field Team Leader during field activities and transferred to the project files for a record of activities at the conclusion of the project. General logbook entry procedures are listed below.

- Logbooks must be permanently bound with all pages numbered to the end of the book. Entries should begin on page 1.
- Only use blue or black ink (waterproof) for logbook entries.
- Sign entries at the end of the day, or before someone else writes in the logbook.
- If a complete page is not used, draw a line diagonally across the blank portion of the page and initial and date the bottom line.
- If a line on the page is not completely filled, draw a horizontal line through the blank portion.
- Ensure that the logbook clearly shows the sequence of the day's events.
- Do not write in the margins or between written lines, and do not leave blank pages to fill in later.
- If an error is made, make corrections by drawing a single line through the error and initialing it.
- Maintain control of the logbook and keep in a secure location.

Field logbooks will contain, at a minimum, the following information, if applicable:

General Information

- Name, location of site, and work order number
- Name of the Site Manager or Field Team Leader
- Names and responsibilities of all field team members using the logbook (or involved with activities for which entries are being made)
- Weather conditions
- Field observations
- Names of any site visitors including entities that they represent

Sample Collection Activities

- Date(s) and times of the sample collection or event.
- Number and types of collected samples.
- Sample location with an emphasis on any changes to documentation in governing documents (i.e., SAP, FSP). This may include measurements from reference points or sketches of sample locations with respect to local features.
- Sample identification numbers, including any applicable cross-references to split samples or samples collected by another entity.
- A description of sampling methodology, or reference to any governing document (i.e., FSP, SAP, QAPP).
- Summary of equipment preparation and decontamination procedures.
- Sample description including depth, color, texture, moisture content, and evidence of waste material or staining.
- Air monitoring (field screening) results.
- Types of laboratory analyses requested.

Site Health and Safety Activities

- All safety, accident, and/or incident reports.

- Real-time personnel air monitoring results, if applicable, or if not documented in the HASP.
- Heat/cold stress monitoring data, if applicable.
- Reasons for upgrades or downgrades in personal protective equipment.
- Health and safety inspections, checklists (drilling safety guide), meetings/briefings.
- Calibration records for field instruments.

Oversight Activities

- Progress and activities performed by contractors including operating times.
- Deviations of contractor activities with respect to project governing documents (i.e., specifications).
- Contractor sampling results and disposition of contingent soil materials/stockpiles.
- Excavation specifications and locations of contractor confirmation samples.
- General site housekeeping and safety issues by site contractors.

SOP	**1502.01**				
GROUP	Field Documentation				
SUB-GROUP					
TITLE	Photograph Logs				
DATE	11/19/2001	**FILE**	1502-01.DOC	**PAGE**	1 of 1

INTRODUCTION

The following Standard Operating Procedure (SOP) presents the requirements for collecting information related to photodocumentation of site activities.

PROCEDURE

- Uniquely number each roll of film obtained for use.
- Record the following information for each negative exposed:
    1. Date and Time
    2. Photographer Name
    3. Witness Name
    4. Orientation (Landscape, Portrait, or Panaoramic)
    5. Description (including activity being performed, specific equipment of interest, sample location(s), compass direction photographer is facing)
- Record "NA" for the negatives not used if the roll is not completely used prior to development.
- Record unique roll number on receipt when film is submitted for development.
- Verify descriptions on log with negative numbers when photographs are received from processing.

FORMS

Blank Photograph Logs can be printed from WESTON On-Line from the *Records Management Application.* Selecting the *Reports/Project Planning/Blank Photo Logs* menu option will generate a project specific log with 36 entries.

INTRODUCTION

The following Standard Operating Procedure (SOP) presents the sample nomenclature for analytical samples that will generate unique sample names compatible with most data management systems. The sample nomenclature is based upon specific requirements for the reporting of these results. A site specific data management plan should be prepared prior to sample collection.

PROCEDURE

SAMPLE NOMENCLATURE – SOIL AND SEDIMENT

Area of Concern – ID – Depth - Collection Type + QC Type

Where:

Area of Concern: A four-digit identifier used to designate the particular Area of Concern (AOC) that the location where the sample was collected.

ID: A three-digit identifier used to designate the particular location in the AOC from which the sample was collected or the center of the composite sample.

Depth: A two-digit code used to designate what depth of sample was collected:

03	0 to 3 inches
06	3 to 6 inches
12	6 to 12 inches

Collection Type: A one-digit code used to designate what type of sample was collected:

1	Surface Water
2	Ground Water
3	Leachate
4	Field QC/water sample
5	Soil/Sediment

6	Oil
7	Waste
8	Other
9	Drinking Water

QC Type: A one-digit code used to designate the QC type of the sample:

1	Normal
2	Duplicate
3	Rinsate Blank
4	Trip Blank
5	Field Blank
6	Confirmation

Examples:

- ***2054-055-06-51:*** Represents the normal soil sample collected from AOC 2054 at location 055 from 3 to 6 inches of depth.
- ***2054-055-06-52***: Represents the duplicate soil sample collected from AOC 2054 at location 055 from 3 to 6 inches of depth.
- ***2054-055-06-43***: Represents the rinsate water sample collected after the last sample of the day if last sample was collected from AOC 2054 at location 055 from 3 to 6 inches of depth.

SAMPLE NOMENCLATURE – WATER (from fixed station or location to be sampled more than once)

WELL OR STATION – YYYYMMDD - Collection Type + QC Type

Where:

Well or Station: For Wells and boreholes always assume there will be 10 or more so Monitoring Well 1 becomes designated MW01 or MW-01. If it is anticipated that there will be over 100 wells designate Monitoring Well 1 as MW001 or MW-001.

YYYYMMDD: A four-digit year + two-digit month + two-digit day

Collection Type: A one-digit code used to designate what type of sample was collected and are shown on page 1.

QC Type: A one-digit code used to designate the QC type of the sample and are shown on page 1.

Examples:

- ***MW01-20090226-21:*** Represents the normal groundwater sample collected from Monitoring Well 1 on 26 February 2009.
- ***MW01-20090226-44:*** Represents the trip blank in the same ice chest as the groundwater sample in the previous collected from Monitor Well 1 on 02/26/2009. All trip blanks must have a sample ID and they must be unique and on the Chain-of -Custody.
- ***2054-000-00-43:*** Represents the rinsate sample from AOC 2054

SOP	0110.05				
GROUP	Database Management System				
SUB-GROUP	Data Collection and Acquisition				
TITLE	Sample Nomenclature				
DATE	04/01/2010	FILE	0110.05.docx	PAGE	1 of 2

INTRODUCTION

The following Standard Operating Procedure (SOP) presents the sample nomenclature for analytical samples that will generate unique sample names compatible with most data management systems. The sample nomenclature is based upon specific requirements for the reporting of these results. A site specific data management plan should be prepared prior to sample collection.

PROCEDURE

SAMPLE NOMENCLATURE – SOIL AND SEDIMENT

Area of Concern – ID – Depth - Collection Type + QC Type

Where:

Area of Concern: A four-digit identifier used to designate the particular Area of Concern (AOC) that the location where the sample was collected.

ID: A three letter &/or digit identifier used to designate the particular location (i.e. grid A01, P06, or 055) in the AOC from which the sample was collected or the center of the composite sample.

Depth: A two-digit code used to designate what depth of sample was collected:

code	Assessment	Confirmation
00	0 to 0 Surface	N/A
03	0 to 3 inches	3 inches below original ground surface
06	3 to 6 inches	6 inches below original ground surface
12	6 to 12 inches	12 inches below original ground surface

Collection Type: A one-digit code used to designate what type of sample was collected:

1	Surface Water
2	Ground Water
3	Leachate
4	Field QC/water sample
5	Soil/Sediment

6	Oil
7	Waste
8	Other
9	Drinking Water

QC Type: A one-digit code used to designate the QC type of the sample:

1	Normal
2	Duplicate
3	Rinsate Blank
4	Trip Blank
5	Field Blank
6	Confirmation, Normal
7	Confirmation, Duplicate

Examples:

- ***2054-055-06-51:*** Represents the normal soil sample collected from AOC 2054 at location 055 from 3 to 6 inches of depth.
- ***2054-055-06-52***: Represents the duplicate soil sample collected from AOC 2054 at location 055 from 3 to 6 inches of depth.

- ***2054-000-00-43:*** Represents the rinsate sample from AOC 2054

- ***2054-055-06-56***: Represents the normal soil sample collected from AOC 2054 at location 055 after 6 inches of material has been removed as the confirmation sample during removal.

  NOTE: The depth is in relation to the original ground surface.

- ***2054-055-06-43***: Represents the rinsate water sample collected after the last sample of the day if last sample was collected from AOC 2054 at location 055 from 3 to 6 inches of depth.

SAMPLE NOMENCLATURE – WATER (from fixed station or location to be sampled more than once)

WELL OR STATION – YYYYMMDD - Collection Type + QC Type

Where:

Well or Station: For Wells and boreholes always assume there will be 10 or more so Monitoring Well 1 becomes designated MW01 or MW-01. If it is anticipated that there will be over 100 wells designate Monitoring Well 1 as MW001 or MW-001.

YYYYMMDD: A four-digit year + two-digit month + two-digit day

Collection Type: A one-digit code used to designate what type of sample was collected and are shown on page 1.

QC Type: A one-digit code used to designate the QC type of the sample and are shown on page 1.

Examples:

- ***MW01-20090226-21:*** Represents the normal groundwater sample collected from Monitoring Well 1 on 26 February 2009.

- ***MW01-20090226-44:*** Represents the trip blank in the same ice chest as the groundwater sample in the previous collected from Monitor Well 1 on 02/26/2009. All trip blanks must have a sample ID and they must be unique and on the Chain-of -Custody.

OSWER 9240.0-44
EPA 540-R-07-06

FINAL July 2007

Office of Superfund Remediation and Technology Innovation

Contract Laboratory Program Guidance for Field Samplers

Disclaimer: The final version of the document replaces any prior versions of the document in their entirety.

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Foreword

The intent of the Contract Laboratory Program (CLP) Guidance for Field Samplers is to replace the CLP Samplers Guide. This guidance document is designed to provide users with general information regarding environmental sample collection for the United States Environmental Protection Agency's (USEPA) Contract Laboratory Program (CLP). This document provides minimum CLP requirements, an explanation of the general sampling process sequence of events, and any related information. The appendices contain useful reference information and checklists to aid in planning and documenting sampling activities.

CLP users also are encouraged to review the Introduction to the Contract Laboratory Program document that contains a general overview of the CLP, how it works, and how to access the program. The CLP requires samplers to use the functionality provided by the Field Operations Records Management System (FORMS) II Lite™ software, which is the preferred means of creating CLP sample documentation. For guidance in using the software to record and submit sampling data, users should reference the FORMS II Lite User's Guide.

Both the Introduction to the Contract Laboratory Program and the Contract Laboratory Program Guidance for Field Samplers can be downloaded from the CLP Web site at the following address:

http://www.epa.gov/superfund/programs/clp/guidance.htm

The FORMS II Lite User's Guide can be downloaded from the CLP Web site at the following address:

http://dyncsdao1.fedcsc.com/itg/forms2lite/doc.html

For more information regarding the CLP or this guide, please contact Elizabeth Holman via email at Holman.Elizabeth@epa.gov or via telephone at (703) 603-8761.

Key Information

Text in blue and underlined indicates an external link to information outside of this document.

The images below are located throughout the document to draw attention to important information and each are labeled accordingly:

Important

Note

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ASB	Analytical Services Branch
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CLP	Contract Laboratory Program
CLP PO	CLP Project Officer
CRQL	Contract Required Quantitation Limit
CVAA	Cold Vapor Atomic Absorption
DOT	Department of Transportation
DQO	Data Quality Objective
dbf	Database File
ET	Eastern Time
FORMS II Lite™	Field Operations Records Management System II Lite
FSP	Field Sampling Plan
HCN	Hydrocyanic acid
IATA	International Air Transport Association
ICP-AES	Inductively Coupled Plasma-Atomic Emission Spectroscopy
ICP-MS	Inductively Coupled Plasma-Mass Spectrometry
MS	Matrix Spike
MSD	Matrix Spike Duplicate
$NAHSO_4$	Sodium Bisulfate
NPL	National Priorities List
OSC	On-scene/on-site Coordinator
OSHA	Occupational Safety and Health Administration
OSRTI	Office of Superfund Remediation and Technology Innovation
OSWER	Office of Solid Waste and Emergency Response
PCBs	Polychlorinated Biphenyls
PE	Performance Evaluation
PM	Program Manager
ppb	Parts-Per-Billion
ppt	Parts-Per-Trillion
PRP	Potentially Responsible Party
PT	Proficiency Testing
PTFE	Polytetrafluoroethylene
PVC	Polyvinyl Chloride
QA	Quality Assurance
QAPP	Quality Assurance Project Plan
QASPER	Quality Assurance Sampling Plan for Environmental Response
QATS	Quality Assurance Technical Support
QC	Quality Control
RAS	Routine Analytical Services
RPM	Remedial Project Manager
RSCC	Regional Sample Control Center Coordinator
RSM	Regional Site Manager
SAM	Site Assessment Manager
SAP	Sampling Analysis Plan
SARA	Superfund Amendments and Reauthorization Act
SDG	Sample Delivery Group
SMC	System Monitoring Compound
SMO	Sample Management Office
SOP	Standard Operating Procedure
SOW	Statement of Work
SVOA	Semivolatile Organic Analyte
TR/COC	Traffic Report/Chain of Custody
txt	Text File
UN	United Nations
USEPA	United States Environmental Protection Agency
VOA	Volatile Organic Analyte
XML	eXtensible Markup Language

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1.0 INTRODUCTION

1.1 About this Guide

This document describes the important organizational roles and responsibilities for those who plan and conduct environmental sample collection projects for analysis through the Superfund's Contract Laboratory Program (CLP). This chapter introduces the structure and purpose of this document. Chapter 2, *Pre-field Activities*, addresses pre-field planning activities that the sampling team could complete prior to the actual sampling event. Chapter 3, *In-field Activities*, addresses those activities that need to be completed during the sampling event.

Appendix A describes the functions within a sampling project which are taken from the Quality Assurance Project Plan requirements. Appendix B and Appendix C contain the sample collection guidelines for Volatile Organic Analytes (VOAs) in soil and in water. Appendix D recommends sampling techniques. Appendix E contains checklists to help the sampler ensure that all necessary steps are completed.

A project and site-specific Quality Assurance Project Plan (QAPP) providing Regional guidance will override guidance given within this document.

1.2 Overview of the CLP

The CLP is a national program of commercial laboratories under contract to support the USEPA's nationwide effort to clean up designated hazardous waste sites by supporting its Superfund program. The Superfund program was originally established under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 and presently exists under the Superfund Amendments and Reauthorization Act (SARA) of 1986.

The CLP uses state-of-the-art technology to provide users with analytical services. The program provides data of known and documented quality to support USEPA enforcement activities or other user needs. To achieve this goal, the CLP has established strict Quality Control (QC) procedures and detailed documentation requirements. Current CLP users include the USEPA Regions, States and Tribal governments, and other Federal agencies. CLP users also are encouraged to review the *Introduction to the Contract Laboratory Program* document that contains a general overview of the CLP, how it works, and how to access the program.

1.2.1 Key Players Within the CLP

In coordinating Superfund sampling efforts, the Analytical Services Branch (ASB) is supported by the Sample Management Office (SMO) contractor, the Regional CLP Project Officers (CLP POs), the Regional Sample Control Center Coordinators (RSCCs), and the Regional Site Managers (RSMs), including Site Assessment Managers (SAMs), On-scene/On-site Coordinators (OSCs), and Remedial Project Managers (RPMs). Samplers may work directly with the RSCC and/or RSM (or equivalent), and/or an OSC from the Field Support Section during a sampling event. See Table 1-1 for a brief description of the functions performed by key participants (functions may vary by Region).

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Table 1-1. Participants in the CLP Sampling Process

Participants	Responsibilities
Analytical Services Branch	USEPA ASB directs the CLP from within the Office of Superfund Remediation and Technology Innovation (OSRTI) in the Office of Solid Waste and Emergency Response (OSWER). ASB responsibilities include: • Development of the Statements of Work (SOWs) that define required analytical methods (including QC, detection/quantitation limits, and holding times) for the analytical services procured under the CLP; • Development and implementation of policies and budgets for Superfund analytical operations; • Development of information management policies and products for analytical data; • Management of SMO and Quality Assurance Technical Support (QATS) contracts; • National administration, evaluation, and management of the CLP; and • Direction of CLP Quality Assurance (QA) activities in coordination with overall OSWER QA activities. To obtain the most current ASB contact list, refer to the following Web site: http://www.epa.gov/superfund/programs/clp/contacts.htm#ASB
CLP Sample Management Office	The contractor-operated SMO provides necessary management, operations, and administrative support to the CLP. SMO receives Regional analytical requests, coordinates and schedules sample analyses, and tracks sample shipments. SMO also receives and checks data for completeness and compliance, processes laboratory invoices, and maintains a repository of sampling records and program data.
CLP Contract Laboratories	The contractor-operated laboratories within CLP provide necessary analytical services for the isolation, detection, and quantitation of the CLP's target compounds and analytes.
Regional CLP Project Officer	The CLP PO monitors the technical performance of the contract laboratories in each Region. The CLP PO works closely with ASB Program Managers (PMs) to identify and resolve laboratory technical issues, and leads laboratory on-site evaluations. To obtain the most current CLP PO contact list, refer to the following Web site: http://www.epa.gov/superfund/programs/clp/polist.htm
Regional Sample Control Center Coordinator	In most Regions, the RSCC coordinates sampling efforts and serves as the central point-of-contact for sampling questions and problems. The RSCC works with SMO to schedule sample shipments to laboratories. In addition, the RSCC's activities may include: informing SMO of sample shipment, cancellations, special instructions, and sampling issues. To obtain the most current RSCC contact list, refer to the following Web site: http://www.epa.gov/superfund/programs/clp/rscclist.htm
Regional Site Manager	The RSM Coordinates the development of acceptance or performance criteria and oversees project-specific contractors, state officials, or private parties conducting site sampling efforts. The RSM could be the SAM, the OSC, or the Remedial Project Manager (RPM).
Field Support Section	The Field Support Section consists of personnel such as the OSC, SAM, and RPM. In most Regions, the Field Support Section develops Standard Operating Procedures (SOPs) for field sampling and related procedures, and assists sampling teams in following those SOPs. The sampling team determines what type(s) of CLP services will be required for a particular sampling event. The Field Support Section reviews Sampling Analysis Plans (SAPs) prepared by sampling teams and oversees sampling teams in the field. The Field Support Section may also prepare their own SAPs, perform sampling activities in the field, and analyze and report the results of their sampling events to the RSM.

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1.3 Overview of the Sampling Process

At-a-Glance:
Overview of the Sampling Process

- ✓ Procedures must be consistent.
- ✓ Analytical data must be accurate and defensible.
- ✓ Procedures must meet minimum requirements.

Once USEPA has determined that physical, chemical, and/or biological testing of a site is necessary, samples of material from the site area must be collected. The type of material that must be collected and the analytical method to be used depends upon the physical location of the site, detection level(s), site history (previous sampling), and known or unknown conditions and contaminants. The sampling process includes carefully planned and consistently applied procedures that produce accurate and legally defensible data. The sampling team should consider the procedures and plans presented in this guide as minimum sampling process guidelines to maintain sample integrity and identity. Samples should be collected according to the approved project and site-specific QAPP and SAP. This document does not define specific sampling procedures because specific sampling protocols depend on individual site conditions, Regional requirements, and acceptance and performance criteria. Since Regions may have their own specific requirements for individual sampling programs, they are responsible for generating Region-specific sampling SOPs.

1.3.1 Procedures Must be Consistent

The purpose of sampling is to collect representative portions from a suspected contaminated site. Sample collection is critical to determining the presence, type, concentration, and extent of environmental contamination by hazardous substances, thus it is a crucial part of every sampling and environmental testing effort. Sampling procedures must be consistently written and followed to mitigate risk of error and the expense of re-sampling.

Failure to follow proper sampling and shipping procedures could result in samples that are contaminated, broken, mislabeled, lost during shipping, or unusable because of a missed holding time. If procedures are inconsistently or improperly followed, any resultant analytical data may be inaccurate and may not be defensible in a court of law.

If re-sampling is needed due to improper sampling, the sampling team may incur the cost.

1.3.2 Analytical Data Must be Accurate and Defensible

The data gathered during sampling activities helps to accurately characterize contaminated waste sites so that the impact on human health and the environment can be properly evaluated. Acquiring accurate and defensible data that will be accepted in a court of law is the CLP's primary objective; therefore, the sampler must collect samples according to strict sampling procedures, plans, and guidelines. USEPA and many other Federal agencies use data resulting from analytical testing of soil/sediment/aqueous samples to:

- Determine if a site is contaminated with organic and/or inorganic compounds;
- Identify pollution sources and Potentially Responsible Parties (PRPs);
- Validate remedial design methodologies;
- Assess response and remedial priorities;
- Assess risk to human health and the environment;
- Determine appropriate cleanup actions; and
- Determine cleanup achievements.

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1.3.3 Sampling Procedures and Guidelines Must Meet Minimum Requirements

It is imperative that samplers be aware of the minimum CLP and Regional requirements that directly impact and define how a sampling event will take place. It is important to note that the procedures and guidelines set forth in this document are considered minimum CLP requirements. Samplers should reference the following sections within this document that specifically address important requirements that must be met for a successful sampling event:

- Section 1.4.1 CLP Documentation Requirements;
- Section 2.4.1 Request Scheduling of Analysis, SMO-assigned Case Numbers, CLP Sample Numbers, and Laboratory Contact Information;
- Section 2.7 Comply with Transportation and Shipping Requirements;
- Section 2.8 Provide Shipment Notification;
- Section 3.1 Collect Samples; and
- Section 3.2 Complete Documentation.

1.4 Overview of Sampling Documentation Requirements

The sampler must properly document samples collected for analysis in order to uniquely identify each sample and ensure adequate chain-of-custody procedures. When collecting samples, the sampler should always keep in mind that any samples collected may be used in future litigation. This is especially important when samples are from privately owned property. If sampling on privately owned property, samplers should also provide the property owner with a receipt for samples collected and removed from that owner's property. Samplers may also be required by a Region to use a sample label, sample tag, or field operations records documenting information such as daily activities, equipment and materials used, personnel involved, site security, etc. These types of documentation help ensure proper sample identification and provide additional chain-of-custody records.

The documentation required by a Region for a sampling event is outlined in project plans such as the QAPP, SAP, and Field Sampling Plan (FSP).

At–a-Glance:
Overview of the Sampling Document Requirements

- ✓ Must use FORMS II Lite to create sample documentation. Analytical data must be accurate and defensible.
- ✓ CLP documentation requirements:
  - CLP Sample Number
  - SMO-assigned Case Number
  - Traffic Report/Chain of Custody (TR/COC) Record
  - Sample Labels
  - Sample Tags
  - Custody Seals
  - Field Operation Records

Under no circumstances should the site name appear on any documentation that is sent to the laboratory (for the CLP).

1.4.1 CLP Documentation Requirements

Samplers must:

1) Record the CLP Sample Number on each sample bottle;
2) Complete the Traffic Report/Chain of Custody (TR/COC) Record using the FORMS II Lite software, making sure to indicate on the TR/COC Record if the samples require the use of a Modified Analysis;
3) Complete and attach sample labels;
4) Complete and attach sample tags to meet Regional requirements;
5) Complete and attach custody seals to meet Regional requirements; and
6) Complete field operations records, as necessary.

Please contact your RSCC (see Table 1-1) for information regarding CLP Sample Numbers, SMO-assigned Case Numbers, TR/COC Records, and chain-of-custody seals for sampling events.

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For information regarding using FORMS II Lite to create and complete a TR/COC Record, refer to the following Web site:

http://www.epa.gov/superfund/programs/clp/f2lite.htm

1.4.1.1 CLP Sample Number

A CLP Sample Number is unique per sampling location and is used to identify and track samples throughout the sampling and analytical processes and is recorded on many types of sampling documentation (e.g., TR/COC Records, sample labels, and sample tags). CLP Sample Numbers are provided to samplers by their RSCC or SMO.

Samplers must contact their RSCC (or their designee) to obtain CLP Sample Numbers for their sampling event. Samplers must correctly assign the CLP Sample Numbers to the appropriate sample bottle or container. Please refer to Section 3.2.1 for more detailed information regarding the use of CLP Sample Numbers.

If the sampler has any questions regarding the assignment of CLP Sample Numbers, they should contact their RSCC.

1.4.1.2 SMO-assigned Case Number

SMO-assigned Case Numbers are used to track groups of samples throughout the sampling and analytical processes and are recorded on many types of sampling documentation (e.g., TR/COC Records, sample labels, and sample tags). Samplers must correctly assign the SMO-assigned Case Number to the appropriate sample bottle or container. To obtain a SMO-assigned Case Number, samplers must contact their RSCC (or their designee).

1.4.1.3 Laboratory Assignment

Samplers are responsible for shipping samples to the appropriate SMO-assigned laboratory for analysis. Samplers must contact their RSCC (or their designee) to obtain their laboratory assignment or they may be provided by SMO.

1.4.1.4 TR/COC Record

The TR/COC Record is used as physical evidence of sample custody and functions as a permanent record of each sample collected.

Per CLP documentation requirements, each cooler must contain a TR/COC Record that lists all the samples contained therein.

In an effort to automate sample documentation in the field, ASB has developed a stand-alone, Windows-based software application that samplers can use to automatically create and generate sample documentation. The FORMS II Lite software allows users to enter information prior to and during sampling events. It allows users to multi-task and electronically create, edit, and print documentation associated with sampling activities. Users can customize data entry screens throughout the entire documentation process. Users can also customize the format and content of sample labels based on specific requirements.

The program simplifies and accelerates the tedious manual sample documentation process by reducing the generation of handwritten documents by almost 70%. The FORMS II Lite software enables samplers to:

- Increment CLP Sample Numbers or manually assign their own unique, project-specific non-CLP Sample Numbers;
- Input the SMO-assigned Case Number into the appropriate field;
- Create sample labels, sample tags, TR/COC Records, Sample Weight forms, and receipts for samples taken from a site;
- Track samples from the field to the laboratory;

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- Electronically capture sample information into databases; and
- Export electronic data as a database File (.dbf), Text (.txt), or eXtensible Markup Language (.xml) file.

USEPA requires samplers to use the FORMS II Lite software for all CLP sampling efforts. For assistance with obtaining or using the FORMS II Lite software, please contact the FORMS II Lite Help Desk at 703-818-4200 from 9:00 AM - 5:00 PM Eastern Time (ET). For additional information regarding FORMS II Lite use and training, please refer to the following Web site:

http://www.epa.gov/superfund/programs/clp/f2lite.htm

1.4.1.5 Chain-of-Custody Seals

A chain-of-custody seal is any adhesive label or tape that can be used to seal a sample bottle, container, plastic bag, or shipping cooler such that if it is opened or tampered with, the seal will be broken. Custody seals must be placed on each sample bottle, container, or bag (as appropriate) and each shipping cooler or container. The custody seal is an excellent means of maintaining a record of chain-of-custody, as well as guarding against possible sample contamination or tampering during shipping.

1.4.1.6 Sample Labels

A sample label is a sticker attached to a sample bottle or container that contains a sample. Sample labels are affixed to each sample container as samples are collected in the field or affixed prior to going in the field. A sample label must contain, at a minimum, a CLP Sample Number so that they can be associated with, and listed on, the associated TR/COC Record. The sample label may also include the required analysis/fraction and preservative used (to eliminate confusion at the laboratory). Samplers should refer to their project plans for Region-specific sample label requirements.

1.4.1.7 Sample Tags

A sample tag identifies a sample bottle or container that contains a sample. The tag also provides specific analytical direction and proof that a sample existed. To support the use of sample data in potential enforcement actions, samples with other than in situ measurements (e.g., pH, temperature, conductivity) can be identified with a sample tag. A CLP Sample Number and SMO-assigned Case Number must be recorded on a sample tag to indicate that the sample container comprises the whole sample in the case where there is just one container of sample, or part of the indicated sample in the case of multiple containers of sample. Samplers should refer to their project plans for Region-specific sample tag requirements.

1.4.1.8 Field Operation Records

Samplers should maintain complete, accurate, and legible field operations records as they perform a sampling activity. The following records are included: Field Logbooks; Corrective Action Reports; Sampling Trip Reports; supplemental standardized forms; logs; and records such as maps or photographs that document each step of the work performed in the field. Samplers should refer to their project plans for Region-specific field operations record requirements. These records are very important tools because they are considered part of the official project file when legal issues arise.

1.4.1.9 Weight Logs

A sample weight log identifies the tared, sample and final weights per bottle for VOA samples. In order to support Method 5035 for VOAs, samplers should enter tared and final weights per bottle in the CLP Sample Weight Log.

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2.0 PRE-FIELD ACTIVITIES

At-a-Glance:
Pre-field Activities

- ✓ Prepare for and communicate during a sampling event.
- ✓ Review project plans containing Regional requirements.
- ✓ Plan to meet documentation requirements.
- ✓ Obtain any necessary permits, licenses, and clearances.
- ✓ Identify and obtain sampling materials.
- ✓ Comply with transportation and shipping requirements.
- ✓ Provide shipment notification.
- ✓ Perform Readiness Review/Run-through.

This chapter provides instructions for completing the suggested pre-field activities that samplers could complete prior to performing sampling activities. These important pre-field activities will save time and help the sampler to better prepare for the sampling event. Samplers should be aware of issues routinely arise during the sampling process so that samplers can avoid making the same mistakes or having the same problems that could adversely affect their sampling event. Samplers are also expected to review all pertinent project plans and meet both CLP and Regional requirements that directly impact the structure and purpose of a sampling event.

The project plans provide information such as the types and numbers of samples to be collected, the analytical methods to be used based on the desired level of quantitation, and the necessary equipment and supplies. The plans also describe the sampling method which may require different specific sample volumes/masses, containers, preservation, shipping, and handling to maintain the integrity of the samples without degradation or contamination.

In addition to reviewing project plans, samplers should determine if the sampling site is privately or publicly owned and obtain the necessary permission to access the sampling site. If the site is privately owned, samplers should make sure to have receipts for available samples to provide to the owner for all samples collected and removed from their property. Samplers must also prepare to identify and obtain sampling materials, prepare to meet documentation requirements by obtaining and learning to use the required software, comply with transportation and shipping requirements, and perform a readiness review/dry run of the sampling process.

2.1 Prepare for a Sampling Event

Samplers must prepare to meet CLP and Regional requirements for a sampling event, appropriately use the CLP Sample Number and SMO-assigned Case Number, complete the TR/COC Record using the FORMS II Lite software, and complete and attach the custody seal(s). It is very important that the sampler include the correct CLP Sample Number on each sample. It is also imperative that the TR/COC Record be accurately completed and submitted with the sample(s). Finally, the sampler must accurately and legibly complete and attach a custody seal to each sample container, or plastic sample bag (as appropriate), and each shipping cooler or container.

However, meeting the sampling requirements requires more than just the proper application of a CLP Sample Number on each sample, completion of the TR/COC Record, and use of a custody seal. The actual collection of samples, packaging, and shipping of those samples are equally important to a successful sampling event.

For example, if a sampler collects an insufficient volume of a sample, the laboratory may not be able to perform the requested analysis. Insufficient sample volumes may also result in a laboratory being unable to perform laboratory quality control, such as Matrix Spike (MS), Matrix Spike Duplicate (MSD), and Duplicate sample analysis. Additionally, if the laboratory receives a sample that is either unpreserved or the sample pH is outside of the required range, the sample cannot be properly analyzed.

Unfortunately, improper shipping and labeling processes and procedures often result in:

- Samples being shipped to the wrong laboratory;
- Broken or empty samples being received at the laboratory; and
- Custody seals or sealant tape that is missing or broken on sample bottles, containers, plastic bags, or shipping coolers shipped to the laboratories.

The importance of completing the paperwork associated with a sampling event cannot be overemphasized. Samplers must make a conscientious effort to accurately complete the TR/COC Record since this is the main document used to derive vital information about a particular sample. The person completing a TR/COC Record

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must be careful to avoid errors such as the appropriate sample(s) not being listed, or the wrong samples being listed. In an effort to eliminate such errors and the confusion that can be associated with handwritten TR/COC Records, samplers must use the FORMS II Lite software to complete the TR/COC Record and other associated sampling documentation.

It is extremely important that QC samples, including field sample duplicates, field samples for Matrix Spike and Matrix Spike Duplicate analyses, and Proficiency Testing (PT) samples, also known as Performance Evaluation (PE) samples, be designated and labeled per Regional guidance by samplers in the field. Mislabeling of QC samples can result in improper and/or inaccurate analysis of a sample at the laboratory.

2.2 Communicate During a Sampling Event

Communication is a key element in planning, administrating, and conducting a sampling event. It is extremely important that all parties involved in a sampling event be in contact throughout the sampling process. The procedures and recommendations outlined in this guide are based on more than 20 years of experience. It has been demonstrated that approximately 50% of all sampling efforts have been negatively affected by incorrect sampling procedures and poor communication among participants.

The key elements of communication for a sampling event include the relationship between the RSCC, SMO, the samplers in the field, and the laboratories who will be accepting the samples. For instance, the samplers must contact the RSCC to start the process for setting up a sampling event. The RSCC will in turn contact SMO who will schedule the sampling event, establish laboratory availability, and arrange for the laboratory to accept projected samples. SMO will then communicate the laboratory assignment to the Region and possibly the sampler.

The sampler should contact the RSCC (per Regional guidelines) and allow enough time for the RSCC to contact SMO at least a week prior to the sampling event.

SMO provides SMO-assigned Case and CLP Sample Numbers in time for the sampling event. SMO also schedules a laboratory and makes sure the laboratory will not have any capacity problems. Communication is also important because if there is a change in the sampling event due to a cancellation or an increase or decrease in the number of samples that will be sent to the laboratory, the sampler can contact the RSCC who can work with SMO to remedy potential capacity, availability, or overbooking problems.

2.3 Review Project Plans Containing Regional Requirements

In addition to meeting CLP requirements, the sample collection process must fulfill numerous Regional requirements. These requirements are determined by a variety of factors that affect how samples should be collected for an individual sampling event. These factors include:

- The type of samples being collected (organic/inorganic, water, soil/sediment, etc.);
- The method by which the samples will be analyzed;
- The acceptance or performance criteria (i.e., Data Quality Objectives [DQOs]); and
- The type of data needed.

The QAPP for each sampling project is written to meet requirements outlined in the documents *EPA Requirements for Quality Assurance Project Plans* (QA/R-5), *EPA Guidance on Quality Assurance Project Plans* (G-5), and Regional QAPP preparation documents. The QAPP is prepared in advance of field activities and is used by samplers to develop any subsequent plans such as the Sampling SAP or the FSP. Samplers should review the QAPP and any subsequent project plans for information outlining the basic components of a sampling activity. QAPP and project plans should be finalized and approved by appropriate Regional QA personnel, the OSC, SAM, or the RPM before providing them to the sampling team. This should be done prior to the start of field activities. Appendix A explains the functions within a sampling project (as these functions relate to a sampling event) and the elements of that function as described in a typical QAPP. Copies of all project plans and relevant SOPs should be maintained in the field for the duration of the sampling project.

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2.4 Plan to Meet Documentation Requirements

At-a-Glance:
Plan to meet documentation requirements.

- ✓ Request SMO-assigned Case and CLP Sample Numbers.
- ✓ Prepare sample cooler return documentation.
- ✓ Prepare to use the FORMS II Lite software.

Sampling events require a variety of accurate and complete documentation. Samplers should review their project plans to determine the types of documentation that must be completed for a sampling project and to ensure that the appropriate documentation will be on-hand in the field. The CLP documentation requirements include the CLP Sample Number, the SMO-assigned Case Number, the TR/COC Record, sample labels, sample tags, custody seals, and field operations records (as necessary). Samplers need to request SMO-assigned Case and CLP Sample Numbers for each sampling event prior to starting field activities. Samplers also need to make sure that the correct TR/COC Records (Organic TR/COC Record for organic analysis or Inorganic TR/COC Record for inorganic analysis) are being used within the FORMS II Lite software. Finally, samplers should be prepared to complete the appropriate shipping cooler return documentation.

Since samplers are required to use the FORMS II Lite software to prepare and submit sampling project documentation and maintain sample chain-of-custody, software users must be familiar with all emergency back up procedures that should be followed in the event of a system failure. Samplers must have access to FORMS II Lite-generated TR/COC Records at sampling events. If problems are experienced while using the FORMS II Lite software, please contact the FORMS II Lite Help Desk at 703-818-4200 from 9:00 AM - 5:00 PM ET.

In the event of a system crash, samplers must have backup hardcopies of FORMS II Lite TR/COC Records. For information regarding emergency backup procedures, please refer to the following Web site:

http://www.epa.gov/superfund/programs/clp/trcoc.htm

2.4.1 Request Scheduling of Analysis, SMO-assigned Case Numbers, CLP Sample Numbers, and Laboratory Contact Information

SMO-assigned Case Numbers are assigned based on a request for CLP Routine Analytical Services (RAS), which is processed though the RSCC (or his/her designee). The sampler must request the RSCC to schedule CLP RAS analysis. The CLP does have the capacity to schedule sampling on an emergency basis, however the sampler must contact the RSCC (or his/her designee) to obtain details regarding how to handle such a situation. When scheduling a sampling event that will last for more than one week, it is recommended that the sampler contact the RSCC (or his/her designee) on a weekly basis to provide updates. This contact between the sampler, the RSCC (or his/her designee), and SMO is very important because it will ensure better availability of laboratory capacity.

In addition to SMO-assigned Case and CLP Sample Numbers, samplers should make sure to have accurate laboratory contact information, such as:

- Laboratory name;
- Laboratory address;
- Contact name; and
- Laboratory phone number.

This information is used for both TR/COC Records and chain-of-custody documentation and shipping paperwork such as address labels and airbills.

The SMO-assigned Case Number is used to track groups of samples throughout the sampling and analytical processes. Samplers must correctly indicate the assigned Case Number on the appropriate sample bottle or container.

The RSCC (or his/her designee) provides the CLP Case Numbers and Sample Numbers for each sampling event to samplers. Once the CLP Sample Numbers have been provided to the sampler, the sampler can use FORMS II Lite to print them onto sample labels.

The following characters are not to be used in generating CLP Sample Numbers and should never appear on any paperwork submitted to the laboratory: I, O, U, and V.

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A CLP *Sample Number* is defined **as** a number that is unique per sampling location and identifies each CLP sample (see Section 1.4.1.1). Since samples must be identified per analytical program (either organic or inorganic), there are two types of TR/COC Records and two letter codes to denote organic vs. inorganic analysis.

A CLP *sample* is defined as one discrete portion of material to be analyzed that is contained at one concentration level, from one station location for each individual or set of analytical fractions -- provided the fractions are all requested for the same CLP analytical service (i.e., organic or inorganic), and identified by a unique Sample Number.

When samples are collected from several station locations to form a composite sample, the composite sample should be assigned either a number from one of the station locations used during collection, or a unique number that represents the composite sample for tracking purposes. The numbering scheme used internally at a sampling event for identifying composite samples should also be documented appropriately (e.g., in the field logs).

Organic CLP Sample Numbers begin with the Regional letter code, followed by four letters and/or numbers. Inorganic CLP Sample Numbers begin with "M", followed by the Regional letter code and then four letters and/or numbers. See Table 2-1 for Region and letter codes for each sample type (i.e., organic or inorganic).

Table 2-1. CLP Sample Number Letter Codes

Region	Letter Code	
	Organic	Inorganic
1	A	MA
2	B	MB
3	C	MC
4	D	MD
5	E	ME
6	F	MF
7	G	MG
8	H	MH
9	Y	MY
10	J	MJ

According to CLP guidelines, each individual inorganic water sample may be analyzed for total metals or dissolved metals, but not both. Therefore, water samples collected for total metal and dissolved metal analyses from the same sampling location must be assigned separate (unique) CLP Sample Numbers. A sampler can use the same CLP Sample Number for an inorganic soil or water sample collected for total metals, mercury and cyanide analyses.

Organic soil and water samples may be collected for analysis under the SOM01 SOW to detect:

- Aroclors;
- Semivolatile Organic Analytes (SVOAs);
- Pesticides;
- Volatile Organic Analytes (VOAs); and/or
- Trace Volatile Analytes

Inorganic soil and water samples may be collected for analysis for cyanide, and for metals using Inductively Coupled Plasma-Atomic Emission Spectroscopy (ICP-AES) and Cold Vapor Atomic Absorption (CVAA), under the ILM05.X SOW.

Inorganic water only samples may be collected for analysis for cyanide, and for metals using Inductively Coupled Plasma-Mass Spectrometry (ICP-MS) and CVAA, under the ILM05 SOW.

2.4.2 Prepare Sample Cooler Return Documentation

CLP laboratories must routinely return sample shipping coolers to the appropriate sampling office within 14 calendar days following receipt of shipment from the sampler. For sample coolers to be returned, the

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sampler must complete the appropriate cooler documentation and work with Regions and government agencies to provide a cost-effective mechanism for laboratories to return the empty coolers to the appropriate sampling office. The sampling cooler return documentation can be prepared in advance and provided to samplers before field activities begin. **The sampler (not the CLP laboratory) is responsible for paying for return of the cooler and should also include shipping airbills bearing the sampler's account number, as well as a return address to allow for cooler return.**

To maintain consistency among cooler transportation programs, samplers should:

- Minimize the use of multiple transportation carriers to avoid confusion;
- Use multiple-copy labels so the laboratory and the sampling team can each retain a copy for their records;
- Prepare labels in advance so that the laboratory can simply affix a completed shipping label on the cooler;
- Include third-party billing information (i.e., their shipping account number) on labels so the laboratory will not be billed by the transportation carrier;
- Confirm that the laboratory knows which transportation carrier to use; and
- Include the SMO-assigned Case Number on return information.

2.5 Obtain Municipal Permits, Licenses, and Clearances

Before starting a sampling event, samplers must make sure to obtain the proper municipal permits, accesses to the property, and any government clearances, if required. The sampler must also contact any appropriate utility companies to ascertain where any underground pipes, cables, etc., may be located.

At-a-Glance:
Obtain permits, licenses, and clearances.

- ✓ Request access to County, State, Tribal, military, and/or Federal property.
- ✓ Contact private property owner(s).
- ✓ Contact utility companies.

2.5.1 Request Access to County, State, Tribal, Military, and/or Federal Property

Proper access to perform sampling activities is important not only for legal reasons, but also to eliminate delays in work and possible refusal to allow sampling to take place. It is crucial that the appropriate permits, licenses, and clearances be secured to obtain access for sampling activities that will be performed on County, State, Tribal, military, and/or Federal property. The sampler must contact the appropriate government offices or personnel well in advance to determine what kinds of approval are required. Pre-approval may be required for specific types of sample collection such as drilling or excavation. For example, drilling on a military base requires pre-approval. Base security may require clearances for all members of the sampling team, including subcontractors. This process may take two or more days.

If arrangements are not made in advance, the team may not be allowed to enter the site until their clearances are processed and the team has been approved to drill. As a result, the sampling schedule is delayed, costing extra time and money.

2.5.2 Contact Private Property Owners

The sampler must obtain written permission from the private property owner(s) before sampling on their property, even if verbal permission has been granted. It is recommended that samplers obtain verbal permission prior to their arrival at the sampling location, but written permission can be obtained on the day of sampling. If a property owner refuses to grant access to their property, it may be necessary for sampling participants to contact the appropriate authorities for assistance.

2.5.3 Contact Utility Companies

The sampler should contact local utility companies (e.g., power, phone, gas, cable, sanitation, etc.) at least one week prior to the sampling event to have underground cables, lines, and pipes flagged and marked. This is required by law. A national one-call directory can be found at:

http://www.digsafely.com/contacts.htm.

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This will eliminate potential safety hazards and service disruption. For example, soil sampling in a residential area may require digging below the soil's surface. It is very important to know where utility lines and pipes are located so that samplers do not hit live electrical wires or rupture gas lines. Samplers should follow Regional or other appropriate program procedures for the procurement of such services. The utility service(s) disruption dates should be confirmed at least two days prior to sampling activities.

Pre-payment of survey fees to local utility companies may be required.

2.6 Identify and Obtain Sampling Materials

Samplers must make sure to be prepared for a sampling project with the appropriate sampling materials (equipment, supplies, sample containers, packing materials, and shipping materials). The equipment and supplies must be properly cleaned, calibrated, and tested as necessary to meet the needs of the sampling project.

At-a-Glance:
Identify and obtain sampling materials.

- ✓ Procure appropriate equipment and supplies.
- ✓ Procure sample containers.
- ✓ Procure shipping supplies.

2.6.1 Procure Appropriate Equipment and Supplies

Each sampling event requires the procurement of equipment and materials to collect, document, identify, pack, and ship samples. The proper field sampling equipment is vital to a successful sample collection. Regional or other samplers should obtain, and arrange in advance, all of the equipment and supplies required for each sampling event. Samplers should review the project plans to verify that the proper equipment is being used for sample collection.

At a minimum, the following materials are generally required during a sampling event:

- Sample storage containers;
- Packing material;
- Sample containers;
- Shipping containers;
- Access to the FORMS II Lite software for creating sample labels, stickers, tags, and TR/COC Records;
- Custody seals; and
- Sampling equipment such as bowls, augers, pumps, etc.

Sampling events may also require specific items such as:

- Cooler temperature blanks;
- Trip blanks for VOA analysis;
- Preservation supplies (e.g., ice or acid); and
- Specially prepared sample vials (e.g., for SW-846 Method 5035A).

2.6.2 Procure Sample Containers

The analytical protocol(s) to be used for sample analysis often requires the use of a particular type of sample container. The type of container also may depend on the sample matrix and analysis. It is recommended that samplers use borosilicate glass containers, which are inert to most materials, when sampling for pesticides and/or other organics. Conventional polyethylene is recommended when sampling for metals because of the lower cost and absorption rate of metal ions.

Using the wrong container may result in breakage, gathering of an insufficient volume needed to perform sample analysis, or the container material may interfere with the analysis. Therefore, samplers should identify and use the correct sample containers for each sampling event.

Containers procured for a sampling event are usually pre-cleaned and shipped ready-for-use from the manufacturer to the sampling site. Regardless of the type of container used, samplers must ensure that the containers have been analyzed or certified clean to levels below concern for the project. These containers must meet the USEPA container type specifications listed in Table 2-2.

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Table 2-2. Container Type Specifications

Reference Number	Container Type	Specifications	
		Closure	Septum
1	40 mL amber glass vial, 24 mm neck finish.	Polypropylene or phenolic, open-top screw-cap, 15 cm opening, 24-400 size.	24 mm disc of 0.005 in. Polytetrafluoroethylene (PTFE) bonded to 0.120 in. silicone for total a thickness of 0.125 in.
2	1 L high density polyethylene, cylinder-round bottle, 28 mm neck finish.	Polyethylene cap, ribbed, 28-410 size; F217 polyethylene liner.	N/A
3	8 oz short, wide mouth, straight-sided, glass jar, 70 mm neck finish.	Polypropylene or phenolic cap, 70-400 size; 0.015 in. PTFE liner.	N/A
4	4 oz (120 mL) tall, wide mouth, straight-sided, glass jar, 48 mm neck finish.	Polypropylene or phenolic cap, 48-400 size; 0.015 in. PTFE liner.	N/A
5	1 L amber round glass bottle, 33 mm pour-out neck finish.	Polypropylene or phenolic cap, 33-430 size; 0.015 in. PTFE liner.	N/A
6	500 mL high density polyethylene, cylinder-round bottle, 28 mm neck finish.	Polypropylene cap, ribbed, 28-410 size; F217 polyethylene liner.	N/A
7	Coring tool used as a transport device (e.g., 5 g Sampler).	Has built-in closing mechanism.	N/A
8	250 mL high density polyethylene, cylinder-round bottle, 28 mm neck finish.		N/A

The information contained in this table is also cross-referenced in the sample collection parameters discussed in Chapter 3. The container Reference Numbers are used in Tables 3-2 and 3-3 under the Containers column. For example, samples collected for low-level soil VOA analysis using SW-846 Method 5035A may require the sampler to use pre-prepared, tared closed-system purge-and-trap vials with a preservative (refer to Appendix B).

Have extra containers readily available for each sampling event in case of breakage, loss, or contamination.

2.6.3 Procure Shipping Supplies

Samples should be correctly packaged into the appropriate shipping containers to reduce the risk of breakage or leakage, and the shipping containers should be appropriately prepared for shipment. Before heading into the field, samplers should refer to the appropriate project plans to determine the types of samples that will be taken during the sampling project so that samplers will have the proper packaging materials at the site for all pertinent samples container types and sample matrices. Samplers should also make sure to obtain the appropriate shipping paperwork (e.g., shipping forms required by the delivery service).

2.7 Comply with Transportation and Shipping Requirements

Samplers are expected to review the applicable project plans to be aware of all State, Federal, Department of Transportation (DOT), and International Air Transport Association (IATA) regulations governing environmental and hazardous sample packaging. The person who ships the samples is responsible for being in compliance with applicable packaging, labeling, and shipping requirements.

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Samplers should request and receive sample permits for outside the continental United States, prior to shipping.

Additional information can be obtained on Hazardous Materials Safety Program regulations from the DOT's Research and Special Programs Administration. Federal transportation regulations can be found in 49-CFR Parts 100-185, are available on the Internet at:

http://www.myregs.com/dotrspa/

2.8 Provide Shipment Notification

Some Regions may require that samplers notify their RSCC (or his/her designee) when samples are shipped. Some Regions allow samplers to contact SMO directly to provide shipment notification. It is recommended that samplers contact the RSCC of sample origin to verify if such notification is necessary. If samplers are shipping samples after 5:00 PM ET, samplers must notify the RSCC (or designee) or SMO by 8:00 AM ET on the following business day.

For Saturday delivery at the laboratory, samplers MUST contact the RSCC (or designee) or SMO so that SMO will receive the delivery information by 3:00 PM ET on the Friday prior to delivery.

2.9 Perform Readiness Review/Dry Run

A readiness review/dry run is a test run of the proposed sampling event. This is a recommended practice since it gives samplers a chance to check all plans, documentation software (i.e., FORMS II Lite), and equipment lists for accuracy and completeness prior to sampling activities. It also provides an opportunity to consult with sampling team members to make sure all the elements are in place and everyone understands their tasking before actually going out to the field. Sampling project managers should provide the test or dry run dates and schedules to samplers so that samplers can prepare accordingly.

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3.0 IN-FIELD ACTIVITIES

This chapter addresses the in-field activities a sampler will focus on during a sampling event such as: determining the type of samples to be collected; collecting the samples; meeting volume, preservation, and holding time requirements; completing documentation; and packing and shipping samples.

When performing a sampling event, the sampler is expected to follow prescribed sampling techniques. The sampler should also be aware of any special sampling considerations, contamination issues, and sample compositing and mixing methods that could affect their sampling efforts. Please refer to Appendix D for more detailed information.

At-a-Glance:
In-field Activities

- ✓ Collecting samples
- ✓ Completing documentation
- ✓ Sampling considerations
- ✓ Procuring shipping supplies

Appropriate Regional guidance and procedures should be consulted for detailed sample collection, preservation, handling and storing, equipment decontamination, and QA/QC procedures.

3.1 Collect Samples

CLP RAS are generally used to analyze samples from Superfund sites. The matrices can be water, soil, or sediment. In some instances, a mixed-matrix sample may be collected which contains either a supernate (for a sediment/soil sample) or a precipitate (for a water sample). In this event, samplers should consult their management plans and/or discuss the required procedures with the RSM or their designee.

A CLP sample consists of all sample aliquots (portions):

- for each individual or set of analytical fractions;
- from one station location;
- for one sample matrix;
- at one concentration level;
- for one laboratory; and
- for one analytical program;

provided that the fractions are all requested from the same CLP analytical service.

In general, it is recommended that two individual samples be collected by separating the aqueous layer from the solid/precipitate layer at the point of collection. They may be assigned two different sample IDs (e.g., Sample IDs ABC124 and ABC125 for Sample ID ABC123), along with a note in the field sample log or tracking system that the sample IDs are derived or related to the same sample ID, to ensure correct follow-up upon receipt of results from the laboratory. Alternatively, they may be assigned the same sample ID, along with a notation of each individual sub-sample or fraction (e.g., Sample IDs ABC123-1 and ABC123-2 or Sample ID ABC123 Fraction 1 and Sample ID ABC123 Fraction 2 for Sample ID ABC123).

3.1.1 Determine Types of Samples to be Collected

Samplers may be required to take several types of samples or sample aliquots during a sampling event. They should refer to their project plans to determine the types of samples or aliquots to be taken, the volumes needed of each sample or aliquot, and the preservation needed for each sample. For an explanation of the various sample types and the requirements for collecting and submitting each particular type, refer to Table 3-1.

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Table 3-1. QC Sample Types and CLP Submission Requirements

Sample Type	Purpose	Collection[1]	CLP Sample Number
Field Duplicate	To check reproducibility of laboratory and field procedures. To indicate non-homogeneity.	Collect from areas that are known or suspected to be contaminated. Collect one sample per week or 10% (Regions may vary) of all field samples per matrix, whichever is greater.	Assign two separate (unique) CLP Sample Numbers (i.e., one number to the field sample and one to the duplicate). Submit blind to the laboratory.
Field Blanks	To check cross-contamination during sample collection, preservation, and shipment, as well as in the laboratory. Also to check sample containers and preservatives.	Collect for each group of samples of similar matrix per day of sampling. Organics - Use water (demonstrated to be free of the contaminants of concern). Inorganics - Use metal-free (deionized or distilled) water.	Assign separate CLP Sample Numbers to the field blanks.
Trip Blank (Volatile Organic Analysis Only)	To check contamination of VOA samples during handling, storage, and shipment from field to laboratory.	Prior to going into the field, prepare and seal one sample per shipment per matrix using water demonstrated to be free of the contaminants of concern (deionized water is appropriate). Place this sample in the cooler used to ship VOA samples.	Assign separate CLP Sample Numbers to the trip blanks.
Equipment Blank or Rinsate Blank	To check field decontamination procedures.	Collect when sampling equipment is decontaminated and reused in the field or when a sample collection vessel (bailer or beaker) will be used. Use blank water (water demonstrated to be organic-free, deionized or distilled for inorganics) to rinse water into the sample containers.	Assign separate CLP Sample Numbers to the equipment blanks.
Matrix Spike (MS) and Duplicate (MSD)[2] (Organic Analysis Only)	To check accuracy and precision of organic analyses in specific sample matrices.	Collect from areas that are known or suspected to be contaminated. For smaller sampling events (i.e., 20 samples or less), MS/MSD additional volume should be collected in the first round of sampling and included in the first shipment of samples to the laboratory. Collect double or triple volume[3] for aqueous samples and soil VOA samples designated for MS/MSD analyses. Additional sample volume is not required for soil samples requiring SVOA, Pesticide, and/or Aroclor analysis. See Appendix B for VOA collection volumes.	Assign the same CLP Sample Number to the field sample and the extra volume for MS/MSD. Identify the sample designated for MS/MSD on the TR/COC Record.
Matrix Spike (MS) and Duplicate (MSD) (Inorganic Analysis Only)	To check accuracy and precision of inorganic analyses in specific sample matrices.	Collect from areas that are known or suspected to be contaminated. For smaller sampling events (i.e., 20 samples or less), Matrix Spike and Duplicates should be collected in the first round of sampling and included in the first shipment of samples to the laboratory. Additional sample volume may be required for inorganic analysis.[4]	Assign the same CLP Sample Number to the field sample and extra volume (if collected). Identify the sample(s) designated for Matrix Spike and Duplicates on the TR/COC Record.
PE Samples	Specially-prepared QC samples used to evaluate a laboratory's analytical proficiency.	The PE samples contain analytes with concentrations unknown to the laboratory. Designated Regional or authorized personnel (depending on Regional policy) arrange for Case-specific CLP PE samples to be prepared and shipped by the QATS contractor. The PE samples can be shipped to the site, or shipped per Regional direction. QATS provides the appropriate preparation instructions and chain-of-custody materials.	Samplers have no direct interaction with the PE sampling process, but should be aware that such samples do exist within the CLP sampling process. Samplers must, however, order PE samples and ship them to the laboratory if required by the Region.

[1] Consult Regional or Project Manager Guidance for field QC sample frequencies; laboratory QC sample frequencies are generally fixed in the laboratory subcontracts or specified in analytical methods. Current frequency for MS/MSD (organic) and MS/duplicate (inorganic) for the CLP is one sample per twenty field sample of similar matrix.

[2] Samples sent under the Organic SOW (SOM01) do not require an MS or MSD for Trace VOA, VOA and BNA fractions, but the Region may opt to send them at their discretion.

[3] Example of double volume: An aqueous sample for SVOA analysis would require the field sampler to collect at least 2 L of field sample and at least 1 L each for the MS and MSD samples for a total volume of 4 L. If Pesticide or Aroclor MS/MSD analyses are required for the same sample, an additional 4 L must be collected. Double volume is the MINIMUM allowable volume for samples designated for MS/MSD analysis. Triple volume may be sent for MS/MSD samples to allow for sufficient volume for these analyses in the event sample volume is lost as a result of samples breaking, leaking, or laboratory accidents.

[4] Double volume may be sent for inorganic aqueous MS and MSD samples to allow for sufficient volume for these analyses in the event sample volume is lost as a result of samples breaking, leaking or laboratory accidents.

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3.1.1.1 Collect Field QC Samples

Samplers can collect field QC samples and laboratory QC samples to verify that sample quality is maintained during a sampling project.

Field QC samples are designed to assess variability of the media being sampled and to detect contamination and sampling error in the field. The types of field QC samples that are generally collected include field duplicates and field blanks (such as equipment, trip, or rinse blanks). Generally, field duplicate samples should remain "blind" to the laboratory (i.e., they should have separate CLP Sample Numbers).

3.1.1.2 Collect Laboratory QC Samples

A laboratory QC sample is an additional analysis of a field sample, as required by the laboratory's contract. There are three types of laboratory QC samples:

- MS [for organic and inorganic samples];
- MSD [for organic samples only]; and
- Duplicates [for inorganic samples only].

Samplers should obtain Regional guidance regarding the collection of MS and MSD samples (especially for organics analyses).

Samplers should select one sample per matrix per 20 samples as a "laboratory QC" sample. Designated organic laboratory QC samples should be noted on the Organic TR/COC Record. Designated inorganic laboratory QC samples should be noted on the Inorganic TR/COC Record. The laboratory QC sample must not be designated only in the "Field QC Qualifier" column on either the Organic or Inorganic TR/COC Records. Make sure that the laboratory QC sample is included in TR/COC Record samples to be used for the Laboratory QC field.

The sampler should select a field sample as the laboratory QC sample. If the sampler does not select a field sample as the laboratory QC sample, then it is possible that the laboratory could select the field blank (e.g., an equipment or rinsate blank) sample to meet contractual QC requirements. The use of field blanks for laboratory MS/MSD/Duplicate analysis reduces the usability of the data to assess data quality.

In the event of multiple sample shipments during a sampling event, it is recommended that the sampler submit laboratory QC samples in the first sample shipment.

3.1.2 Meet Volume, Preservation, and Holding Time Requirements

Samplers should refer to their project plans to obtain the specific sample volumes to be collected, the preservation needed for those samples, and the technical holding times under which they must submit samples to the scheduled CLP laboratory. Sample collection parameters (to include sample volumes, preservatives, and technical holding times) for organic collection and analysis are listed in Tables 3-2 and 3-3. Sample collection parameters for inorganic analysis and collection are listed in Table 3-4.

3.1.2.1 Collect Sample Volume

Collecting sufficient sample volume is critical. There must be sufficient physical sample volume for the analysis of all required parameters and completion of all QC determinations. The type of analytical procedure(s) to be performed will often dictate the sample volume to collect. For example, each water sample collected for VOA analysis by CLP SOW SOM01 or ILM05 requires a minimum of three vials, each filled completely to a 40 mL capacity. See Appendix C for information regarding the collection of VOAs in water. It is extremely important that samplers refer to their specific project plans to identify and collect the correct sample volume during each sampling event.

When sampling for VOAs in soils, samplers must use SW-846 Method 5035A guidelines included in Appendix B.

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3.1.2.2 Preserve Samples

Degradation of some contaminants may occur naturally (e.g., VOAs). The sampler must chemically preserve some water samples for certain analytes before shipping them to the laboratory. The sampler should preserve and immediately cool all samples to 4°C (±2°C) upon collection and samples should remain cooled until the time of analysis (do not freeze water samples). Preservation techniques vary among Regions so the sampler should obtain Region-specific instructions and review the appropriate project plans and SOPs. See Appendix C for information regarding the collection of VOAs in water.

3.1.2.3 Ship within Holding Times

Samplers should ship samples to scheduled CLP laboratories as soon as possible after collection. Daily shipment of samples to CLP laboratories is preferred whenever possible. If samples cannot be shipped on a daily basis, they must be properly preserved and maintained to meet CLP-specified temperatures, holding times, and custody requirements.

The technical holding times are the maximum time allowed between a sample collection and the completion of the sample extraction and/or analysis. In contrast, contractual holding times are the maximum lengths of time that the CLP laboratory can hold the sample prior to extraction and/or analysis. These contractual holding times are described in the appropriate CLP SOW. Contractual holding times are shorter than the technical holding times to allow for sample packing and shipping.

If samplers are shipping samples after 5:00 PM ET, they must notify the RSCC (or designee) or SMO by 8:00 AM ET on the following business day. When making a Saturday delivery, samplers shall contact the RSCC (or designee) or SMO by 3:00 PM ET on the Friday prior to delivery.

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Table 3-2. Sample Collection Requirements for CLP SOW SOM01 (VOAs)

Matrix	Container Type	Sample Type	Minimum Number of Containers Needed				Minimum Volume/ Mass	Important Notes	Preservative	Technical Holding Time
			with Water	Dry	% Moisture	TOTAL				
Water	See Table 2-2, Reference Number 1.	Samples Only	-	-	-	**3**	Fill to capacity	Containers/vials must be filled to capacity with no headspace or air bubbles. Refer to Appendix C for samples requiring QC analyses.	Preserve to a pH of 2 with HCl and cool to 4°C (±2°C) immediately after collection. DO NOT FREEZE water samples.	14 days
		Samples with SIM	-	-	-	**4**				
		Samples with MS/MSD	-	-	-	**6**				
		Samples with SIM and MS/MSD	-	-	-	**8**				
Soil/ Sediment	**OPTION 1** Closed-system Vials See Table 2-2, Reference Number 1.	Samples Only	-	3	1	**4**	5g	Place samples on side prior to being frozen. Refer to Appendix B for samples requiring QC analyses.	Frozen (-7°C to -15°C) or iced to 4° (±2°C).	14 days
		Samples with MS/MSD	-	9	1	**10**				48 hours
	OPTION 2 Closed-system containing Vials Water See Table 2-2, Reference Number 1.	Samples Only	2	1	1	**4**	5g	Containers/vials must be filled to capacity with no headspace or air bubbles. Place samples on side prior to being frozen. Refer to Appendix B for samples requiring QC analyses.	Frozen (-7°C to -15°C) or iced to 4° (±2°C). DO NOT FREEZE water samples.	14 days
		Samples with MS/MSD	6	1	5	**12**				48 hours
	OPTION 3 See Table 2-2, Reference Number 7.	Samples Only	-	3	1	**4**	5g	Refer to Appendix B for samples requiring QC analysis.	Frozen (-7°C to -15°C) or iced to 4°C (±2°C).	48 hours
		Samples with MS/MSD	-	9	1	**10**				48 hours

Notes

[1] Minimum volume/mass to be collected in order to ensure sample analysis can be performed.

[2] Check Regional guidance regarding use of acid as a preservative of samples that may contain carbonates, residual chlorine, and other oxidants.

[3] This technical holding time is calculated from the time of sample collection to sample extraction. Sample extracts are to be analyzed within 40 days of extraction. It is recommended that samplers ship samples to the laboratory on the same day that they are collected, or as soon as possible thereafter.

[4] Check Regional guidance regarding use of acid preservatives when testing for carbonates, residual chlorine, and other oxidants.

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Table 3-3. Sample Collection Requirements for CLP SOW SOM01 (SVOAs, Pesticides and Aroclors)

Analysis	Matrix	Containers	Minimum Volume/ Mass	Important Notes	Preservative	Technical Holding Time
Semivolatile Analytes	Water	See Table 2-2, Reference Number 5.	2L	If amber containers are not available, the samples should be protected from light.	Cool all samples to 4°C (±2°C) immediately after collection. DO NOT FREEZE water samples.	7 days
	Soil/ Sediment	See Table 2-2, Reference Numbers 3 and 4.	Fill to capacity		Cool all samples to 4°C (±2°C) immediately after collection.	14 days
Pesticides/ Aroclors	Water	See Table 2-2, Reference Number 5.	2L	If amber containers are not available, the samples should be protected from light.	Cool all samples to 4°C (±2°C) immediately after collection. DO NOT FREEZE water samples.	7 days
	Soil/ Sediment	See Table 2-2, Reference Numbers 3 and 4.	Fill to capacity		Cool all samples to 4°C (±2°C) immediately after collection.	14 days

Notes

[1] Minimum volume/mass to be collected in order to ensure sample analysis can be performed.
[2] Check Regional guidance regarding use of acid as a preservative of samples that may contain carbonates, residual chlorine, and other oxidants.
[3] This technical holding time is calculated from the time of sample collection to sample extraction. Sample extracts are to be analyzed within 40 days of extraction. It is recommended that samplers ship samples to the laboratory on the same day that they are collected, or as soon as possible thereafter.
[4] Check Regional guidance regarding use of acid preservatives when testing for carbonates, residual chlorine, and other oxidants.

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Table 3-4. Sample Collection Requirements for CLP SOW ILM05

Analysis	Matrix	Containers	Minimum Volume/ Mass[1]	Important Notes	Preservative	Technical Holding Time[4]
Metals/ICP-AES and/or Mercury by CVAA	Water	See Table 2-2, Reference Number 2.	1L	If collecting for both ICP-AES AND ICP-MS methods, a separate 1L volume of sample must be collected for each method per sample location.	Acidify to pH < 2 with HNO_3 and cool to 4°C (±2°C) immediately after collection.[2] DO NOT FREEZE water samples.	6 months for all metals except Mercury (28 days)
	Soil/ Sediment	See Table 2-2, Reference Number 3.	Fill to capacity		Cool to 4°C (±2°C) immediately after collection.	6 months
Cyanide/ Spectrophotometric Determination[3]	Water	See Table 2-2, Reference Number 2.	1L		To neutralize residual chlorine, immediately upon collection, add 0.6 g ascorbic acid for each liter of sample collected. Add NaOH until pH >12 and cool to 4°C (±2°C) immediately after collection.[5] DO NOT FREEZE water samples.	14 days
	Soil/ Sediment	See Table 2-2, Reference Number 3.	Fill to capacity		Cool to 4°C (±2°C) immediately after collection.	14 days

Notes

1 Minimum volume/mass to be collected in order to ensure sample analysis can be performed.

2 Check Regional guidance regarding use of acid as a preservative of samples that may contain carbonates, residual chlorine, and other oxidants.

3 Samplers must test for sulfide and oxidizing agents (e.g., chlorine) in aqueous samples in the field upon collection. Please refer to the SAP and Appendix C for guidance. Sulfides adversely affect the analytical procedure. The following can be done to test for and neutralize sulfides. Place a drop of the sample on lead acetate test paper to detect the presence of sulfides. If sulfides are present, treat 25 mL more of the sample than that required for the cyanide determination with powdered cadmium carbonate or lead carbonate. Yellow cadmium sulfide or black lead sulfide precipitates if the sample contains sulfide. Repeat this operation until a drop of the treated sample solution does not darken the lead acetate test paper. Filter the solution through a dry filter paper into a dry beaker, and from the filtrate measure the sample to be used for analysis. Avoid a large excess of cadmium carbonate and a long contact time in order to minimize a loss by complication or occlusion of cyanide on the precipitated material. Sulfide removal should be performed in the field, if practical, prior to pH adjustment with NaOH.

4 This technical holding time is calculated from the time of sample collection to sample extraction. Sample extracts are to be analyzed within 40 days of extraction. It is recommended that samplers ship samples to the laboratory on the same day that they are collected, or as soon as possible thereafter.

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3.2 Complete Documentation

Samplers must complete all documentation, including the recording of the CLP Sample Number on the sample container or bottle, sample labels, and chain-of-custody seals (as appropriate), the completion of the TR/COC Record, and the completion of field operations records (as necessary).

Samplers should use the FORMS II Lite software to create and print sample labels and the TR/COC Record. Samplers can create and print out two copies of a sample label and attach one to the sample container or bottle, and place the other on the sample tag that may be attached to the sample container or bottle.

Samplers are expected to review their project plans to determine what documentation they are expected to include during a sampling event. It is highly recommended that samplers provide documentation, even if the Region does not require it.

Under no circumstances should the site name appear on any documentation being sent to the laboratory.

An example of a packaged sample is shown in Figure 3-1. A description of each type of documentation and instructions for accurate completion are included in the following sections.

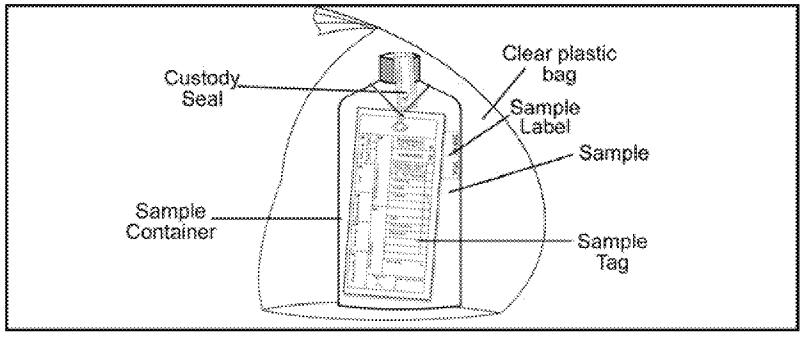

Figure 3-1. Packaged Sample with Identification and Chain-of-Custody Documentation (Excluding TR/COC Record)

3.2.1 Identify a Sample with a CLP Sample Number and SMO-assigned Case Number

The CLP Sample Number and SMO-assigned Case Number **must** be recorded on each sample taken during a sampling event (see Section 1.4.1.1). Samplers can record these numbers on the sample bottle or container using permanent ink. The numbers must also be recorded on the sample tag, if required.

Dissolved metal samples and total metal samples taken from the same sampling location cannot have the same CLP Sample Number because two different sets of data will be generated.

3.2.2 Complete TR/COC Records

A Traffic Report is used as physical evidence of sample custody and as a permanent record for each sample collected. A chain-of-custody record documents the exchange and transportation of samples from the field to the laboratory.

The ASB requires samplers to use the FORMS II Lite software to create documentation for all CLP sampling efforts. For assistance with obtaining or using the FORMS II Lite software, please contact the FORMS II Lite Help Desk at 703-818-4200 from 9:00 AM - 5:00 PM ET.

To meet CLP sample documentation and chain-of-custody requirements, the sampler must attach a separate TR/COC Record to each cooler they ship. The TR/COC Record must document each sample within the cooler. Samples shipped in other coolers should not be documented. This practice maintains the chain-of-custody for all samples in case of incorrect shipment.

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If more than one TR/COC Record is used for the samples within one cooler, all of the records must have complete header information and original signatures. Samplers are responsible for the care and custody of samples from the time of collection to the time of shipment to the laboratories for analysis. A sample is considered under custody if:

- It is in possession or in view after being in possession;
- It was in possession and then secured or sealed to prevent tampering; or
- It was in possession when placed in a secured area.

Each time the custody of samples is turned over to another person, the TR/COC Record must be signed off by the former custodian and accepted by the new custodian. Samplers are, therefore, responsible for properly completing any forms or other Region-required documentation used to establish the chain-of-custody for each sample during a sampling event.

3.2.2.1 Complete a TR/COC Record Using the FORMS II Lite Software

Once the sampler inputs sample collection information into FORMS II Lite, a TR/COC Record will be generated electronically. The software automatically displays only the information to be entered by the sampler. FORMS II Lite then generates a laboratory and a Regional copy of the TR/COC Record (see Figures 3-2 through 3-5). The sampler can print out multiple copies of the TR/COC Record as necessary. The sampler must sign and submit original copies of the TR/COC Record as appropriate.

An electronic TR/COC Record created using the FORMS II Lite software contains basic header information; however, the sampler can also include some additional detailed information. For example, not only is the sample matrix listed on the electronic TR/COC Record, but the name of the sampler taking the sample can also be entered. Samplers should note that certain information will not appear on the electronic TR/COC Record (e.g., matrix and preservative descriptions).

3.2.2.2 Indicate Modified Analysis on FORMS II Lite TR/COC Records

When completing a TR/COC Record using FORMS II Lite, the sampler should identify any samples that will be analyzed using a CLP Modified Analysis. Samplers should indicate use of a Modified Analysis by creating a new analysis within the FORMS II Lite Wizard or through the FORMS II Lite Reference Tables. This newly-created analysis should contain the Modification Reference Number within the name assigned to the analysis. For example, if a Region submits a Modified Analysis for an additional analyte, and SMO assigns the Modification Reference Number 1301.0, the FORMS II Lite analysis could be named "VOA by M.A. 1301.0". The associated abbreviation for this analysis could be "VOA M.A.". If you have any questions regarding identification of Modified Analysis using FORMS II Lite, please contact the FORMS II Lite Help Desk at 703-818-4200 from 9:00 AM - 5:00 PM ET.

3.2.2.3 Make Manual Edits to Printed FORMS II Lite TR/COC Records

If a FORMS II Lite TR/COC Record has been printed and deletions or edits need to be made by the sampler, the following procedures must be followed:

- If making a deletion, manually cross out the information to be disregarded from the TR/COC Record, initial and date the deletion.
- If making an addition, enter the new information and initialsign and date the newly added information.

All modifications made on a printed TR/COC Record must be initialed and dated.

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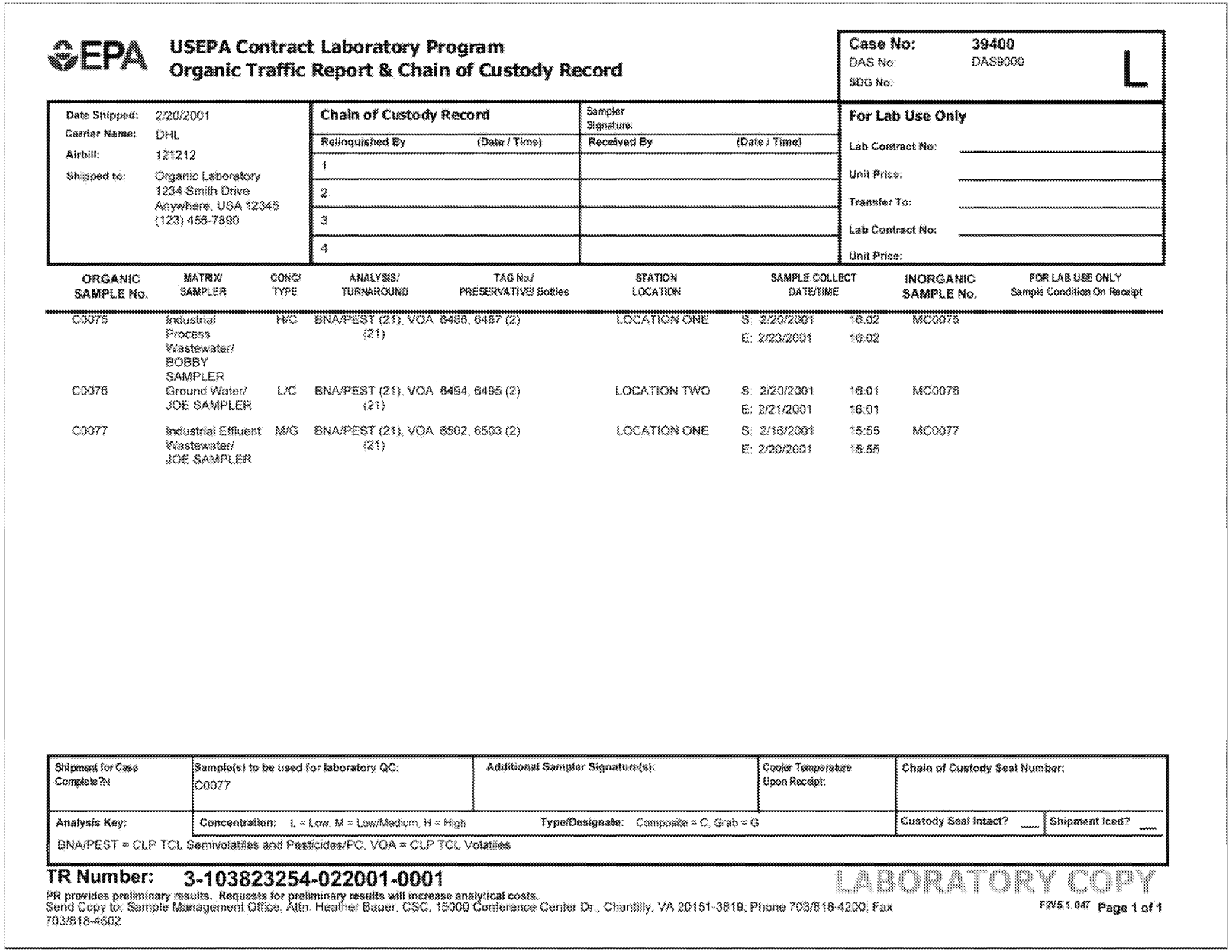

EPA **USEPA Contract Laboratory Program**
Organic Traffic Report & Chain of Custody Record

Case No: 39400
DAS No: DAS9000
SDG No:
L

Date Shipped: 2/20/2001
Carrier Name: DHL
Airbill: 121212
Shipped to: Organic Laboratory
1234 Smith Drive
Anywhere, USA 12345
(123) 456-7890

Chain of Custody Record

Relinquished By	(Date / Time)	Received By	(Date / Time)
1			
2			
3			
4			

Sampler Signature:

For Lab Use Only
Lab Contract No:
Unit Price:
Transfer To:
Lab Contract No:
Unit Price:

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		INORGANIC SAMPLE No.	FOR LAB USE ONLY Sample Condition On Receipt
C0075	Industrial Process Wastewater/ BOBBY SAMPLER	H/C	BNA/PEST (21), VOA (21)	6486, 6487 (2)	LOCATION ONE	S: 2/20/2001 E: 2/23/2001	16:02 16:02	MC0075	
C0076	Ground Water/ JOE SAMPLER	L/C	BNA/PEST (21), VOA (21)	6494, 6495 (2)	LOCATION TWO	S: 2/20/2001 E: 2/21/2001	16:01 16:01	MC0076	
C0077	Industrial Effluent Wastewater/ JOE SAMPLER	M/G	BNA/PEST (21), VOA (21)	6502, 6503 (2)	LOCATION ONE	S: 2/16/2001 E: 2/20/2001	15:55 15:55	MC0077	

Shipment for Case Complete?N	Sample(s) to be used for laboratory QC: C0077	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt:	Chain of Custody Seal Number:
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Custody Seal Intact? ___	Shipment Iced? ___

BNA/PEST = CLP TCL Semivolatiles and Pesticides/PC, VOA = CLP TCL Volatiles

TR Number: 3-103823254-022001-0001

LABORATORY COPY

PR provides preliminary results. Requests for preliminary results will increase analytical costs.
Send Copy to: Sample Management Office, Attn: Heather Bauer, CSC, 15000 Conference Center Dr., Chantilly, VA 20151-3819; Phone 703/818-4200, Fax 703/818-4602

F2/5.1.047 Page 1 of 1

Figure 3-2. Organic Traffic Report & Chain of Custody Record (Laboratory Copy)

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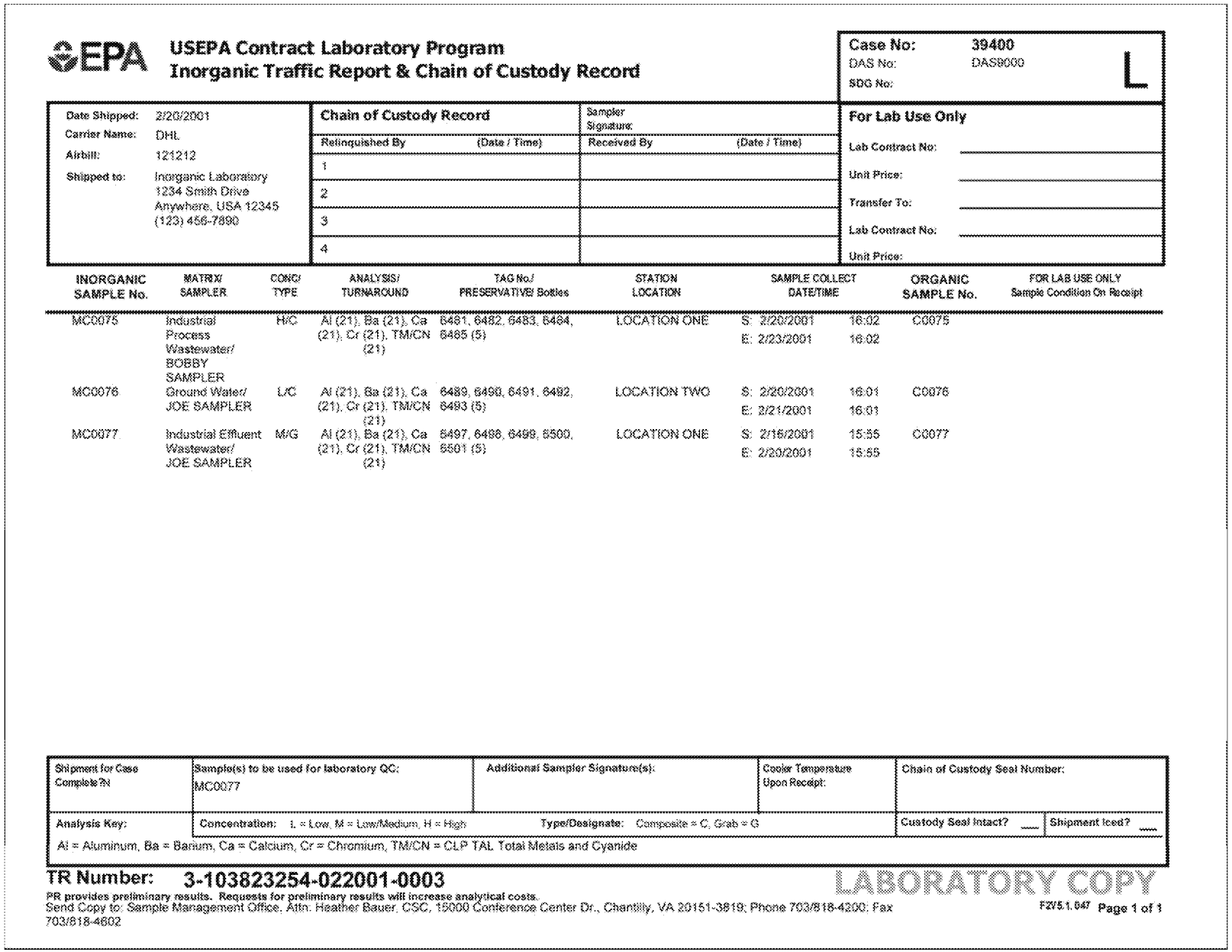

EPA

USEPA Contract Laboratory Program
Inorganic Traffic Report & Chain of Custody Record

Case No: 39400
DAS No: DAS9000
SDG No:
L

Date Shipped:	2/20/2001
Carrier Name:	DHL
Airbill:	121212
Shipped to:	Inorganic Laboratory 1234 Smith Drive Anywhere, USA 12345 (123) 456-7890

Chain of Custody Record

Relinquished By	(Date / Time)	Received By	(Date / Time)
1			
2			
3			
4			

Sampler Signature:

For Lab Use Only

Lab Contract No:
Unit Price:
Transfer To:
Lab Contract No:
Unit Price:

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		ORGANIC SAMPLE No.	FOR LAB USE ONLY Sample Condition On Receipt
MC0075	Industrial Process Wastewater/ BOBBY SAMPLER	H/C	Al (21), Ba (21), Ca (21), Cr (21), TM/CN (21)	6481, 6482, 6483, 6484, 6485 (5)	LOCATION ONE	S: 2/20/2001 E: 2/23/2001	16:02 16:02	C0075	
MC0076	Ground Water/ JOE SAMPLER	L/C	Al (21), Ba (21), Ca (21), Cr (21), TM/CN (21)	6489, 6490, 6491, 6492, 6493 (5)	LOCATION TWO	S: 2/20/2001 E: 2/21/2001	16:01 16:01	C0076	
MC0077	Industrial Effluent Wastewater/ JOE SAMPLER	M/G	Al (21), Ba (21), Ca (21), Cr (21), TM/CN (21)	6497, 6498, 6499, 6500, 6501 (5)	LOCATION ONE	S: 2/16/2001 E: 2/20/2001	15:55 15:55	C0077	

Shipment for Case Complete?N	Sample(s) to be used for laboratory QC: MC0077	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt:	Chain of Custody Seal Number:
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Custody Seal Intact? ___	Shipment Iced? ___

Al = Aluminum, Ba = Barium, Ca = Calcium, Cr = Chromium, TM/CN = CLP TAL Total Metals and Cyanide

TR Number: 3-103823254-022001-0003

LABORATORY COPY

PR provides preliminary results. Requests for preliminary results will increase analytical costs.
Send Copy to: Sample Management Office, Attn: Heather Bauer, CSC, 15000 Conference Center Dr., Chantilly, VA 20151-3819; Phone 703/818-4200; Fax 703/818-4602

FZV5.1.047 Page 1 of 1

Figure 3-3. Inorganic Traffic Report & Chain of Custody Record (Laboratory Copy)

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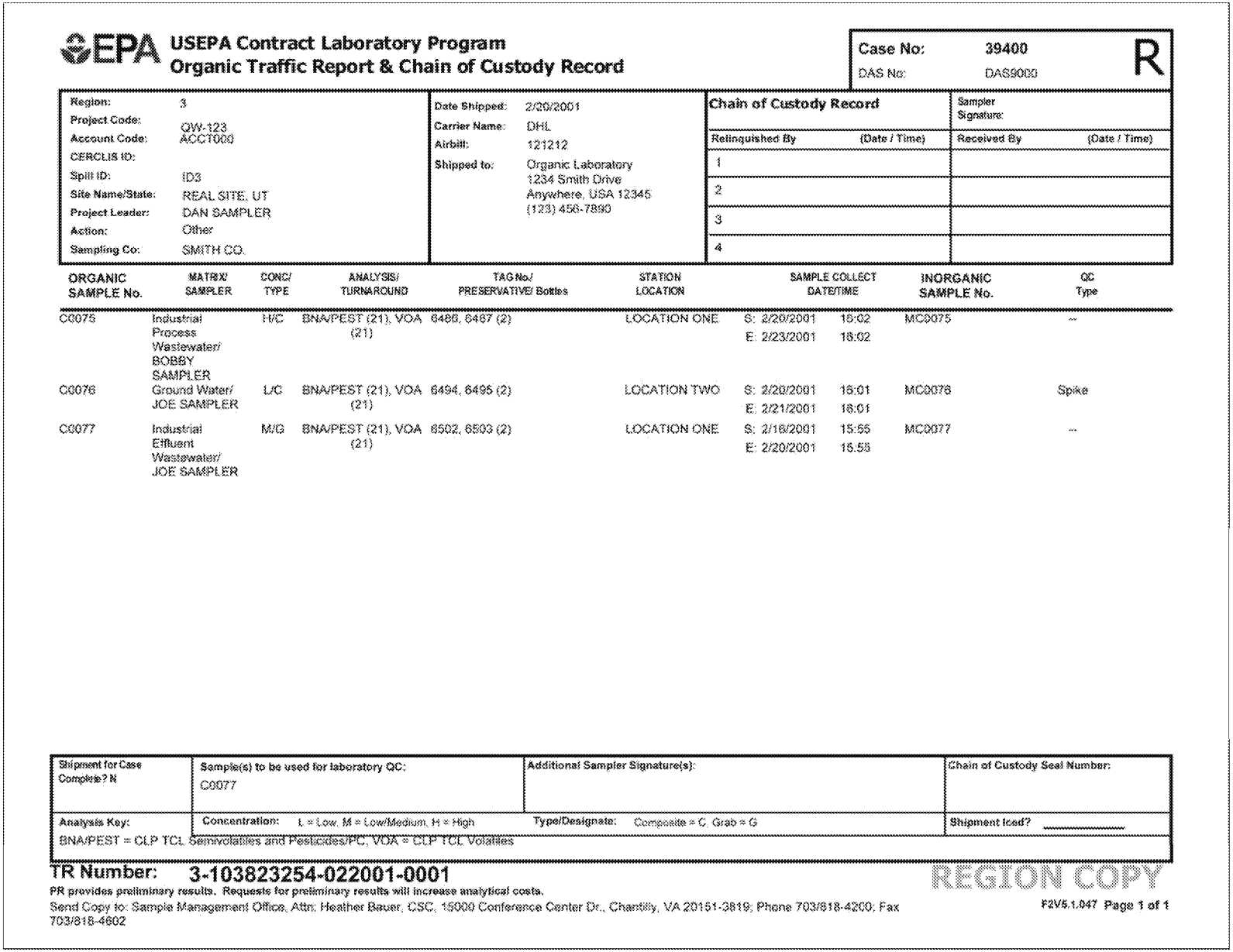

USEPA Contract Laboratory Program
Organic Traffic Report & Chain of Custody Record

Case No: 39400
DAS No: DAS9000
R

Region:	3
Project Code:	
Account Code:	QW-123 ACCT000
CERCLIS ID:	
Spill ID:	ID3
Site Name/State:	REAL SITE, UT
Project Leader:	DAN SAMPLER
Action:	Other
Sampling Co:	SMITH CO.

Date Shipped:	2/20/2001
Carrier Name:	DHL
Airbill:	121212
Shipped to:	Organic Laboratory 1234 Smith Drive Anywhere, USA 12345 (123) 456-7890

Chain of Custody Record

Relinquished By	(Date / Time)	Received By	(Date / Time)
1			
2			
3			
4			

Sampler Signature:

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		INORGANIC SAMPLE No.	QC Type
C0075	Industrial Process Wastewater/ BOBBY SAMPLER	H/C	BNA/PEST (21), VOA (21)	6486, 6487 (2)	LOCATION ONE	S: 2/20/2001 E: 2/23/2001	16:02 16:02	MC0075	--
C0076	Ground Water/ JOE SAMPLER	L/C	BNA/PEST (21), VOA (21)	6494, 6495 (2)	LOCATION TWO	S: 2/20/2001 E: 2/21/2001	16:01 16:01	MC0076	Spike
C0077	Industrial Effluent Wastewater/ JOE SAMPLER	M/G	BNA/PEST (21), VOA (21)	6502, 6503 (2)	LOCATION ONE	S: 2/16/2001 E: 2/20/2001	15:55 15:55	MC0077	--

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC: C0077	Additional Sampler Signature(s):	Chain of Custody Seal Number:
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Shipment Iced? _____
BNA/PEST = CLP TCL Semivolatiles and Pesticides/PC, VOA = CLP TCL Volatiles			

TR Number: 3-103823254-022001-0001

REGION COPY

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

Send Copy to: Sample Management Office, Attn: Heather Bauer, CSC, 15000 Conference Center Dr., Chantilly, VA 20151-3819; Phone 703/818-4200; Fax 703/818-4602

F2V5.1.047 Page 1 of 1

Figure 3-4. Organic Traffic Report & Chain of Custody Record (Region Copy)

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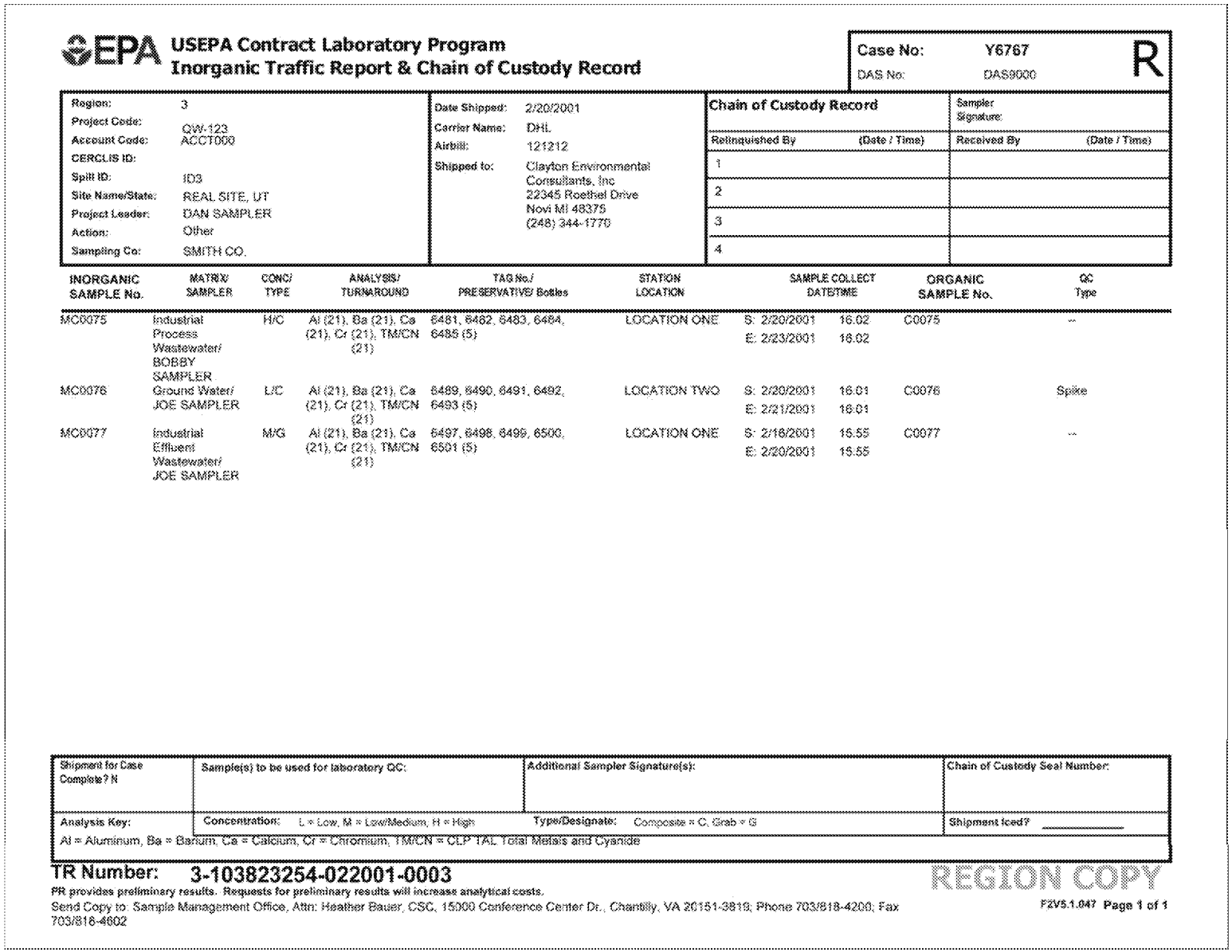

USEPA Contract Laboratory Program
Inorganic Traffic Report & Chain of Custody Record

Case No: Y6767 R
DAS No: DAS8000

Region:	3	Date Shipped:	2/20/2001
Project Code:	QW-123	Carrier Name:	DHL
Account Code:	ACCT000	Airbill:	121212
CERCLIS ID:		Shipped to:	Clayton Environmental Consultants, Inc 22345 Roethel Drive Novi MI 48375 (248) 344-1770
Spill ID:	ID3		
Site Name/State:	REAL SITE, UT		
Project Leader:	DAN SAMPLER		
Action:	Other		
Sampling Co:	SMITH CO.		

Chain of Custody Record

Relinquished By	(Date / Time)	Received By	(Date / Time)
1			
2			
3			
4			

Sampler Signature:

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		ORGANIC SAMPLE No.	QC Type
MC0075	Industrial Process Wastewater/ BOBBY SAMPLER	H/C	Al (21), Ba (21), Ca (21), Cr (21), TM/CN (21)	6481, 6482, 6483, 6484, 6485 (5)	LOCATION ONE	S: 2/20/2001 E: 2/23/2001	16.02 16.02	C0075	--
MC0076	Ground Water/ JOE SAMPLER	L/C	Al (21), Ba (21), Ca (21), Cr (21), TM/CN (21)	6489, 6490, 6491, 6492, 6493 (5)	LOCATION TWO	S: 2/20/2001 E: 2/21/2001	16.01 16.01	C0076	Spike
MC0077	Industrial Effluent Wastewater/ JOE SAMPLER	M/G	Al (21), Ba (21), Ca (21), Cr (21), TM/CN (21)	6497, 6498, 6499, 6500, 6501 (5)	LOCATION ONE	S: 2/16/2001 E: 2/20/2001	15.55 15.55	C0077	--

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Chain of Custody Seal Number:
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Shipment Iced? _____

Al = Aluminum, Ba = Barium, Ca = Calcium, Cr = Chromium, TM/CN = CLP TAL Total Metals and Cyanide

TR Number: 3-103823254-022001-0003

REGION COPY

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

Send Copy to: Sample Management Office, Attn: Heather Bauer, CSC, 15000 Conference Center Dr., Chantilly, VA 20151-3819, Phone 703/818-4200, Fax 703/818-4602

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Figure 3-5. Inorganic Traffic Report & Chain of Custody Record (Region Copy)

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3.2.3 Complete and Attach Custody Seals

Custody seals are usually pre-printed stickers that are signed (or initialed) and dated by the sampler after sample collection and placed on sample bottles or containers and/or shipping coolers or containers (see Figure 3-6). The custody seals document who sealed the sample container and verifies that the sample has not been tampered with. The seals must be placed such that they will break if the sample bottle or container or the shipping cooler or container is tampered with or opened after leaving custody of samplers. Custody seals can also be used to maintain custody of other items such as envelopes containing videotapes of the sample collection process.

Custody seals should never be placed directly onto a coring tool used as a transport device (e.g., 5 g Sampler) or tared, 40 mL closed-system vials. The seals must be placed on the bag for the coring tool used as a transport device, or on the bag used to enclose the vials. Refer to Appendix B for details.

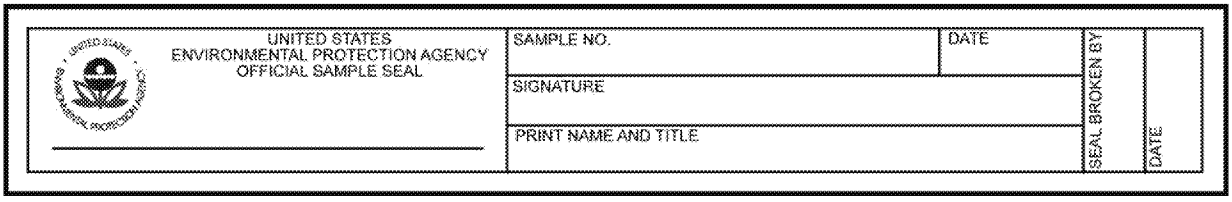

Figure 3-6. Custody Seal

Instructions for completing and attaching a custody seal are included in Table 3-5.

Table 3-5. Completing and Attaching a Custody Seal

Step	Action	Important Notes
1	Record the CLP Sample Number.	The space for the CLP Sample Number does not need to be completed on custody seals being placed on the opening of a cooler, only on those being placed on the opening of sample bottles or containers.
2	Record the month, day, and year of sample collection.	
3	Sign the seal in the Signature field.	
4	Print your name and title in the Print Name and Title field.	
5	Place the custody seal over the edge of the sample bottle or container such that it will break if tampered with.	Custody seals can be placed directly on any sample container except for coring tools used as a transport device (e.g., 5 g Samplers) and tared VOA bottles. If packing coring tools used as a transport device or tared VOA bottles, place them in a clear plastic bag and place the custody seal on the outside of the bag.
6	If possible, cover the custody seal with clear plastic tape to protect it.	Take special care to not place the protective tape over the seal in such a way that it can be removed and then re-attached without signs of tampering.

The use and type of custody seals can vary by Region or collecting organization. Samplers should obtain the appropriate custody seals and specific instructions for correctly attaching them from the RSCC.

3.2.4 Complete and Attach Sample Labels

Samplers affix sample labels to each sample container. A sample label must contain the associated CLP Sample Number (either written or pre-printed), SMO-assigned Case Number, and the preservative used. It must also denote the analysis/fraction. Samplers may also include additional information such as the station location or the date/time of collection. Samplers should use FORMS II Lite to create and print sample labels. The sampler can print two labels and attach one to the sample container or bottle, and place the other label on the sample tag that should also be attached to the sample container or bottle. The

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labels should then be covered with clear packaging tape to protect the label and maintain legibility. If handwriting a sample label, the sampler should complete the label information using waterproof ink, place the label on the outside of the sample bottle or container, then cover the label with clear packaging tape to protect the label and maintain legibility (see Figure 3-1).

Do not attach labels to tared VOA sample vials. A label should already be pre-attached to the tared vial.

3.2.5 Complete and Attach Sample Tags

To support use of sample data in potential enforcement actions, sample characteristics other than on-site measurements (e.g., pH, temperature, conductivity) can be identified with a sample tag. Typically, site-specific information is written on the tags using waterproof ink. The use and type of sample tags may vary by Region. For each sampling event, samplers should receive the required sample tags and type of information to include from the RSCC. The sampler can use FORMS II Lite to create and print out multiple sample labels, one of which can be attached to the sample tag and then covered with clear packaging tape to protect the label and maintain legibility. If FORMS II Lite-created sample labels are not available, a detailed set of instructions for completing and attaching a handwritten sample tag are included in Table 3-6.

The use and type of sample tags may vary among Regions.

Table 3-6. Completing and Attaching a Handwritten Sample Tag

Step	Action	Important Notes
1	Under the "Remarks" heading, record the CLP Sample Number and SMO-assigned Case Number.	Make sure to record the correct CLP Sample Number and SMO-assigned Case Number in a legible manner.
2	Record the project code (e.g., Contract Number, Work Assignment Number, Interagency Agreement Number, etc.) assigned by USEPA.	
3	Enter the station number assigned by the sampling team coordinator.	
4	Record the month, day, and year of sample collection.	
5	Enter the military time of sample collection (e.g., 13:01 for 1:01 PM).	
6	Identify the designate and place an "X" in either the "Comp." or "Grab" box if the sample is either a composite or grab sample.	
7	Record the station location.	
8	Sign the sample tag in the Signature area.	
9	Place an "X" in the box next to Yes or No to indicate if a preservative was added to the sample.	
10	Under "Analyses", place an "X" in the box next to the parameters for which the sample is to be analyzed.	
11	Leave the box for "Laboratory Sample Number" blank.	
12	It is recommended that the sample tag be attached to the neck of the sample bottle or container using regular string, stretch string, or wire (see Figure 3-1).	Do **NOT** use wire to attach a sample tag to a metals sample.

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An example of a completed sample tag is included in Figure 3-7 below:

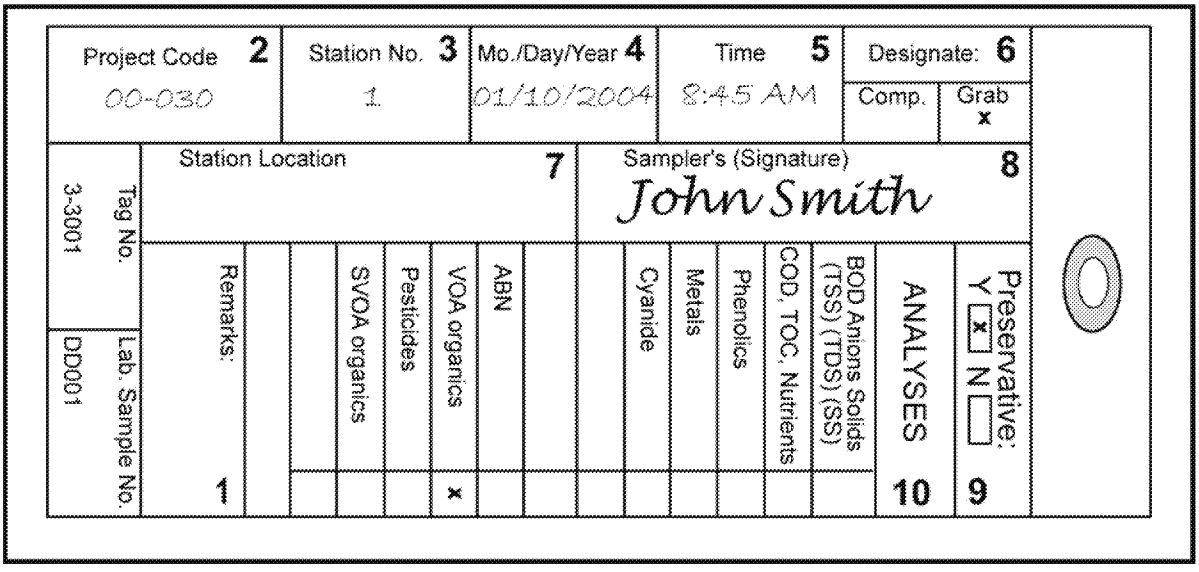

Figure 3-7. Completed Sample Tag

3.3 Provide Sample Receipt

After samples have been taken from private property, the sampler should prepare a receipt for these samples and provide this receipt to the property owner. This is especially important when sampling on private property since these samples could be used during future litigation and the receipt will verify that the owner granted approval for the removal of the samples from the property. An example of a sample receipt created using FORMS II Lite is shown in Figure 3-8.

EPA Region 3
U.S. ENVIRONMENTAL PROTECTION AGENCY

RECEIPT FOR SAMPLES

PROJECT NO.	PROJECT NAME	NAME & LOCATION OF FACILITY/SITE
QW-123		EXAMPLE SITE
SAMPLERS: (SIGNATURES)		

STATION NO.	LOCATION/DESCRIPTION	DATE	TIME	Comp/Grab	NO. OF EPA CONTAINERS	SPLIT SAMPLE Y OR N	EPA SAMPLE TAG NO.'S
STATION ONE	LOCATION ONE	2/20/2001	15:55	G	11	Yes	112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122
STATION ONE	LOCATION TWO	2/20/2001	16:01	C	11	Yes	123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133
STATION TWO	LOCATION ONE	2/20/2001	16:02	C	11	Yes	134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144

SPLIT SAMPLES TRANSFERRED BY: (PRINT)	DATE	SPLIT SAMPLES RECEIVED BY ☐ OR DECLINED BY ☐ (PRINT)	DATE/TIME
(SIGN)	TIME	(SIGN)	TELEPHONE
		TITLE	

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Figure 3-8. Sample Receipt Created Using the FORMS II Lite Software

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3.4 Pack and Ship Samples

Once the samples have been collected, it is very important that the sampler properly package the samples for shipment and ensure that the samples are sent to the appropriate laboratory as quickly as possible. Prompt and proper packaging of samples will:

- Protect the integrity of samples from changes in composition or concentration caused by bacterial growth or degradation from increased temperatures;
- Reduce the chance of leaking or breaking of sample containers that would result in loss of sample volume, loss of sample integrity, and exposure of personnel to toxic substances; and
- Help ensure compliance with shipping regulations.

3.4.1 Sample Containers

Once samples are collected, they must be stored in conditions that maintain sample integrity. All samples should be placed in shipping containers or other suitable containers with ice to reduce the temperature as soon as possible after collection. Ideally, all samples should be shipped the day of collection for overnight delivery to the laboratory. If samples cannot be shipped on the day of collection, the sample temperature should be maintained at 4°C (±2°C) until they are shipped to the laboratory.

One CLP RAS sample may be contained in several bottles and vials. For example, one soil sample may consist of all containers needed for three of the analytical fractions available under this service (i.e., SVOA fraction, Pesticide fraction, and Aroclor fraction), even though the fractions are collected in separate containers. Therefore, the analysis to be performed and the matrix type will determine the type of container(s) that will be used, as well as the volume that must be collected for that particular sample fraction.

3.4.2 Inventory of Samples and Documentation

Prior to shipment, samplers should conduct an inventory of the contents of the shipping cooler or container against the corresponding TR/COC Record when packing for shipment to laboratories. An inventory will ensure that the proper number of containers have been collected for each analysis of the samples, that the required PE and QC samples and cooler temperature blanks are included, and the correct Sample Numbers and fractions have been assigned to each sample.

3.4.3 Shipping Regulations

Sample shipping personnel are legally responsible for ensuring that the sample shipment will comply with all applicable shipping regulations. For example, hazardous material samples must be packaged, labeled, and shipped in compliance with all IATA Dangerous Goods regulations or DOT regulations and USEPA guidelines. Refer to Appendix B for detailed shipping guidelines when using SW-846 Method 5035A to preserve and ship samples.

3.4.4 Sample Packaging for Shipment

Samplers are responsible for the proper packaging of samples for shipment. To ensure that samples are appropriately packaged (e.g., to avoid breakage and/or contamination) the sampler should consult their respective project plans to determine the proper packing and shipping procedures. The sampler must determine the sample type, pack the shipping containers correctly, include necessary paperwork, label and seal shipping containers or coolers, and ship the samples.

3.4.4.1 Determine the Sample Type and Container

Samplers should know what kinds of samples they are handling to ensure proper packaging. Samplers should refer to their appropriate project plans to determine which type of sample container should be used for each type of sample being taken during the sampling event.

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Please follow Regional guidance with reference to samples containing dioxin or radioactive waste.

3.4.4.2 Pack Shipping Containers

It is imperative that samples are correctly and carefully packed in shipping containers to prevent the sample containers from breaking or leaking. Samplers must prepare and pack a shipping cooler or container according to the instructions outlined in Table 3-7.

Table 3-7. Packing Samples for Shipment

Step	Action	Important Notes
1	Seal all drain holes in the shipping container, both inside and out, to prevent leakage in the event of sample breakage.	
2	Check all lids/caps to make sure the samples are tightly sealed and will not leak.	
3	Seal samples within a clear plastic bag.	Custody seals can be placed directly on any sample container except for coring tools used as a transport device (e.g., 5 g Samplers) and tared VOA bottles. If packing coring tools used as a transport device or tared VOA bottles, place them in a clear plastic bag and place the custody seal on the outside of the bag.
4	Fully chill samples to 4°C (±2°C) prior to placement within suitable packing materials.	
5	Prior to placing samples within the shipping cooler, it is recommended that samplers line shipping containers with non-combustible, absorbent packing material.	
6	Place samples in CLEAN, sealed, watertight shipping containers (metal or hard plastic coolers).	
7	Conduct an inventory of the contents of the shipping cooler/container against the corresponding TR/COC Record.	
8	Cover samples in double-bagged ice to prevent water damage to packing materials.	Do NOT pour loose ice directly into the sample cooler. The ice is used to maintain the temperature of the samples within the shipping cooler.
9	It is recommended a temperature blank be included within each cooler being shipped.	The temperature blank is generally a 40 L vial filled with water and labeled "temperature blank" but does not have a Sample Number.
10	Ensure that the site name or other site-identifying information does not appear on any documentation being sent to the laboratory.	The laboratory should not receive any site-identifying information.

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3.4.4.3 Include Necessary Paperwork

Samplers must properly place the necessary paperwork in the shipping cooler. All paperwork must be placed in a plastic bag or pouch and then secured to the underside of the shipping cooler lids (see Figure 3-9).

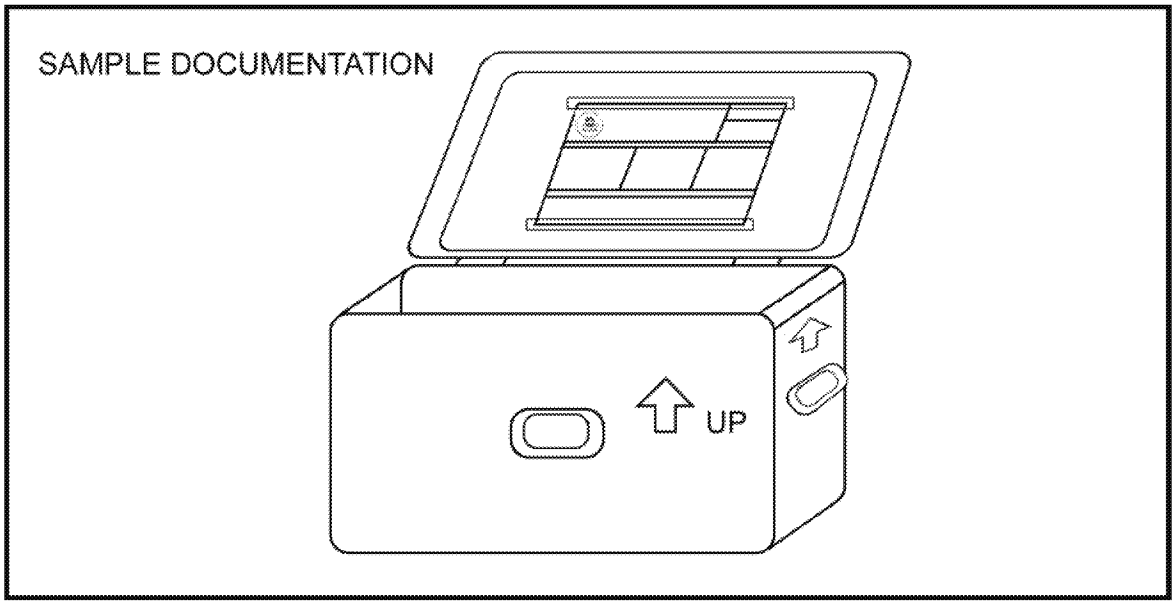

Figure 3-9. Sample Cooler with Attached TR/COC Record and Cooler Return Documentation

Necessary paperwork includes TR/COC Records and sample weight logs (see Figure 3-10), if required (for VOA samples). Samplers should contact their RSCC (or designee) for specific paperwork requirements.

USEPA Contract Laboratory Program
Sample Weight Log

Shipped to: AAA Testing Laboratory
1700 Mill Avenue
Houston TX 77099
(281) 983-1234

Case No. 39563
DAS No. DAS34
Date Shipped: 9/29/2003

Sample No.	Matrix	Analysis	Preservative	Bottle/ Tag Number	Tared Weight (g)	Final Weight (g)	Sample Weight (g)	Laboratory Weight	Traffic Report No.
C0036	Subsurface Soil (>12")	CLP TCL Volatiles	Ice Only	199548	32.80	37.20	4.40		3-103018225-092903-0001
C0036	Subsurface Soil (>12")	CLP TCL Volatiles	Ice Only	199547	32.10	38.30	6.20		3-103018225-092903-0001
C0036	Subsurface Soil (>12")	CLP TCL Volatiles	Ice Only	199549	31.20	38.60	7.40		3-103018225-092903-0001
C0037	Surface Soil (0"-12")	CLP TCL Volatiles	Ice Only	199552	32.00	36.90	4.90		3-103018225-092903-0001
C0037	Surface Soil (0"-12")	CLP TCL Volatiles	Ice Only	199551	32.40	37.10	4.70		3-103018225-092903-0001
C0037	Surface Soil (0"-12")	CLP TCL Volatiles	Ice Only	199550	31.90	35.90	4.00		3-103018225-092903-0001

Completed By:	Date:

All weights are measured in grams

Figure 3-10. Sample Weight Log

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3.4.4.4 Return Sample Shipping Coolers

CLP laboratories must routinely return sample shipping coolers within 14 calendar days following shipment receipt. Therefore, the sampler should also include cooler return instructions with each shipment. The sampler (not the CLP laboratory) is responsible for paying for return of the cooler and should also include shipping airbills bearing the sampler's account number, as well as a return address to allow for cooler return.

3.4.4.5 Label and Seal Sample Shipping Coolers

After samples are packaged within shipping coolers, samplers must carefully secure the top and bottom of the coolers with tape, place return address labels clearly on the outside of the cooler, and attach the required chain-of-custody seals (see Figure 3-11).

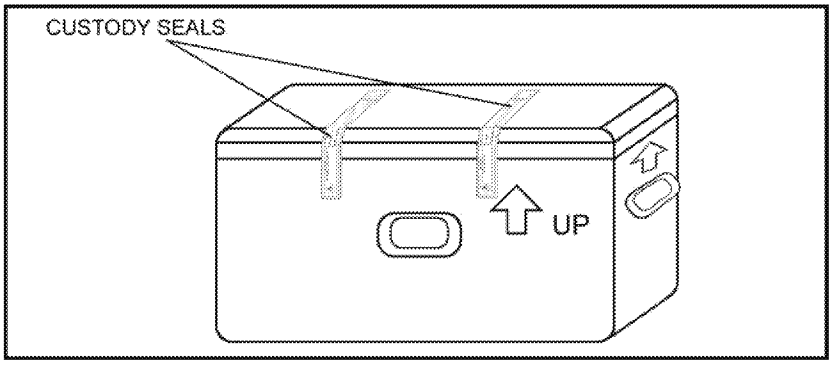

Figure 3-11. Shipping Cooler with Custody Seals

If more than one cooler is being delivered to a laboratory, samplers should mark each cooler as "1 of 2", "2 of 2", etc. In addition, samplers must accurately complete and attach shipping airbill paperwork for shipment of the samples to the laboratory. An airbill, addressed to the Sample Custodian of the receiving laboratory, should be completed for each cooler shipped. Samplers should receive the correct name, address, and telephone number of the laboratory to which they must ship samples from the RSCC or SMO. To avoid delays in analytical testing, samplers should make sure they are sending the correct types of samples to the correct laboratory when collecting samples for multiple types of analysis. For example, inorganic samples may be shipped to one laboratory for analysis, while organic samples may need to be shipped to another laboratory.

3.4.4.6 Ship Samples

The sampling contractor should ensure that samplers know the shipping company's name, address, and telephone number. In addition, they should be aware of the shipping company's hours of operation, shipping schedule, and pick-up/drop-off requirements.

Overnight Delivery

It is imperative that samples be sent via overnight delivery. Delays caused by longer shipment times may cause technical holding times to expire, which in turn may destroy sample integrity or require the recollection of samples for analysis.

Saturday Delivery

For shipping samples for Saturday delivery, the sampler MUST contact the RSCC (or their designee) or SMO so that SMO will receive the delivery information by 3:00 PM ET on the Friday prior to delivery.

3.4.5 Shipment Notification

When samples are shipped to CLP Laboratories, samplers **must immediately** report all sample shipments to the RSCC (or their designee) or to SMO. **Under no circumstances should the sampler contact the laboratory directly.** If samplers are shipping samples after 5:00 PM ET, they must notify the RSCC (or

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designee) or SMO by 8:00 AM ET on the following business day. Samplers should receive the name and phone number of the appropriate SMO coordinator to contact from the Region/RSCC.

Samplers must provide the following information to the RSCC (or their designee) or to SMO:

- Name and phone number at which they can easily be reached (preferably closest on-site phone number if still in the field);
- SMO-assigned Case Number (see Section 2.4.1);
- Number, concentration, matrix and analysis of samples being shipped;
- Name of laboratory (or laboratories) to which the samples were shipped;
- Airbill number(s);
- Date of shipment;
- Case status (i.e., whether or not the Case is complete);
- Problems encountered, special comments, or any unanticipated issues;
- When to expect the next anticipated shipment; and
- An electronic export of the TR/COC Record (must be sent as soon as possible after sample shipment). For information regarding electronic export of TR/COC Records, refer to the following Web site:

http://www.epa.gov/superfund/programs/clp/f2lsubmit.htm

For Saturday delivery, samplers MUST contact the RSCC (or their designee) or SMO so that SMO will receive the delivery information by 3:00 PM ET on the Friday prior to delivery.

Samplers should be aware if their Region requires them to notify the RSCC (or designee) and/or SMO of sample shipment.

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Appendix A: Functions within a Sampling Project

The following table describes Quality Assurance Project Plan (QAPP) requirements taken from *EPA Requirements for Quality Assurance Project Plans* (EPA QA/R-5).

Functions Within a Sampling Project	Elements of that Function
Project Management	
Project/Task Organization	Identifies the individuals or organizations participating in the project and defines their specific roles and responsibilities.
Problem Definition/Background	States the specific problem to be solved or decision to be made and includes sufficient background information to provide a historical and scientific perspective for each particular project.
Project/Task Description	Describes the work to be performed and the schedule for implementation to include: • Measurements to be made during the course of the project; • Applicable technical, regulatory, or program-specific quality standards, criteria, or objectives; • Any special personnel and equipment requirements; assessment tools needed; and • A work schedule and any required project and quality records, including types of reports needed.
Quality Objectives and Criteria	Describes the project quality objectives and measurement performance criteria.
Special Training/Certification	Ensures that any specialized training for non-routine field sampling techniques, field analyses, laboratory analyses, or data validation should be specified.
Documents and Records	• Itemizes the information and records that must be included in the data report package and specifies the desired reporting format for hard copy and electronic forms, when used. • Identifies any other records and/or documents applicable to the project such as audit reports, interim progress reports, and final reports that will be produced. • Specifies or references all applicable requirements for the final disposition of records and documents, including location and length of retention period.
Data Generation and Acquisition	
Sampling Process Design (Experimental Design)	• Describes the experimental design or data collection design for the project. • Classifies all measurements as critical or non-critical.
Sampling Methods	• Describes the procedures for collecting samples and identifies sampling methods and equipment. Includes any implementation requirements, support facilities, sample preservation requirements, and materials needed. • Describes the process for preparing and decontaminating sampling equipment to include the disposal of decontamination by-products, selection and preparation of sample containers, sample volumes, preservation methods, and maximum holding times for sampling, preparation, and/or analysis. • Describes specific performance requirements for the method. • Addresses what to do when a failure in sampling occurs, who is responsible for corrective action, and how the effectiveness of the corrective action shall be determined and documented
Sample Handling and Custody	• Describes the requirements and provisions for sample handling and custody in the field, laboratory, and transport, taking into account the nature of the samples, the maximum allowable sample holding times before extraction and analysis, and the available shipping options and schedules. • Includes examples of sample labels, custody forms, and sample custody logs.

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Analytical Methods	• Identifies the analytical methods and equipment required, including sub-sampling or extraction methods, waste disposal requirements (if any), and specific method performance requirements. • Identifies analytical methods by number, date, and regulatory citation (as appropriate). If a method allows the user to select from various options, the method citations should state exactly which options are being selected. • Addresses what to do when a failure in the analytical system occurs, who is responsible for corrective action, and how the effectiveness of the corrective action shall be determined and documented. • Specifies the laboratory turnaround time needed, if important to the project schedule. • Specifies whether a field sampling and/or laboratory analysis Case Narrative is required to provide a complete description of any difficulties encountered during sampling or analysis.
Quality Control (QC)	• Identifies required measurement QC checks for both the field and laboratory. • States the frequency of analysis for each type of QC check, and the spike compounds sources and levels. • States or references the required control limits for each QC check and corrective action required when control limits are exceeded and how the effectiveness of the corrective action shall be determined and documented. • Describes or references the procedures to be used to calculate each of the QC statistics.
Instrument/Equipment Testing, Inspection, and Maintenance	• Describes how inspections and acceptance testing of environmental sampling and measurement systems and their components will be performed and documented. Identifies and discusses the procedure by which final acceptance will be performed by independent personnel. • Describes how deficiencies are to be resolved and when re-inspection will be performed. • Describes or references how periodic preventative and corrective maintenance of measurement or test equipment shall be performed. • Identifies the equipment and/or system requiring periodic maintenance. • Discusses how the availability of spare parts identified in the operating guidance and/or design specifications of the systems will be assured and maintained.
Instrument/Equipment Calibration and Frequency	• Identifies all tools, gauges, instruments, and other sampling, measuring, and test equipment used for data collection activities affecting quality that must be controlled, and at specific times, calibrated to maintain performance within specified limits. • Identifies the certified equipment and/or standards used for calibration. • Describes or references how calibration will be conducted using certified equipment and/or standards with known valid relationships to nationally recognized performance standards. If no such standards exist, documents the basis for calibration. • Indicates how records of calibration shall be maintained and traced to the instrument.
Inspection/Acceptance of Supplies and Consumables	• Describes how and by whom supplies and consumables shall be inspected and accepted for use in the project. • States acceptance criteria for such supplies and consumables.
Non-direct Measurements	• Identifies any types of data needed for project implementation or decision-making that are obtained from non-measurement sources (e.g., computer databases, programs, literature files, historical databases). • Describes the intended use of data. • Defines the acceptance criteria for the use of such data in the project. • Specifies any limitations on the use of the data.
Data Management	• Describes the project data management scheme, tracing the data path from generation in the field or laboratory to their final use or storage. • Describes or references the standard record-keeping procedures, document control system, and the approach used for data storage and retrieval on electronic media.

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Appendix B: CLP Sample Collection Guidelines for VOAs in Soil by SW-846 Method 5035A

A. Preferred Options for the Contract Laboratory Program (CLP) are Options 1, 2, and 3:

Soil samples must be placed on their sides prior to being frozen.

Option 1.

Closed-system Vials:

Container - tared or preweighed 40 mL VOA Vials containing a magnetic stir bar.

Collect 5 g of soil per vial (iced or frozen in the field).

Regular Samples	3 Vials - Dry (5 g soil per vial) 1 Vial - Dry (filled with soil, no headspace) 4 Total Vials
Regular Samples Requiring QC Analysis	9 Vials - Dry (5 g soil per vial) 1 Vial - Dry (filled with soil, no headspace) 10 Total Vials

Option 2.

Closed-system Vials Containing Water:

Container - tared or pre-weighed 40 mL VOA vials containing a magnetic stir bar and 5 mL water.

Collect 5 g of soil per vial (iced or frozen in the field).

Regular Samples	2 Vials with water added (5 g soil and 5 mL water per vial) 1 Vial - Dry (5 g soil in vial) 1 Vial - Dry (filled with soil, no headspace) 4 Total Vials (2 with water and 2 dry)
Regular Samples Requiring QC Analysis	6 Vials with water added (5 g soil and 5 mL water per vial) 5 Vials - Dry (5 g soil per vial) 1 Vial - Dry (filled with soil, no headspace) 12 Total Vials (6 with water and 6 dry)

Option 3.

Coring Tool used as a Transport Device

Container - 5 g Samplers or equivalent.

All Samplers should be iced or frozen in the field and bagged individually.

Regular Samples	3 Samplers (5 g soil per Sampler) 1 Vial - Dry (filled with soil, no headspace) 4 Total (3 Samplers and 1 Vial)
Regular Samples Requiring QC Analysis	9 Samplers (5 g soil per Sampler) 1 Vial - Dry (filled with soil, no headspace) 10 Total (11 Samplers and 1 Vial)

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B. Options 4, 5, and 6 are NOT preferred options for the CLP:

Option 4.

Closed-system Vials:

Container - tared or preweighed 40 mL VOA Vials containing a magnetic stir bar and preservative.

Collect 5 g of soil per vial and add Sodium bisulfate ($NaHSO_4$) preservative (5 mL water + 1 g $NaHSO_4$) - iced or frozen in the field.

Caution: This option is NOT a Preferred Option for the CLP because:

NaHSO4 preservation creates low pH conditions that will cause the destruction of certain CLP target analytes (e.g., vinyl chloride, trichloroethene, trichlorofluoromethane, cis- and trans-1,3-dichloropropene). Projects requiring the quantitation of these analytes should consider alternative sample preservation methods. NaHSO4 also cannot be used on carbonaceous soils. Check the soil before using this method of collection! Soil can be checked by placing a test sample in a clean vial, then adding several drops of NaHSO4 solution. If the soil bubbles, use Option 4b and note this issue on the TR/COC Record.

Option 4a. Samples preserved in the field

Regular Samples	2 Vials with $NaHSO_4$ preservative added (5g soil per vial) 1 Vial without $NaHSO_4$ preservative added (5g soil per vial) 1 Vial - Dry (filled with soil, no headspace) 4 Total Vials (2 with $NaHSO_4$ preservative and 2 without)
Regular Samples Requiring QC Analyses	4 Vials with $NaHSO_4$ preservative added (5g soil per vial) 5 Vials without $NaHSO_4$ preservative added (5 g soil per vial) 1 Vial - Dry (filled with soil, no headspace) 10 Total Vials (4 with $NaHSO_4$ and 6 without)

Option 4b. Samples are preserved by the laboratory (No $NaHSO_4$ preservative is added to these samples in the field).

Regular Samples	3 Vials - Dry (5 g soil per vial) 1 Vial - Dry (filled with soil, no headspace) 4 Total Vials
Regular Samples Requiring QC Analyses	9 Vials - Dry (5 g soil per vial) 1 Vial - Dry (filled with soil, no headspace) 10 Total Vials

Option 5.

Methanol Preservation (medium-level analysis only):

Container - tared or pre-weighed 40 mL VOA vials containing 5-10 mL methanol.

Collect 5 g of soil per vial (iced in the field).

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Caution: This is NOT a preferred option for the CLP because:

Samples preserved with methanol can only be analyzed by the medium-level method. Low-level Contract Required Quantitation Limit (CRQLs) cannot be achieved when samples are preserved this way.

Additional problems associated with use of methanol as a preservative in the field include:

- Possible contamination of the methanol by sampling-related activities (e.g., absorption of diesel fumes from sampling equipment);
- Leakage of methanol from the sample vials during shipping, resulting in loss of VOAs prior to analysis.

Regular Samples	2 Vials (5 g soil and 5-10 mL methanol per vial) 1 Vial - Dry (filled with soil, no headspace) 3 Total Vials (2 with methanol and 1 dry)
Regular Samples Requiring QC Analysis	6 Vials (5 g soil and 5-10 mL methanol per vial) 1 Vial -Dry (filled with soil, no headspace) 7 Total Vials (6 with methanol and 1 dry)

If shipping samples containing methanol as a preservative, a shipping label must be used to indicate methanol. This label must also contain the United Nations (UN) identification number for methanol (UN 1230), and indicate Limited Quantity.

Option 6.

Glass Containers filled with sample - No Headspace:

Container - 4 oz Glass Jars.

Glass container filled with soil with no headspace and iced.

Caution: This is NOT a preferred option for the CLP because:

Samples collected in this manner lose most of their volatile analytes prior to analysis when the sample containers are opened and sub-sampled in the laboratory. This option is only available due to Regional requirements.

Regular Samples	2 Glass Jars (4 oz) filled with sample, no headspace 1 Vial - Dry (filled with soil, no headspace) 3 Total Containers
Regular Samples Requiring QC Analysis	2 Glass Jars (4 oz) filled with sample, no headspace 1 Vial - Dry (filled with soil, no headspace) 3 Total Containers

C. Caution:

1. Extreme care must be taken to ensure that frozen samples do not break during shipment.
2. Before adding soil to pre-weighed vials containing a stir bar, weigh the vials to confirm the tared weight. If the weight varies by more than 0.1 g, record the new weight on the label and the sample documentation. Do NOT add labels to these vials once the tared weight has been determined/confirmed.

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D. Dry Samples:

All options include taking a sample in a dry 40 mL VOA vial (or a 4 oz wide mouth jar) with no headspace. No additional water, $NaHSO_4$, or methanol is added to this sample. This sample is taken to determine moisture content; therefore, it does not need to be tared or have a stir bar.

E. Iced or Frozen Samples:

1. Iced means cooled to 4°C (±2°C) immediately after collection.
2. Frozen means cooled to between -7°C and -15°C immediately after collection.

F. Sample Delivery:

CLP strongly recommends that all samples reach the laboratory by COB the next day after sample collection.

G. Notes:

1. For Option 4, samples can be preserved with $NaHSO_4$ either:
   - In the field; or
   - In the laboratory upon receipt. In this case, the sampler should put the following information in the Preservation Column of the TR/COC Record - "To be preserved at lab with $NaHSO_4$". This Regional Request should also be communicated to SMO so that the laboratory can be notified.
2. Regional QAPPs may require the use of Option 5. Please note that this option is for medium-level analysis ONLY.
3. If water, methanol, or $NaHSO_4$ preservative is added to the vials in the field, a field blank containing the appropriate liquid used in the vials should be sent to the laboratory for analysis.

H. Number of Containers Rationale:

The rationale for the number of containers (vials or samplers) required for the field sample and the required laboratory QC for each option is given as follows:

Option 1.

Rationale for Regular Vials:	1 vial for low-level analysis (water purge) 1 vial for backup low-level analysis 1 vial for medium-level analysis (methanol extraction)
Rationale for QC Vials:	2 vials for MS and MSD low-level analysis 2 vials for MS and MSD medium-level analysis 2 vials for backup (MS and MSD) low-level or medium-level analysis

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Option 2.

Rationale for Regular Vials:	1 vial for low-level analysis (water purge) 1 vial for back up low-level analysis 1 vial dry for medium-level analysis (methanol extraction)
Rationale for QC Vials:	2 vials for MS and MSD low-level analysis 2 vials for MS and MSD medium-level analysis 2 vials for backup (MS and MSD) low-level or medium-level analysis
Medium-level: Analysis	Methanol will be added in the laboratory

Option 3.

Rationale for Regular Samples:	1 sampler for low-level analysis (water purge) 1 sampler for back up low-level analysis 1 sampler for medium-level analysis (methanol extraction)
Rationale for QC Samples:	2 samplers for MS and MSD low-level analysis 2 samplers for backup MS and MSD low-level analysis 2 samplers for MS and MSD medium-level analysis 2 samplers for backup MS and MSD medium-level analysis

Option 4a ($NaHSO_4$ added in the field).

Rationale for Regular Vials:	1 vial with water for low-level analysis (water purge) 1 vial with water for backup low-level analysis 1 vial dry for medium-level analysis (methanol extraction)
Rationale for QC Vials:	2 vials with water for MS and MSD low-level analysis 2 vials dry for MS and MSD medium-level analysis 2 vials for backup (MS and MSD) low-level or medium-level analysis

Option 4b ($NaHSO_4$ added in the laboratory).

Rationale for Regular Vials:	1 vial for low-level analysis (water purge) 1 vial for backup low-level analysis 1 vial for medium-level analysis (methanol extraction)
Rationale for QC Vials:	2 vials for MS and MSD low-level analysis 2 vials for MS and MSD medium-level analysis 2 vials for backup (MS and MSD) low-level or medium-level analysis

Option 5.

Rationale for Regular Samples:	1 vial for regular medium-level analysis 1 vial for back up medium-level analysis
Rationale for QC Samples:	2 samples for MS and MSD 2 samples for backup MS and MSD

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Option 6.

In this option, all Regular and QC samples for both low-level and medium analysis are taken as subsamples from the same container.

Rationale for Regular Analysis	1 glass jar for low-level analysis and medium-level analysis **1 glass jar for backup low-level analysis and medium-level analysis**
Rationale for QC Analysis:	1 glass jar for low-level analysis and medium-level analysis **1 glass jar for backup low-level analysis and medium-level analysis**

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Appendix C: General CLP Sample Collection Guidelines VOAs in Water

Regional guidance and/or specific Project Plan requirements will supersede the guidelines listed below.

Collect the following:

- At least two 40 mL glass containers with polytetrafluoroethylene (PTFE)-lined septa and open top screw-caps that are filled to capacity with no air bubbles, preserved to a pH of 2 with HCl, and cooled to 4°C (±2°C) immediately after collection. DO NOT FREEZE THE SAMPLES.
- If Selected Ion Monitoring (SIM) analysis is requested, at least two additional 40 mL glass containers with PTFE-lined septa and open top screw-caps that are filled to capacity with no air bubbles, preserved to a pH of 2 with HCl, and cooled to 4°C (±2°C) immediately after collection.

Test for Carbonates, Residual Chlorine, Oxidants, and Sulfides:

- It is very important that samplers obtain Regional guidance when testing and ameliorating for:
  - Carbonates;
  - Residual chlorine (e.g., municipal waters or industrial waste waters that are treated with chlorine prior to use or discharge); or
  - Oxidants.
- VOA samples containing carbonates react with the acid preservative causing effervescence (due to formation of carbon dioxide), which can cause loss of volatile analytes.
- Residual chlorine present in VOA samples can continue to react with dissolved organic matter. This continuous reaction may lead to inaccurate quantitation of certain analytes present in the sample at the time of collection.
- Residual chlorine and oxidants present in VOA samples can cause degradation of certain volatile analytes (e.g., styrene).

Perform the following for *Pre-Preserved* Vials:

1. Pour the sample slowly down the edge of the sample vial to avoid excess aeration or agitation of the sample during filling.
2. Fill the vial completely so that a reverse (convex) meniscus is present and ensure that there are no air bubbles present (either in the body or especially at the top of the vial).
3. Place the septum on the vial so that the PTFE side is in contact with the sample, and then firmly tighten the cap.
4. Gently flip the vial a few times to ensure that the sample is mixed with the acid preservative.
5. While holding the vial upright, gently tap the sample to check for air bubbles (either in the body or especially at the top of the vial).
6. If air bubbles are present, discard the sample and select a new vial in which to recollect a new sample. Repeat Steps 1 - 5 above.
7. Do NOT mix or composite samples for VOAs.
8. Cool sample to a temperature of 4°C (±2°C). Samplers should begin the cooling process in the field as samples are being collected. Double-bagged ice should be used. DO NOT FREEZE WATER SAMPLES.
9. Immediately transfer the vial to the sample shuttle (device that contains a "set" of VOA vials) once it has been collected. Do NOT allow ice to touch the vials.

Perform the Following for *Empty* Vials:

1. Rinse the vial with sample water prior to actual sample collection and preservation.

Regions vary in their approach to pre-rinsing and/or re-using sample vials (e.g., some Regions do not recommend pre-rinsing and/or re-use of pre-cleaned containers using sample water). Be sure to follow Regional guidance.

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2. Add 1-2 mL of acid preservative to the vial. Check to ensure that the sample you are collecting requires a preservative (follow Regional guidance).
3. Pour the sample slowly down the edge of the sample vial to avoid excess aeration and agitation of the sample.
4. Fill the vial completely so that a reverse (convex) meniscus is present and ensure that there are no air bubbles present (either in the body or especially at the top of the vial).
5. Place the septum on the vial so that the PTFE side is in contact with the sample, and then firmly tighten the cap.
6. Gently flip the vial a few times to ensure that the sample is mixed with the acid preservative.
7. While holding the vial upright, gently tap the vial to check for air bubbles (either in the body or especially at the top of the vial).
8. If air bubbles are present, discard the sample and recollect a new sample using the same sample vial. Repeat Steps 1 - 7 above.
9. Check the recollected sample for air bubbles. If air bubbles are present, additional sample water may be added to the vial to eliminate air bubbles. If there are air bubbles after three consecutive attempts to eliminate air bubbles by the addition of sample water, the entire sample and sample vial should be discarded and a new sample collected.
10. Do NOT mix or composite samples for VOAs.
11. Cool sample to a temperature of 4°C (±2°C). Samplers should begin the cooling process in the field as samples are being collected. Double-bagged ice should be used. DO NOT FREEZE WATER SAMPLES.
12. Immediately transfer the vial to the sample shuttle (device which contains a "set" of VOA vials) once it has been collected. Do NOT allow ice to touch the vials.

Things to Remember:

- Samples must be shipped as soon as possible, preferably on the same day as sample collection to avoid exceeding sample holding times. If overnight transit is not possible, samples should be maintained at 2 - 4°C until they are shipped to the laboratory.
- If samples are not preserved (a requirement for certain analytes), the technical holding time is shortened to 7 days.

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Appendix D: Sampling Techniques and Considerations

During a sampling event, the sampler is expected to follow prescribed sampling techniques. The sampler should also be aware of any special sampling considerations, contaminant issues, and sample compositing and mixing methods that could affect their sampling efforts.

Regional guidance will take precedence over any of the techniques and considerations listed below.

D.1 General Sampling Techniques

Information regarding surface water, sediment, soil, and groundwater sampling can be found in many documents including, but not limited to, the following sources:

- Compendium of ERT Surface Water and Sediment Sampling Procedures, EPA/540/P-91/005;
- Compendium of ERT Soil Sampling and Surface Geophysics Procedures, EPA/540/P-91/006;
- Compendium of ERT Groundwater Sampling Procedures, EPA/540/P-91/007;
- Quality Assurance Sampling Plan for Environmental Response (QASPER) software, Version 4.1, ERT; and
- *Requirements for the Preparation of Sampling and Analysis Plans*; United States Army Corps of Engineers, February 1, 2001, EM 200-1-3.

When working with potentially hazardous materials, samplers should follow USEPA and OSHA requirements, specific health and safety procedures, and DOT requirements.

D.2 Special Sampling Considerations

Samplers should refer to Regionally-developed SOPs to obtain specific procedures for properly collecting and preserving samples in the field. For additional guidance regarding sampling for VOAs in soil and water, see Appendices B and C. Samplers should obtain Regional guidance when testing and ameliorating for:

- Carbonates in VOA soil and water;
- Residual chlorine in VOA soil and water, or cyanide water;
- Oxidants in VOA soil and water; or
- Sulfides in cyanide.

D.3 Contaminant Sampling

Certain compounds can be detected in the parts-per-billion (ppb) and/or parts-per-trillion (ppt) range. Extreme care MUST be taken to prevent cross-contamination of these samples. The following precautions should be taken when trace contaminants are a concern:

- Disposable gloves should be worn each time a different location is sampled.
- When collecting both surface water and sediments, surface water samples should be collected first. This reduces the chance of sediment dispersal into surface water, and the resulting loss of surface water sample integrity.
- Sampling should occur in a progression from the least to the most contaminated area, if this information is known to the sampling team.
- Samplers should use equipment constructed of PTFE, stainless steel, or glass that has been properly pre-cleaned for collection of samples for trace organic and/or inorganic analyses. Equipment constructed of plastic or polyvinyl chloride (PVC) should NOT be used to collect samples for trace organic compound analyses.
- Equipment constructed of stainless steel should NOT be used to collect samples for trace metals analysis.

D.4 Sample Compositing

Sample compositing is a site-specific activity that must be conducted according to the SAP. Compositing is typically used for large sites under investigation to improve the precision (i.e., lower the variance) of the estimated average contaminant concentrations. **Samples for VOA analysis should NOT be composited to minimize loss of VOAs/analytes.**

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Composite samples consist of a series of discrete grab samples that are mixed together to characterize the average composition of a given material. The discrete samples are usually of equal volume, but may be weighted to reflect an increased flow or volume. Regardless, all discrete samples must be collected in an identical manner and the number of grab samples forming a composite should be consistent. There are several compositing techniques that may be required such as:

- Flow-proportioned – Collected proportional to the flow rate during the compositing period by either a time-varying/constant volume or a time-constant/varying volume method. This technique is usually associated with wastewater or storm water runoff sampling.
- Time – Composed of a varying number of discrete samples collected at equal time intervals during the compositing period. This technique is typically used to sample wastewater and streams, and in some air sampling applications.
- Areal – Collected from individual grab samples collected in an area or on a cross-sectional basis. Areal composites are comprised of equal volumes of grab samples where all grabs are collected in an identical manner. This technique is typically used for estimating average contaminant concentrations in soils or sediments. This technique is useful when contaminants are present in nugget form (i.e., TNT chunks, lead shot, etc.), thus exhibiting large differences in concentration over a small sample area.
- Vertical – Collected from individual grab samples but taken from a vertical cross section. Vertical composites are comprised of equal volumes of grab samples where all grab samples are collected in an identical manner. Examples would include vertical profiles of a soil borehole or sediment columns.
- Volume – Collected from discrete samples whose aliquot volumes are proportional to the volume of sampled material. Volume composites are usually associated with hazardous waste bulking operations where the sample represents combined or bulked waste.

When compositing solid samples (i.e., sediment, soil, or sludge) for analysis of compounds present in trace quantities, use a stainless steel or PTFE bowl and spatula.

D.5 Sample Mixing and Homogenizing

Mixing of the sample for the remaining parameters is necessary to create a representative sample media. It is extremely important that solid samples be mixed as thoroughly as possible to ensure that the sample is as representative as possible of the sample location. Please refer to the project-specific SAP regarding instructions on removal of any extraneous materials (e.g., leaves, sticks, rocks, etc.). The mixing technique will depend on the physical characteristics of the solid material (e.g., particle size, moisture content, etc.). The mixing container should be large enough to hold the sample volume and accommodate the procedures without spilling. Both the mixing container (generally a bowl or tray) and the mixing implement should be properly decontaminated before use. Samples should be homogenized according to procedures listed in the project-specific SAP.

Samples for VOA analysis should not be mixed to minimize loss of volatile analytes.

Table D-1 provides a short procedure for mixing a soil sample with a small particle size (less than 1/4 in) and filling sample containers in the field.

Table D-1. Mixing a Sample and Filling Sample Containers

Step	Action
1	Roll the contents of the compositing container to the middle of the container and mix.
2	Quarter the sample and move to the sides of the container.
3	Mix each quarter individually, then combine and mix OPPOSITE quarters, then roll to the middle of the container.
4	Mix the sample once more, and then quarter the sample again.
5	Mix each quarter individually, then combine and mix ADJACENT corners, then roll to the middle of the container. The goal is to achieve a consistent physical appearance before sample containers are filled.
6	Flatten piled material into an oblong shape.
7	Using a flat-bottomed scoop, collect a strip of soil across the entire width of the short axis and place it into a sample container.
8	Repeat Step 7 at evenly-spaced intervals until the sample containers are filled.
9	Record the approximate quantity of each subsample in the field log book.

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Appendix E: Sampling Checklists

Appendix E-1: Personnel Preparation Checklist

(Page 1 of 1)

Personnel Briefing	Yes	No	Comments:
1. Did you review sampling team responsibilities and identify individual(s) responsible for corrective actions?			
2. Did you ensure that you have met the appropriate personal safety and protection requirements?			
3. Did you identify sampling locations and receive permission to access them, as appropriate?			
4. Did you contact the appropriate utility companies PRIOR to the start of sampling? Note By law, utility companies must be contacted prior to the start of digging/sampling so that any underground utilities (gas lines, water lines, electrical lines, etc.) can be marked. A list of one-call centers for each state may be found at: http://www.digsafely.com/contacts.htm.			
5. If sampling on private property, do you have sample receipts to provide to the property owner for all samples taken and removed from the property?			
6. Have you determined the number and type of samples to be collected?			
7. Did you review sample collection methods?			
8. Have you reviewed sample container requirements?			
9. Did you review decontamination requirements, procedures, and locations?			
10. Did you determine holding times and conditions?			
11. Did you determine Performance Evaluation (PE) and Quality Control (QC) sample requirements?			
12. Have you obtained shipping cooler temperature blanks, if required?			
13. Did you review sample label and tag requirements?			
14. Did you review Traffic Report/Chain of Custody (TR/COC) Record and custody seal requirements?			
15. Have you obtained the laboratory name, shipping addresses, and telephone number?			
16. Did you review cooler return instructions?			
17. Have you obtained shipping company information (name, telephone number, account number, pickup schedule)?			
18. Have you obtained shipping schedules?			
19. Did you review shipment reporting requirements and the appropriate contact names and telephone numbers for reporting?			
20. Have you included any sampler comments regarding sampling issues (e.g., low volumes, matrix, suspected concentrations based on field measurements)?			

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Appendix E-2: General Sample Collection Checklist

(Page 1 of 1)

General Sample Collection	Yes	No	Comments:
1. Did you identify and mark the sampling location with buoys, flags, or stakes according to the sampling plans, maps, and grids?			
2. If the sampling location is inaccessible, did you contact the appropriate field or Regional personnel for instructions?			
3. Did you use the correct sampling equipment?			
4. Did you follow the correct decontamination procedures?			
5. Did you follow the correct collection procedures?			
6. Did you use the correct sample containers for each sample collected?			
7. Did you collect the correct volume for each sample?			
8. Did you collect the correct type of sample, including primary samples and Quality Control (QC) samples?			
9. Did you properly preserve each sample collected?			
10. Did you correctly document and label each sample with all necessary information? Under no circumstances should the site name appear on any documentation being sent to the laboratory.			
11. If sampling on private property, did you provide a sample receipt to the owner of the property for all samples taken and removed from the property?			

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Appendix E-3: Completing Field Logbook Checklist

(Page 1 of 1)

Completing Field Logbook	Yes	No	Comments:
1. Did you use waterproof ink when writing in the field logbook?			
2. Did you document sampling project information such as: • Project name, ID, and location; • Names of samplers; • Geological observations, including maps; • Atmospheric conditions; • Field measurements; and • Sampling dates, times, and locations? Under no circumstances should the site name appear on any documentation being sent to the laboratory.			
3. Did you record sampling activity information such as: • Sampling dates and times; • Sample identifications; • Sample matrices; • Sample descriptions (e.g., odors and/or colors); • Number of samples taken; • Sampling methods/equipment; and • Description of QC samples?			
4. Did you document any and all deviations from the sampling plan?			
5. Did you document any and all difficulties in sampling and/or any unusual circumstances?			
6. Were all errors corrected by crossing a line through the error, initialing the error, dating the error, and then adding the correct information?			

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Appendix E-4: Completing Handwritten Sample Labels Checklist

(Page 1 of 1)

Completing Handwritten Sample Labels	Yes	No	Comments:
1. Did the Region provide CLP Sample Numbers and SMO-assigned Case Numbers?			
2. If additional CLP Sample Numbers were needed, did you contact the appropriate Regional personnel?			
3. Were the CLP Sample Numbers and SMO-assigned Case Numbers on the labels correct? Organic CLP Sample Numbers begin with the Regional letter code, followed by letters and numbers. Inorganic CLP Sample Numbers begin with "M", followed by the Regional letter code, and then letters and numbers. The following characters are not used in generating CLP Sample Numbers and should never appear on any paperwork send to the laboratory: I; O; U; and V. Also, the last character of a CLP Sample Number will never be a letter.			
4. Were samples uniquely numbered and designated to only one sample? Samples collected for total metal and dissolved metal analyses must receive separate, unique, CLP Sample Numbers.			
5. Were Quality Control (QC) samples numbered accordingly?			
6. Were the specific requirements followed for total and dissolved metals analysis, QC and Performance Evaluation (PE) samples, and SW-846 Method 5035A?			
7. Were all temperature blanks labeled with "TEMPERATURE BLANK"?			
8. Was a sample label containing the CLP Sample Number, SMO-assigned Case Number, location, concentration, preservative, and the fraction/analysis, attached to each sample bottle or container as the sample was collected? Under no circumstances should the site name appear on any documentation being sent to the laboratory.			
9. Was clear tape placed over the sample labels to protect the labels from moisture and to help the labels adhere to the sample bottle?			
10. Were all errors corrected by crossing a line through the error, initialing the error, dating the error, and then adding the correct information?			

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Appendix E-5: Completing Handwritten Sample Tags & Custody Seals Checklists

(Page 1 of 1)

Completing Handwritten Sample Tags	Yes	No	Comments:
1. Was waterproof ink used on the sample tags?			
2. If Regionally required for individual sample containers, was the project code on the sample tag completed?			
3. Was the station number on the sample tag completed?			
4 Was the date filled in using the format MM/DD/YYYY?			
5. Was the time of sample collection indicated in military time format HH:MM?			
6. Was the box checked indicating composite or grab sample?			
7. Was the station location on the sample tag completed?			
8. Did you indicate whether or not the sample was preserved by checking "yes" or "no?"			
9. Was the appropriate analysis indicated on the sample tag?			
10. Were the appropriate CLP Sample Number and SMO-assigned Case Number indicated and cross-referenced with the numbers on the sample label?			
11. Did you sign the sample tags?			
12 Did you attach the sample tag to the neck of the sample bottle with striang, stretch string, or wire (recommended method)? Do **NOT** use wire to attach a sample tag to a metal sample.			
13. Were all errors corrected by crossing a line through the error, initialing the error, dating the error, and then adding the correct information?			

Completing Custody Seals	Yes	No	Comments:
1. Did you sign and date the custody seal?			
2. Did you attach a completed custody seal to the sample bottle, container, or plastic bag, placing the seal over the cap or lid of each sample bottle or container or on the bag opening such that it will be broken if the sample bottle, container, or bag is opened or tampered with?			
3. As appropriate, did you attach the completed custody seal to the sample shipping container or cooler, placing the seal such that it will be broken if the container or cooler is opened or tampered with?			
4. Were all errors corrected by crossing a line through the error, initialing the error, dating the error, and then adding the correct information?			

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Appendix E-6: Packing Sample Container Checklist

(Page 1 of 1)

Packing Sample Container	Yes	No	Comments:
1. Did you follow all State, Federal, Department of Transportation (DOT), and International Air Transportation Association (IATA) regulations governing the packaging of environmental and hazardous samples? If samples contain methanol preservation (e.g., samples to be analyzed by SW-846 Method 5035A), refer to the packaging instructions in Appendix A.			
2. Were all CLP Sample Numbers, SMO-assigned Case Numbers, fractions/analyses, labels, tags, and custody seals attached to the correct sample containers?			
3. Was an inventory conducted of CLP Sample Numbers, SMO-assigned Case Numbers, fractions/analyses, and containers, and verified against the TR/COC Records?			
4. Were the correct number and type of Performance Evaluation (PE) and Quality Control (QC) samples collected?			
5. Were all sample containers sealed in clear plastic bags with the sample label and tag visible through the packaging?			
6. Were all soil/sediment samples known to contain dioxin securely enclosed in metal cans (e.g., paint cans) with the lids sealed?			
7. Was suitable absorbent packing material placed around the sample bottles or containers?			
8. Were the outsides of metal containers labeled properly with the CLP Sample Number, SMO-assigned Case Number, and the fraction/analysis of the sample inside?			

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Appendix E-7: Packing Shipping Container Checklist

(Page 1 of 1)

Packing Shipping Container	Yes	No	Comments:
1. Were you shipping samples in a clean waterproof metal or hard plastic ice chest or cooler in good condition?			
2. Were all non-applicable labels from previous shipments removed from the container?			
3. Were all inside and outside drain plugs closed and covered with suitable tape (e.g., duct tape)?			
4. Was the inside of the cooler lined with plastic (e.g., large heavy-duty garbage bag)?			
5. Was the lined shipping cooler packed with noncombustible absorbent packing material?			
6. Were sample containers placed in the cooler in an upright position not touching one another?			
7. Was a sample shipping cooler temperature blank included in the cooler?			
8. Did the documentation in the cooler only address the samples in that cooler?			
9. Was the site name absent from all documentation? Under no circumstances should the site name appear on any documentation being sent to the laboratory.			
10. Was there sufficient packing material around and in between the sample bottles and cans to avoid breakage during transport?			
11. If required, was double-bagged ice placed on top and around sample bottles to keep the samples cold at 4°C (± 2° C)? Do Not Pack Loose Ice Into the Cooler!			
12. Was the top of the plastic liner fastened and secured with tape?			
13. Was a completed custody seal placed around the top of the fastened plastic liner (if required by the Region)?			
14. Were all sample documents enclosed within the cooler (e.g., TR/COC Record and cooler return instructions) in a waterproof plastic bag?			
15. Was the plastic bag, containing the documentation, taped to the underside of the cooler lid?			
16. Were cooler return instructions and airbills, if required, taped to the underside of the cooler lid?			
17. Was the return address of the cooler written with permanent ink on the underside of the cooler lid?			
18. Was tape placed around the outside of the entire cooler and over the hinges?			
19. Were the completed custody seals placed over the top edge of the cooler so the cooler cannot be opened without breaking the seals?			
20. Was the return address label attached to the top left corner of the cooler lid?			
21. Were instructional labels attached to the top of the cooler, as necessary (e.g., "This End Up," "Do Not Tamper With," or "Environmental Laboratory Samples")?			
22. If shipping hazardous samples, were the correct labels attached to the cooler (e.g., "Flammable Liquids", "Caution", or "Poison")?			
23. If shipping samples containing methanol as a preservative (e.g., samples to be analyzed by SW-846 Method 5035A), was a label used to indicate methanol, the United Nations (UN) identification number for methanol (UN 1230), and Limited Quantity?			

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Appendix E-8: Shipping & Reporting CLP Samples Checklist

(Page 1 of 1)

Shipping CLP Samples	Yes	No	Comments:
1. Did you follow all State, Federal, Department of Transportation (DOT), and International Air Transportation Association (IATA) regulations governing the shipment of environmental and hazardous samples?			
2. Was a separate airbill filled out for each cooler being shipped?			
3. Was the airbill filled out completely, including correct laboratory name, address, and telephone number, identification of recipient as "Sample Custodian," and appropriate delivery option (e.g., overnight or Saturday)?			
4. Was the completed airbill attached to the top of the cooler with the correct laboratory address?			
5. If more than one cooler was being shipped to the same laboratory, were they marked as "1 of 2," "2 of 2," etc.?			
6. Were the samples being shipped "overnight" through a qualified commercial carrier?			
Reporting CLP Samples	**Yes**	**No**	**Comments:**
1. Did you contact the Contract Laboratory Program Sample Management Office (SMO) on the same day samples were shipped?			
2. If the samples were shipped after 5:00 PM Eastern Time (ET), were they reported to the RSCC (or designee) or to SMO by 8:00 AM ET the following business day?			
3. Did you notify the RSCC (or designee) or SMO so that SMO will receive the delivery information by 3:00 PM ET on Friday for sample shipments that will be delivered to the laboratory on Saturday?			
4. Did you provide the RSCC (or designee) or SMO with: • Your name, phone number, and Region number; • Case Number of the project; • Exact number of samples, matrix(ces), concentration(s), and type of analysis; • Laboratory(ies) to which the samples were shipped; • Carrier name and airbill number; • Date of shipment; • Date of next shipment; and • Any other information pertinent to the shipment?			

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Appendix F: Glossary

Analyte -- The element, compound, or ion that is determined in an analytical procedure; the substance or chemical constituent of interest.

Analytical Services Branch (ASB) -- Directs the Contract Laboratory Program (CLP) from within the United States Environmental Protection Agency's (USEPA's) Office of Superfund Remediation and Technology Innovation (OSRTI) in the Office of Solid Waste and Emergency Response (OSWER).

Aroclor -- Polychlorinated biphenyls (PCBs) or a class of organic compounds with 1 to 10 chlorine atoms attached to biphenyl and a general chemical formula of $C_{12}H_{10-x}Cl_x$. PCBs, commercially produced as complex mixtures containing multiple isomers at different degrees of chlorination, were marketed in North America under the trade name Aroclor.

Case -- A finite, usually predetermined, number of samples collected over a given time period from a particular site. Case Numbers are assigned by the Sample Management Office (SMO). A Case consists of one or more Sample Delivery Groups (SDGs).

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) -- Initiated in December 1980, CERCLA provided broad federal authority to respond directly to the release or possible release or hazardous substances that may endanger human health or the environment. CERCLA also established a trust fund to provide for cleanup when no responsible party could be identified; hence CERCLA is commonly referred to as "Superfund".

Contract Laboratory Program (CLP) -- A national program of commercial laboratories under contract to support the USEPA's nationwide efforts to clean up designated hazardous waste sites by providing a range of chemical analytical services to produce environmental data of known and documented quality. This program is directed by USEPA's Analytical Services Branch (ASB).

Contract Laboratory Program Project Officer (CLP PO) -- Monitors technical performance of the contract laboratories in each Region.

Contract Laboratory Program Sample Management Office (CLP SMO) -- A contractor-operated facility operated under the CLP, awarded and administered by the USEPA, which provides necessary management, operations, and administrative support to the CLP. SMO coordinates and schedules sample analyses, tracks sample shipments and analyses, receives and tracks data for completeness and compliance, and processes laboratory invoices.

Custody Seal -- An adhesive label or tape that is used to seal a sample bottle or container that maintains chain-of-custody and that will break if the sample bottle or container is opened or tampered with.

Cyanide (Total) -- Cyanide ion and complex cyanides converted to hydrocyanic acid (HCN) by reaction in a reflux system of a mineral acid in the presence of magnesium ion.

Data Quality Objective (DQO) -- The requirements established to maintain the quality of the data being collected.

Data Validation -- Data validation is based on Region-defined criteria and limits, professional judgment of the data validator, and (if available) the Quality Assurance Project Plan (QAPP) and Sampling and Analysis Plan (SAP).

Equipment Blank -- A sample used to check field decontamination procedures. See Field Blank.

Field Blank -- Any blank sample that is submitted from the field. Each field blank is assigned its own unique USEPA Sample Number. A Field Blank checks for cross-contamination during sample collection, sample shipment, and in the laboratory. A field blank includes trip blanks, rinsates, equipment blanks, etc.

Field Duplicate -- Checks reproducibility of laboratory and field procedures and indicates non-homogeneity.

Field Operations Reporting Management System (FORMS) II Lite -- A stand-alone, Windows-based software application that enables samplers to automatically create and generate sample documentation both prior to and during a sampling event.

Field QC Sample -- Used to detect for contamination or error in the field.

Field Sample -- Primary sample material taken out in the field from which other samples, such as duplicates or split samples are derived. A field sample can be prepared in the field and sent for analysis in one or multiple containers, and is identified by a unique EPA Sample Number.

Field Sampling Plan (FSP) -- Developed to outline the actual steps and requirements pertaining to a particular sampling event, and explains, in detail, each component of the event to all involved samplers.

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Holding Time -- The elapsed time expressed in hours, days, or months from the date of collection of the sample until the date of its analysis.

> **Contractual** -- The lengths of time that the CLP laboratory must follow to comply with the terms of the contract, and are described in the CLP analytical services Statements of Work (SOWs).
>
> **Technical** -- The maximum lengths of time that samples may be held from time of collection to time of preparation and/or analysis and still be considered valid.

Laboratory Blank -- See Method Blank.

Laboratory Duplicate -- A sample required by the laboratory's contract to check the precision of inorganic analyses.

Laboratory QC Sample -- An additional volume of an existing sample, as required by the laboratory's contract, used to detect contamination or error in the laboratory's practices.

Matrix -- The predominant material of which a sample to be analyzed is composed.

Matrix Spike (MS) -- Sample required by the laboratory's contract to check the accuracy of organic and inorganic analyses. It is an aliquot of a sample (water or soil) that is fortified (spiked) with known quantities of a specific compound and subjected to the entire analytical procedure. See Matrix Spike Duplicate.

Matrix Spike Duplicate (MSD) -- Sample required by the laboratory's contract to check the accuracy and precision of organic analyses. It is a second aliquot of the same matrix as the Matrix Spike (MS) that is spiked to determine the precision of the method. See Matrix Spike.

Method Blank -- An analytical control consisting of all reagents, internal standards and surrogate standards [or System Monitoring Compounds (SMCs) for volatile organic analysis], that is carried throughout the entire analytical procedure. The method blank is used to define the level of laboratory, background, and reagent contamination, also referred to as laboratory blank when defining the level of laboratory contamination.

Performance Evaluation (PE) Sample -- A sample of known composition provided by the USEPA for contractor analysis. Used by USEPA to evaluate contractor performance.

Pesticides -- Substances intended to repel, kill, or control any species designated a "pest", including weeds, insects, rodents, fungi, bacteria, and other organisms. Under the CLP, only organochlorine pesticides are analyzed (e.g., DDT, Dieldrin, Endrin, etc.).

Polychlorinated Biphenyls (PCBs) -- A group of toxic, persistent chemicals used in electrical transformers and capacitors for insulating purposes, and in gas pipeline systems as a lubricant. The sale and new use of PCBs were banned by law in 1979.

Quality Assurance (QA) -- An integrated system of management activities involving planning, implementation, assessment, reporting, and quality improvement to ensure that a process, item, or service is of the type and quality needed and expected by the customer.

Quality Assurance Project Plan (QAPP) -- Document written to meet requirements outlined in the document *EPA Guidance for Quality Assurance Project Plans* (EPA QA/R-5). Prepared in advance of field activities and used by samplers to develop any subsequent plans such as the Sampling Analysis Plan (SAP) or the Field Sampling Plan (FSP).

Quality Control (QC) -- The overall system of technical activities that measures the attributes and performance of a process, item, or service against defined standards to verify that they meet the stated requirements established by the customer; operational techniques and activities that are used to fulfill requirements for quality.

Regional Sample Control Center (RSCC) Coordinator -- In most Regions, coordinates sampling efforts and serves as the central point-of-contact for sampling questions and problems. Also assists in coordinating the level of Regional sampling activities to correspond with the monthly projected demand for analytical services.

Regional Site Manager -- Coordinates the development of data quality objectives and oversees project-specific remedial or removal contractors, State officials, or private parties conducting site sampling efforts.

Rinse Blank -- A sample used to check decontamination procedures. Also see Field Blank.

Routine Analytical Service (RAS) -- The standard inorganic and organic analyses available through the CLP.

Sample -- A discrete portion of material to be analyzed that is contained in single or multiple containers, and identified by a unique Sample Number.

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Sample Delivery Group (SDG) – A unit within a sample Case that is used to identify a group of samples for delivery. An SDG is defined by the following, whichever is most frequent:

- Each Case of field samples received; or
- Each 20 field samples (excluding PE samples) within a Case; or
- Each 7 calendar day period (3 calendar day period for 7-day turnaround) during which field samples in a Case are received (said period beginning with the receipt of the first sample in the SDG).

In addition, all samples and/or sample fractions assigned to an SDG must have been scheduled under the same contractual turnaround time. Preliminary Results have no impact on defining the SDG. Sample may be assigned to SDGs by matrix (e.g., all soil samples in one SDG, all water samples in another) at the discretion of the laboratory.

Sample Label -- An identification label attached to a sample bottle or container to identify the sample.

Sample Number -- A unique number used to identify and track a sample. This number can be recorded on a sample label or written on the sample bottle or container using indelible ink.

Sample Tag -- A tag attached to a sample that identifies the sample and maintains chain-of-custody.

Sampling Analysis Plan (SAP) -- A document that explains how samples are to be collected and analyzed for a particular sampling event.

Semivolatile Organic Analyte (SVOA) -- A compound amenable to analysis by extraction of the sample using an organic solvent.

Statement of Work (SOW) -- A document that specifies how laboratories analyze samples under a particular Contract Laboratory Program (CLP) analytical program.

Superfund -- The program operated under the legislative authority of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and Superfund Amendments and Reauthorization Act (SARA) that funds and carries out USEPA removal and remedial activities at hazardous waste sites. These activities include establishing the National Priorities List (NPL), investigating sites for inclusion on the list, determining their priority, and conducting and/or supervising cleanup and other remedial actions.

Superfund Amendments and Reauthorization Act (SARA) -- The 1986 amendment to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

Traffic Report/Chain of Custody (TR/COC) Record -- A record that is functionally similar to a packing slip that accompanies a shipment of goods. Used as physical evidence of sample custody and functions as a permanent record for each sample collected.

Trip Blank -- A sample used to check for contamination during sample handling and shipment from field to laboratory. Also see Field Blank.

Volatile Organic Analyte (VOA) -- A compound amenable to analysis by the purge-and-trap technique. Used synonymously with the term purgeable compound.

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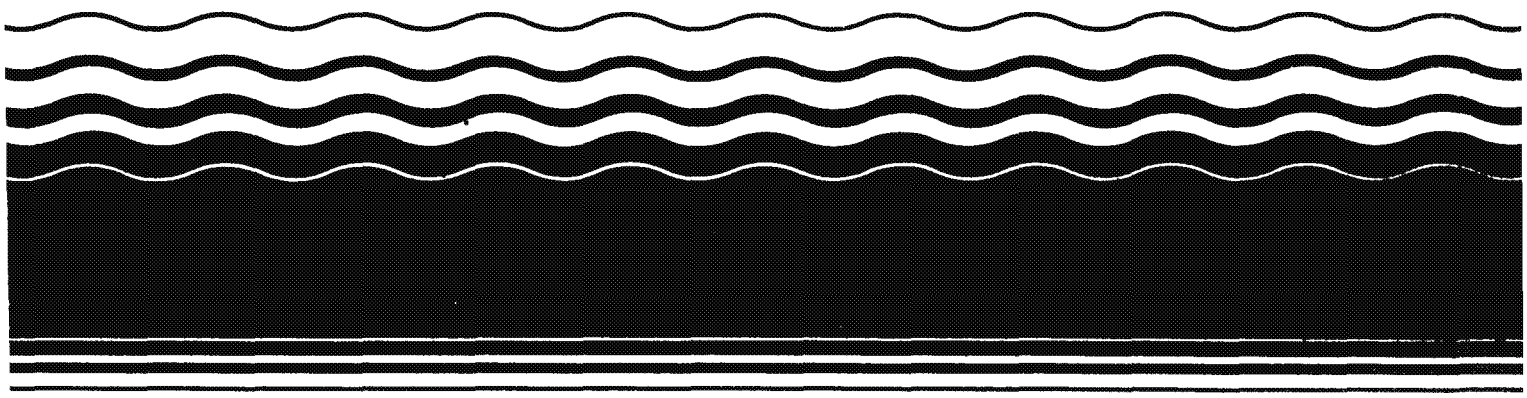
Compendium of ERT Surface Water and Sediment Sampling Procedures



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COMPENDIUM OF ERT SURFACE WATER AND SEDIMENT SAMPLING PROCEDURES

Sampling Equipment Decontamination

Surface Water Sampling

Sediment Sampling

Interim Final

Environmental Response Team
Emergency Response Division

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Each Standard Operating Procedure in this compendium contains a discussion on quality assurance/quality control (QA/QC). For more information on QA/QC objectives and requirements, refer to the *Quality Assurance/Quality Control Guidance for Removal Activities*, OSWER directive 9360.4-01, EPA/540/G-90/004.

Questions, comments, and recommendations are welcomed regarding the Compendium of ERT Surface Water and Sediment Sampling Procedures. Send remarks to:

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1.0 SAMPLING EQUIPMENT DECONTAMINATION: SOP #2006

1.1 SCOPE AND APPLICATION

This Standard Operating Procedure (SOP) describes methods used for preventing or reducing cross-contamination, and provides general guidelines for sampling equipment decontamination procedures at a hazardous waste site. Preventing or minimizing cross-contamination in sampled media and in samples is important for preventing the introduction of error into sampling results and for protecting the health and safety of site personnel.

Removing or neutralizing contaminants that have accumulated on sampling equipment ensures protection of personnel from permeating substances, reduces or eliminates transfer of contaminants to clean areas, prevents the mixing of incompatible substances, and minimizes the likelihood of sample cross-contamination.

1.2 METHOD SUMMARY

Contaminants can be physically removed from equipment, or deactivated by sterilization or disinfection. Gross contamination of equipment requires physical decontamination, including abrasive and non-abrasive methods. These include the use of brushes, air and wet blasting, and high-pressure water cleaning, followed by a wash/rinse process using appropriate cleaning solutions. Use of a solvent rinse is required when organic contamination is present.

1.3 SAMPLE PRESERVATION, CONTAINERS, HANDLING, AND STORAGE

This section is not applicable to this SOP.

1.4 INTERFERENCES AND POTENTIAL PROBLEMS

- The use of distilled/deionized water commonly available from commercial vendors may be acceptable for decontamination of sampling equipment provided that it has been verified by laboratory analysis to be analyte free.

- An untreated potable water supply is not an acceptable substitute for tap water. Tap water may be used from any municipal water treatment system for mixing of decontamination solutions.

- Acids and solvents utilized in the decontamination sequence pose the health and safety risks of inhalation or skin contact, and raise shipping concerns of permeation or degradation.

- The site work plan must address disposal of the spent decontamination solutions.

- Several procedures can be established to minimize contact with waste and the potential for contamination. For example:

  - Stress work practices that minimize contact with hazardous substances.

  - Use remote sampling, handling, and container-opening techniques when appropriate.

  - Cover monitoring and sampling equipment with protective material to minimize contamination.

  - Use disposable outer garments and disposable sampling equipment when appropriate.

1.5 EQUIPMENT/APPARATUS

- appropriate personal protective clothing
- non-phosphate detergent
- selected solvents
- long-handled brushes
- drop cloths/plastic sheeting
- trash container
- paper towels
- galvanized tubs or buckets
- tap water

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- distilled/deionized water
- metal/plastic containers for storage and disposal of contaminated wash solutions
- pressurized sprayers for tap and deionized/distilled water
- sprayers for solvents
- trash bags
- aluminum foil
- safety glasses or splash shield
- emergency eyewash bottle

1.6 REAGENTS

There are no reagents used in this procedure aside from the actual decontamination solutions and solvents. In general, the following solvents are utilized for decontamination purposes:

- 10% nitric acid[1]
- acetone (pesticide grade)[2]
- hexane (pesticide grade)[2]
- methanol

[1] Only if sample is to be analyzed for trace metals.
[2] Only if sample is to be analyzed for organics.

1.7 PROCEDURES

As part of the health and safety plan, develop and set up a decontamination plan before any personnel or equipment enter the areas of potential exposure. The equipment decontamination plan should include:

- the number, location, and layout of decontamination stations
- which decontamination apparatus is needed
- the appropriate decontamination methods
- methods for disposal of contaminated clothing, apparatus, and solutions

1.7.1 Decontamination Methods

All personnel, samples, and equipment leaving the contaminated area of a site must be decontaminated. Various decontamination methods will either physically remove contaminants, inactivate contaminants by disinfection or sterilization, or do both.

In many cases, gross contamination can be removed by physical means. The physical decontamination techniques appropriate for equipment decontamination can be grouped into two categories: abrasive methods and non-abrasive methods.

Abrasive Cleaning Methods

Abrasive cleaning methods work by rubbing and wearing away the top layer of the surface containing the contaminant. The following abrasive methods are available:

- Mechanical: Mechanical cleaning methods use brushes of metal or nylon. The amount and type of contaminants removed will vary with the hardness of bristles, length of brushing time, and degree of brush contact.

- Air Blasting: Air blasting is used for cleaning large equipment, such as bulldozers, drilling rigs or auger bits. The equipment used in air blast cleaning employs compressed air to force abrasive material through a nozzle at high velocities. The distance between the nozzle and the surface cleaned, as well as the pressure of air, the time of application, and the angle at which the abrasive strikes the surface, determines cleaning efficiency. Air blasting has several disadvantages: it is unable to control the amount of material removed, it can aerate contaminants, and it generates large amounts of waste.

- Wet Blasting: Wet blast cleaning, also used to clean large equipment, involves use of a suspended fine abrasive delivered by compressed air to the contaminated area. The amount of materials removed can be carefully controlled by using very fine abrasives. This method generates a large amount of waste.

Non-Abrasive Cleaning Methods

Non-abrasive cleaning methods work by forcing the contaminant off of a surface with pressure. In general, less of the equipment surface is removed using non-abrasive methods. The following non-abrasive methods are available:

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- High-Pressure Water: This method consists of a high-pressure pump, an operator-controlled directional nozzle, and a high pressure hose. Operating pressure usually ranges from 340 to 680 atmospheres (atm) which relates to flow rates of 20 to 140 liters per minute.

- Ultra-High-Pressure Water: This system produces a pressurized water jet (from 1,000 to 4,000 atm). The ultra-high-pressure spray removes tightly-adhered surface film. The water velocity ranges from 500 m/sec (1,000 atm) to 900 m/sec (4,000 atm). Additives can enhance the method. This method is not applicable for hand-held sampling equipment.

Disinfection/Rinse Methods

- Disinfection: Disinfectants are a practical means of inactivating infectious agents.

- Sterilization: Standard sterilization methods involve heating the equipment. Sterilization is impractical for large equipment.

- Rinsing: Rinsing removes contaminants through dilution, physical attraction, and solubilization.

1.7.2 Field Sampling Equipment Cleaning Procedures

Solvent rinses are not necessarily required when organics are not a contaminant of concern and may be eliminated from the sequence specified below. Similarly, an acid rinse is not required if analysis does not include inorganics.

1. Where applicable, follow physical removal procedures specified in section 1.7.1.

2. Wash equipment with a non-phosphate detergent solution.

3. Rinse with tap water.

4. Rinse with distilled/deionized water.

5. Rinse with 10% nitric acid if the sample will be analyzed for trace organics.

6. Rinse with distilled/deionized water.

7. Use a solvent rinse (pesticide grade) if the sample will be analyzed for organics.

8. Air dry the equipment completely.

9. Rinse again with distilled/deionized water.

Selection of the solvent for use in the decontamination process is based on the contaminants present at the site. Use of a solvent is required when organic contamination is present on-site. Typical solvents used for removal of organic contaminants include acetone, hexane, or water. An acid rinse step is required if metals are present on-site. If a particular contaminant fraction is not present at the site, the nine-step decontamination procedure listed above may be modified for site specificity. The decontamination solvent used should not be among the contaminants of concern at the site.

Table 1 lists solvent rinses which may be required for elimination of particular chemicals. After each solvent rinse, the equipment should be air dried and rinsed with distilled/deionized water.

Sampling equipment that requires the use of plastic tubing should be disassembled and the tubing replaced with clean tubing, before commencement of sampling and between sampling locations.

1.8 CALCULATIONS

This section is not applicable to this SOP.

1.9 QUALITY ASSURANCE/ QUALITY CONTROL

One type of quality control sample specific to the field decontamination process is the rinsate blank. The rinsate blank provides information on the effectiveness of the decontamination process employed in the field. When used in conjunction with field blanks and trip blanks, a rinsate blank can detect contamination during sample handling, storage and sample transportation to the laboratory.

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Table 1: Recommended Solvent Rinse for Soluble Contaminants

SOLVENT	SOLUBLE CONTAMINANTS
Water	• Low-chain hydrocarbons • Inorganic compounds • Salts • Some organic acids and other polar compounds
Dilute Acids	• Basic (caustic) compounds • Amines • Hydrazines
Dilute Bases -- for example, detergent and soap	• Metals • Acidic compounds • Phenol • Thiols • Some nitro and sulfonic compounds
Organic Solvents[1] - for example, alcohols, ethers, ketones, aromatics, straight-chain alkanes (e.g., hexane), and common petroleum products (e.g., fuel, oil, kerosene)	• Nonpolar compounds (e.g., some organic compounds)

[1] - WARNING: Some organic solvents can permeate and/or degrade protective clothing.

A rinsate blank consists of a sample of analyte-free (i.e, deionized) water which is passed over and through a field decontaminated sampling device and placed in a clean sample container.

Rinsate blanks should be run for all parameters of interest at a rate of 1 per 20 for each parameter, even if samples are not shipped that day. Rinsate blanks are not required if dedicated sampling equipment is used.

1.10 DATA VALIDATION

This section is not applicable to this SOP.

1.11 HEALTH AND SAFETY

When working with potentially hazardous materials, follow U.S. EPA, OSHA and specific health and safety procedures.

Decontamination can pose hazards under certain circumstances even though performed to protect health and safety. Hazardous substances may be incompatible with decontamination methods. For example, the decontamination solution or solvent may react with contaminants to produce heat, explosion, or toxic products. Decontamination methods may be incompatible with clothing or equipment; some solvents can permeate or degrade protective clothing. Also, decontamination solutions and solvents may pose a direct health hazard to workers through inhalation or skin contact, or if they combust.

The decontamination solutions and solvents must be determined to be compatible before use. Any method that permeates, degrades, or damages personal protective equipment should not be used. If decontamination methods pose a direct health hazard, measures should be taken to protect personnel or the methods should be modified to eliminate the hazard.

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2.0 SURFACE WATER SAMPLING: SOP #2013

2.1 SCOPE AND APPLICATION

This Standard Operating Procedure (SOP) is applicable to the collection of representative liquid samples, both aqueous and nonaqueous from streams, rivers, lakes, ponds, lagoons, and surface impoundments. It includes samples collected from depth, as well as samples collected from the surface.

2.2 METHOD SUMMARY

Sampling situations vary widely and therefore no universal sampling procedure can be recommended.

However, sampling of both aqueous and non-aqueous liquids from the above mentioned sources is generally accomplished through the use of one of the following samplers or techniques:

- Kemmerer bottle
- bacon bomb sampler
- dip sampler
- direct method

These sampling techniques will allow for the collection of representative samples from the majority of surface waters and impoundments encountered.

2.3 SAMPLE PRESERVATION, CONTAINERS, HANDLING, AND STORAGE

Once samples have been collected, follow these procedures:

1. Transfer the sample(s) into suitable labeled sample containers.

2. Preserve the sample if appropriate, or use pre-preserved sample bottles.

3. Cap the container, put it in a Ziploc plastic bag and place it on ice in a cooler.

4. Record all pertinent data in the site logbook and on a field data sheet.

5. Complete the chain of custody form.

6. Attach custody seals to the cooler prior to shipment.

7. Decontaminate all sampling equipment prior to the collection of additional samples.

2.4 INTERFERENCES AND POTENTIAL PROBLEMS

There are two primary interferences or potential problems with surface water sampling. These include cross-contamination of samples and improper sample collection.

- Cross-contamination problems can be eliminated or minimized through the use of dedicated sampling equipment. If this is not possible or practical, then decontamination of sampling equipment is necessary. Refer to ERT SOP #2006, Sampling Equipment Decontamination.

- Improper sample collection can involve using contaminated equipment, disturbance of the stream or impoundment substrate, and sampling in an obviously disturbed area.

Following proper decontamination procedures and minimizing disturbance of the sample site will eliminate these problems.

2.5 EQUIPMENT/APPARATUS

Equipment needed for collection of surface water samples includes:

- Kemmerer bottles
- bacon bomb sampler
- dip sampler
- line and messengers
- sample bottle preservatives
- Ziploc bags
- ice
- cooler(s)
- chain of custody forms, field data sheets

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- decontamination equipment
- maps/plot plan
- safety equipment
- compass
- tape measure
- survey stakes, flags, or buoys and anchors
- camera and film
- logbook/waterproof pen
- sample bottle labels

2.6 REAGENTS

Reagents will be utilized for preservation of samples and for decontamination of sampling equipment. The preservatives required are specified by the analysis to be performed. Decontamination solutions are specified in ERT SOP #2006, Sampling Equipment Decontamination.

2.7 PROCEDURES

2.7.1 Preparation

1. Determine the extent of the sampling effort, the sampling methods to be employed, and which equipment and supplies are needed.

2. Obtain necessary sampling and monitoring equipment.

3. Decontaminate or preclean equipment, and ensure that it is in working order.

4. Prepare scheduling and coordinate with staff, clients, and regulatory agency, if appropriate.

5. Perform a general site survey prior to site entry in accordance with the site-specific health and safety plan.

6. Use stakes, flags, or buoys to identify and mark all sampling locations. If required, the proposed locations may be adjusted based on site access, property boundaries, and surface obstructions.

2.7.2 Sampling Considerations

Representative Samples

In order to collect a representative sample, the hydrology and morphometrics (e.g., measurements of volume, depth, etc.) of a stream or impoundment should be determined prior to sampling. This will aid in determining the presence of phases or layers in lagoons or impoundments, flow patterns in streams, and appropriate sample locations and depths.

Water quality data should be collected in impoundments to determine if stratification is present. Measurements of dissolved oxygen, pH, and temperature can indicate if strata exist which would effect analytical results. Measurements should be collected at 1-meter intervals from the substrate to the surface using an appropriate instrument, such as a Hydrolab (or equivalent).

Water quality measurements such as dissolved oxygen, pH, temperature, conductivity, and oxidation-reduction potential can assist in the interpretation of analytical data and the selection of sampling sites and depths anytime surface water samples are collected.

Generally, the deciding factors in the selection of a sampling device for sampling liquids in streams, rivers, lakes, ponds, lagoons, and surface impoundments are:

- Will the sample be collected from the shore or from a boat on the impoundment?
- What is the desired depth at which the sample is to be collected?
- What is the overall depth and flow direction of river or stream?

Sampler Composition

The appropriate sampling device must be of a proper composition. Samplers constructed of glass, stainless steel, PVC or PFTE (Teflon) should be used based upon the analyses to be performed.

2.7.3 Sample Collection

Kemmerer Bottle

Kemmerer bottle (Figure 1, Appendix A) may be used in most situations where site access is from a boat or structure such as a bridge or pier, and where samples at depth are required. Sampling procedures are as follows:

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1. Using a properly decontaminated Kemmerer bottle, set the sampling device so that the sampling end pieces are pulled away from the sampling tube, allowing the substance to be sampled to pass through this tube.

2. Lower the pre-set sampling device to the predetermined depth. Avoid bottom disturbance.

3. When the Kemmerer bottle is at the required depth, send down the messenger, closing the sampling device.

4. Retrieve the sampler and discharge the first 10 to 20 mL to clear any potential contamination on the valve. Transfer the sample to the appropriate sample container.

Bacon Bomb Sampler

A bacon bomb sampler (Figure 2, Appendix A) may be used in similar situations to those outlined for the Kemmerer bottle. Sampling procedures are as follows:

1. Lower the bacon bomb sampler carefully to the desired depth, allowing the line for the trigger to remain slack at all times. When the desired depth is reached, pull the trigger line until taut.

2. Release the trigger line and retrieve the sampler.

3. Transfer the sample to the appropriate sample container by pulling the trigger.

Dip Sampler

A dip sampler (Figure 3, Appendix A) is useful for situations where a sample is to be recovered from an outfall pipe or along a lagoon bank where direct access is limited. The long handle on such a device allows access from a discrete location. Sampling procedures are as follows:

1. Assemble the device in accordance with the manufacturer's instructions.

2. Extend the device to the sample location and collect the sample.

3. Retrieve the sampler and transfer the sample to the appropriate sample container.

Direct Method

For streams, rivers, lakes, and other surface waters, the direct method may be utilized to collect water samples from the surface. This method is not to be used for sampling lagoons or other impoundments where contact with contaminants are a concern.

Using adequate protective clothing, access the sampling station by appropriate means. For shallow stream stations, collect the sample under the water surface pointing the sample container upstream. The container must be upstream of the collector. Avoid disturbing the substrate. For lakes and other impoundments, collect the sample under the water surface avoiding surface debris and the boat wake.

When using the direct method, do not use pre-preserved sample bottles as the collection method may dilute the concentration of preservative necessary for proper sample preservation.

2.8 CALCULATIONS

This section is not applicable to this SOP.

2.9 QUALITY ASSURANCE/ QUALITY CONTROL

There are no specific quality assurance activities which apply to the implementation of these procedures. However, the following general QA/QC procedures apply:

- All data must be documented on field data sheets or within site logbooks.

- All instrumentation must be operated in accordance with operating instructions as supplied by the manufacturer, unless otherwise specified in the work plan. Equipment checkout and calibration activities must occur prior to sampling/operation and they must be documented.

2.10 DATA VALIDATION

This section is not applicable to this SOP.

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2.11 HEALTH AND SAFETY

When working with potentially hazardous materials, follow U.S. EPA, OSHA and specific health and safety procedures.

More specifically, when sampling lagoons or surface impoundments containing known or suspected hazardous substances, take adequate precautions. The sampling team member collecting the sample should not get too close to the edge of the impoundment, where bank failure may cause him or her to lose their balance. The person performing the sampling should be on a lifeline and be wearing adequate protective equipment. When conducting sampling from a boat in an impoundment or flowing waters, follow appropriate boating safety procedures.

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3.0 SEDIMENT SAMPLING: SOP #2016

3.1 SCOPE AND APPLICATION

This Standard Operating Procedure (SOP) is applicable to the collection of representative sediment samples. Analysis of sediment may determine whether concentrations of specific contaminants exceed established threshold action levels, or if the concentrations present a risk to public health, welfare, or the environment.

The methodologies discussed in this procedure are applicable to the sampling of sediment in both flowing and standing water. They are generic in nature and may be modified in whole or part to meet the handling and analytical requirements of the contaminants of concern, as well as the constraints presented by the sampling area. However, if modifications occur, they should be documented in the site logbook or report summarizing field activities.

For the purposes of this procedure, sediments are those mineral and organic materials situated beneath an aqueous layer. The aqueous layer may be either static, as in lakes, ponds, or other impoundments or flowing, as in rivers and streams.

3.2 METHOD SUMMARY

Sediment samples may be recovered using a variety of methods and equipment, depending on the depth of the aqueous layer, the portion of the sediment profile required (surface versus subsurface), the type of sample required (disturbed versus undisturbed) and the sediment type.

Sediment is collected from beneath an aqueous layer either directly, using a hand-held device such as a shovel, trowel, or auger, or indirectly using a remotely activated device such as an Ekman or Ponar dredge. Following collection, the sediment is placed into a container constructed of inert material, homogenized, and transferred to the appropriate sample containers. The homogenization procedure should not be used if sample analysis includes volatile organics.

3.3 SAMPLE PRESERVATION, CONTAINERS, HANDLING, AND STORAGE

- Chemical preservation of solids is generally not recommended. Cooling is usually the best approach, supplemented by the appropriate holding time.

- Wide-mouth glass containers with Teflon-lined caps are utilized for sediment samples. The sample volume is a function of the analytical requirements and will be specified in the work plan.

- Transfer sediment from the sample collection device to an appropriate sample container using a stainless steel or plastic lab spoon or equivalent. If composite samples are collected, place the sediment sample in a stainless steel, plastic or other appropriate composition (e.g.: Teflon) bucket, and mix thoroughly to obtain a homogeneous sample representative of the entire sampling interval. Then place the sediment sample into labeled containers.

- Samples for volatile organic analysis must be collected directly from the bucket, before mixing the sample, to minimize loss due to volatilization of contaminants.

- All sampling devices should be decontaminated, then wrapped in aluminum foil. The sampler should remain in this wrapping until it is needed. Each sampler should be used for only one sample. Dedicated samplers for sediment samples may be impractical due to the large number of sediment samples which may be required and the cost of the sampler. In this case, samplers should be cleaned in the field using the decontamination procedure described in ERT SOP# 2006, Sampling Equipment Decontamination.

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3.4 INTERFERENCES AND POTENTIAL PROBLEMS

Substrate particle size and organic content are directly related to water velocity and flow characteristics of a body of water. Contaminants are more likely to be concentrated in sediments typified by fine particle size and a high organic content. This type of sediment is most likely to be collected from depositional zones. In contrast, coarse sediments with low organic content do not typically concentrate pollutants and are found in erosional zones. The selection of a sampling location can, therefore, greatly influence the analytical results.

3.5 EQUIPMENT/APPARATUS

Equipment needed for collection of sediment samples includes:

- maps/plot plan
- safety equipment
- compass
- tape measure
- survey stakes, flags, or buoys and anchors
- camera and film
- stainless steel, plastic, or other appropriate composition bucket
- 4-oz., 8-oz., and one-quart, wide-mouth jars w/Teflon-lined lids
- Ziploc plastic bags
- logbook
- sample jar labels
- chain of custody forms, field data sheets
- cooler(s)
- ice
- decontamination supplies/equipment
- spade or shovel
- spatula
- scoop
- trowel
- bucket auger
- thin-walled auger
- extension rods
- T-handle
- sampling trier
- sediment coring device (tubes, points, drive head, drop hammer, "eggshell" check valve devices, acetate cores)
- Ponar dredge
- Ekman dredge
- nylon rope

3.6 REAGENTS

Reagents are not used for preservation of sediment samples. Decontamination solutions are specified in ERT SOP #2006, Sampling Equipment Decontamination.

3.7 PROCEDURES

3.7.1 Preparation

1. Determine the extent of the sampling effort, the sampling methods to be employed, and which equipment and supplies are required.

2. Obtain necessary sampling and monitoring equipment.

3. Decontaminate or preclean equipment, and ensure that it is in working order.

4. Prepare schedules, and coordinate with staff, client, and regulatory agencies, if appropriate.

5. Perform a general site survey prior to site entry in accordance with the site-specific health and safety plan.

6. Use stakes, flags, or buoys to identify and mark all sampling locations. Specific site characteristics, including flow regime, basin morphometry, sediment characteristics, depth of overlying aqueous layer, and extent and nature of contaminant should be considered when selecting sample location. If required, the proposed locations may be adjusted based on site access, property boundaries, and surface obstructions.

3.7.2 Sample Collection

Selection of a sampling device is most often contingent upon: (1) the depth of water at the sampling location, and (2) the physical characteristics of the medium to be sampled.

Sampling Surface Sediments with a Trowel or Scoop From Beneath a Shallow Aqueous Layer

Collection of surface sediment from beneath a shallow aqueous layer can be accomplished with

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tools such as spades, shovels, and scoops. Surface material can be removed to the required depth; then a stainless steel or plastic scoop should be used to collect the sample.

This method can be used to collect consolidated sediments but is limited somewhat by the depth of the aqueous layer. Accurate, representative samples can be collected with this procedure depending on the care and precision demonstrated by the sample team member. A stainless steel or plastic scoop or lab spoon will suffice in most applications. Care should be exercised to avoid the use of devices plated with chrome or other materials. Plating is particularly common with garden trowels.

Follow these procedures to collect sediment samples with a scoop or trowel:

1. Using a precleaned stainless steel scoop or trowel, remove the desired thickness of sediment from the sampling area.

2. Transfer the sample into an appropriate sample or homogenization container.

Sampling Surface Sediments with a Thin-Wall Tube Auger From Beneath a Shallow Aqueous Layer

This system consists of an auger, a series of extension rods, and a "T" handle (see Figure 4, Appendix A). The auger is driven into the sediment and used to extract a core. A sample of the core is taken from the appropriate depth.

Use the following procedure to collect sediment samples with a thin-walled auger:

1. Insert the auger into the material to be sampled at a 0° to 45° angle from vertical. This orientation minimizes spillage of the sample from the sampler. Extraction of samples may require tilting of the sampler.

2. Rotate the auger once or twice to cut a core of material.

3. Slowly withdraw the auger, making sure that the slot is facing upward.

4. An acetate core may be inserted into the auger prior to sampling, if characteristics of the sediments or body of water warrant. By using this technique, an intact core can be extracted.

5. Transfer the sample into an appropriate sample or homogenization container.

Sampling Deep Sediments with Augers and Thin-Wall Tube Samplers From Beneath a Shallow Aqueous Layer

This system uses an auger, a series of extension rods, a "T" handle, and a thin-wall tube sampler (Figure 4, Appendix A). The auger bores a hole to a desired sampling depth and then is withdrawn. The auger tip is then replaced with a tube core sampler, lowered down the borehole, and driven into the sediment at the completion depth. The core is then withdrawn and the sample collected. This method can be used to collect consolidated sediments, but is somewhat limited by the depth of the aqueous layer.

Several augers are available which include bucket and posthole augers. Bucket augers are better for direct sample recovery, are fast, and provide a large volume of sample. Posthole augers have limited utility for sample collection as they are designed more for their ability to cut through fibrous, rooted, swampy areas.

Follow these procedures to collect sediment samples with a hand auger:

1. Attach the auger bit to a drill extension rod, then attach the "T" handle to the drill extension rod.

2. Clear the area to be sampled of any surface debris.

3. Begin augering, periodically removing any accumulated sediment from the auger bucket.

4. After reaching the desired depth, slowly and carefully remove the auger from boring. (When sampling directly from the auger, collect sample after the auger is removed from boring and proceed to Step 10.)

5. Remove auger tip from drill rods and replace with a precleaned thin-wall tube sampler. Install proper cutting tip.

6. Carefully lower tube sampler down borehole. Gradually force tube sampler into sediment.

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Care should be taken to avoid scraping the borehole sides. Also, avoid hammering of the drill rods to facilitate coring, since the vibrations may cause the boring walls to collapse.

7. Remove tube sampler and unscrew drill rods.

8. Remove cutting tip and remove core from device.

9. Discard top of core (approximately 1 inch), as this represents material collected by the tube sampler before penetration of the layer of concern.

10. Transfer sample into an appropriate sample or homogenization container.

Sampling Surface Sediments From Beneath a Deep Aqueous Layer with an Ekman or Ponar Dredge

This technique consists of lowering a sampling device to the sediment by use of a rope, cable, or extended handle. The mechanism is triggered, and the device entraps sediment in spring-loaded jaws, or within lever-operated jaws.

Follow these procedures for collecting sediment with an Ekman dredge (Figure 5, Appendix A):

1. Thread a sturdy nylon or stainless steel cable through the bracket, or secure the extended handle to the bracket with machine bolts.

2. Attach springs to both sides. Arrange the Ekman dredge sampler so that the jaws are in the open position and trip cables are positioned over the release studs.

3. Lower the sampler to a point just above the sediment surface.

4. Drop the sampler sharply onto the sediment.

5. Trigger the jaw release mechanism by lowering a messenger down the line, or by depressing the button on the upper end of the extended handle.

6. Raise the sampler and slowly decant any free liquid through the top of the sampler. Be careful to retain fine sediments.

7. Open the dredge and transfer the sediment into a stainless steel or plastic bucket. Continue to collect additional sediment until sufficient material has been secured. Thoroughly mix sediment to obtain a homogeneous sample, and then transfer to the appropriate sample container.

8. Samples for volatile organic analysis must be collected directly from the bucket before mixing the sample to minimize volatilization of contaminants.

Follow these procedures for collecting sediment with a Ponar dredge (Figure 6, Appendix A):

1. Attach a sturdy nylon or steel cable to the hook provided on top of the dredge.

2. Arrange the Ponar dredge sampler in the open position, setting the trip bar so the sampler remains open when lifted from the top.

3. Slowly lower the sampler to a point just above the sediment.

4. Drop the sampler sharply into the sediment, then pull sharply up on the line, thus releasing the trip bar and closing the dredge.

5. Raise the sampler to the surface and slowly decant any free liquid through the screens on top of the dredge. Be careful to retain fine sediments.

6. Open the dredge and transfer the sediment to a stainless steel or plastic bucket. Continue to collect additional sediment until sufficient material has been gained. Thoroughly mix sediment to obtain a homogeneous sample, and then transfer to the appropriate sample container.

7. Samples for volatile organic analysis must be collected directly from the bucket before mixing the sample to minimize volatilization of contaminants.

Sampling Subsurface Sediments From Beneath a Deep Aqueous Layer with a Sample Coring Device

Follow these procedures when using a sample coring device (Figure 7, Appendix A) to collect

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subsurface sediments. It consists of a coring device, handle, and acetate core utilized in the following procedure:

1. Assemble the coring device by inserting the acetate core into the sampling tube.

2. Insert the "eggshell" check valve mechanisms into the tip of the sampling tube with the convex surface positioned inside the acetate core.

3. Screw the coring point onto the tip of the sampling tube.

4. Screw the handle onto the upper end of the sampling tube and add extension rods as needed.

5. Place the sampler in a perpendicular position on the material to be sampled.

6. This sampler may be used with either a drive hammer for firm consolidated sediments, or a "T" handle for soft sediments. If the "T" handle is used, place downward pressure on the device until the desired depth is reached. Rotate the sampler to shear off the core of the bottom, retrieve the device and proceed to Step 15.

7. If the drive hammer is selected, insert the tapered handle (drive head) of the drive hammer through the drive head.

8. With left hand holding the tube, drive the sampler into the material to the desired depth. Do not drive the tube further than the tip of the hammer's guide.

9. Record the length of the tube that penetrated the sample material, and the number of blows required to obtain this depth.

10. Remove the drive hammer and fit the keyhole-like opening on the flat side of the hammer onto the drive head. In this position, the hammer serves as a handle for the sampler.

11. Rotate the sampler at least two revolutions to shear off the sample at the bottom.

12. Lower the sampler handle (hammer) until it just clears the two ear-like protrusions on the drive head, and rotate about 90°.

13. Withdraw the sampler by pulling the handle (hammer) upwards and dislodging the hammer from the sampler.

14. Unscrew the coring point and remove the "eggshell" check valve.

15. Slide the acetate core out of the sampler tube. The acetate core may be capped at both ends. The sample may be used in this fashion, or the contents transferred to a stainless steel or plastic bucket and mixed thoroughly to obtain a homogeneous sample representative of the entire sampling interval.

16. Samples for volatile organic analysis must be collected directly from the bucket before mixing the sample to minimize volatilization of contaminants.

3.8 CALCULATIONS

This section is not applicable to this SOP.

3.9 QUALITY ASSURANCE/ QUALITY CONTROL

There are no specific quality assurance activities which apply to the implementation of these procedures. However, the following QA/QC procedures apply:

1. All data must be documented on field data sheets or within site logbooks.

2. All instrumentation must be operated in accordance with operating instructions as supplied by the manufacturer, unless otherwise specified in the work plan. Equipment checkout and calibration activities must occur prior to sampling/operation, and they must be documented.

3.10 DATA VALIDATION

This section is not applicable to this SOP.

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3.11 HEALTH AND SAFETY

When working with potentially hazardous materials follow U.S. EPA, OSHA and specific health and safety procedures.

More specifically, when sampling sediment from bodies of water containing known or suspected hazardous substances, adequate precautions must be taken to ensure the sampler's safety. The team member collecting the sample should not get too close to the edge of the water, where bank failure may cause him or her to lose their balance. To prevent this, the person performing the sampling should be on a lifeline, and be wearing adequate protective equipment. If sampling from a vessel is necessary, implement appropriate protective measures.

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APPENDIX A

Figures

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Figure 1: Kemmerer Bottle

SOP #2013

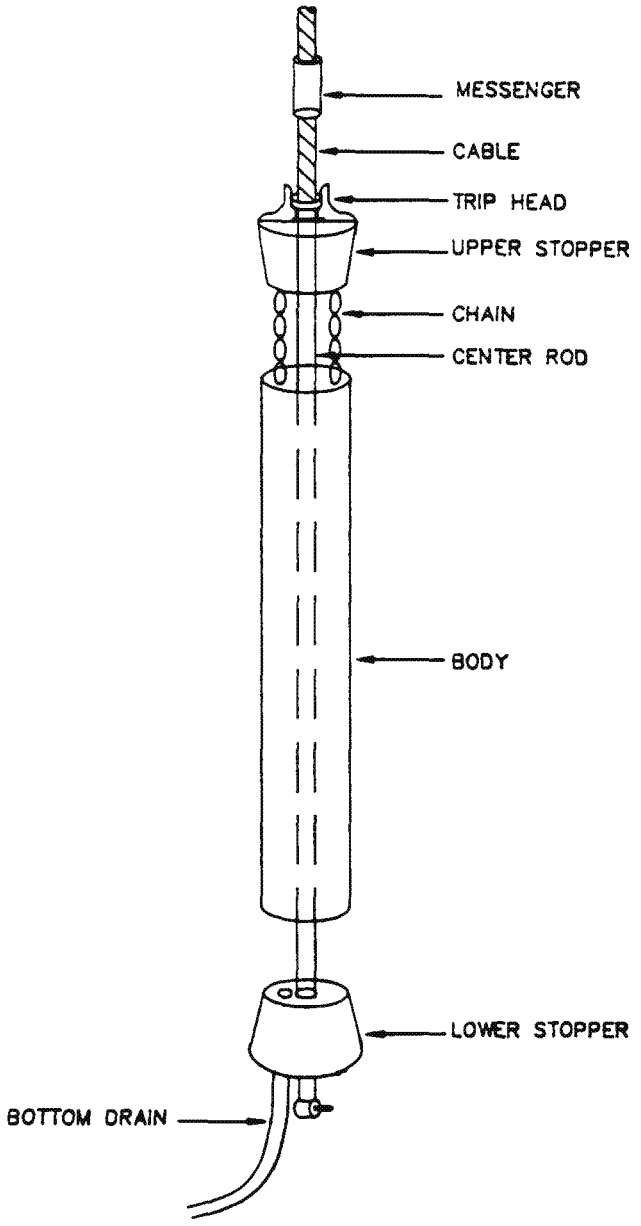

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Figure 2: Bacon Bomb Sampler

SOP #2013

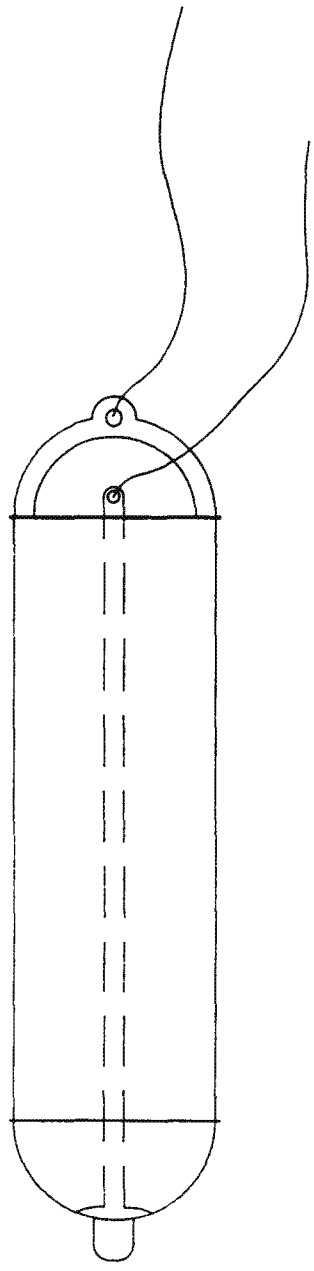

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Figure 3: Dip Sampler

SOP #2013

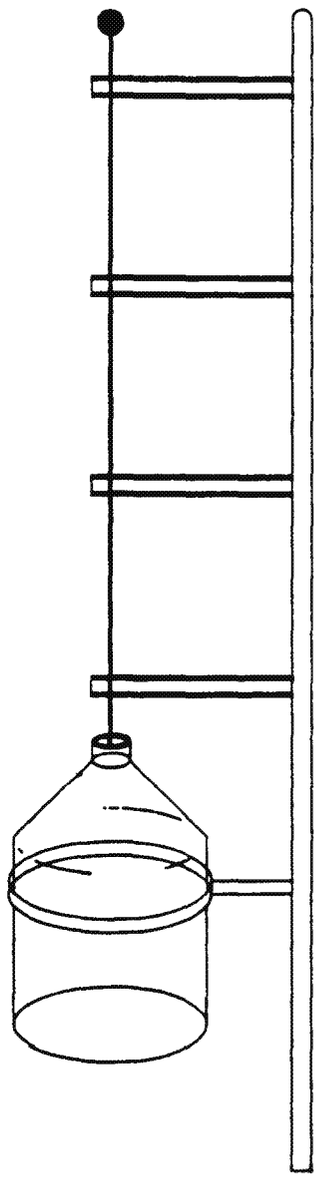

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Figure 4: Sampling Auger

SOP #2016

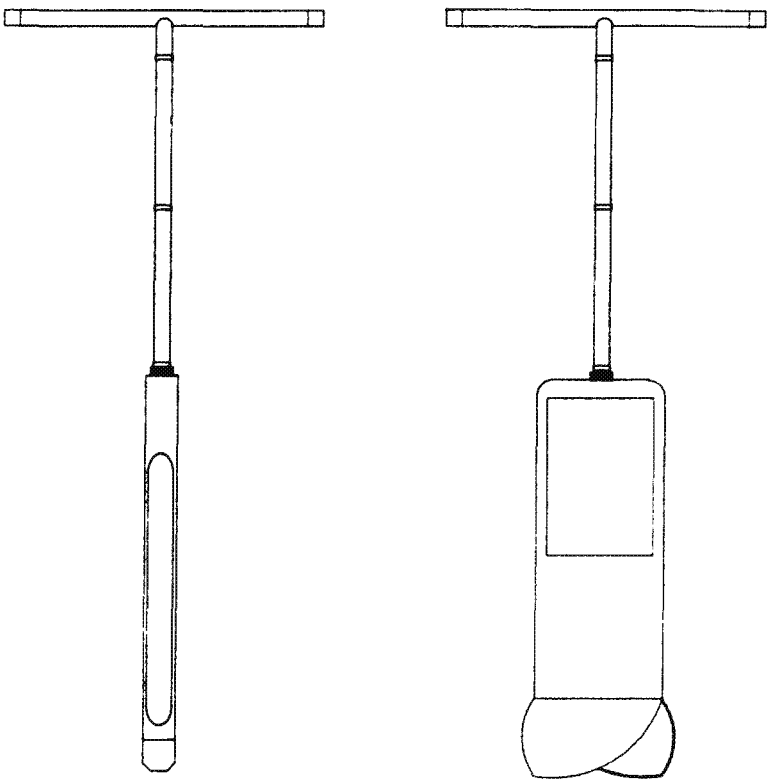

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Figure 5: Ekman Dredge

SOP #2016

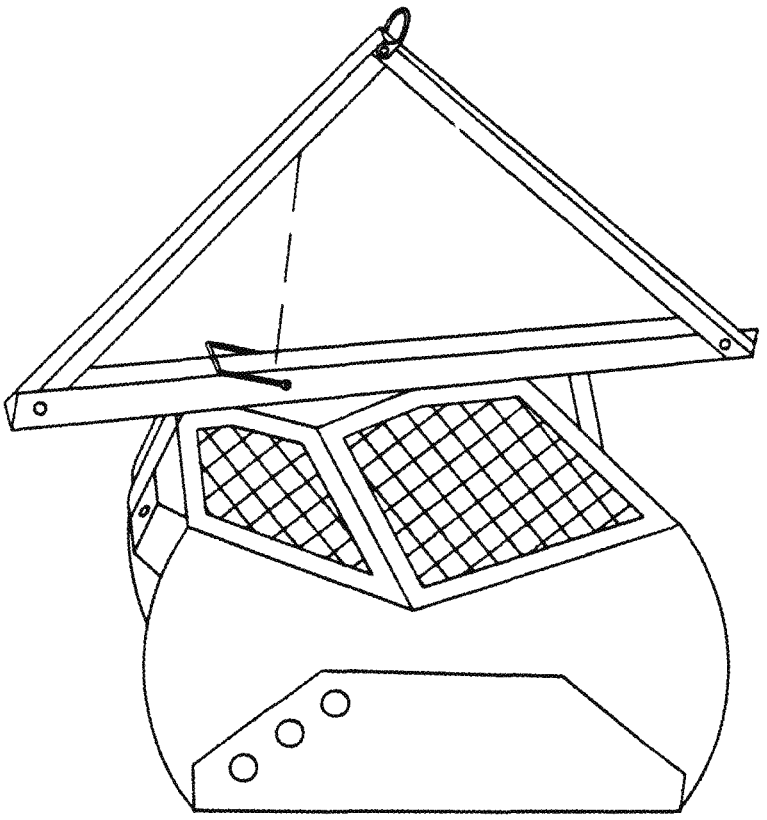

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Figure 6: Ponar Dredge

SOP #2016

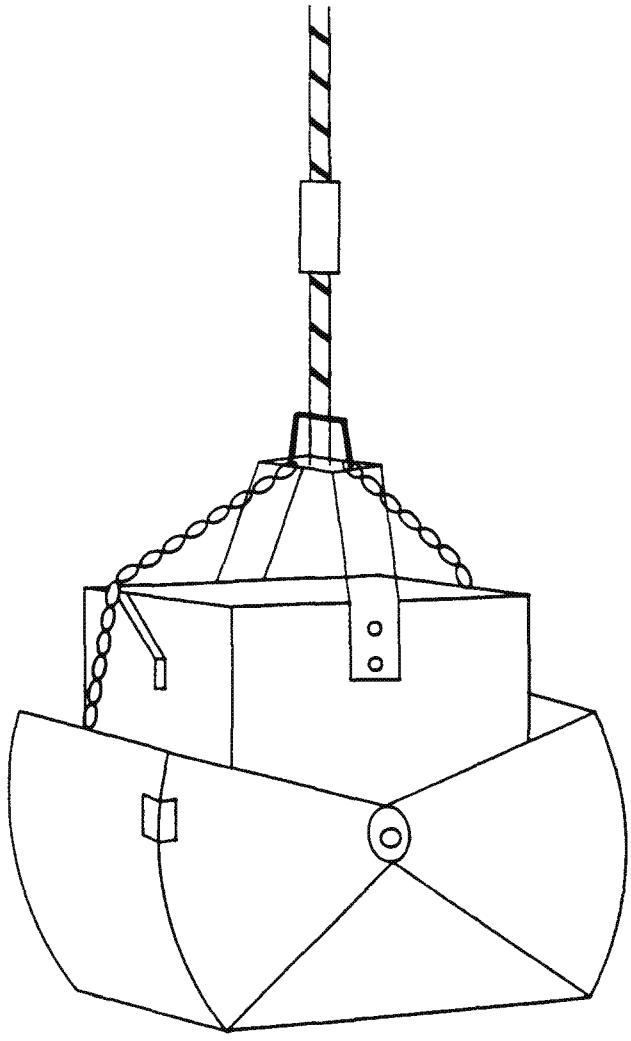

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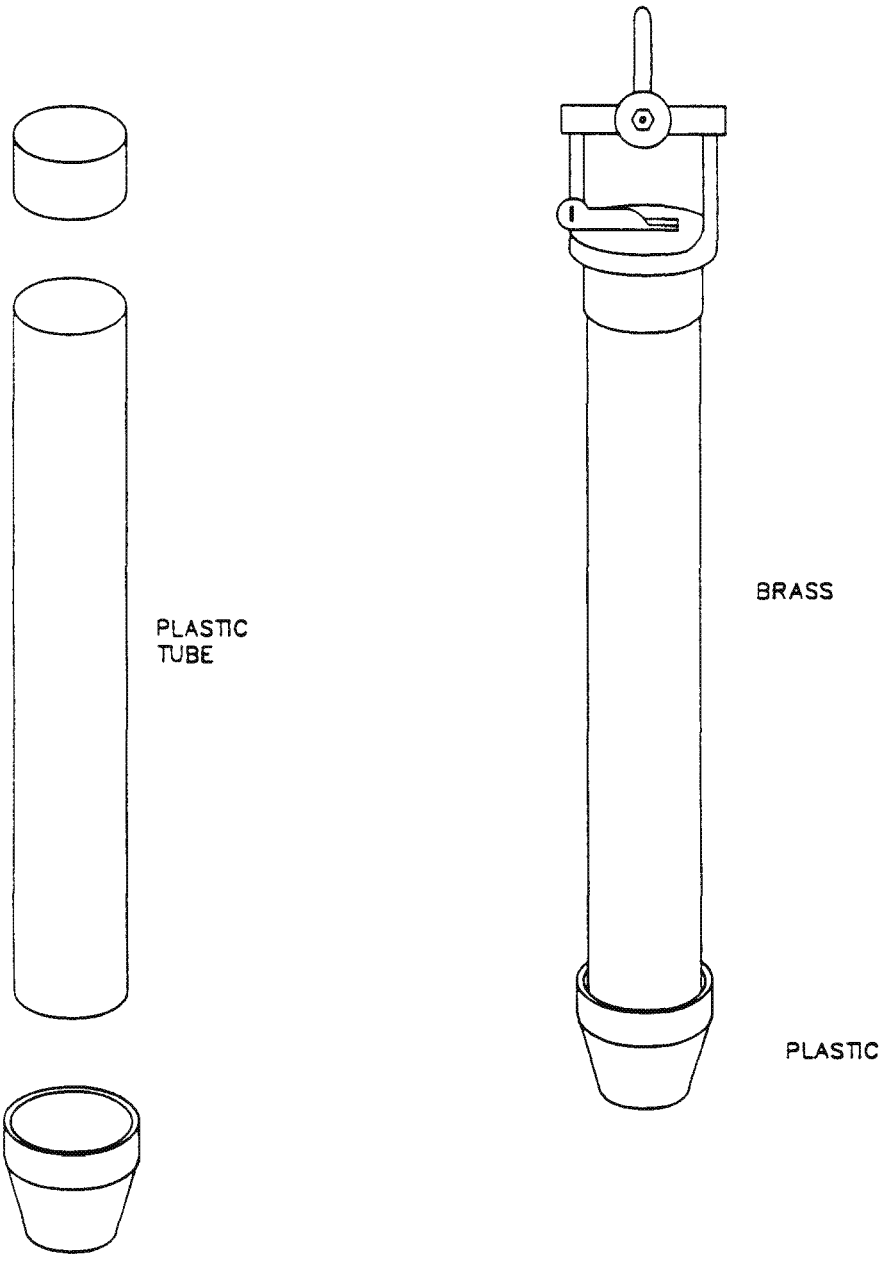
Figure 7: Sample Coring Device

SOP #2016



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APPENDIX C

2017 EPA RESIDENTIAL SOIL REGIONAL SCREENING LEVELS

THQ=1.0 AND 0.1

Key: I = IRIS; P = PPRTV; D = DWSHA; O = OPP; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #29); H = HEAST; F = See FAQ; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Child Hazard Index (HI) = 1			
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	volatile	muta-gen	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	GIABS	ABS	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL Child THQ=1 (mg/kg)	Dermal SL Child THQ=1 (mg/kg)	Inhalation SL Child THQ=1 (mg/kg)	Noncarcinogenic SL Child THI=1 (mg/kg)
				1.2E-03	O						1.4E+09		1	0.1	Acephate	30560-19-1					9.4E+01	4.0E+02		7.8E+01
		2.2E-06	I			9.0E-03	I	V		1.1E+05	1.4E+09	8.7E+03	1		Acetaldehyde	75-07-0			1.1E+01	1.1E+01			8.2E+01	8.2E+01
				2.0E-02	I						1.4E+09		1	0.1	Acetochlor	34256-82-1					1.6E+03	6.6E+03		1.3E+03
				9.0E-01	I	3.1E+01	A	V		1.1E+05	1.4E+09	1.4E+04	1		Acetone	67-64-1					7.0E+04		4.4E+05	6.1E+04
						2.0E-03	X				1.4E+09		1	0.1	Acetone Cyanohydrin	75-86-5							2.8E+06	2.8E+06
						6.0E-02	I	V		1.3E+05	1.4E+09	1.3E+04	1		Acetonitrile	75-05-8							8.1E+02	8.1E+02
				1.0E-01	I			V		2.5E+03	1.4E+09	6.0E+04	1		Acetophenone	98-86-2					7.8E+03			7.8E+03
3.8E+00	C	1.3E-03	C								1.4E+09		1	0.1	Acetylaminofluorene, 2-	53-96-3	1.8E-01	6.5E-01	2.9E+03	1.4E-01				
				5.0E-04	I	2.0E-05	I	V		2.3E+04	1.4E+09	6.9E+03	1		Acrolein	107-02-8					3.9E+01		1.4E-01	1.4E-01
5.0E-01	I	1.0E-04	I	2.0E-03	I	6.0E-03	I		M		1.4E+09		1	0.1	Acrylamide	79-06-1	3.1E-01	1.2E+00	1.4E+04	2.4E-01	1.6E+02	6.6E+02	8.5E+06	1.3E+02
				5.0E-01	I	1.0E-03	I	V		1.1E+05	1.4E+09	9.5E+04	1		Acrylic Acid	79-10-7					3.9E+04		9.9E+01	9.9E+01
5.4E-01	I	6.8E-05	I	4.0E-02	A	2.0E-03	I	V		1.1E+04	1.4E+09	7.7E+03	1		Acrylonitrile	107-13-1	1.3E+00		3.2E-01	2.5E-01	3.1E+03		1.6E+01	1.6E+01
						6.0E-03	P				1.4E+09		1	0.1	Adiponitrile	111-69-3							8.5E+06	8.5E+06
5.6E-02	C			1.0E-02	I						1.4E+09		1	0.1	Alachlor	15972-60-8	1.2E+01	4.4E+01		9.7E+00	7.8E+02	3.3E+03		6.3E+02
				1.0E-03	I						1.4E+09		1	0.1	Aldicarb	116-06-3					7.8E+01	3.3E+02		6.3E+01
				1.0E-03	I						1.4E+09		1	0.1	Aldicarb Sulfone	1646-88-4					7.8E+01	3.3E+02		6.3E+01
											1.4E+09		1	0.1	Aldicarb sulfoxide	1646-87-3								
1.7E+01	I	4.9E-03	I	3.0E-05	I			V			1.4E+09	1.7E+06	1		Aldrin	309-00-2	4.1E-02		9.8E-01	3.9E-02	2.3E+00			2.3E+00
				5.0E-03	I	1.0E-04	X	V		1.1E+05	1.4E+09	3.4E+04	1		Allyl Alcohol	107-18-6					3.9E+02		3.6E+00	3.5E+00
2.1E-02	C	6.0E-06	C			1.0E-03	I	V		1.4E+03	1.4E+09	1.6E+03	1		Allyl Chloride	107-05-1	3.3E+01		7.4E-01	7.2E-01			1.7E+00	1.7E+00
				1.0E+00	P	5.0E-03	P				1.4E+09		1		Aluminum	7429-90-5					7.8E+04		7.1E+06	7.7E+04
				4.0E-04	I						1.4E+09		1		Aluminum Phosphide	20859-73-8					3.1E+01			3.1E+01
				9.0E-03	I						1.4E+09		1	0.1	Ametryn	834-12-8					7.0E+02	3.0E+03		5.7E+02
2.1E+01	C	6.0E-03	C								1.4E+09		1	0.1	Aminobiphenyl, 4-	92-67-1	3.3E-02	1.2E-01	6.4E+02	2.6E-02				
				8.0E-02	P						1.4E+09		1	0.1	Aminophenol, m-	591-27-5					6.3E+03	2.6E+04		5.1E+03
				4.0E-03	X						1.4E+09		1	0.1	Aminophenol, o-	95-55-6					3.1E+02	1.3E+03		2.5E+02
				2.0E-02	P						1.4E+09		1	0.1	Aminophenol, p-	123-30-8					1.6E+03	6.6E+03		1.3E+03
				2.5E-03	I						1.4E+09		1	0.1	Amitraz	33089-61-1					2.0E+02	8.2E+02		1.6E+02
						5.0E-01	I	V					1		Ammonia	7664-41-7								
				2.0E-01	I						1.4E+09		1		Ammonium Sulfamate	7773-06-0					1.6E+04			1.6E+04
						3.0E-03	X	V		1.4E+04	1.4E+09	2.6E+04	1		Amyl Alcohol, tert-	75-85-4							8.2E+01	8.2E+01
5.7E-03	I	1.6E-06	C	7.0E-03	P	1.0E-03	I				1.4E+09		1	0.1	Aniline	62-53-3	1.2E+02	4.3E+02	2.4E+06	9.5E+01	5.5E+02	2.3E+03	1.4E+06	4.4E+02
4.0E-02	P			2.0E-03	X						1.4E+09		1	0.1	Anthraquinone, 9,10-	84-65-1	1.7E+01	6.2E+01		1.4E+01	1.6E+02	6.6E+02		1.3E+02
				4.0E-04	I						1.4E+09		0.15		Antimony (metallic)	7440-36-0					3.1E+01			3.1E+01
				5.0E-04	H						1.4E+09		0.15		Antimony Pentoxide	1314-60-9					3.9E+01			3.9E+01
				4.0E-04	H						1.4E+09		0.15		Antimony Tetroxide	1332-81-6					3.1E+01			3.1E+01
						2.0E-04	I				1.4E+09		0.15		Antimony Trioxide	1309-64-4							2.8E+05	2.8E+05
1.5E+00	I	4.3E-03	I	3.0E-04	I	1.5E-05	C				1.4E+09		1	0.03	Arsenic, Inorganic	7440-38-2	7.7E-01	5.5E+00	8.9E+02	6.8E-01	3.9E+01	3.3E+02	2.1E+04	3.5E+01
				3.5E-06	C	5.0E-05	I				1.4E+09		1		Arsine	7784-42-1					2.7E-01		7.1E+04	2.7E-01
				3.6E-02	O						1.4E+09		1	0.1	Asulam	3337-71-1					2.8E+03	1.2E+04		2.3E+03
2.3E-01	C			3.5E-02	I						1.4E+09		1	0.1	Atrazine	1912-24-9	3.0E+00	1.1E+01		2.4E+00	2.7E+03	1.2E+04		2.2E+03
8.8E-01	C	2.5E-04	C								1.4E+09		1	0.1	Auramine	492-80-8	7.9E-01	2.8E+00	1.5E+04	6.2E-01				
				4.0E-04	I						1.4E+09		1	0.1	Avermectin B1	65195-55-3					3.1E+01	1.3E+02		2.5E+01
				3.0E-03	A	1.0E-02	A				1.4E+09		1	0.1	Azinphos-methyl	86-50-0					2.3E+02	9.9E+02	1.4E+07	1.9E+02
1.1E-01	I	3.1E-05	I					V			1.4E+09	5.2E+05	1		Azobenzene	103-33-3	6.3E+00		4.7E+01	5.8E+00				
				1.0E+00	P	7.0E-06	P				1.4E+09		1	0.1	Azodicarbonamide	123-77-3					7.8E+04	3.3E+05	9.9E+03	8.6E+03
				2.0E-01	I	5.0E-04	H				1.4E+09		0.07		Barium	7440-39-3					1.6E+04		7.1E+05	1.5E+04
5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M		1.4E+09		0.025		Barium Chromate	10294-40-3	3.1E-01		9.2E+00	3.0E-01	1.6E+03		2.8E+05	1.6E+03
				5.0E-03	O			V			1.4E+09	3.1E+05	1		Benfluralin	1861-40-1					3.9E+02			3.9E+02
				5.0E-02	I						1.4E+09		1	0.1	Benomyl	17804-35-2					3.9E+03	1.6E+04		3.2E+03
				2.0E-01	I						1.4E+09		1	0.1	Bensulfuron-methyl	83055-99-6					1.6E+04	6.6E+04		1.3E+04
				3.0E-02	I						1.4E+09		1	0.1	Bentazon	25057-89-0					2.3E+03	9.9E+03		1.8E+03
4.0E-03	P			1.0E-01	I			V		1.2E+03	1.4E+09	2.3E+04	1		Benzaldehyde	100-52-7	1.7E+02			1.7E+02	7.8E+03			7.8E+03
5.5E-02	I	7.8E-06	I	4.0E-03	I	3.0E-02	I	V		1.8E+03	1.4E+09	3.5E+03	1		Benzene	71-43-2	1.3E+01		1.3E+00	1.2E+00	3.1E+02		1.1E+02	8.2E+01
1.0E-01	X			3.0E-04	X						1.4E+09		1	0.1	Benzenediamine-2-methyl sulfate, 1,4-	6369-59-1	7.0E+00	2.5E+01		5.4E+00	2.3E+01	9.9E+01		1.9E+01
				1.0E-03	P			V		1.3E+03	1.4E+09	1.9E+04	1		Benzenethiol	108-98-5					7.8E+01			7.8E+01
2.3E+02	I	6.7E-02	I	3.0E-03	I				M		1.4E+09		1	0.1	Benzidine	92-87-5	6.7E-04	2.6E-03	2.1E+01	5.3E-04	2.3E+02	9.9E+02		1.9E+02
				4.0E+00	I						1.4E+09		1	0.1	Benzoic Acid	65-85-0					3.1E+05	1.3E+06		2.5E+05
1.3E+01	I							V		3.2E+02	1.4E+09	6.8E+04	1		Benzotrichloride	98-07-7	5.3E-02			5.3E-02				
				1.0E-01	P						1.4E+09		1	0.1	Benzyl Alcohol	100-51-6					7.8E+03	3.3E+04		6.3E+03
1.7E-01	I	4.9E-05	C	2.0E-03	P	1.0E-03	P	V		1.5E+03	1.4E+09	2.6E+04	1		Benzyl Chloride	100-44-7	4.1E+00		1.5E+00	1.1E+00	1.6E+02		2.7E+01	2.3E+01
		2.4E-03	I	2.0E-03	I	2.0E-05	I				1.4E+09		0.007		Beryllium and compounds	7440-41-7			1.6E+03	1.6E+03	1.6E+02		2.8E+04	1.6E+02
				9.0E-03	P						1.4E+09		1	0.1	Bifenox	42576-02-3					7.0E+02	3.0E+03		5.7E+02
				1.5E-02	I						1.4E+09		1	0.1	Biphenthrin	82657-04-3					1.2E+03	4.9E+03		9.5E+02
8.0E-03	I			5.0E-01	I	4.0E-04	X	V			1.4E+09	1.1E+05	1		Biphenyl, 1,1'-	92-52-4	8.7E+01			8.7E+01	3.9E+04		4.8E+01	4.7E+01
				4.0E-02	I			V		1.0E+03	1.4E+09	3.5E+04	1		Bis(2-chloro-1-methylethyl) ether	108-60-1					3.1E+03			3.1E+03
				3.0E-03	P						1.4E+09		1	0.1	Bis(2-chloroethoxy)methane	111-91-1					2.3E+02	9.9E+02		1.9E+02
1.1E+00	I	3.3E-04	I					V		5.1E+03	1.4E+09	4.3E+04	1		Bis(2-chloroethyl)ether	111-44-4	6.3E-01		3.6E-01	2.3E-01				
2.2E+02	I	6.2E-02	I					V		4.2E+03	1.4E+09	1.9E+03	1		Bis(chloromethyl)ether	542-88-1	3.2E-03		8.5E-05	8.3E-05				
				5.0E-02	I						1.4E+09		1	0.1	Bisphenol A	80-05-7					3.9E+03	1.6E+04		3.2E+03
				2.0E-01	I	2.0E-02	H				1.4E+09		1		Boron And Borates Only	7440-42-8					1.6E+04		2.8E+07	1.6E+04
				2.0E+00	P	2.0E-02	P	V			1.4E+09		1		Boron Trichloride	10294-34-5					1.6E+05		2.8E+07	1.6E+05
				4.0E-02	C	1.3E-02	C	V			1.4E+09		1		Boron Trifluoride	7637-07-2					3.1E+03		1.8E+07	3.1E+03
7.0E-01	I			4.0E-03	I						1.4E+09		1		Bromate	15541-45-4	9.9E-01			9.9E-01	3.1E+02			3.1E+02
2.0E+00	X	6.0E-04	X					V		2.4E+03	1.4E+09	5.9E+03	1		Bromo-2-chloroethane, 1-	107-04-0	3.5E-01		2.8E-02	2.8E-02				

TR=1E-06
HQ=1.0

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Toxicity and Chemical-specific Information															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Child Hazard Index (HI) = 1			
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	GIABS	ABS	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL Child THQ=1 (mg/kg)	Dermal SL Child THQ=1 (mg/kg)	Inhalation SL Child THQ=1 (mg/kg)	Noncarcinogenic SL Child THI=1 (mg/kg)
				8.0E-03	I	6.0E-02	I	V		6.8E+02	1.4E+09	8.4E+03	1		Bromobenzene	108-86-1					6.3E+02		5.2E+02	2.9E+02
						4.0E-02	X	V		4.0E+03	1.4E+09	3.6E+03	1		Bromochloromethane	74-97-5							1.5E+02	1.5E+02
6.2E-02	I	3.7E-05	C	2.0E-02	I			V		9.3E+02	1.4E+09	4.0E+03	1		Bromodichloromethane	75-27-4	1.1E+01		3.0E-01	2.9E-01	1.6E+03			1.6E+03
7.9E-03	I	1.1E-06	I	2.0E-02	I			V		9.2E+02	1.4E+09	9.7E+03	1		Bromoform	75-25-2	8.8E+01		2.5E+01	1.9E+01	1.6E+03			1.6E+03
				1.4E-03	I	5.0E-03	I	V		3.6E+03	1.4E+09	1.4E+03	1		Bromomethane	74-83-9					1.1E+02		7.3E+00	6.8E+00
				5.0E-03	H			V			1.4E+09	1.2E+05	1		Bromophos	2104-96-3					3.9E+02			3.9E+02
1.0E-01	O			1.5E-02	O						1.4E+09		1	0.1	Bromoxynil	1689-84-5	6.7E+00	2.4E+01		5.3E+00	1.2E+03	4.9E+03		9.5E+02
				1.5E-02	O			V			1.4E+09	4.7E+05	1		Bromoxynil Octanoate	1689-99-2					1.2E+03			1.2E+03
3.4E+00	C	3.0E-05	I			2.0E-03	I	V		6.7E+02	1.4E+09	8.7E+02	1		Butadiene, 1,3-	106-99-0	2.0E-01		8.1E-02	5.6E-02			1.8E+00	1.8E+00
				3.0E-02	O						1.4E+09		1	0.1	Butanoic acid, 4-(2,4-dichlorophenoxy)-	94-82-6					2.3E+03	9.9E+03		1.9E+03
				1.0E-01	I			V		7.6E+03	1.4E+09	3.0E+04	1		Butanol, N-	71-36-3					7.8E+03			7.8E+03
				2.0E+00	P	3.0E+01	P	V		2.1E+04	1.4E+09	2.9E+04	1		Butyl alcohol, sec-	78-92-2					1.6E+05		9.1E+05	1.3E+05
				5.0E-02	I			V			1.4E+09	8.6E+04	1		Butylate	2008-41-5					3.9E+03			3.9E+03
2.0E-04	C	5.7E-08	C								1.4E+09		1	0.1	Butylated hydroxyanisole	25013-16-5	3.5E+03	1.2E+04	6.7E+07	2.7E+03				
3.6E-03	P			3.0E-01	P						1.4E+09		1	0.1	Butylated hydroxytoluene	128-37-0	1.9E+02	6.9E+02		1.5E+02	2.3E+04	9.9E+04		1.9E+04
				5.0E-02	P			V		1.1E+02	1.4E+09	8.1E+03	1		Butylbenzene, n-	104-51-8					3.9E+03			3.9E+03
				1.0E-01	X			V		1.5E+02	1.4E+09	7.4E+03	1		Butylbenzene, sec-	135-98-8					7.8E+03			7.8E+03
				1.0E-01	X			V		1.8E+02	1.4E+09	7.4E+03	1		Butylbenzene, tert-	98-06-6					7.8E+03			7.8E+03
				2.0E-02	A						1.4E+09		1	0.1	Cacodylic Acid	75-60-5					1.6E+03	6.6E+03		1.3E+03
		1.8E-03	I	1.0E-03	I	1.0E-05	A				1.4E+09		0.025	0.001	Cadmium (Diet)	7440-43-9			2.1E+03	2.1E+03	7.8E+01	8.2E+02	1.4E+04	7.1E+01
		1.8E-03	I	5.0E-04	I	1.0E-05	A						0.05	0.001	Cadmium (Water)	7440-43-9								
5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M		1.4E+09		0.025		Calcium Chromate	13765-19-0	3.1E-01		9.2E+00	3.0E-01	1.6E+03		2.8E+05	1.6E+03
				5.0E-01	I	2.2E-03	C				1.4E+09		1	0.1	Caprolactam	105-60-2					3.9E+04	1.6E+05	3.1E+06	3.1E+04
1.5E-01	C	4.3E-05	C	2.0E-03	I						1.4E+09		1	0.1	Captafol	2425-06-1	4.6E+00	1.6E+01	6.9E+04	3.6E+00	1.6E+02	6.6E+02		1.3E+02
2.3E-03	C	6.6E-07	C	1.3E-01	I						1.4E+09		1	0.1	Captan	133-06-2	3.0E+02	1.1E+03	5.8E+06	2.4E+02	1.0E+04	4.3E+04		8.2E+03
				1.0E-01	I						1.4E+09		1	0.1	Carbaryl	63-25-2					7.8E+03	3.3E+04		6.3E+03
				5.0E-03	I						1.4E+09		1	0.1	Carbofuran	1563-66-2					3.9E+02	1.6E+03		3.2E+02
				1.0E-01	I	7.0E-01	I	V		7.4E+02	1.4E+09	1.2E+03	1		Carbon Disulfide	75-15-0					7.8E+03		8.5E+02	7.7E+02
7.0E-02	I	6.0E-06	I	4.0E-03	I	1.0E-01	I	V		4.6E+02	1.4E+09	1.5E+03	1		Carbon Tetrachloride	56-23-5	9.9E+00		7.0E-01	6.5E-01	3.1E+02		1.6E+02	1.0E+02
						1.0E-01	P	V		5.9E+03	1.4E+09	6.5E+02	1		Carbonyl Sulfide	463-58-1							6.7E+01	6.7E+01
				1.0E-02	I						1.4E+09		1	0.1	Carbosulfan	55285-14-8					7.8E+02	3.3E+03		6.3E+02
				1.0E-01	I						1.4E+09		1	0.1	Carboxin	5234-68-4					7.8E+03	3.3E+04		6.3E+03
						9.0E-04	I				1.4E+09		1		Ceric oxide	1306-38-3							1.3E+06	1.3E+06
				1.0E-01	I			V			1.4E+09	1.5E+05	1		Chloral Hydrate	302-17-0					7.8E+03			7.8E+03
				1.5E-02	I						1.4E+09		1	0.1	Chloramben	133-90-4					1.2E+03	4.9E+03		9.5E+02
4.0E-01	H										1.4E+09		1	0.1	Chloranil	118-75-2	1.7E+00	6.1E+00		1.3E+00				
3.5E-01	I	1.0E-04	I	5.0E-04	I	7.0E-04	I	V			1.4E+09	1.5E+06	1	0.04	Chlordane	12789-03-6	2.0E+00	1.8E+01	4.3E+01	1.7E+00	3.9E+01	4.1E+02	1.1E+03	3.5E+01
1.0E+01	I	4.6E-03	C	3.0E-04	I						1.4E+09		1	0.1	Chlordecone (Kepone)	143-50-0	7.0E-02	2.5E-01	8.3E+02	5.4E-02	2.3E+01	9.9E+01		1.9E+01
				7.0E-04	A						1.4E+09		1	0.1	Chlorfenvinphos	470-90-6					5.5E+01	2.3E+02		4.4E+01
				9.0E-02	O						1.4E+09		1	0.1	Chlorimuron, Ethyl-	90982-32-4					7.0E+03	3.0E+04		5.7E+03
				1.0E-01	I	1.5E-04	A	V		2.8E+03	1.4E+09	1.2E+03	1		Chlorine	7782-50-5					7.8E+03		1.8E-01	1.8E-01
				3.0E-02	I	2.0E-04	I	V			1.4E+09		1		Chlorine Dioxide	10049-04-4					2.3E+03		2.6E+05	2.3E+03
				3.0E-02	I						1.4E+09		1		Chlorite (Sodium Salt)	7758-19-2					2.3E+03			2.3E+03
						5.0E+01	I	V		1.2E+03	1.4E+09	1.0E+03	1		Chloro-1,1-difluoroethane, 1-	75-68-3							5.4E+04	5.4E+04
		3.0E-04	I	2.0E-02	H	2.0E-02	I	V		7.9E+02	1.4E+09	1.1E+03	1		Chloro-1,3-butadiene, 2-	126-99-8			1.0E-02	1.0E-02	1.6E+03		2.2E+01	2.2E+01
4.6E-01	H										1.4E+09		1	0.1	Chloro-2-methylaniline HCl, 4-	3165-93-3	1.5E+00	5.4E+00		1.2E+00				
1.0E-01	P	7.7E-05	C	3.0E-03	X						1.4E+09		1	0.1	Chloro-2-methylaniline, 4-	95-69-2	7.0E+00	2.5E+01	5.0E+04	5.4E+00	2.3E+02	9.9E+02		1.9E+02
2.7E-01	X							V		1.2E+04	1.4E+09	1.6E+04	1		Chloroacetaldehyde, 2-	107-20-0	2.6E+00			2.6E+00				
											1.4E+09		1	0.1	Chloroacetic Acid	79-11-8								
						3.0E-05	I				1.4E+09		1	0.1	Chloroacetophenone, 2-	532-27-4							4.3E+04	4.3E+04
2.0E-01	P			4.0E-03	I						1.4E+09		1	0.1	Chloroaniline, p-	106-47-8	3.5E+00	1.2E+01		2.7E+00	3.1E+02	1.3E+03		2.5E+02
				2.0E-02	I	5.0E-02	P	V		7.6E+02	1.4E+09	6.5E+03	1		Chlorobenzene	108-90-7					1.6E+03		3.4E+02	2.8E+02
				1.0E-01	X						1.4E+09		1	0.1	Chlorobenzene sulfonic acid, p-	98-66-8					7.8E+03	3.3E+04		6.3E+03
1.1E-01	C	3.1E-05	C	2.0E-02	I						1.4E+09		1	0.1	Chlorobenzilate	510-15-6	6.3E+00	2.2E+01	1.2E+05	4.9E+00	1.6E+03	6.6E+03		1.3E+03
				3.0E-02	X						1.4E+09		1	0.1	Chlorobenzoic Acid, p-	74-11-3					2.3E+03	9.9E+03		1.9E+03
				3.0E-03	P	3.0E-01	P	V		2.9E+02	1.4E+09	6.8E+03	1		Chlorobenzotrifluoride, 4-	98-56-6					2.5E+02		2.1E+03	2.1E+02
				4.0E-02	P			V		7.3E+02	1.4E+09	1.8E+03	1		Chlorobutane, 1-	109-69-3					3.1E+03			3.1E+03
						5.0E+01	I	V		1.7E+03	1.4E+09	9.4E+02	1		Chlorodifluoromethane	75-45-6							4.9E+04	4.9E+04
				2.0E-02	P			V		1.1E+05	1.4E+09	7.8E+04	1		Chloroethanol, 2-	107-07-3					1.6E+03			1.6E+03
3.1E-02	C	2.3E-05	I	1.0E-02	I	9.8E-02	A	V		2.5E+03	1.4E+09	2.6E+03	1		Chloroform	67-66-3	2.2E+01		3.2E-01	3.2E-01	7.8E+02		2.7E+02	2.0E+02
						9.0E-02	I	V		1.3E+03	1.4E+09	1.2E+03	1		Chloromethane	74-87-3							1.1E+02	1.1E+02
2.4E+00	C	6.9E-04	C					V		9.3E+03	1.4E+09	5.3E+03	1		Chloromethyl Methyl Ether	107-30-2	2.9E-01		2.2E-02	2.0E-02				
3.0E-01	P			3.0E-03	P	1.0E-05	X				1.4E+09		1	0.1	Chloronitrobenzene, o-	88-73-3	2.3E+00	8.2E+00		1.8E+00	2.3E+02	9.9E+02	1.4E+04	1.9E+02
6.0E-02	P			7.0E-04	P	2.0E-03	P				1.4E+09		1	0.1	Chloronitrobenzene, p-	100-00-5	1.2E+01	4.1E+01		9.0E+00	5.5E+01	2.3E+02	2.8E+06	4.4E+01
				5.0E-03	I			V		2.7E+04	1.4E+09	1.4E+05	1		Chlorophenol, 2-	95-57-8					3.9E+02			3.9E+02
						4.0E-04	C	V		6.2E+02	1.4E+09	4.7E+03	1		Chloropicrin	76-06-2							2.0E+00	2.0E+00
3.1E-03	C	8.9E-07	C	1.5E-02	I						1.4E+09		1	0.1	Chlorothalonil	1897-45-6	2.2E+02	8.0E+02	4.3E+06	1.8E+02	1.2E+03	4.9E+03		9.5E+02
				2.0E-02	I			V		9.1E+02	1.4E+09	8.1E+03	1		Chlorotoluene, o-	95-49-8					1.6E+03			1.6E+03
				2.0E-02	X			V		2.5E+02	1.4E+09	7.3E+03	1		Chlorotoluene, p-	106-43-4					1.6E+03			1.6E+03
2.4E+02	C	6.9E-02	C								1.4E+09		1	0.1	Chlorozotocin	54749-90-5	2.9E-03	1.0E-02	5.5E+01	2.3E-03				
				5.0E-02	O						1.4E+09		1	0.1	Chlorpropham	101-21-3					3.9E+03	1.6E+04		3.2E+03
				1.0E-03	A						1.4E+09		1	0.1	Chlorpyrifos	2921-88-2					7.8E+01	3.3E+02		6.3E+01
				1.0E-02	H						1.4E+09		1	0.1	Chlorpyrifos Methyl	5598-13-0					7.8E+02	3.3E+03		6.3E+02
				2.0E-02	O						1.4E+09		1	0.1	Chlorsulfuron	64902-72-3					1.6E+03	6.6E+03		1.3E+03
				1.0E-02	I						1.4E+09		1	0.1	Chlorthal-dimethyl	1861-32-1					7.8E+02	3.3E+03		6.3E+02

TR=1E-06
HQ=1.0

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Key: I = IRIS; P = PPRTV; D = DWSHA; O = OPP; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #29); H = HEAST; F = See FAQ; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information														Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Child Hazard Index (HI) = 1			
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	volatile	mutagen	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	GIABS	ABS	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL Child THQ=1 (mg/kg)	Dermal SL Child THQ=1 (mg/kg)	Inhalation SL Child THQ=1 (mg/kg)	Noncarcinogenic SL Child THI=1 (mg/kg)
				8.0E-04	H						1.4E+09		1	0.1	Chlorthiophos	60238-56-4					6.3E+01	2.6E+02		5.1E+01
				1.5E+00	I						1.4E+09		0.013		Chromium(III), Insoluble Salts	16065-83-1					1.2E+05			1.2E+05
5.0E-01	C	8.4E-02	S	3.0E-03	I	1.0E-04	I		M		1.4E+09		0.025		Chromium(VI)	18540-29-9	3.1E-01			1.6E+01	3.0E-01	2.3E+02		1.4E+05	2.3E+02
											1.4E+09		0.013		Chromium, Total	7440-47-3									
				1.3E-02	I						1.4E+09		1	0.1	Clofentezine	74115-24-5					1.0E+03	4.3E+03		8.2E+02
		9.0E-03	P	3.0E-04	P	6.0E-06	P				1.4E+09		1		Cobalt	7440-48-4				4.2E+02	4.2E+02	2.3E+01		8.5E+03	2.3E+01
		6.2E-04	I					V	M				1		Coke Oven Emissions	8007-45-2									
				4.0E-02	H						1.4E+09		1		Copper	7440-50-8						3.1E+03			3.1E+03
				5.0E-02	I	6.0E-01	C				1.4E+09		1	0.1	Cresol, m-	108-39-4						3.9E+03	1.6E+04	8.5E+08	3.2E+03
				5.0E-02	I	6.0E-01	C				1.4E+09		1	0.1	Cresol, o-	95-48-7						3.9E+03	1.6E+04	8.5E+08	3.2E+03
				1.0E-01	A	6.0E-01	C				1.4E+09		1	0.1	Cresol, p-	106-44-5						7.8E+03	3.3E+04	8.5E+08	6.3E+03
				1.0E-01	A						1.4E+09		1	0.1	Cresol, p-chloro-m-	59-50-7						7.8E+03	3.3E+04		6.3E+03
				1.0E-01	A	6.0E-01	C				1.4E+09		1	0.1	Cresols	1319-77-3						7.8E+03	3.3E+04	8.5E+08	6.3E+03
1.9E+00	H			1.0E-03	P			V		1.7E+04	1.4E+09	1.9E+04	1		Crotonaldehyde, trans-	123-73-9	3.7E-01			3.7E-01		7.8E+01			7.8E+01
				1.0E-01	I	4.0E-01	I	V		2.7E+02	1.4E+09	6.2E+03	1		Cumene	98-82-8						7.8E+03		2.6E+03	1.9E+03
2.2E-01	C	6.3E-05	C								1.4E+09		1	0.1	Cupferron	135-20-6	3.2E+00	1.1E+01	6.1E+04	2.5E+00				
8.4E-01	H			2.0E-03	H						1.4E+09		1	0.1	Cyanazine	21725-46-2	8.3E-01	2.9E+00		6.5E-01	1.6E+02	6.6E+02		1.3E+02
															Cyanides									
				1.0E-03	I						1.4E+09		1		~Calcium Cyanide	592-01-8					7.8E+01			7.8E+01
				5.0E-03	I						1.4E+09		1		~Copper Cyanide	544-92-3					3.9E+02			3.9E+02
				6.0E-04	I	8.0E-04	S	V		9.5E+05	1.4E+09	5.3E+04	1		~Cyanide (CN-)	57-12-5					4.7E+01		4.4E+01	2.3E+01
				1.0E-03	I			V			1.4E+09		1		~Cyanogen	460-19-5					7.8E+01			7.8E+01
				9.0E-02	I			V			1.4E+09		1		~Cyanogen Bromide	506-68-3					7.0E+03			7.0E+03
				5.0E-02	I			V			1.4E+09		1		~Cyanogen Chloride	506-77-4					3.9E+03			3.9E+03
				6.0E-04	I	8.0E-04	I	V		1.0E+07	1.4E+09	5.2E+04	1		~Hydrogen Cyanide	74-90-8					4.7E+01		4.4E+01	2.3E+01
				2.0E-03	I						1.4E+09		1		~Potassium Cyanide	151-50-8					1.6E+02			1.6E+02
				5.0E-03	I						1.4E+09		0.04		~Potassium Silver Cyanide	506-61-6					3.9E+02			3.9E+02
				1.0E-01	I						1.4E+09		0.04		~Silver Cyanide	506-64-9					7.8E+03			7.8E+03
				1.0E-03	I						1.4E+09		1		~Sodium Cyanide	143-33-9					7.8E+01			7.8E+01
				2.0E-04	P						1.4E+09		1		~Thiocyanates	E1790664					1.6E+01			1.6E+01
				2.0E-04	X			V			1.4E+09		1		~Thiocyanic Acid	463-56-9					1.6E+01			1.6E+01
				5.0E-02	I						1.4E+09		1		~Zinc Cyanide	557-21-1					3.9E+03			3.9E+03
						6.0E+00	I	V		1.2E+02	1.4E+09	1.0E+03	1		Cyclohexane	110-82-7							6.5E+03	6.5E+03
2.0E-02	X			2.0E-02	X						1.4E+09		1	0.1	Cyclohexane, 1,2,3,4,5-pentachloro-6-chloro-	87-84-3	3.5E+01	1.2E+02		2.7E+01	1.6E+03	6.6E+03		1.3E+03
				5.0E+00	I	7.0E-01	P	V		5.1E+03	1.4E+09	4.2E+04	1		Cyclohexanone	108-94-1					3.9E+05		3.0E+04	2.8E+04
				5.0E-03	P	1.0E+00	X	V		2.8E+02	1.4E+09	1.5E+03	1		Cyclohexene	110-83-8					3.9E+02		1.5E+03	3.1E+02
				2.0E-01	I			V		2.9E+05	1.4E+09	7.5E+04	1		Cyclohexylamine	108-91-8					1.6E+04			1.6E+04
				2.5E-02	I						1.4E+09		1	0.1	Cyfluthrin	68359-37-5					2.0E+03	8.2E+03		1.6E+03
				1.0E-03	O						1.4E+09		1	0.1	Cyhalothrin	68085-85-8					7.8E+01	3.3E+02		6.3E+01
				6.0E-02	O						1.4E+09		1	0.1	Cypermethrin	52315-07-8					4.7E+03	2.0E+04		3.8E+03
				1.5E-02	O						1.4E+09		1	0.1	Cyromazine	66215-27-8					1.2E+03	4.9E+03		9.5E+02
2.4E-01	I	6.9E-05	C								1.4E+09		1	0.1	DDD	72-54-8	2.9E+00	1.0E+01	5.5E+04	2.3E+00				
3.4E-01	I	9.7E-05	C					V			1.4E+09	2.1E+06	1		DDE, p,p'-	72-55-9	2.0E+00		6.1E+01	2.0E+00				
3.4E-01	I	9.7E-05	I	5.0E-04	I						1.4E+09		1	0.03	DDT	50-29-3	2.0E+00	2.4E+01	3.9E+04	1.9E+00	3.9E+01	5.5E+02		3.7E+01
				3.0E-02	I						1.4E+09		1	0.1	Dalapon	75-99-0					2.3E+03	9.9E+03		1.9E+03
1.8E-02	C	5.1E-06	C	1.5E-01	I						1.4E+09		1	0.1	Daminozide	1596-84-5	3.9E+01	1.4E+02	7.5E+05	3.0E+01	1.2E+04	4.9E+04		9.5E+03
7.0E-04	I			7.0E-03	I						1.4E+09		1	0.1	Decabromodiphenyl ether, 2,2',3,3',4,4',5,5',6,6'- (BDE-209)	1163-19-5	9.9E+02	3.5E+03		7.8E+02	5.5E+02	2.3E+03		4.4E+02
				4.0E-05	I						1.4E+09		1	0.1	Demeton	8065-48-3					3.1E+00	1.3E+01		2.5E+00
1.2E-03	I			6.0E-01	I						1.4E+09		1	0.1	Di(2-ethylhexyl)adipate	103-23-1	5.8E+02	2.1E+03		4.5E+02	4.7E+04	2.0E+05		3.8E+04
6.1E-02	H										1.4E+09		1	0.1	Diallate	2303-16-4	1.1E+01	4.1E+01		8.9E+00				
				7.0E-04	A						1.4E+09		1	0.1	Diazinon	333-41-5					5.5E+01	2.3E+02		4.4E+01
				1.0E-02	X			V			1.4E+09	5.2E+05	1		Dibenzothiophene	132-65-0					7.8E+02			7.8E+02
8.0E-01	P	6.0E-03	P	2.0E-04	P	2.0E-04	I	V	M	9.8E+02	1.4E+09	3.2E+04	1		Dibromo-3-chloropropane, 1,2-	96-12-8	1.9E-01		5.4E-03	5.3E-03	1.6E+01		6.7E+00	4.7E+00
				4.0E-04	X			V		1.6E+02	1.4E+09	1.9E+04	1		Dibromobenzene, 1,3-	108-36-1					3.1E+01			3.1E+01
				1.0E-02	I			V			1.4E+09	2.2E+04	1		Dibromobenzene, 1,4-	106-37-6					7.8E+02			7.8E+02
8.4E-02	I			2.0E-02	I			V		8.0E+02	1.4E+09	8.0E+03	1		Dibromochloromethane	124-48-1	8.3E+00			8.3E+00	1.6E+03			1.6E+03
2.0E+00	I	6.0E-04	I	9.0E-03	I	9.0E-03	I	V		1.3E+03	1.4E+09	8.6E+03	1		Dibromoethane, 1,2-	106-93-4	3.5E-01		4.0E-02	3.6E-02	7.0E+02		8.1E+01	7.3E+01
						4.0E-03	X	V		2.8E+03	1.4E+09	5.6E+03	1		Dibromomethane (Methylene Bromide)	74-95-3							2.4E+01	2.4E+01
				3.0E-04	P						1.4E+09		1	0.1	Dibutyltin Compounds	E1790660					2.3E+01	9.9E+01		1.9E+01
				3.0E-02	I						1.4E+09		1	0.1	Dicamba	1918-00-9					2.3E+03	9.9E+03		1.9E+03
		4.2E-03	P					V		5.5E+02	1.4E+09	3.2E+03	1		Dichloro-2-butene, 1,4-	764-41-0			2.1E-03	2.1E-03				
		4.2E-03	P					V		5.2E+02	1.4E+09	1.1E+04	1		Dichloro-2-butene, cis-1,4-	1476-11-5			7.4E-03	7.4E-03				
		4.2E-03	P					V		7.6E+02	1.4E+09	1.1E+04	1		Dichloro-2-butene, trans-1,4-	110-57-6			7.4E-03	7.4E-03				
5.0E-02	I			4.0E-03	I						1.4E+09		1	0.1	Dichloroacetic Acid	79-43-6	1.4E+01	4.9E+01		1.1E+01	3.1E+02	1.3E+03		2.5E+02
				9.0E-02	I	2.0E-01	H	V		3.8E+02	1.4E+09	1.2E+04	1		Dichlorobenzene, 1,2-	95-50-1					7.0E+03		2.4E+03	1.8E+03
5.4E-03	C	1.1E-05	C	7.0E-02	A	8.0E-01	I	V			1.4E+09	1.0E+04	1		Dichlorobenzene, 1,4-	106-46-7	1.3E+02		2.7E+00	2.6E+00	5.5E+03		8.7E+03	3.4E+03
4.5E-01	I	3.4E-04	C								1.4E+09		1	0.1	Dichlorobenzidine, 3,3'-	91-94-1	1.5E+00	5.5E+00	1.1E+04	1.2E+00				
				9.0E-03	X						1.4E+09		1	0.1	Dichlorobenzophenone, 4,4'-	90-98-2					7.0E+02	3.0E+03		5.7E+02
				2.0E-01	I	1.0E-01	X	V		8.5E+02	1.4E+09	8.4E+02	1		Dichlorodifluoromethane	75-71-8					1.6E+04		8.8E+01	8.7E+01
5.7E-03	C	1.6E-06	C	2.0E-01	P			V		1.7E+03	1.4E+09	2.1E+03	1		Dichloroethane, 1,1-	75-34-3	1.2E+02		3.7E+00	3.6E+00	1.6E+04			1.6E+04
9.1E-02	I	2.6E-05	I	6.0E-03	X	7.0E-03	P	V		3.0E+03	1.4E+09	4.6E+03	1		Dichloroethane, 1,2-	107-06-2	7.6E+00		4.9E-01	4.6E-01	4.7E+02		3.3E+01	3.1E+01
				5.0E-02	I	2.0E-01	I	V		1.2E+03	1.4E+09	1.2E+03	1		Dichloroethylene, 1,1-	75-35-4					3.9E+03		2.4E+02	2.3E+02
				2.0E-03	I			V		2.4E+03	1.4E+09	2.5E+03	1		Dichloroethylene, 1,2-cis-	156-59-2					1.6E+02			1.6E+02
				2.0E-02	I			V		1.9E+03	1.4E+09	1.8E+03	1		Dichloroethylene, 1,2-trans-	156-60-5					1.6E+03			1.6E+03
				3.0E-03	I						1.4E+09		1	0.1	Dichlorophenol, 2,4-	120-83-2					2.3E+02	9.9E+02		1.9E+02

TR=1E-06
THQ=1.0

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Key: I = IRIS; P = PPRTV; D = DWSHA; O = OPP; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #29); H = HEAST; F = See FAQ; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information														Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Child Hazard Index (HI) = 1			
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	GIABS	ABS	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL Child THQ=1 (mg/kg)	Dermal SL Child THQ=1 (mg/kg)	Inhalation SL Child THQ=1 (mg/kg)	Noncarcinogenic SL Child THI=1 (mg/kg)
				1.0E-02	I						1.4E+09		1	0.05	Dichlorophenoxy Acetic Acid, 2,4-	94-75-7					7.8E+02	6.6E+03		7.0E+02
3.7E-02	P	3.7E-05	P	4.0E-02	P	4.0E-03	I	V		1.4E+03	1.4E+09	3.8E+03	1		Dichloropropane, 1,2-	78-87-5	1.9E+01		2.9E-01	2.6E-01	3.1E+03		1.6E+01	1.6E+01
				2.0E-02	P			V		1.5E+03	1.4E+09	6.8E+03	1		Dichloropropane, 1,3-	142-28-9					1.6E+03			1.6E+03
				3.0E-03	I						1.4E+09		1	0.1	Dichloropropanol, 2,3-	616-23-9					2.3E+02	9.9E+02		1.9E+02
1.0E-01	I	4.0E-06	I	3.0E-02	I	2.0E-02	I	V		1.6E+03	1.4E+09	3.6E+03	1		Dichloropropene, 1,3-	542-75-6	7.0E+00		2.5E+00	1.8E+00	2.3E+03		7.4E+01	7.2E+01
2.9E-01	I	8.3E-05	C	5.0E-04	I	5.0E-04	I				1.4E+09		1	0.1	Dichlorvos	62-73-7	2.4E+00	8.5E+00	4.6E+04	1.9E+00	3.9E+01	1.6E+02	7.1E+05	3.2E+01
				7.0E-05	O						1.4E+09		1	0.1	Dicrotophos	141-66-2					5.5E+00	2.3E+01		4.4E+00
				8.0E-02	P	3.0E-04	X	V		2.6E+02	1.4E+09	4.1E+03	1		Dicyclopentadiene	77-73-6					6.3E+03		1.3E+00	1.3E+00
1.6E+01	I	4.6E-03	I	5.0E-05	I						1.4E+09		1	0.1	Dieldrin	60-57-1	4.3E-02	1.5E-01	8.3E+02	3.4E-02	3.9E+00	1.6E+01		3.2E+00
		3.0E-04	C			5.0E-03	I						1	0.1	Diesel Engine Exhaust	E1713661^5								
				2.0E-03	P	2.0E-04	P				1.4E+09		1	0.1	Diethanolamine	111-42-2					1.6E+02	6.6E+02	2.8E+05	1.3E+02
				3.0E-02	P	1.0E-04	P				1.4E+09		1	0.1	Diethylene Glycol Monobutyl Ether	112-34-5					2.3E+03	9.9E+03	1.4E+05	1.9E+03
				6.0E-02	P	3.0E-04	P				1.4E+09		1	0.1	Diethylene Glycol Monoethyl Ether	111-90-0					4.7E+03	2.0E+04	4.3E+05	3.8E+03
				1.0E-03	P			V		1.1E+05	1.4E+09	1.4E+05	1		Diethylformamide	617-84-5					7.8E+01			7.8E+01
3.5E+02	C	1.0E-01	C								1.4E+09		1	0.1	Diethylstilbestrol	56-53-1	2.0E-03	7.1E-03	3.8E+01	1.6E-03				
				8.3E-02	O						1.4E+09		1	0.1	Difenzoquat	43222-48-6					6.5E+03	2.7E+04		5.2E+03
				2.0E-02	I						1.4E+09		1	0.1	Diflubenzuron	35367-38-5					1.6E+03	6.6E+03		1.3E+03
						4.0E+01	I	V		1.4E+03	1.4E+09	1.2E+03	1		Difluoroethane, 1,1-	75-37-6							4.8E+04	4.8E+04
4.4E-02	C	1.3E-05	C					V			1.4E+09	1.2E+05	1		Dihydrosafrole	94-58-6	1.6E+01		2.7E+01	9.9E+00				
						7.0E-01	P	V		2.3E+03	1.4E+09	3.1E+03	1		Diisopropyl Ether	108-20-3							2.2E+03	2.2E+03
				8.0E-02	I			V		5.3E+02	1.4E+09	3.8E+04	1		Diisopropyl Methylphosphonate	1445-75-6					6.3E+03			6.3E+03
				2.2E-02	O						1.4E+09		1	0.1	Dimethipin	55290-64-7					1.7E+03	7.2E+03		1.4E+03
				2.2E-03	O						1.4E+09		1	0.1	Dimethoate	60-51-5					1.7E+02	7.3E+02		1.4E+02
1.6E+00	P										1.4E+09		1	0.1	Dimethoxybenzidine, 3,3'-	119-90-4	4.3E-01	1.5E+00		3.4E-01				
1.7E-03	P			6.0E-02	P						1.4E+09		1	0.1	Dimethyl methylphosphonate	756-79-6	4.1E+02	1.5E+03		3.2E+02	4.7E+03	2.0E+04		3.8E+03
4.6E+00	C	1.3E-03	C								1.4E+09		1	0.1	Dimethylamino azobenzene [p-]	60-11-7	1.5E-01	5.4E-01	2.9E+03	1.2E-01				
5.8E-01	H										1.4E+09		1	0.1	Dimethylaniline HCl, 2,4-	21436-96-4	1.2E+00	4.3E+00		9.4E-01				
2.0E-01	P			2.0E-03	X						1.4E+09		1	0.1	Dimethylaniline, 2,4-	95-68-1	3.5E+00	1.2E+01		2.7E+00	1.6E+02	6.6E+02		1.3E+02
2.7E-02	P			2.0E-03	I			V		8.3E+02	1.4E+09	3.1E+04	1		Dimethylaniline, N,N-	121-69-7	2.6E+01			2.6E+01	1.6E+02			1.6E+02
1.1E+01	P										1.4E+09		1	0.1	Dimethylbenzidine, 3,3'-	119-93-7	6.3E-02	2.2E-01		4.9E-02				
				1.0E-01	P	3.0E-02	I	V		1.1E+05	1.4E+09	1.3E+05	1		Dimethylformamide	68-12-2					7.8E+03		4.0E+03	2.6E+03
				1.0E-04	X	2.0E-06	X	V		1.7E+05	1.4E+09	2.8E+04	1		Dimethylhydrazine, 1,1-	57-14-7					7.8E+00		5.8E-02	5.7E-02
5.5E+02	C	1.6E-01	C					V		1.9E+05	1.4E+09	1.7E+05	1		Dimethylhydrazine, 1,2-	540-73-8	1.3E-03		2.9E-03	8.8E-04				
				2.0E-02	I						1.4E+09		1	0.1	Dimethylphenol, 2,4-	105-67-9					1.6E+03	6.6E+03		1.3E+03
				6.0E-04	I						1.4E+09		1	0.1	Dimethylphenol, 2,6-	576-26-1					4.7E+01	2.0E+02		3.8E+01
				1.0E-03	I						1.4E+09		1	0.1	Dimethylphenol, 3,4-	95-65-8					7.8E+01	3.3E+02		6.3E+01
4.5E-02	C	1.3E-05	C					V		4.7E+02	1.4E+09	5.5E+03	1		Dimethylvinylchloride	513-37-1	1.5E+01		1.2E+00	1.1E+00				
				8.0E-05	X						1.4E+09		1	0.1	Dinitro-o-cresol, 4,6-	534-52-1					6.3E+00	2.6E+01		5.1E+00
				2.0E-03	I						1.4E+09		1	0.1	Dinitro-o-cyclohexyl Phenol, 4,6-	131-89-5					1.6E+02	6.6E+02		1.3E+02
				1.0E-04	P						1.4E+09		1	0.1	Dinitrobenzene, 1,2-	528-29-0					7.8E+00	3.3E+01		6.3E+00
				1.0E-04	I						1.4E+09		1	0.1	Dinitrobenzene, 1,3-	99-65-0					7.8E+00	3.3E+01		6.3E+00
				1.0E-04	P						1.4E+09		1	0.1	Dinitrobenzene, 1,4-	100-25-4					7.8E+00	3.3E+01		6.3E+00
				2.0E-03	I						1.4E+09		1	0.1	Dinitrophenol, 2,4-	51-28-5					1.6E+02	6.6E+02		1.3E+02
6.8E-01	I										1.4E+09		1	0.1	Dinitrotoluene Mixture, 2,4/2,6-	E1615210	1.0E+00	3.6E+00		8.0E-01				
3.1E-01	C	8.9E-05	C	2.0E-03	I						1.4E+09		1	0.102	Dinitrotoluene, 2,4-	121-14-2	2.2E+00	7.8E+00	4.3E+04	1.7E+00	1.6E+02	6.5E+02		1.3E+02
1.5E+00	P			3.0E-04	X						1.4E+09		1	0.099	Dinitrotoluene, 2,6-	606-20-2	4.6E-01	1.7E+00		3.6E-01	2.3E+01	1.0E+02		1.9E+01
				2.0E-03	S						1.4E+09		1	0.006	Dinitrotoluene, 2-Amino-4,6-	35572-78-2					1.6E+02	1.1E+04		1.5E+02
				2.0E-03	S						1.4E+09		1	0.009	Dinitrotoluene, 4-Amino-2,6-	19406-51-0					1.6E+02	7.3E+03		1.5E+02
4.5E-01	X			9.0E-04	X						1.4E+09		1	0.1	Dinitrotoluene, Technical grade	25321-14-6	1.5E+00	5.5E+00		1.2E+00	7.0E+01	3.0E+02		5.7E+01
				1.0E-03	I						1.4E+09		1	0.1	Dinoseb	88-85-7					7.8E+01	3.3E+02		6.3E+01
1.0E-01	I	5.0E-06	I	3.0E-02	I	3.0E-02	I	V		1.2E+05	1.4E+09	4.0E+04	1		Dioxane, 1,4-	123-91-1	7.0E+00		2.2E+01	5.3E+00	2.3E+03		1.2E+03	8.1E+02
															Dioxins									
6.2E+03	I	1.3E+00	I								1.4E+09		1	0.03	~Hexachlorodibenzo-p-dioxin, Mixture		1.1E-04	1.3E-03	2.9E+00	1.0E-04				
1.3E+05	C	3.8E+01	C	7.0E-10	I	4.0E-08	C	V			1.4E+09	2.0E+06	1	0.03	~TCDD, 2,3,7,8-	1746-01-6	5.3E-06	6.3E-05	1.4E-04	4.8E-06	5.5E-05	7.7E-04	8.2E-02	5.1E-05
				3.0E-02	I						1.4E+09		1	0.1	Diphenamid	957-51-7					2.3E+03	9.9E+03		1.9E+03
				8.0E-04	X						1.4E+09		1	0.1	Diphenyl Sulfone	127-63-9					6.3E+01	2.6E+02		5.1E+01
				1.0E-01	O						1.4E+09		1	0.1	Diphenylamine	122-39-4					7.8E+03	3.3E+04		6.3E+03
8.0E-01	I	2.2E-04	I								1.4E+09		1	0.1	Diphenylhydrazine, 1,2-	122-66-7	8.7E-01	3.1E+00	1.7E+04	6.8E-01				
				2.2E-03	I						1.4E+09		1	0.1	Diquat	85-00-7					1.7E+02	7.3E+02		1.4E+02
7.1E+00	C	1.4E-01	C								1.4E+09		1	0.1	Direct Black 38	1937-37-7	9.8E-02	3.5E-01	2.7E+01	7.6E-02				
7.4E+00	C	1.4E-01	C								1.4E+09		1	0.1	Direct Blue 6	2602-46-2	9.4E-02	3.3E-01	2.7E+01	7.3E-02				
6.7E+00	C	1.4E-01	C								1.4E+09		1	0.1	Direct Brown 95	16071-86-6	1.0E-01	3.7E-01	2.7E+01	8.1E-02				
				4.0E-05	I						1.4E+09		1	0.1	Disulfoton	298-04-4					3.1E+00	1.3E+01		2.5E+00
				1.0E-02	I			V			1.4E+09	4.5E+04	1		Dithiane, 1,4-	505-29-3					7.8E+02			7.8E+02
				2.0E-03	I						1.4E+09		1	0.1	Diuron	330-54-1					1.6E+02	6.6E+02		1.3E+02
				2.0E-02	O						1.4E+09		1	0.1	Dodine	2439-10-3					1.6E+03	6.6E+03		1.3E+03
				5.0E-02	O			V			1.4E+09	1.2E+05	1		EPTC	759-94-4					3.9E+03			3.9E+03
				6.0E-03	I			V			1.4E+09	4.1E+05	1		Endosulfan	115-29-7					4.7E+02			4.7E+02
				2.0E-02	I						1.4E+09		1	0.1	Endothall	145-73-3					1.6E+03	6.6E+03		1.3E+03
				3.0E-04	I						1.4E+09		1	0.1	Endrin	72-20-8					2.3E+01	9.9E+01		1.9E+01
9.9E-03	I	1.2E-06	I	6.0E-03	P	1.0E-03	I	V		1.1E+04	1.4E+09	1.9E+04	1		Epichlorohydrin	106-89-8	7.0E+01		4.4E+01	2.7E+01	4.7E+02		2.0E+01	1.9E+01
						2.0E-02	I	V		1.5E+04	1.4E+09	7.7E+03	1		Epoxybutane, 1,2-	106-88-7							1.6E+02	1.6E+02
				4.0E-02	P						1.4E+09		1	0.1	Ethanol, 2-(2-methoxyethoxy)-	111-77-3					3.1E+03	1.3E+04		2.5E+03
				5.0E-03	I						1.4E+09		1	0.1	Ethephon	16672-87-0					3.9E+02	1.6E+03		3.2E+02
				5.0E-04	I						1.4E+09		1	0.1	Ethion	563-12-2					3.9E+01	1.6E+02		3.2E+01

TR=1E-06
HQ=1.0

ED_002624_00006427-00157

Key: I = IRIS; P = PPRTV; D = DWSHA; O = OPP; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #29); H = HEAST; F = See FAQ; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Child Hazard Index (HI) = 1			
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	GIABS	ABS	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL Child THQ=1 (mg/kg)	Dermal SL Child THQ=1 (mg/kg)	Inhalation SL Child THQ=1 (mg/kg)	Noncarcinogenic SL Child THI=1 (mg/kg)
				1.0E-01	P	6.0E-02	P	V		2.4E+04	1.4E+09	6.2E+04	1		Ethoxyethanol Acetate, 2-	111-15-9					7.8E+03		3.8E+03	2.6E+03
				9.0E-02	P	2.0E-01	I	V		1.1E+05	1.4E+09	9.8E+04	1		Ethoxyethanol, 2-	110-80-5					7.0E+03		2.1E+04	5.2E+03
				9.0E-01	I	7.0E-02	P	V		1.1E+04	1.4E+09	8.6E+03	1		Ethyl Acetate	141-78-6					7.0E+04		6.3E+02	6.2E+02
				5.0E-03	P	8.0E-03	P	V		2.5E+03	1.4E+09	6.3E+03	1		Ethyl Acrylate	140-88-5					3.9E+02		5.3E+01	4.7E+01
						1.0E+01	I	V		2.1E+03	1.4E+09	1.3E+03	1		Ethyl Chloride (Chloroethane)	75-00-3							1.4E+04	1.4E+04
				2.0E-01	I			V		1.0E+04	1.4E+09	3.1E+03	1		Ethyl Ether	60-29-7					1.6E+04			1.6E+04
						3.0E-01	P	V		1.1E+03	1.4E+09	5.8E+03	1		Ethyl Methacrylate	97-63-2							1.8E+03	1.8E+03
				1.0E-05	I						1.4E+09		1	0.1	Ethyl-p-nitrophenyl Phosphonate	2104-64-5					7.8E-01	3.3E+00		6.3E-01
1.1E-02	C	2.5E-06	C	1.0E-01	I	1.0E+00	I	V		4.8E+02	1.4E+09	5.7E+03	1		Ethylbenzene	100-41-4	6.3E+01		6.4E+00	5.8E+00	7.8E+03		5.9E+03	3.4E+03
				7.0E-02	P						1.4E+09		1	0.1	Ethylene Cyanohydrin	109-78-4					5.5E+03	2.3E+04		4.4E+03
				9.0E-02	P			V		1.9E+05	1.4E+09	1.8E+05	1		Ethylene Diamine	107-15-3					7.0E+03			7.0E+03
				2.0E+00	I	4.0E-01	C				1.4E+09		1	0.1	Ethylene Glycol	107-21-1					1.6E+05	6.6E+05	5.7E+08	1.3E+05
				1.0E-01	I	1.6E+00	I				1.4E+09		1	0.1	Ethylene Glycol Monobutyl Ether	111-76-2					7.8E+03	3.3E+04	2.3E+09	6.3E+03
3.1E-01	C	3.0E-03	I			3.0E-02	C	V	M	1.2E+05	1.4E+09	6.1E+03	1		Ethylene Oxide	75-21-8	4.9E-01		2.1E-03	2.0E-03			1.9E+02	1.9E+02
4.5E-02	C	1.3E-05	C	8.0E-05	I						1.4E+09		1	0.1	Ethylene Thiourea	96-45-7	1.5E+01	5.5E+01	2.9E+05	1.2E+01	6.3E+00	2.6E+01		5.1E+00
6.5E+01	C	1.9E-02	C					V		1.5E+05	1.4E+09	2.4E+04	1		Ethyleneimine	151-56-4	1.1E-02		3.5E-03	2.7E-03				
				3.0E+00	I						1.4E+09		1	0.1	Ethylphthalyl Ethyl Glycolate	84-72-0					2.3E+05	9.9E+05		1.9E+05
				2.5E-04	I						1.4E+09		1	0.1	Fenamiphos	22224-92-6					2.0E+01	8.2E+01		1.6E+01
				2.5E-02	I						1.4E+09		1	0.1	Fenpropathrin	39515-41-8					2.0E+03	8.2E+03		1.6E+03
				2.5E-02	I						1.4E+09		1	0.1	Fenvalerate	51630-58-1					2.0E+03	8.2E+03		1.6E+03
				1.3E-02	I						1.4E+09		1	0.1	Fluometuron	2164-17-2					1.0E+03	4.3E+03		8.2E+02
				4.0E-02	C	1.3E-02	C				1.4E+09		1		Fluoride	16984-48-8					3.1E+03		1.8E+07	3.1E+03
				6.0E-02	I	1.3E-02	C				1.4E+09		1		Fluorine (Soluble Fluoride)	7782-41-4					4.7E+03		1.8E+07	4.7E+03
				8.0E-02	I						1.4E+09		1	0.1	Fluridone	59756-60-4					6.3E+03	2.6E+04		5.1E+03
				1.5E-02	O						1.4E+09		1	0.1	Flurprimidol	56425-91-3					1.2E+03	4.9E+03		9.5E+02
				2.0E-03	O						1.4E+09		1	0.1	Flusilazole	85509-19-9					1.6E+02	6.6E+02		1.3E+02
				5.0E-01	O						1.4E+09		1	0.1	Flutolanil	66332-96-5					3.9E+04	1.6E+05		3.2E+04
				1.0E-02	I						1.4E+09		1	0.1	Fluvalinate	69409-94-5					7.8E+02	3.3E+03		6.3E+02
				9.0E-02	O						1.4E+09		1	0.1	Folpet	133-07-3					7.0E+03	3.0E+04		5.7E+03
				2.5E-03	O						1.4E+09		1	0.1	Fomesafen	72178-02-0					2.0E+02	8.2E+02		1.6E+02
				2.0E-03	I						1.4E+09		1	0.1	Fonofos	944-22-9					1.6E+02	6.6E+02		1.3E+02
		1.3E-05	I	2.0E-01	I	9.8E-03	A	V		4.2E+04	1.4E+09	7.8E+04	1		Formaldehyde	50-00-0			1.7E+01	1.7E+01	1.6E+04		6.0E+02	7.8E+02
				9.0E-01	P	3.0E-04	X	V		1.1E+05	1.4E+09	9.3E+04	1		Formic Acid	64-18-6					7.0E+04		2.9E+01	2.9E+01
				2.5E+00	O						1.4E+09		1	0.1	Fosetyl-AL	39148-24-8					2.0E+05	8.2E+05		1.6E+05
															Furans									
				1.0E-03	X			V			1.4E+09	1.6E+05	1	0.03	~Dibenzofuran	132-64-9					7.8E+01	1.1E+03		7.3E+01
				1.0E-03	I			V		6.2E+03	1.4E+09	2.6E+03	1	0.03	~Furan	110-00-9					7.8E+01	1.1E+03		7.3E+01
				9.0E-01	I	2.0E+00	I	V		1.7E+05	1.4E+09	1.2E+04	1	0.03	~Tetrahydrofuran	109-99-9					7.0E+04	9.9E+05	2.5E+04	1.8E+04
3.8E+00	H										1.4E+09		1	0.1	Furazolidone	67-45-8	1.8E-01	6.5E-01		1.4E-01				
				3.0E-03	I	5.0E-02	H	V		1.0E+04	1.4E+09	4.9E+04	1		Furfural	98-01-1					2.3E+02		2.5E+03	2.1E+02
1.5E+00	C	4.3E-04	C								1.4E+09		1	0.1	Furium	531-82-8	4.6E-01	1.6E+00	8.9E+03	3.6E-01				
3.0E-02	I	8.6E-06	C								1.4E+09		1	0.1	Furmecyclox	60568-05-0	2.3E+01	8.2E+01	4.4E+05	1.8E+01				
				6.0E-03	O						1.4E+09		1	0.1	Glufosinate, Ammonium	77182-82-2					4.7E+02	2.0E+03		3.8E+02
						8.0E-05	C				1.4E+09		1	0.1	Glutaraldehyde	111-30-8							1.1E+05	1.1E+05
				4.0E-04	I	1.0E-03	H	V		1.1E+05	1.4E+09	8.4E+04	1		Glycidyl	765-34-4					3.1E+01		8.8E+01	2.3E+01
				1.0E-01	I						1.4E+09		1	0.1	Glyphosate	1071-83-6					7.8E+03	3.3E+04		6.3E+03
				1.0E-02	X			V			1.4E+09	1.5E+05	1		Guanidine	113-00-8					7.8E+02			7.8E+02
				2.0E-02	P						1.4E+09		1	0.1	Guanidine Chloride	50-01-1					1.6E+03	6.6E+03		1.3E+03
				3.0E-02	X						1.4E+09		1	0.1	Guanidine Nitrate	506-93-4					2.3E+03	9.9E+03		1.9E+03
				5.0E-05	I						1.4E+09		1	0.1	Haloxyfop, Methyl	69806-40-2					3.9E+00	1.6E+01		3.2E+00
4.5E+00	I	1.3E-03	I	5.0E-04	I			V			1.4E+09	4.8E+05	1		Heptachlor	76-44-8	1.5E-01		1.0E+00	1.3E-01	3.9E+01			3.9E+01
9.1E+00	I	2.6E-03	I	1.3E-05	I			V			1.4E+09	8.4E+05	1		Heptachlor Epoxide	1024-57-3	7.6E-02		9.1E-01	7.0E-02	1.0E+00			1.0E+00
				3.0E-04	X	4.0E-01	P	V		5.8E+01	1.4E+09	9.0E+02	1		Heptane, N-	142-82-5					2.3E+01		3.7E+02	2.2E+01
				2.0E-03	I			V			1.4E+09	3.8E+05	1		Hexabromobenzene	87-82-1					1.6E+02			1.6E+02
				2.0E-04	I						1.4E+09		1	0.1	Hexabromodiphenyl ether, 2,2',4,4',5,5'- (BDE-153)	68631-49-2					1.6E+01	6.6E+01		1.3E+01
1.6E+00	I	4.6E-04	I	8.0E-04	I			V			1.4E+09	6.8E+04	1		Hexachlorobenzene	118-74-1	4.3E-01		4.1E-01	2.1E-01	6.3E+01			6.3E+01
7.8E-02	I	2.2E-05	I	1.0E-03	P			V		1.7E+01	1.4E+09	1.1E+04	1		Hexachlorobutadiene	87-68-3	8.9E+00		1.4E+00	1.2E+00	7.8E+01			7.8E+01
6.3E+00	I	1.8E-03	I	8.0E-03	A						1.4E+09		1	0.1	Hexachlorocyclohexane, Alpha-	319-84-6	1.1E-01	3.9E-01	2.1E+03	8.6E-02	6.3E+02	2.6E+03		5.1E+02
1.8E+00	I	5.3E-04	I								1.4E+09		1	0.1	Hexachlorocyclohexane, Beta-	319-85-7	3.9E-01	1.4E+00	7.2E+03	3.0E-01				
1.1E+00	C	3.1E-04	C	3.0E-04	I						1.4E+09		1	0.04	Hexachlorocyclohexane, Gamma- (Lindane)	58-89-9	6.3E-01	5.6E+00	1.2E+04	5.7E-01	2.3E+01	2.5E+02		2.1E+01
1.8E+00	I	5.1E-04	I								1.4E+09		1	0.1	Hexachlorocyclohexane, Technical	608-73-1	3.9E-01	1.4E+00	7.5E+03	3.0E-01				
				6.0E-03	I	2.0E-04	I	V		1.6E+01	1.4E+09	8.5E+03	1		Hexachlorocyclopentadiene	77-47-4					4.7E+02		1.8E+00	1.8E+00
4.0E-02	I	1.1E-05	C	7.0E-04	I	3.0E-02	I	V			1.4E+09	8.0E+03	1		Hexachloroethane	67-72-1	1.7E+01		2.0E+00	1.8E+00	5.5E+01		2.5E+02	4.5E+01
				3.0E-04	I						1.4E+09		1	0.1	Hexachlorophene	70-30-4					2.3E+01	9.9E+01		1.9E+01
1.1E-01	I			3.0E-03	I						1.4E+09		1	0.015	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	121-82-4	6.3E+00	1.5E+02		6.1E+00	2.3E+02	6.6E+03		2.3E+02
						1.0E-05	I	V		3.4E+03	1.4E+09	3.0E+05	1		Hexamethylene Diisocyanate, 1,6-	822-06-0							3.1E+00	3.1E+00
				4.0E-04	P						1.4E+09		1	0.1	Hexamethylphosphoramide	680-31-9					3.1E+01	1.3E+02		2.5E+01
						7.0E-01	I	V		1.4E+02	1.4E+09	8.3E+02	1		Hexane, N-	110-54-3							6.1E+02	6.1E+02
				2.0E+00	P						1.4E+09		1	0.1	Hexanedioic Acid	124-04-9					1.6E+05	6.6E+05		1.3E+05
				5.0E-03	I	3.0E-02	I	V		3.3E+03	1.4E+09	1.3E+04	1		Hexanone, 2-	591-78-6					3.9E+02		4.2E+02	2.0E+02
				3.3E-02	I						1.4E+09		1	0.1	Hexazinone	51235-04-2					2.6E+03	1.1E+04		2.1E+03
				2.5E-02	I						1.4E+09		1	0.1	Hexythiazox	78587-05-0					2.0E+03	8.2E+03		1.6E+03
				1.7E-02	O						1.4E+09		1	0.1	Hydramethylnon	67485-29-4					1.3E+03	5.6E+03		1.1E+03
3.0E+00	I	4.9E-03	I			3.0E-05	P	V			1.4E+09		1		Hydrazine	302-01-2	2.3E-01		7.8E+02	2.3E-01			4.3E+04	4.3E+04
3.0E+00	I	4.9E-03	I								1.4E+09		1		Hydrazine Sulfate	10034-93-2	2.3E-01		7.8E+02	2.3E-01				

TR=1E-06
HQ=1.0

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Key: I = IRIS; P = PPRTV; D = DWSHA; O = OPP; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #29); H = HEAST; F = See FAQ; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Child Hazard Index (HI) = 1			
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	GIABS	ABS	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL Child THQ=1 (mg/kg)	Dermal SL Child THQ=1 (mg/kg)	Inhalation SL Child THQ=1 (mg/kg)	Noncarcinogenic SL Child THI=1 (mg/kg)
						2.0E-02	I	V			1.4E+09		1		Hydrogen Chloride	7647-01-0							2.8E+07	2.8E+07
				4.0E-02	C	1.4E-02	C	V			1.4E+09		1		Hydrogen Fluoride	7664-39-3					3.1E+03		2.0E+07	3.1E+03
						2.0E-03	I	V			1.4E+09		1		Hydrogen Sulfide	7783-06-4							2.8E+06	2.8E+06
6.0E-02	P			4.0E-02	P						1.4E+09		1	0.1	Hydroquinone	123-31-9	1.2E+01	4.1E+01		8.0E+00	3.1E+03	1.3E+04		2.5E+03
6.1E-02	O			2.5E-03	O						1.4E+09		1	0.1	Imazalil	35554-44-0	1.1E+01	4.0E+01		8.9E+00	2.0E+02	8.2E+02		1.6E+02
				2.5E-01	I						1.4E+09		1	0.1	Imazaquin	81335-37-7					2.0E+04	8.2E+04		1.6E+04
				2.5E+00	O						1.4E+09		1	0.1	Imazethapyr	81335-77-5					2.0E+05	8.2E+05		1.6E+05
				1.0E-02	A						1.4E+09		1		Iodine	7553-56-2					7.8E+02			7.8E+02
				4.0E-02	I						1.4E+09		1	0.1	Iprodione	36734-19-7					3.1E+03	1.3E+04		2.5E+03
				7.0E-01	P						1.4E+09		1		Iron	7439-89-6					5.5E+04			5.5E+04
				3.0E-01	I			V		1.0E+04	1.4E+09	2.8E+04	1		Isobutyl Alcohol	78-83-1					2.3E+04			2.3E+04
9.5E-04	I			2.0E-01	I	2.0E+00	C				1.4E+09		1	0.1	Isophorone	78-59-1	7.3E+02	2.6E+03		5.7E+02	1.6E+04	6.6E+04	2.8E+09	1.3E+04
				1.5E-02	I			V			1.4E+09	4.2E+05	1		Isopropalin	33820-53-0					1.2E+03			1.2E+03
				2.0E+00	P	2.0E-01	P	V		1.1E+05	1.4E+09	2.8E+04	1		Isopropanol	67-63-0					1.6E+05		5.8E+03	5.8E+03
				1.0E-01	I						1.4E+09		1	0.1	Isopropyl Methyl Phosphonic Acid	1832-54-8					7.8E+03	3.3E+04		6.3E+03
				5.0E-02	I						1.4E+09		1	0.1	Isoxaben	82558-50-7					3.9E+03	1.6E+04		3.2E+03
						3.0E-01	A	V			1.4E+09		1		JP-7	E1737665							4.3E+08	4.3E+08
				8.0E-03	O						1.4E+09		1	0.1	Lactofen	77501-63-4					6.3E+02	2.6E+03		5.1E+02
															Lead Compounds									
5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M		1.4E+09		0.025		~Lead Chromate	7758-97-6	3.1E-01		9.2E+00	3.0E-01	1.6E+03		2.8E+05	1.6E+03
8.5E-03	C	1.2E-05	C								1.4E+09		1		~Lead Phosphate	7446-27-7	8.2E+01		3.2E+05	8.2E+01				
8.5E-03	C	1.2E-05	C								1.4E+09		1	0.1	~Lead acetate	301-04-2	8.2E+01	2.9E+02	3.2E+05	6.4E+01				
											1.4E+09		1		~Lead and Compounds	7439-92-1								4.0E+02
8.5E-03	C	1.2E-05	C								1.4E+09		1	0.1	~Lead subacetate	1335-32-6	8.2E+01	2.9E+02	3.2E+05	6.4E+01				
				1.0E-07	I			V		2.4E+00	1.4E+09	1.9E+03	1		~Tetraethyl Lead	78-00-2					7.8E-03			7.8E-03
				5.0E-06	P			V		3.8E+02	1.4E+09	2.6E+04	1		Lewisite	541-25-3					3.9E-01			3.9E-01
				7.7E-03	O						1.4E+09		1	0.1	Linuron	330-55-2					6.0E+02	2.5E+03		4.9E+02
				2.0E-03	P						1.4E+09		1		Lithium	7439-93-2					1.6E+02			1.6E+02
				5.0E-04	I						1.4E+09		1	0.1	MCPA	94-74-6					3.9E+01	1.6E+02		3.2E+01
				4.4E-03	O						1.4E+09		1	0.1	MCPB	94-81-5					3.4E+02	1.5E+03		2.8E+02
				1.0E-03	I						1.4E+09		1	0.1	MCPP	93-65-2					7.8E+01	3.3E+02		6.3E+01
				2.0E-02	I						1.4E+09		1	0.1	Malathion	121-75-5					1.6E+03	6.6E+03		1.3E+03
				1.0E-01	I	7.0E-04	C				1.4E+09		1	0.1	Maleic Anhydride	108-31-6					7.8E+03	3.3E+04	9.9E+05	6.3E+03
				5.0E-01	I						1.4E+09		1	0.1	Maleic Hydrazide	123-33-1					3.9E+04	1.6E+05		3.2E+04
				1.0E-04	P						1.4E+09		1	0.1	Malononitrile	109-77-3					7.8E+00	3.3E+01		6.3E+00
				3.0E-02	H						1.4E+09		1	0.1	Mancozeb	8018-01-7					2.3E+03	9.9E+03		1.9E+03
				5.0E-03	I						1.4E+09		1	0.1	Maneb	12427-38-2					3.9E+02	1.6E+03		3.2E+02
				1.4E-01	I	5.0E-05	I						1		Manganese (Diet)	7439-96-5								
				2.4E-02	S	5.0E-05	I				1.4E+09		0.04		Manganese (Non-diet)	7439-96-5					1.9E+03		7.1E+04	1.6E+03
				9.0E-05	H						1.4E+09		1	0.1	Mephosfolan	950-10-7					7.0E+00	3.0E+01		5.7E+00
				3.0E-02	I						1.4E+09		1	0.1	Mepiquat Chloride	24307-26-4					2.3E+03	9.9E+03		1.9E+03
1.1E-02	P			4.0E-03	P						1.4E+09		1	0.1	Mercaptobenzothiazole, 2-	149-30-4	6.3E+01	2.2E+02		4.9E+01	3.1E+02	1.3E+03		2.5E+02
															Mercury Compounds									
				3.0E-04	I	3.0E-04	S				1.4E+09		0.07		~Mercuric Chloride (and other Mercury salts)	7487-94-7					2.3E+01		4.3E+05	2.3E+01
						3.0E-04	I	V		3.1E+00	1.4E+09	3.5E+04	1		~Mercury (elemental)	7439-97-6							1.1E+01	1.1E+01
				1.0E-04	I						1.4E+09		1		~Methyl Mercury	22967-92-6					7.8E+00			7.8E+00
				8.0E-05	I						1.4E+09		1	0.1	~Phenylmercuric Acetate	62-38-4					6.3E+00	2.6E+01		5.1E+00
				3.0E-05	I			V			1.4E+09	1.9E+06	1		Merphos	150-50-5					2.3E+00			2.3E+00
				1.0E-04	O						1.4E+09		1	0.1	Merphos Oxide	78-48-8					7.8E+00	3.3E+01		6.3E+00
				6.0E-02	I						1.4E+09		1	0.1	Metalaxyl	57837-19-1					4.7E+03	2.0E+04		3.8E+03
				1.0E-04	I	3.0E-02	P	V		4.6E+03	1.4E+09	6.8E+03	1		Methacrylonitrile	126-98-7					7.8E+00		2.1E+02	7.5E+00
				5.0E-05	I						1.4E+09		1	0.1	Methamidophos	10265-92-6					3.9E+00	1.6E+01		3.2E+00
				2.0E+00	I	2.0E+01	I	V		1.1E+05	1.4E+09	2.9E+04	1		Methanol	67-56-1					1.6E+05		6.1E+05	1.2E+05
				1.5E-03	O						1.4E+09		1	0.1	Methidathion	950-37-8					1.2E+02	4.9E+02		9.6E+01
				2.5E-02	I						1.4E+09		1	0.1	Methomyl	16752-77-5					2.0E+03	8.2E+03		1.6E+03
4.9E-02	C	1.4E-05	C								1.4E+09		1	0.1	Methoxy-5-nitroaniline, 2-	99-59-2	1.4E+01	5.0E+01	2.7E+05	1.1E+01				
				5.0E-03	I						1.4E+09		1	0.1	Methoxychlor	72-43-5					3.9E+02	1.6E+03		3.2E+02
				8.0E-03	P	1.0E-03	P	V		1.2E+05	1.4E+09	1.2E+05	1		Methoxyethanol Acetate, 2-	110-49-6					6.3E+02		1.3E+02	1.1E+02
				5.0E-03	P	2.0E-02	I	V		1.1E+05	1.4E+09	1.0E+05	1		Methoxyethanol, 2-	109-86-4					3.9E+02		2.1E+03	3.3E+02
				1.0E+00	X			V		2.9E+04	1.4E+09	8.1E+03	1		Methyl Acetate	79-20-9					7.8E+04			7.8E+04
						2.0E-02	P	V		6.8E+03	1.4E+09	7.0E+03	1		Methyl Acrylate	96-33-3							1.5E+02	1.5E+02
				6.0E-01	I	5.0E+00	I	V		2.8E+04	1.4E+09	1.2E+04	1		Methyl Ethyl Ketone (2-Butanone)	78-93-3					4.7E+04		6.4E+04	2.7E+04
		1.0E-03	X	1.0E-03	P	2.0E-05	X	V		1.8E+05	1.4E+09	5.0E+04	1		Methyl Hydrazine	60-34-4			1.4E-01	1.4E-01	7.8E+01		1.1E+00	1.0E+00
						3.0E+00	I	V		3.4E+03	1.4E+09	1.1E+04	1		Methyl Isobutyl Ketone (4-methyl-2-pentanone)	108-10-1							3.3E+04	3.3E+04
						1.0E-03	C	V		1.0E+04	1.4E+09	4.4E+03	1		Methyl Isocyanate	624-83-9							4.6E+00	4.6E+00
				1.4E+00	I	7.0E-01	I	V		2.4E+03	1.4E+09	6.3E+03	1		Methyl Methacrylate	80-62-6					1.1E+05		4.8E+03	4.4E+03
				2.5E-04	I						1.4E+09		1	0.1	Methyl Parathion	298-00-0					2.0E+01	8.2E+01		1.6E+01
				6.0E-02	X						1.4E+09		1	0.1	Methyl Phosphonic Acid	993-13-5					4.7E+03	2.0E+04		3.8E+03
				6.0E-03	H	4.0E-02	H	V		3.9E+02	1.4E+09	2.4E+04	1		Methyl Styrene (Mixed Isomers)	25013-15-4					4.7E+02		1.0E+03	3.2E+02
9.9E-02	C	2.8E-05	C								1.4E+09		1	0.1	Methyl methanesulfonate	66-27-3	7.0E+00	2.5E+01	1.4E+05	5.5E+00				
1.8E-03	C	2.6E-07	C			3.0E+00	I	V		8.9E+03	1.4E+09	4.9E+03	1		Methyl tert-Butyl Ether (MTBE)	1634-04-4	3.9E+02		5.3E+01	4.7E+01			1.5E+04	1.5E+04
				3.0E-04	X						1.4E+09		1	0.1	Methyl-1,4-benzenediamine dihydrochloride, 2-	615-45-2					2.3E+01	9.9E+01		1.9E+01
9.0E-03	P			2.0E-02	X						1.4E+09		1	0.1	Methyl-5-Nitroaniline, 2-	99-55-8	7.7E+01	2.7E+02		6.0E+01	1.6E+03	6.6E+03		1.3E+03
8.3E+00	C	2.4E-03	C								1.4E+09		1	0.1	Methyl-N-nitro-N-nitrosoguanidine, N-	70-25-7	8.4E-02	3.0E-01	1.6E+03	6.5E-02				
1.3E-01	C	3.7E-05	C								1.4E+09		1	0.1	Methylaniline Hydrochloride, 2-	636-21-5	5.3E+00	1.9E+01	1.0E+05	4.2E+00				

TR=1E-06
HQ=1.0

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Key: I = IRIS; P = PPRTV; D = DWSHA; O = OPP; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #29); H = HEAST; F = See FAQ; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information														Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Child Hazard Index (HI) = 1			
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	volatile	muta-gen	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	GIABS	ABS	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL Child THQ=1 (mg/kg)	Dermal SL Child THQ=1 (mg/kg)	Inhalation SL Child THQ=1 (mg/kg)	Noncarcinogenic SL Child THI=1 (mg/kg)
				1.0E-02	A						1.4E+09		1	0.1	Methylarsonic acid	124-58-3					7.8E+02	3.3E+03		6.3E+02
				2.0E-04	X						1.4E+09		1	0.1	Methylbenzene,1-4-diamine monohydrochloride, 2-	74612-12-7					1.6E+01	6.6E+01		1.3E+01
1.0E-01	X			3.0E-04	X						1.4E+09		1	0.1	Methylbenzene-1,4-diamine sulfate, 2-	615-50-9	7.0E+00	2.5E+01		5.4E+00	2.3E+01	9.9E+01		1.9E+01
2.2E+01	C	6.3E-03	C						M		1.4E+09		1	0.1	Methylcholanthrene, 3-	56-49-5	7.0E-03	2.7E-02	2.2E+02	5.5E-03				
2.0E-03	I	1.0E-08	I	6.0E-03	I	6.0E-01	I	V	M	3.3E+03	1.4E+09	2.2E+03	1		Methylene Chloride	75-09-2	7.7E+01		2.2E+02	5.7E+01	4.7E+02		1.4E+03	3.5E+02
1.0E-01	P	4.3E-04	C	2.0E-03	P				M		1.4E+09		1	0.1	Methylene-bis(2-chloroaniline), 4,4'-	101-14-4	1.5E+00	6.0E+00	3.2E+03	1.2E+00	1.6E+02	6.6E+02		1.3E+02
4.6E-02	I	1.3E-05	C								1.4E+09		1	0.1	Methylene-bis(N,N-dimethyl) Aniline, 4,4'-	101-61-1	1.5E+01	5.4E+01	2.9E+05	1.2E+01				
1.6E+00	C	4.6E-04	C			2.0E-02	C				1.4E+09		1	0.1	Methylenebisbenzenamine, 4,4'-	101-77-9	4.3E-01	1.5E+00	8.3E+03	3.4E-01			2.8E+07	2.8E+07
						6.0E-04	I				1.4E+09		1	0.1	Methylenediphenyl Diisocyanate	101-68-8							8.5E+05	8.5E+05
				7.0E-02	H			V		5.0E+02	1.4E+09	1.3E+04	1		Methylstyrene, Alpha-	98-83-9					5.5E+03			5.5E+03
				1.5E-01	I						1.4E+09		1	0.1	Metolachlor	51218-45-2					1.2E+04	4.9E+04		9.5E+03
				2.5E-02	I						1.4E+09		1	0.1	Metribuzin	21087-64-9					2.0E+03	8.2E+03		1.6E+03
				2.5E-01	I						1.4E+09		1	0.1	Metsulfuron-methyl	74223-64-6					2.0E+04	8.2E+04		1.6E+04
				3.0E+00	P			V		3.4E-01	1.4E+09	1.4E+03	1		Mineral oils	8012-95-1					2.3E+05			2.3E+05
1.8E+01	C	5.1E-03	C	2.0E-04	I			V			1.4E+09	8.6E+05	1		Mirex	2385-85-5	3.9E-02		4.7E-01	3.6E-02	1.6E+01			1.6E+01
				2.0E-03	I						1.4E+09		1	0.1	Molinate	2212-67-1					1.6E+02	6.6E+02		1.3E+02
				5.0E-03	I						1.4E+09		1		Molybdenum	7439-98-7					3.9E+02			3.9E+02
				1.0E-01	I						1.4E+09		1		Monochloramine	10599-90-3					7.8E+03			7.8E+03
				2.0E-03	P						1.4E+09		1	0.1	Monomethylaniline	100-61-8					1.6E+02	6.6E+02		1.3E+02
				2.5E-02	I						1.4E+09		1	0.1	Mycobutanil	88671-89-0					2.0E+03	8.2E+03		1.6E+03
				3.0E-04	X						1.4E+09		1	0.1	N,N'-Diphenyl-1,4-benzenediamine	74-31-7					2.3E+01	9.9E+01		1.9E+01
				2.0E-03	I			V			1.4E+09	5.7E+04	1		Naled	300-76-5					1.6E+02			1.6E+02
				3.0E-02	X	1.0E-01	P	V			1.4E+09		1		Naphtha, High Flash Aromatic (HFAN)	64742-95-6					2.3E+03		1.4E+08	2.3E+03
1.8E+00	C	0.0E+00	C								1.4E+09		1	0.1	Naphthylamine, 2-	91-59-8	3.9E-01	1.4E+00		3.0E-01				
				1.2E-01	O						1.4E+09		1	0.1	Napropamide	15299-99-7					9.4E+03	4.0E+04		7.6E+03
		2.6E-04	C	1.1E-02	C	1.4E-05	C				1.4E+09		1	0.1	Nickel Acetate	373-02-4			1.5E+04	1.5E+04	8.6E+02	3.6E+03	2.0E+04	6.7E+02
		2.6E-04	C	1.1E-02	C	1.4E-05	C				1.4E+09		1	0.1	Nickel Carbonate	3333-67-3			1.5E+04	1.5E+04	8.6E+02	3.6E+03	2.0E+04	6.7E+02
		2.6E-04	C	1.1E-02	C	1.4E-05	C	V			1.4E+09		1		Nickel Carbonyl	13463-39-3			1.5E+04	1.5E+04	8.6E+02		2.0E+04	8.2E+02
		2.6E-04	C	1.1E-02	C	1.4E-05	C				1.4E+09		0.04		Nickel Hydroxide	12054-48-7			1.5E+04	1.5E+04	8.6E+02		2.0E+04	8.2E+02
		2.6E-04	C	1.1E-02	C	2.0E-05	C				1.4E+09		0.04		Nickel Oxide	1313-99-1			1.5E+04	1.5E+04	8.6E+02		2.8E+04	8.4E+02
		2.4E-04	I	1.1E-02	C	1.4E-05	C				1.4E+09		0.04		Nickel Refinery Dust	E715532			1.6E+04	1.6E+04	8.6E+02		2.0E+04	8.2E+02
		2.6E-04	C	2.0E-02	I	9.0E-05	A				1.4E+09		0.04		Nickel Soluble Salts	7440-02-0			1.5E+04	1.5E+04	1.6E+03		1.3E+05	1.5E+03
1.7E+00	C	4.8E-04	I	1.1E-02	C	1.4E-05	C				1.4E+09		0.04		Nickel Subsulfide	12035-72-2	4.1E-01		8.0E+03	4.1E-01	8.6E+02		2.0E+04	8.2E+02
		2.6E-04	C	1.1E-02	C	1.4E-05	C				1.4E+09		1	0.1	Nickelocene	1271-28-9			1.5E+04	1.5E+04	8.6E+02	3.6E+03	2.0E+04	6.7E+02
				1.6E+00	I						1.4E+09		1		Nitrate	14797-55-8					1.3E+05			1.3E+05
											1.4E+09		1		Nitrate + Nitrite (as N)	E701177								
				1.0E-01	I						1.4E+09		1		Nitrite	14797-65-0					7.8E+03			7.8E+03
				1.0E-02	X	5.0E-05	X				1.4E+09		1	0.1	Nitroaniline, 2-	88-74-4					7.8E+02	3.3E+03	7.1E+04	6.3E+02
2.0E-02	P			4.0E-03	P	6.0E-03	P				1.4E+09		1	0.1	Nitroaniline, 4-	100-01-6	3.5E+01	1.2E+02		2.7E+01	5.1E+02	1.3E+03	8.5E+06	2.5E+02
		4.0E-05	I	2.0E-03	I	9.0E-03	I	V		3.1E+03	1.4E+09	7.3E+04	1		Nitrobenzene	98-95-3			5.1E+00	5.1E+00	1.6E+02		6.9E+02	1.3E+02
				3.0E+03	P						1.4E+09		1	0.1	Nitrocellulose	9004-70-0					2.3E+08	9.9E+08		1.9E+08
				7.0E-02	H						1.4E+09		1	0.1	Nitrofurantoin	67-20-9					5.5E+03	2.3E+04		4.4E+03
1.3E+00	C	3.7E-04	C								1.4E+09		1	0.1	Nitrofurazone	59-87-0	5.3E-01	1.9E+00	1.0E+04	4.2E-01				
1.7E-02	P			1.0E-04	P						1.4E+09		1	0.1	Nitroglycerin	55-63-0	4.1E+01	1.5E+02		3.2E+01	7.8E+00	3.3E+01		6.3E+00
				1.0E-01	I						1.4E+09		1	0.1	Nitroguanidine	556-88-7					7.8E+03	3.3E+04		6.3E+03
		8.8E-06	P			5.0E-03	P	V		1.8E+04	1.4E+09	1.7E+04	1		Nitromethane	75-52-5			5.4E+00	5.4E+00			8.8E+01	8.8E+01
		2.7E-03	H			2.0E-02	I	V		4.9E+03	1.4E+09	1.3E+04	1		Nitropropane, 2-	79-46-9			1.4E-02	1.4E-02			2.7E+02	2.7E+02
2.7E+01	C	7.7E-03	C						M		1.4E+09		1	0.1	Nitroso-N-ethylurea, N-	759-73-9	5.7E-03	2.2E-02	1.8E+02	4.5E-03				
1.2E+02	C	3.4E-02	C						M		1.4E+09		1	0.1	Nitroso-N-methylurea, N-	684-93-5	1.3E-03	5.0E-03	4.1E+01	1.0E-03				
5.4E+00	I	1.6E-03	I					V			1.4E+09	2.4E+05	1		Nitroso-di-N-butylamine, N-	924-16-3	1.3E-01		4.3E-01	9.9E-02				
7.0E+00	I	2.0E-03	C								1.4E+09		1	0.1	Nitroso-di-N-propylamine, N-	621-64-7	9.9E-02	3.5E-01	1.9E+03	7.8E-02				
2.8E+00	I	8.0E-04	C								1.4E+09		1	0.1	Nitrosodiethanolamine, N-	1116-54-7	2.5E-01	8.8E-01	4.8E+03	1.9E-01				
1.5E+02	I	4.3E-02	I						M		1.4E+09		1	0.1	Nitrosodiethylamine, N-	55-18-5	1.0E-03	4.0E-03	3.2E+01	8.1E-04				
5.1E+01	I	1.4E-02	I	8.0E-06	P	4.0E-05	X	V	M	2.4E+05	1.4E+09	8.2E+04	1		Nitrosodimethylamine, N-	62-75-9	3.0E-03		6.0E-03	2.0E-03	6.3E-01		3.4E+00	5.3E-01
4.9E-03	I	2.6E-06	C								1.4E+09		1	0.1	Nitrosodiphenylamine, N-	86-30-6	1.4E+02	5.0E+02	1.5E+06	1.1E+02				
2.2E+01	I	6.3E-03	C						V		1.4E+09		1		Nitrosomethylethylamine, N-	10595-95-6	3.2E-02		5.4E-02	2.0E-02				
6.7E+00	C	1.9E-03	C								1.4E+09		1	0.1	Nitrosomorpholine [N-]	59-89-2	1.0E-01	3.7E-01	2.0E+03	8.1E-02				
9.4E+00	C	2.7E-03	C								1.4E+09		1	0.1	Nitrosopiperidine [N-]	100-75-4	7.4E-02	2.6E-01	1.4E+03	5.8E-02				
2.1E+00	I	6.1E-04	I								1.4E+09		1	0.1	Nitrosopyrrolidine, N-	930-55-2	3.3E-01	1.2E+00	6.3E+03	2.6E-01				
				1.0E-04	X						1.4E+09		1	0.1	Nitrotoluene, m-	99-08-1					7.8E+00	3.3E+01		6.3E+00
2.2E-01	P			9.0E-04	P			V		1.5E+03	1.4E+09	1.4E+05	1		Nitrotoluene, o-	88-72-2	3.2E+00			3.2E+00	7.0E+01			7.0E+01
1.6E-02	P			4.0E-03	P						1.4E+09		1	0.1	Nitrotoluene, p-	99-99-0	4.3E+01	1.5E+02		3.4E+01	3.1E+02	1.3E+03		2.5E+02
				3.0E-04	X	2.0E-02	P	V		6.9E+00	1.4E+09	1.0E+03	1		Nonane, n-	111-84-2					2.3E+01		2.2E+01	1.1E+01
				1.5E-02	O						1.4E+09		1	0.1	Norflurazon	27314-13-2					1.2E+03	4.9E+03		9.5E+02
				3.0E-03	I						1.4E+09		1	0.1	Octabromodiphenyl Ether	32536-52-0					2.3E+02	9.9E+02		1.9E+02
				5.0E-02	I						1.4E+09		1	0.006	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0					3.9E+03	2.7E+05		3.9E+03
				2.0E-03	H						1.4E+09		1	0.1	Octamethylpyrophosphoramide	152-16-9					1.6E+02	6.6E+02		1.3E+02
7.8E-03	O			1.4E-01	O						1.4E+09		1	0.1	Oryzalin	19044-88-3	8.9E+01	3.2E+02		7.0E+01	1.1E+04	4.6E+04		8.8E+03
				5.0E-03	I						1.4E+09		1	0.1	Oxadiazon	19666-30-9					3.9E+02	1.6E+03		3.2E+02
				2.5E-02	I						1.4E+09		1	0.1	Oxamyl	23135-22-0					2.0E+03	8.2E+03		1.6E+03
7.3E-02	O			3.0E-02	O						1.4E+09		1	0.1	Oxyfluorfen	42874-03-3	9.5E+00	3.4E+01		7.4E+00	2.3E+03	9.9E+03		1.9E+03
				1.3E-02	I						1.4E+09		1	0.1	Paclobutrazol	76738-62-0					1.0E+03	4.3E+03		8.2E+02
				4.5E-03	I						1.4E+09		1	0.1	Paraquat Dichloride	1910-42-5					3.5E+02	1.5E+03		2.8E+02
				6.0E-03	H						1.4E+09		1	0.1	Parathion	56-38-2					4.7E+02	2.0E+03		3.8E+02
				5.0E-02	H			V			1.4E+09	4.5E+04	1		Pebulate	1114-71-2					3.9E+03			3.9E+03

TR=1E-06
HQ=1.0

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Key: I = IRIS; P = PPRTV; D = DWSHA; O = OPP; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #29); H = HEAST; F = See FAQ; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information														Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Child Hazard Index (HI) = 1			
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	GIABS	ABS	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL Child THQ=1 (mg/kg)	Dermal SL Child THQ=1 (mg/kg)	Inhalation SL Child THQ=1 (mg/kg)	Noncarcinogenic SL Child THI=1 (mg/kg)
				3.0E-02	O						1.4E+09		1	0.1	Pendimethalin	40487-42-1					2.3E+03	9.9E+03		1.9E+03
				2.0E-03	I			V		3.1E-01	1.4E+09	5.1E+05	1		Pentabromodiphenyl Ether	32534-81-9					1.6E+02			1.6E+02
				1.0E-04	I						1.4E+09		1	0.1	Pentabromodiphenyl ether, 2,2',4,4',5- (BDE-99)	60348-60-9					7.8E+00	3.3E+01		6.3E+00
				8.0E-04	I			V			1.4E+09	8.1E+04	1		Pentachlorobenzene	608-93-5					6.3E+01			6.3E+01
9.0E-02	P							V		4.6E+02	1.4E+09	9.7E+03	1		Pentachloroethane	76-01-7	7.7E+00			7.7E+00				
2.6E-01	H			3.0E-03	I			V			1.4E+09	4.3E+05	1		Pentachloronitrobenzene	82-68-8	2.7E+00			2.7E+00	2.3E+02			2.3E+02
4.0E-01	I	5.1E-06	C	5.0E-03	I						1.4E+09		1	0.25	Pentachlorophenol	87-86-5	1.7E+00	2.5E+00	7.5E+05	1.0E+00	3.9E+02	6.6E+02		2.5E+02
4.0E-03	X			2.0E-03	P						1.4E+09		1	0.1	Pentaerythritol tetranitrate (PETN)	78-11-5	1.7E+02	6.2E+02		1.4E+02	1.6E+02	6.6E+02		1.3E+02
						1.0E+00	P	V		3.9E+02	1.4E+09	7.8E+02	1		Pentane, n-	109-66-0							8.1E+02	8.1E+02
															Perchlorates									
				7.0E-04	I						1.4E+09		1		~Ammonium Perchlorate	7790-98-9					5.5E+01			5.5E+01
				7.0E-04	I						1.4E+09		1		~Lithium Perchlorate	7791-03-9					5.5E+01			5.5E+01
				7.0E-04	I						1.4E+09		1		~Perchlorate and Perchlorate Salts	14797-73-0					5.5E+01			5.5E+01
				7.0E-04	I						1.4E+09		1		~Potassium Perchlorate	7778-74-7					5.5E+01			5.5E+01
				7.0E-04	I						1.4E+09		1		~Sodium Perchlorate	7601-89-0					5.5E+01			5.5E+01
				2.0E-02	P						1.4E+09		1	0.1	Perfluorobutane sulfonic acid (PFBS)	375-73-5					1.6E+03	6.6E+03		1.3E+03
				2.0E-02	P						1.4E+09		1	0.1	Perfluorobutanesulfonate	45187-15-3					1.6E+03	6.6E+03		1.3E+03
				5.0E-02	I						1.4E+09		1	0.1	Permethrin	52645-53-1					3.9E+03	1.6E+04		3.2E+03
2.2E-03	C	6.3E-07	C								1.4E+09		1	0.1	Phenacetin	62-44-2	3.2E+02	1.1E+03	6.1E+06	2.5E+02				
				2.4E-01	O						1.4E+09		1	0.1	Phenmedipham	13684-63-4					1.9E+04	7.9E+04		1.5E+04
				3.0E-01	I	2.0E-01	C				1.4E+09		1	0.1	Phenol	108-95-2					2.3E+04	9.9E+04	2.8E+08	1.9E+04
				4.0E-03	I						1.4E+09		1	0.1	Phenol, 2-(1-methylethoxy)-, methylcarbamate	114-26-1					3.1E+02	1.3E+03		2.5E+02
				5.0E-04	X						1.4E+09		1	0.1	Phenothiazine	92-84-2					3.9E+01	1.6E+02		3.2E+01
				2.0E-04	X			V		1.3E+02	1.4E+09	7.1E+03	1		Phenyl Isothiocyanate	103-72-0					1.6E+01			1.6E+01
				6.0E-03	I						1.4E+09		1	0.1	Phenylenediamine, m-	108-45-2					4.7E+02	2.0E+03		3.8E+02
1.2E-01	P			4.0E-03	P						1.4E+09		1	0.1	Phenylenediamine, o-	95-54-5	5.8E+00	2.1E+01		4.5E+00	3.1E+02	1.3E+03		2.5E+02
				1.0E-03	X						1.4E+09		1	0.1	Phenylenediamine, p-	106-50-3					7.8E+01	3.3E+02		6.3E+01
1.9E-03	H										1.4E+09		1	0.1	Phenylphenol, 2-	90-43-7	3.6E+02	1.3E+03		2.8E+02				
				2.0E-04	H						1.4E+09		1	0.1	Phorate	298-02-2					1.6E+01	6.6E+01		1.3E+01
						3.0E-04	I	V		1.6E+03	1.4E+09	9.8E+02	1		Phosgene	75-44-5							3.1E-01	3.1E-01
				2.0E-02	I						1.4E+09		1	0.1	Phosmet	732-11-6					1.6E+03	6.6E+03		1.3E+03
															Phosphates, Inorganic									
				4.9E+01	P						1.4E+09		1		~Aluminum metaphosphate	13776-88-0					3.8E+06			3.8E+06
				4.9E+01	P						1.4E+09		1		~Ammonium polyphosphate	68333-79-9					3.8E+06			3.8E+06
				4.9E+01	P						1.4E+09		1		~Calcium pyrophosphate	7790-76-3					3.8E+06			3.8E+06
				4.9E+01	P						1.4E+09		1		~Diammonium phosphate	7783-28-0					3.8E+06			3.8E+06
				4.9E+01	P						1.4E+09		1		~Dicalcium phosphate	7757-93-9					3.8E+06			3.8E+06
				4.9E+01	P						1.4E+09		1		~Dimagnesium phosphate	7782-75-4					3.8E+06			3.8E+06
				4.9E+01	P						1.4E+09		1		~Dipotassium phosphate	7758-11-4					3.8E+06			3.8E+06
				4.9E+01	P						1.4E+09		1		~Disodium phosphate	7558-79-4					3.8E+06			3.8E+06
				4.9E+01	P						1.4E+09		1		~Monoaluminum phosphate	13530-50-2					3.8E+06			3.8E+06
				4.9E+01	P						1.4E+09		1		~Monoammonium phosphate	7722-76-1					3.8E+06			3.8E+06
				4.9E+01	P						1.4E+09		1		~Monocalcium phosphate	7758-23-8					3.8E+06			3.8E+06
				4.9E+01	P						1.4E+09		1		~Monomagnesium phosphate	7757-86-0					3.8E+06			3.8E+06
				4.9E+01	P						1.4E+09		1		~Monopotassium phosphate	7778-77-0					3.8E+06			3.8E+06
				4.9E+01	P						1.4E+09		1		~Monosodium phosphate	7558-80-7					3.8E+06			3.8E+06
				4.9E+01	P						1.4E+09		1		~Polyphosphoric acid	8017-16-1					3.8E+06			3.8E+06
				4.9E+01	P						1.4E+09		1		~Potassium tripolyphosphate	13845-36-8					3.8E+06			3.8E+06
				4.9E+01	P						1.4E+09		1		~Sodium acid pyrophosphate	7758-16-9					3.8E+06			3.8E+06
				4.9E+01	P						1.4E+09		1		~Sodium aluminum phosphate (acidic)	7785-88-8					3.8E+06			3.8E+06
				4.9E+01	P						1.4E+09		1		~Sodium aluminum phosphate (anhydrous)	10279-59-1					3.8E+06			3.8E+06
				4.9E+01	P						1.4E+09		1		~Sodium aluminum phosphate (tetrahydrate)	10305-76-7					3.8E+06			3.8E+06
				4.9E+01	P						1.4E+09		1		~Sodium hexametaphosphate	10124-56-8					3.8E+06			3.8E+06
				4.9E+01	P						1.4E+09		1		~Sodium polyphosphate	68915-31-1					3.8E+06			3.8E+06
				4.9E+01	P						1.4E+09		1		~Sodium trimetaphosphate	7785-84-4					3.8E+06			3.8E+06
				4.9E+01	P						1.4E+09		1		~Sodium tripolyphosphate	7758-29-4					3.8E+06			3.8E+06
				4.9E+01	P						1.4E+09		1		~Tetrapotassium phosphate	7320-34-5					3.8E+06			3.8E+06
				4.9E+01	P						1.4E+09		1		~Tetrasodium pyrophosphate	7722-88-5					3.8E+06			3.8E+06
				4.9E+01	P						1.4E+09		1		~Trialuminum sodium tetra decahydrogenoctaorthophosphate (dihydrate)	15136-87-5					3.8E+06			3.8E+06
				4.9E+01	P						1.4E+09		1		~Tricalcium phosphate	7758-87-4					3.8E+06			3.8E+06
				4.9E+01	P						1.4E+09		1		~Trimagnesium phosphate	7757-87-1					3.8E+06			3.8E+06
				4.9E+01	P						1.4E+09		1		~Tripotassium phosphate	7778-53-2					3.8E+06			3.8E+06
				4.9E+01	P						1.4E+09		1		~Trisodium phosphate	7601-54-9					3.8E+06			3.8E+06
				3.0E-04	I	3.0E-04	I	V			1.4E+09		1		Phosphine	7803-51-2					2.3E+01		4.3E+05	2.3E+01
				4.9E+01	P	1.0E-02	I				1.4E+09		1		Phosphoric Acid	7664-38-2					3.8E+06		1.4E+07	3.0E+06
				2.0E-05	I			V			1.4E+09	6.9E+03	1		Phosphorus, White	7723-14-0					1.6E+00			1.6E+00
															Phthalates									
1.4E-02	I	2.4E-06	C	2.0E-02	I						1.4E+09		1	0.1	~Bis(2-ethylhexyl)phthalate	117-81-7	5.0E+01	1.8E+02	1.6E+06	3.9E+01	1.6E+03	6.6E+03		1.3E+03
1.9E-03	P			2.0E-01	I						1.4E+09		1	0.1	~Butyl Benzyl Phthalate	85-68-7	3.7E+02	1.3E+03		2.9E+02	1.6E+04	6.6E+04		1.3E+04
				1.0E+00	I						1.4E+09		1	0.1	~Butylphthalyl Butylglycolate	85-70-1					7.8E+04	3.3E+05		6.3E+04
				1.0E-01	I						1.4E+09		1	0.1	~Dibutyl Phthalate	84-74-2					7.8E+03	3.3E+04		6.3E+03
				8.0E-01	I						1.4E+09		1	0.1	~Diethyl Phthalate	84-66-2					6.3E+04	2.6E+05		5.1E+04
				1.0E-01	I			V			1.4E+09	2.1E+04	1		~Dimethylterephthalate	120-61-6					7.8E+03			7.8E+03
				1.0E-02	P						1.4E+09		1	0.1	~Octyl Phthalate, di-N-	117-84-0					7.8E+02	3.3E+03		6.3E+02
				1.0E+00	H						1.4E+09		1	0.1	~Phthalic Acid, P-	100-21-0					7.8E+04	3.3E+05		6.3E+04

TR=1E-06
HQ=1.0

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Key: I = IRIS; P = PPRTV; D = DWSHA; O = OPP; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #29); H = HEAST; F = See FAQ; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Child Hazard Index (HI) = 1			
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	volatile	muta-gen	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	GIABS	ABS	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL Child THQ=1 (mg/kg)	Dermal SL Child THQ=1 (mg/kg)	Inhalation SL Child THQ=1 (mg/kg)	Noncarcinogenic SL Child THI=1 (mg/kg)
				2.0E+00	I	2.0E-02	C				1.4E+09		1	0.1	~Phthalic Anhydride	85-44-9					1.6E+05	6.6E+05	2.8E+07	1.3E+05
				7.0E-02	I						1.4E+09		1	0.1	Picloram	1918-02-1					5.5E+03	2.3E+04		4.4E+03
				1.0E-04	X						1.4E+09		1	0.1	Picramic Acid (2-Amino-4,6-dinitrophenol)	96-91-3					7.8E+00	3.3E+01		6.3E+00
				9.0E-04	X						1.4E+09		1	0.1	Picric Acid (2,4,6-Trinitrophenol)	88-89-1					7.0E+01	3.0E+02		5.7E+01
				6.7E-05	O						1.4E+09		1	0.1	Pirimiphos, Methyl	29232-93-7					5.2E+00	2.2E+01		4.2E+00
3.0E+01	C	8.6E-03	C	7.0E-06	H						1.4E+09		1	0.1	Polybrominated Biphenyls	59536-65-1	2.3E-02	8.2E-02	4.4E+02	1.8E-02	5.5E-01	2.3E+00		4.4E-01
															Polychlorinated Biphenyls (PCBs)									
7.0E-02	S	2.0E-05	S	7.0E-05	I			V			1.4E+09	7.1E+05	1	0.14	~Aroclor 1016	12674-11-2	9.9E+00	2.5E+01	1.0E+02	6.7E+00	5.5E+00	1.6E+01		4.1E+00
2.0E+00	S	5.7E-04	S					V			1.4E+09	2.0E+05	1	0.14	~Aroclor 1221	11104-28-2	3.5E-01	8.8E-01	1.0E+00	2.0E-01				
2.0E+00	S	5.7E-04	S					V			1.4E+09	1.1E+05	1	0.14	~Aroclor 1232	11141-16-5	3.5E-01	8.8E-01	5.5E-01	1.7E-01				
2.0E+00	S	5.7E-04	S					V			1.4E+09	5.9E+05	1	0.14	~Aroclor 1242	53469-21-9	3.5E-01	8.8E-01	2.9E+00	2.3E-01				
2.0E+00	S	5.7E-04	S					V			1.4E+09	6.3E+05	1	0.14	~Aroclor 1248	12672-29-6	3.5E-01	8.8E-01	3.1E+00	2.3E-01				
2.0E+00	S	5.7E-04	S	2.0E-05	I			V			1.4E+09	8.4E+05	1	0.14	~Aroclor 1254	11097-69-1	3.5E-01	8.8E-01	4.1E+00	2.4E-01	1.6E+00	4.7E+00		1.2E+00
2.0E+00	S	5.7E-04	S					V			1.4E+09	1.3E+06	1	0.14	~Aroclor 1260	11096-82-5	3.5E-01	8.8E-01	6.5E+00	2.4E-01				
				6.0E-04	X			V			1.4E+09	9.6E+05	1	0.14	~Aroclor 5460	11126-42-4					4.7E+01	1.4E+02		3.9E+01
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V			1.4E+09	2.4E+06	1	0.14	~Heptachlorobiphenyl, 2,3,3',4,4',5,5'- (PCB 189)	39635-31-9	1.8E-01	4.5E-01	6.0E+00	1.3E-01	1.8E+00	5.5E+00	3.4E+03	1.4E+00
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V			1.4E+09	1.6E+06	1	0.14	~Hexachlorobiphenyl, 2,3',4,4',5,5'- (PCB 167)	52663-72-6	1.8E-01	4.5E-01	3.9E+00	1.2E-01	1.8E+00	5.5E+00	2.2E+03	1.4E+00
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V			1.4E+09	1.0E+06	1	0.14	~Hexachlorobiphenyl, 2,3,3',4,4',5'- (PCB 157)	69782-90-7	1.8E-01	4.5E-01	2.6E+00	1.2E-01	1.8E+00	5.5E+00	1.4E+03	1.4E+00
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V			1.4E+09	1.1E+06	1	0.14	~Hexachlorobiphenyl, 2,3,3',4,4',5- (PCB 156)	38380-08-4	1.8E-01	4.5E-01	2.7E+00	1.2E-01	1.8E+00	5.5E+00	1.5E+03	1.4E+00
3.9E+03	E	1.1E+00	E	2.3E-08	E	1.3E-06	E	V			1.4E+09	1.6E+06	1	0.14	~Hexachlorobiphenyl, 3,3',4,4',5,5'- (PCB 169)	32774-16-6	1.8E-04	4.5E-04	3.9E-03	1.2E-04	1.8E-03	5.5E-03	2.2E+00	1.4E-03
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V			1.4E+09	7.3E+05	1	0.14	~Pentachlorobiphenyl, 2',3,4,4',5- (PCB 123)	65510-44-3	1.8E-01	4.5E-01	1.8E+00	1.2E-01	1.8E+00	5.5E+00	1.0E+03	1.4E+00
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V			1.4E+09	5.9E+05	1	0.14	~Pentachlorobiphenyl, 2,3',4,4',5- (PCB 118)	31508-00-6	1.8E-01	4.5E-01	1.5E+00	1.2E-01	1.8E+00	5.5E+00	8.2E+02	1.4E+00
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V			1.4E+09	6.0E+05	1	0.14	~Pentachlorobiphenyl, 2,3,3',4,4'- (PCB 105)	32598-14-4	1.8E-01	4.5E-01	1.5E+00	1.2E-01	1.8E+00	5.5E+00	8.4E+02	1.4E+00
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V			1.4E+09	1.1E+06	1	0.14	~Pentachlorobiphenyl, 2,3,4,4',5- (PCB 114)	74472-37-0	1.8E-01	4.5E-01	2.6E+00	1.2E-01	1.8E+00	5.5E+00	1.5E+03	1.4E+00
1.3E+04	E	3.8E+00	E	7.0E-09	E	4.0E-07	E	V			1.4E+09	7.3E+05	1	0.14	~Pentachlorobiphenyl, 3,3',4,4',5- (PCB 126)	57465-28-8	5.3E-05	1.4E-04	5.4E-04	3.6E-05	5.5E-04	1.6E-03	3.0E-01	4.1E-04
2.0E+00	I	5.7E-04	I					V			1.4E+09	5.3E+05	1	0.14	~Polychlorinated Biphenyls (high risk)	1336-36-3	3.5E-01	8.8E-01	2.6E+00	2.3E-01				
4.0E-01	I	1.0E-04	I					V					1	0.14	~Polychlorinated Biphenyls (low risk)	1336-36-3								
7.0E-02	I	2.0E-05	I					V					1	0.14	~Polychlorinated Biphenyls (lowest risk)	1336-36-3								
1.3E+01	E	3.8E-03	E	7.0E-06	E	4.0E-04	E				1.4E+09		1	0.14	~Tetrachlorobiphenyl, 3,3',4,4'- (PCB 77)	32598-13-3	5.3E-02	1.4E-01	1.0E+03	3.6E-02	5.5E-01	1.6E+00	5.7E+05	4.1E-01
3.9E+01	E	1.1E-02	E	2.3E-06	E	1.3E-04	E	V			1.4E+09	5.1E+05	1	0.14	~Tetrachlorobiphenyl, 3,4,4',5- (PCB 81)	70362-50-4	1.8E-02	4.5E-02	1.3E-01	1.2E-02	1.8E-01	5.5E-01	7.1E+01	1.4E-01
						6.0E-04	I				1.4E+09		1	0.1	Polymeric Methylene Diphenyl Diisocyanate (PMDI)	9016-87-9							8.5E+05	8.5E+05
															Polynuclear *Aromatic Hydrocarbons* (PAHs)									
				6.0E-02	I			V			1.4E+09	1.4E+05	1	0.13	~Acenaphthene	83-32-9					4.7E+03	1.5E+04		3.8E+03
				3.0E-01	I			V			1.4E+09	5.2E+05	1	0.13	~Anthracene	120-12-7					2.3E+04	7.6E+04		1.8E+04
1.0E-01	E	6.0E-05	E					V	M		1.4E+09	4.4E+06	1	0.13	~Benz[a]anthracene	56-55-3	1.5E+00	4.6E+00	7.4E+01	1.1E+00				
1.2E+00	C	1.1E-04	C								1.4E+09		1	0.13	~Benzo(j)fluoranthene	205-82-3	5.8E-01	1.6E+00	3.5E+04	4.2E-01				
1.0E+00	I	6.0E-04	I	3.0E-04	I	2.0E-06	I		M		1.4E+09		1	0.13	~Benzo[a]pyrene	50-32-8	1.5E-01	4.6E-01	2.3E+03	1.1E-01	2.3E+01	7.6E+01	2.8E+03	1.8E+01
1.0E-01	E	6.0E-05	E						M		1.4E+09		1	0.13	~Benzo[b]fluoranthene	205-99-2	1.5E+00	4.6E+00	2.3E+04	1.1E+00				
1.0E-02	E	6.0E-06	E						M		1.4E+09		1	0.13	~Benzo[k]fluoranthene	207-08-9	1.5E+01	4.6E+01	2.3E+05	1.1E+01				
				8.0E-02	I			V			1.4E+09	8.0E+04	1	0.13	~Chloronaphthalene, Beta-	91-58-7					6.3E+03	2.0E+04		4.8E+03
1.0E-03	E	6.0E-07	E						M		1.4E+09		1	0.13	~Chrysene	218-01-9	1.5E+02	4.6E+02	2.3E+06	1.1E+02				
1.0E+00	E	6.0E-04	E						M		1.4E+09		1	0.13	~Dibenz[a,h]anthracene	53-70-3	1.5E-01	4.6E-01	2.3E+03	1.1E-01				
1.2E+01	C	1.1E-03	C								1.4E+09		1	0.13	~Dibenzo(a,e)pyrene	192-65-4	5.8E-02	1.6E-01	3.5E+03	4.2E-02				
2.5E+02	C	7.1E-02	C						M		1.4E+09		1	0.13	~Dimethylbenz(a)anthracene, 7,12-	57-97-6	6.1E-04	1.8E-03	1.9E+01	4.6E-04				
				4.0E-02	I						1.4E+09		1	0.13	~Fluoranthene	206-44-0					3.1E+03	1.0E+04		2.4E+03
				4.0E-02	I			V			1.4E+09	2.8E+05	1	0.13	~Fluorene	86-73-7					3.1E+03	1.0E+04		2.4E+03
1.0E-01	E	6.0E-05	E						M		1.4E+09		1	0.13	~Indeno[1,2,3-cd]pyrene	193-39-5	1.5E+00	4.6E+00	2.3E+04	1.1E+00				
2.9E-02	P			7.0E-02	A			V		3.9E+02	1.4E+09	5.9E+04	1	0.13	~Methylnaphthalene, 1-	90-12-0	2.4E+01	6.6E+01		1.8E+01	5.5E+03	1.8E+04		4.2E+03
				4.0E-03	I			V			1.4E+09	5.8E+04	1	0.13	~Methylnaphthalene, 2-	91-57-6					3.1E+02	1.0E+03		2.4E+02
		3.4E-05	C	2.0E-02	I	3.0E-03	I	V			1.4E+09	4.6E+04	1	0.13	~Naphthalene	91-20-3			3.8E+00	3.8E+00	1.6E+03	5.1E+03	1.4E+02	1.3E+02
1.2E+00	C	1.1E-04	C								1.4E+09		1	0.13	~Nitropyrene, 4-	57835-92-4	5.8E-01	1.6E+00	3.5E+04	4.2E-01				
				3.0E-02	I			V			1.4E+09	2.4E+06	1	0.13	~Pyrene	129-00-0					2.3E+03	7.6E+03		1.8E+03
				2.0E-02	P						1.4E+09		1	0.1	Potassium Perfluorobutane Sulfonate	29420-49-3					1.6E+03	6.6E+03		1.3E+03
1.5E-01	I			9.0E-03	I						1.4E+09		1	0.1	Prochloraz	67747-09-5	4.6E+00	1.6E+01		3.6E+00	7.0E+02	3.0E+03		5.7E+02
				6.0E-03	H			V			1.4E+09	4.2E+05	1		Profluralin	26399-36-0					4.7E+02			4.7E+02
				1.5E-02	I						1.4E+09		1	0.1	Prometon	1610-18-0					1.2E+03	4.9E+03		9.5E+02
				4.0E-02	O						1.4E+09		1	0.1	Prometryn	7287-19-6					3.1E+03	1.3E+04		2.5E+03
				1.3E-02	I						1.4E+09		1	0.1	Propachlor	1918-16-7					1.0E+03	4.3E+03		8.2E+02
				5.0E-03	I						1.4E+09		1	0.1	Propanil	709-98-8					3.9E+02	1.6E+03		3.2E+02
3.3E-02	O			4.0E-02	O						1.4E+09		1	0.1	Propargite	2312-35-8	2.1E+01	7.6E+01		1.7E+01	3.1E+03	1.3E+04		2.5E+03
				2.0E-03	I			V		1.1E+05	1.4E+09	6.3E+04	1		Propargyl Alcohol	107-19-7					1.6E+02			1.6E+02
				2.0E-02	I						1.4E+09		1	0.1	Propazine	139-40-2					1.6E+03	6.6E+03		1.3E+03
				2.0E-02	I						1.4E+09		1	0.1	Propham	122-42-9					1.6E+03	6.6E+03		1.3E+03
				1.0E-01	O						1.4E+09		1	0.1	Propiconazole	60207-90-1					7.8E+03	3.3E+04		6.3E+03
						8.0E-03	I	V		3.3E+04	1.4E+09	8.9E+03	1		Propionaldehyde	123-38-6							7.5E+01	7.5E+01
				1.0E-01	X	1.0E+00	X	V		2.6E+02	1.4E+09	7.0E+03	1		Propyl benzene	103-65-1					7.8E+03		7.3E+03	3.8E+03
						3.0E+00	C	V		3.5E+02	1.4E+09	7.0E+02	1		Propylene	115-07-1							2.2E+03	2.2E+03
				2.0E+01	P						1.4E+09		1	0.1	Propylene Glycol	57-55-6					1.6E+06	6.6E+06		1.3E+06
						2.7E-04	A				1.4E+09		1	0.1	Propylene Glycol Dinitrate	6423-43-4							3.9E+05	3.9E+05
				7.0E-01	H	2.0E+00	I	V		1.1E+05	1.4E+09	7.8E+04	1		Propylene Glycol Monomethyl Ether	107-98-2					5.5E+04		1.8E+05	4.1E+04
2.4E-01	I	3.7E-06	I			3.0E-02	I	V		7.8E+04	1.4E+09	1.0E+04	1		Propylene Oxide	75-56-9	2.9E+00		7.8E+00	2.1E+00			3.2E+02	3.2E+02
				7.5E-02	I						1.4E+09		1	0.1	Propyzamide	23950-58-5					5.9E+03	2.5E+04		4.7E+03
				1.0E-03	I			V		5.3E+05	1.4E+09	5.5E+04	1		Pyridine	110-86-1					7.8E+01			7.8E+01
				5.0E-04	I						1.4E+09		1	0.1	Quinalphos	13593-03-8					3.9E+01	1.6E+02		3.2E+01
3.0E+00	I										1.4E+09		1	0.1	Quinoline	91-22-5	2.3E-01	8.2E-01		1.8E-01				

TR=1E-06
HQ=1.0

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Toxicity and Chemical-specific Information															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Child Hazard Index (HI) = 1			
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	GIABS	ABS	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL Child THQ=1 (mg/kg)	Dermal SL Child THQ=1 (mg/kg)	Inhalation SL Child THQ=1 (mg/kg)	Noncarcinogenic SL Child THI=1 (mg/kg)
				9.0E-03	I						1.4E+09		1	0.1	Quizalofop-ethyl	76578-14-8					7.0E+02	3.0E+03		5.7E+02
						3.0E-02	A				1.4E+09		1		Refractory Ceramic Fibers	E715557							4.3E+07	4.3E+07
				3.0E-02	I						1.4E+09		1	0.1	Resmethrin	10453-86-8					2.3E+03	9.9E+03		1.9E+03
				5.0E-02	H			V			1.4E+09	4.7E+05	1		Ronnel	299-84-3					3.9E+03			3.9E+03
				4.0E-03	I						1.4E+09		1	0.1	Rotenone	83-79-4					3.1E+02	1.3E+03		2.5E+02
2.2E-01	C	6.3E-05	C						M		1.4E+09		1	0.1	Safrole	94-59-7	7.0E-01	2.7E+00	2.2E+04	5.5E-01				
				5.0E-03	I						1.4E+09		1		Selenious Acid	7783-00-8					3.9E+02			3.9E+02
				5.0E-03	I	2.0E-02	C				1.4E+09		1		Selenium	7782-49-2					3.9E+02		2.8E+07	3.9E+02
				5.0E-03	C	2.0E-02	C				1.4E+09		1		Selenium Sulfide	7446-34-6					3.9E+02		2.8E+07	3.9E+02
				1.4E-01	O						1.4E+09		1	0.1	Sethoxydim	74051-80-2					1.1E+04	4.6E+04		8.8E+03
						3.0E-03	C				1.4E+09		1		Silica (crystalline, respirable)	7631-86-9							4.3E+06	4.3E+06
				5.0E-03	I						1.4E+09		0.04		Silver	7440-22-4					3.9E+02			3.9E+02
1.2E-01	H			5.0E-03	I						1.4E+09		1	0.1	Simazine	122-34-9	5.8E+00	2.1E+01		4.5E+00	3.9E+02	1.6E+03		3.2E+02
				1.3E-02	I						1.4E+09		1	0.1	Sodium Acifluorfen	62476-59-9					1.0E+03	4.3E+03		8.2E+02
				4.0E-03	I						1.4E+09		1		Sodium Azide	26628-22-8					3.1E+02			3.1E+02
5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M		1.4E+09		0.025		Sodium Dichromate	10588-01-9	3.1E-01		9.2E+00	3.0E-01	1.6E+03		2.8E+05	1.6E+03
2.7E-01	H			3.0E-02	I						1.4E+09		1	0.1	Sodium Diethyldithiocarbamate	148-18-5	2.6E+00	9.2E+00		2.0E+00	2.3E+03	9.9E+03		1.9E+03
				5.0E-02	A	1.3E-02	C				1.4E+09		1		Sodium Fluoride	7681-49-4					3.9E+03		1.8E+07	3.9E+03
				2.0E-05	I						1.4E+09		1	0.1	Sodium Fluoroacetate	62-74-8					1.6E+00	6.6E+00		1.3E+00
				1.0E-03	H						1.4E+09		1		Sodium Metavanadate	13718-26-8					7.8E+01			7.8E+01
				8.0E-04	P						1.4E+09		1		Sodium Tungstate	13472-45-2					6.3E+01			6.3E+01
				8.0E-04	P						1.4E+09		1		Sodium Tungstate Dihydrate	10213-10-2					6.3E+01			6.3E+01
2.4E-02	H			3.0E-02	I						1.4E+09		1	0.1	Stirofos (Tetrachlorovinphos)	961-11-5	2.9E+01	1.0E+02		2.3E+01	2.3E+03	9.9E+03		1.9E+03
5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M		1.4E+09		0.025		Strontium Chromate	7789-06-2	3.1E-01		9.2E+00	3.0E-01	1.6E+03		2.8E+05	1.6E+03
				6.0E-01	I						1.4E+09		1		Strontium, Stable	7440-24-6					4.7E+04			4.7E+04
				3.0E-04	I						1.4E+09		1	0.1	Strychnine	57-24-9					2.3E+01	9.9E+01		1.9E+01
				2.0E-01	I	1.0E+00	I	V		8.7E+02	1.4E+09	9.4E+03	1		Styrene	100-42-5					1.6E+04		9.7E+03	6.0E+03
				3.0E-03	P						1.4E+09		1	0.1	Styrene-Acrylonitrile (SAN) Trimer						2.3E+02	9.9E+02		1.9E+02
				1.0E-03	P	2.0E-03	X				1.4E+09		1	0.1	Sulfolane	126-33-0					7.8E+01	3.3E+02	2.8E+06	6.3E+01
				8.0E-04	P						1.4E+09		1	0.1	Sulfonylbis(4-chlorobenzene), 1,1'-	80-07-9					6.3E+01	2.6E+02		5.1E+01
						1.0E-03	C	V			1.4E+09		1		Sulfur Trioxide	7446-11-9							1.4E+06	1.4E+06
						1.0E-03	C				1.4E+09		1		Sulfuric Acid	7664-93-9							1.4E+06	1.4E+06
2.5E-02	I	7.1E-06	I	5.0E-02	H						1.4E+09		1	0.1	Sulfurous acid, 2-chloroethyl 2-[4-(1,1-dimethylethyl)phenoxy]-1-methylethyl ester	140-57-8	2.8E+01	9.9E+01	5.4E+05	2.2E+01	3.9E+03	1.6E+04		3.2E+03
				3.0E-02	H						1.4E+09		1	0.1	TCMTB	21564-17-0					2.3E+03	9.9E+03		1.9E+03
				7.0E-02	I						1.4E+09		1	0.1	Tebuthiuron	34014-18-1					5.5E+03	2.3E+04		4.4E+03
				2.0E-02	H						1.4E+09		1	0.1	Temephos	3383-96-8					1.6E+03	6.6E+03		1.3E+03
				1.3E-02	I						1.4E+09		1	0.1	Terbacil	5902-51-2					1.0E+03	4.3E+03		8.2E+02
				2.5E-05	H			V		3.1E+01	1.4E+09	2.6E+05	1		Terbufos	13071-79-9					2.0E+00			2.0E+00
				1.0E-03	I						1.4E+09		1	0.1	Terbutryn	886-50-0					7.8E+01	3.3E+02		6.3E+01
				1.0E-04	I						1.4E+09		1	0.1	Tetrabromodiphenyl ether, 2,2',4,4'- (BDE-47)	5436-43-1					7.8E+00	3.3E+01		6.3E+00
				3.0E-04	I			V			1.4E+09	5.1E+04	1		Tetrachlorobenzene, 1,2,4,5-	95-94-3					2.3E+01			2.3E+01
2.6E-02	I	7.4E-06	I	3.0E-02	I			V		6.8E+02	1.4E+09	5.7E+03	1		Tetrachloroethane, 1,1,1,2-	630-20-6	2.7E+01		2.2E+00	2.0E+00	2.3E+03			2.3E+03
2.0E-01	I	5.8E-05	C	2.0E-02	I			V		1.9E+03	1.4E+09	1.5E+04	1		Tetrachloroethane, 1,1,2,2-	79-34-5	3.5E+00		7.3E-01	6.0E-01	1.6E+03			1.6E+03
2.1E-03	I	2.6E-07	I	6.0E-03	I	4.0E-02	I	V		1.7E+02	1.4E+09	2.4E+03	1		Tetrachloroethylene	127-18-4	3.3E+02		2.5E+01	2.4E+01	4.7E+02		9.8E+01	8.1E+01
				3.0E-02	I						1.4E+09		1	0.1	Tetrachlorophenol, 2,3,4,6-	58-90-2					2.3E+03	9.9E+03		1.9E+03
2.0E+01	H							V			1.4E+09	1.1E+05	1		Tetrachlorotoluene, p- alpha, alpha, alpha-	5216-25-1	3.5E-02			3.5E-02				
				5.0E-04	I						1.4E+09		1	0.1	Tetraethyl Dithiopyrophosphate	3689-24-5					3.9E+01	1.6E+02		3.2E+01
						8.0E+01	I	V		2.1E+03	1.4E+09	1.2E+03	1		Tetrafluoroethane, 1,1,1,2-	811-97-2							1.0E+05	1.0E+05
				2.0E-03	P						1.4E+09		1	0.0007	Tetryl (Trinitrophenylmethylnitramine)	479-45-8					1.6E+02	1.0E+05		1.6E+02
				2.0E-05	S						1.4E+09		1		Thallic Oxide	1314-32-5					1.6E+00			1.6E+00
				1.0E-05	X						1.4E+09		1		Thallium (I) Nitrate	10102-45-1					7.8E-01			7.8E-01
				1.0E-05	X						1.4E+09		1		Thallium (Soluble Salts)	7440-28-0					7.8E-01			7.8E-01
				1.0E-05	X			V			1.4E+09		1		Thallium Acetate	563-68-8					7.8E-01			7.8E-01
				2.0E-05	X			V			1.4E+09		1		Thallium Carbonate	6533-73-9					1.6E+00			1.6E+00
				1.0E-05	X						1.4E+09		1		Thallium Chloride	7791-12-0					7.8E-01			7.8E-01
				1.0E-05	S						1.4E+09		1		Thallium Selenite	12039-52-0					7.8E-01			7.8E-01
				2.0E-05	X						1.4E+09		1		Thallium Sulfate	7446-18-6					1.6E+00			1.6E+00
				4.3E-02	O						1.4E+09		1	0.1	Thifensulfuron-methyl	79277-27-3					3.4E+03	1.4E+04		2.7E+03
				1.0E-02	I						1.4E+09		1	0.1	Thiobencarb	28249-77-6					7.8E+02	3.3E+03		6.3E+02
				7.0E-02	X						1.4E+09		1	0.0075	Thiodiglycol	111-48-8					5.5E+03	3.1E+05		5.4E+03
				3.0E-04	H						1.4E+09		1	0.1	Thiofanox	39196-18-4					2.3E+01	9.9E+01		1.9E+01
1.2E-02	O			2.7E-02	O						1.4E+09		1	0.1	Thiophanate, Methyl	23564-05-8	6.0E+01	2.1E+02		4.7E+01	2.1E+03	8.8E+03		1.7E+03
				1.5E-02	O						1.4E+09		1	0.1	Thiram	137-26-8					1.2E+03	4.9E+03		9.5E+02
				6.0E-01	H						1.4E+09		1		Tin	7440-31-5					4.7E+04			4.7E+04
						1.0E-04	A	V			1.4E+09		1		Titanium Tetrachloride	7550-45-0							1.4E+05	1.4E+05
				8.0E-02	I	5.0E+00	I	V		8.2E+02	1.4E+09	4.3E+03	1		Toluene	108-88-3					6.3E+03		2.2E+04	4.9E+03
		1.1E-05	C			6.0E-06	C	V			1.4E+09	7.6E+05	1		Toluene-2,4-diisocyanate	584-84-9			1.9E+02	1.9E+02			6.4E+00	6.4E+00
1.8E-01	X			2.0E-04	X						1.4E+09		1	0.1	Toluene-2,5-diamine	95-70-5	3.9E+00	1.4E+01		3.0E+00	1.6E+01	6.6E+01		1.3E+01
		1.1E-05	C			6.0E-06	C	V		1.7E+03	1.4E+09	6.3E+05	1		Toluene-2,6-diisocyanate	91-08-7			1.6E+02	1.6E+02			5.3E+00	5.3E+00
1.6E-02	P	5.1E-05	C								1.4E+09		1	0.1	Toluidine, o- (Methylaniline, 2-)	95-53-4	4.3E+01	1.5E+02	7.5E+04	3.4E+01				
3.0E-02	P			4.0E-03	X						1.4E+09		1	0.1	Toluidine, p-	106-49-0	2.3E+01	8.2E+01		1.8E+01	3.1E+02	1.3E+03		2.5E+02
				3.0E+00	P			V		3.4E-01	1.4E+09	1.4E+03	1		Total Petroleum Hydrocarbons (Aliphatic High)	E1790670					2.3E+05			2.3E+05
						6.0E-01	P	V		1.4E+02	1.4E+09	8.3E+02	1		Total Petroleum Hydrocarbons (Aliphatic Low)	E1790666							5.2E+02	5.2E+02
				1.0E-02	X	1.0E-01	P	V		6.9E+00	1.4E+09	1.0E+03	1		Total Petroleum Hydrocarbons (Aliphatic Medium)	E1790668					7.8E+02		1.1E+02	9.6E+01
				4.0E-02	P						1.4E+09		1	0.1	Total Petroleum Hydrocarbons (Aromatic High)	E1790676					3.1E+03	1.3E+04		2.5E+03

TR=1E-06
HQ=1.0

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Key: I = IRIS; P = PPRTV; D = DWSHA; O = OPP; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #29); H = HEAST; F = See FAQ; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Child Hazard Index (HI) = 1			
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	GIABS	ABS	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL Child THQ=1 (mg/kg)	Dermal SL Child THQ=1 (mg/kg)	Inhalation SL Child THQ=1 (mg/kg)	Noncarcinogenic SL Child THI=1 (mg/kg)
				4.0E-03	P	3.0E-02	P	V		1.8E+03	1.4E+09	3.5E+03	1		Total Petroleum Hydrocarbons (Aromatic Low)	E1790672					3.1E+02		1.1E+02	8.2E+01
				4.0E-03	P	3.0E-03	P	V			1.4E+09	5.2E+04	1		Total Petroleum Hydrocarbons (Aromatic Medium)	E1790674					3.1E+02		1.6E+02	1.1E+02
1.1E+00	I	3.2E-04	I								1.4E+09		1	0.1	Toxaphene	8001-35-2	6.3E-01	2.2E+00	1.2E+04	4.9E-01				
				7.5E-03	I						1.4E+09		1	0.1	Tralomethrin	66841-25-6					5.9E+02	2.5E+03		4.7E+02
				3.0E-04	A			V			1.4E+09	3.4E+03	1		Tri-n-butyltin	688-73-3					2.3E+01			2.3E+01
				8.0E+01	X						1.4E+09		1	0.1	Triacetin	102-76-1					6.3E+06	2.6E+07		5.1E+06
				3.4E-02	O						1.4E+09		1	0.1	Triadimefon	43121-43-3					2.7E+03	1.1E+04		2.1E+03
7.2E-02	O			2.5E-02	O			V			1.4E+09	3.6E+05	1		Triallate	2303-17-5	9.7E+00			9.7E+00	2.0E+03			2.0E+03
				1.0E-02	I						1.4E+09		1	0.1	Triasulfuron	82097-50-5					7.8E+02	3.3E+03		6.3E+02
				8.0E-03	I						1.4E+09		1	0.1	Tribenuron-methyl	101200-48-0					6.3E+02	2.6E+03		5.1E+02
				5.0E-03	I			V			1.4E+09	4.8E+04	1		Tribromobenzene, 1,2,4-	615-54-3					3.9E+02			3.9E+02
				9.0E-03	X						1.4E+09		1	0.1	Tribromophenol, 2,4,6-	118-79-6					7.0E+02	3.0E+03		5.7E+02
9.0E-03	P			1.0E-02	P						1.4E+09		1	0.1	Tributyl Phosphate	126-73-8	7.7E+01	2.7E+02		6.0E+01	7.8E+02	3.3E+03		6.3E+02
				3.0E-04	P						1.4E+09		1	0.1	Tributyltin Compounds	E1790678					2.3E+01	9.9E+01		1.9E+01
				3.0E-04	I						1.4E+09		1	0.1	Tributyltin Oxide	56-35-9					2.3E+01	9.9E+01		1.9E+01
				3.0E+01	I	5.0E+00	P	V		9.1E+02	1.4E+09	1.3E+03	1		Trichloro-1,2,2-trifluoroethane, 1,1,2-	76-13-1					2.3E+06		6.7E+03	6.7E+03
7.0E-02	I			2.0E-02	I						1.4E+09		1	0.1	Trichloroacetic Acid	76-03-9	9.9E+00	3.5E+01		7.8E+00	1.6E+03	6.6E+03		1.3E+03
2.9E-02	H										1.4E+09		1	0.1	Trichloroaniline HCl, 2,4,6-	33663-50-2	2.4E+01	8.5E+01		1.9E+01				
7.0E-03	X			3.0E-05	X						1.4E+09		1	0.1	Trichloroaniline, 2,4,6-	634-93-5	9.9E+01	3.5E+02		7.8E+01	2.3E+00	9.9E+00		1.9E+00
				8.0E-04	X			V			1.4E+09	3.2E+04	1		Trichlorobenzene, 1,2,3-	87-61-6					6.3E+01			6.3E+01
2.9E-02	P			1.0E-02	I	2.0E-03	P	V		4.0E+02	1.4E+09	3.0E+04	1		Trichlorobenzene, 1,2,4-	120-82-1	2.4E+01			2.4E+01	7.8E+02		6.2E+01	5.8E+01
				2.0E+00	I	5.0E+00	I	V		6.4E+02	1.4E+09	1.7E+03	1		Trichloroethane, 1,1,1-	71-55-6					1.6E+05		8.6E+03	8.1E+03
5.7E-02	I	1.6E-05	I	4.0E-03	I	2.0E-04	X	V		2.2E+03	1.4E+09	7.2E+03	1		Trichloroethane, 1,1,2-	79-00-5	1.2E+01		1.3E+00	1.1E+00	3.1E+02		1.5E+00	1.5E+00
4.6E-02	I	4.1E-06	I	5.0E-04	I	2.0E-03	I	V	M	6.9E+02	1.4E+09	2.2E+03	1		Trichloroethylene	79-01-6	8.8E+00		1.1E+00	9.4E-01	3.9E+01		4.6E+00	4.1E+00
				3.0E-01	I			V		1.2E+03	1.4E+09	1.0E+03	1		Trichlorofluoromethane	75-69-4					2.3E+04			2.3E+04
				1.0E-01	I						1.4E+09		1	0.1	Trichlorophenol, 2,4,5-	95-95-4					7.8E+03	3.3E+04		6.3E+03
1.1E-02	I	3.1E-06	I	1.0E-03	P						1.4E+09		1	0.1	Trichlorophenol, 2,4,6-	88-06-2	6.3E+01	2.2E+02	1.2E+06	4.9E+01	7.8E+01	3.3E+02		6.3E+01
				1.0E-02	I						1.4E+09		1	0.1	Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5					7.8E+02	3.3E+03		6.3E+02
				8.0E-03	I						1.4E+09		1	0.1	Trichlorophenoxypropionic acid, -2,4,5	93-72-1					6.3E+02	2.6E+03		5.1E+02
				5.0E-03	I			V		1.3E+03	1.4E+09	1.5E+04	1		Trichloropropane, 1,1,2-	598-77-6					3.9E+02			3.9E+02
3.0E+01	I			4.0E-03	I	3.0E-04	I	V	M	1.4E+03	1.4E+09	1.6E+04	1		Trichloropropane, 1,2,3-	96-18-4	5.1E-03			5.1E-03	3.1E+02		4.9E+00	4.8E+00
				3.0E-03	X	3.0E-04	P	V		3.1E+02	1.4E+09	2.3E+03	1		Trichloropropene, 1,2,3-	96-19-5					2.3E+02		7.3E-01	7.3E-01
				2.0E-02	A						1.4E+09		1	0.1	Tricresyl Phosphate (TCP)	1330-78-5					1.6E+03	6.6E+03		1.3E+03
				3.0E-03	I						1.4E+09		1	0.1	Tridiphane	58138-08-2					2.3E+02	9.9E+02		1.9E+02
						7.0E-03	I	V		2.8E+04	1.4E+09	1.6E+04	1		Triethylamine	121-44-8							1.2E+02	1.2E+02
				2.0E+00	P						1.4E+09		1	0.1	Triethylene Glycol	112-27-6					1.6E+05	6.6E+05		1.3E+05
						2.0E+01	P	V		4.8E+03	1.4E+09	7.1E+02	1		Trifluoroethane, 1,1,1-	420-46-2							1.5E+04	1.5E+04
7.7E-03	I			7.5E-03	I			V			1.4E+09	5.1E+05	1		Trifluralin	1582-09-8	9.0E+01			9.0E+01	5.9E+02			5.9E+02
2.0E-02	P			1.0E-02	P						1.4E+09		1	0.1	Trimethyl Phosphate	512-56-1	3.5E+01	1.2E+02		2.7E+01	7.8E+02	3.3E+03		6.3E+02
				1.0E-02	I	6.0E-02	I	V		2.9E+02	1.4E+09	9.4E+03	1		Trimethylbenzene, 1,2,3-	526-73-8					7.8E+02		5.9E+02	3.4E+02
				1.0E-02	I	6.0E-02	I	V		2.2E+02	1.4E+09	7.9E+03	1		Trimethylbenzene, 1,2,4-	95-63-6					7.8E+02		5.0E+02	3.0E+02
				1.0E-02	I	6.0E-02	I	V		1.8E+02	1.4E+09	6.6E+03	1		Trimethylbenzene, 1,3,5-	108-67-8					7.8E+02		4.1E+02	2.7E+02
				1.0E-02	X			V		3.0E+01	1.4E+09	1.0E+03	1		Trimethylpentene, 2,4,4-	25167-70-8					7.8E+02			7.8E+02
				3.0E-02	I						1.4E+09		1	0.019	Trinitrobenzene, 1,3,5-	99-35-4					2.3E+03	5.2E+04		2.2E+03
3.0E-02	I			5.0E-04	I						1.4E+09		1	0.032	Trinitrotoluene, 2,4,6-	118-96-7	2.3E+01	2.6E+02		2.1E+01	3.9E+01	5.2E+02		3.6E+01
				2.0E-02	P						1.4E+09		1	0.1	Triphenylphosphine Oxide	791-28-6					1.6E+03	6.6E+03		1.3E+03
				2.0E-02	A						1.4E+09		1	0.1	Tris(1,3-Dichloro-2-propyl) Phosphate	13674-87-8					1.6E+03	6.6E+03		1.3E+03
				1.0E-02	X						1.4E+09		1	0.1	Tris(1-chloro-2-propyl)phosphate	13674-84-5					7.8E+02	3.3E+03		6.3E+02
2.3E+00	C	6.6E-04	C					V		4.7E+02	1.4E+09	9.0E+05	1		Tris(2,3-dibromopropyl)phosphate	126-72-7	3.0E-01		3.8E+00	2.8E-01				
2.0E-02	P			7.0E-03	P						1.4E+09		1	0.1	Tris(2-chloroethyl)phosphate	115-96-8	3.5E+01	1.2E+02		2.7E+01	5.5E+02	2.3E+03		4.4E+02
3.2E-03	P			1.0E-01	P						1.4E+09		1	0.1	Tris(2-ethylhexyl)phosphate	78-42-2	2.2E+02	7.7E+02		1.7E+02	7.8E+03	3.3E+04		6.3E+03
				8.0E-04	P						1.4E+09		1		Tungsten	7440-33-7					6.3E+01			6.3E+01
				2.0E-04	A	4.0E-05	A				1.4E+09		1		Uranium (Soluble Salts)	E715565					1.6E+01		5.7E+04	1.6E+01
1.0E+00	C	2.9E-04	C						M		1.4E+09		1	0.1	Urethane	51-79-6	1.5E-01	6.0E-01	4.8E+03	1.2E-01				
		8.3E-03	P	9.0E-03	I	7.0E-06	P				1.4E+09		0.026		Vanadium Pentoxide	1314-62-1			4.6E+02	4.6E+02	7.0E+02		9.9E+03	6.6E+02
				5.0E-03	S	1.0E-04	A				1.4E+09		0.026		Vanadium and Compounds	7440-62-2					3.9E+02		1.4E+05	3.9E+02
				1.0E-03	I			V			1.4E+09	1.2E+05	1		Vernolate	1929-77-7					7.8E+01			7.8E+01
				1.2E-03	O						1.4E+09		1	0.1	Vinclozolin	50471-44-8					9.4E+01	4.0E+02		7.6E+01
				1.0E+00	H	2.0E-01	I	V		2.8E+03	1.4E+09	4.4E+03	1		Vinyl Acetate	108-05-4					7.8E+04		9.2E+02	9.1E+02
		3.2E-05	H			3.0E-03	I	V		2.5E+03	1.4E+09	1.4E+03	1		Vinyl Bromide	593-60-2			1.2E-01	1.2E-01			4.3E+00	4.3E+00
7.2E-01	I	4.4E-06	I	3.0E-03	I	1.0E-01	I	V	M	3.9E+03	1.4E+09	9.6E+02	1		Vinyl Chloride	75-01-4	9.4E-02		1.6E-01	5.9E-02	2.3E+02		1.0E+02	7.0E+01
				3.0E-04	I						1.4E+09		1	0.1	Warfarin	81-81-2					2.3E+01	9.9E+01		1.9E+01
				2.0E-01	S	1.0E-01	S	V		3.9E+02	1.4E+09	5.6E+03	1		Xylene, P-	106-42-3					1.6E+04		5.8E+02	5.6E+02
				2.0E-01	S	1.0E-01	S	V		3.9E+02	1.4E+09	5.5E+03	1		Xylene, m-	108-38-3					1.6E+04		5.7E+02	5.5E+02
				2.0E-01	S	1.0E-01	S	V		4.3E+02	1.4E+09	6.5E+03	1		Xylene, o-	95-47-6					1.6E+04		6.7E+02	6.5E+02
				2.0E-01	I	1.0E-01	I	V		2.6E+02	1.4E+09	5.7E+03	1		Xylenes	1330-20-7					1.6E+04		6.0E+02	5.8E+02
				3.0E-04	I						1.4E+09		1		Zinc Phosphide	1314-84-7					2.3E+01			2.3E+01
				3.0E-01	I						1.4E+09		1		Zinc and Compounds	7440-66-6					2.3E+04			2.3E+04
				5.0E-02	I						1.4E+09		1	0.1	Zineb	12122-67-7					3.9E+03	1.6E+04		3.2E+03
				8.0E-05	X						1.4E+09		1		Zirconium	7440-67-7					6.3E+00			6.3E+00

TR=1E-06 HQ=1.0

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Key: I = IRIS; P = PPRTV; D = DWSHA; O = OPP; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #29); H = HEAST; F = See FAQ; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information																Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Child Hazard Index (HI) = 0.1			
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	GIABS	ABS	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL Child THQ=0.1 (mg/kg)	Dermal SL Child THQ=0.1 (mg/kg)	Inhalation SL Child THQ=0.1 (mg/kg)	Noncarcinogenic SL Child THI=0.1 (mg/kg)
				1.2E-03	O						1.4E+09		1	0.1	Acephate	30560-19-1					9.4E+00	4.0E+01		7.6E+00
		2.2E-06	I			9.0E-03	I	V		1.1E+05	1.4E+09	8.7E+03	1		Acetaldehyde	75-07-0			1.1E+01	1.1E+01			8.2E+00	8.2E+00
				2.0E-02	I						1.4E+09		1	0.1	Acetochlor	34256-82-1					1.6E+02	6.6E+02		1.3E+02
				9.0E-01	I	3.1E+01	A	V		1.1E+05	1.4E+09	1.4E+04	1		Acetone	67-64-1					7.0E+03		4.4E+04	6.1E+03
						2.0E-03	X				1.4E+09		1	0.1	Acetone Cyanohydrin	75-86-5							2.8E+05	2.8E+05
						6.0E-02	I	V		1.3E+05	1.4E+09	1.3E+04	1		Acetonitrile	75-05-8							8.1E+01	8.1E+01
				1.0E-01	I			V		2.5E+03	1.4E+09	6.0E+04	1		Acetophenone	98-86-2					7.8E+02			7.8E+02
3.8E+00	C	1.3E-03	C								1.4E+09		1	0.1	Acetylaminofluorene, 2-	53-96-3	1.8E-01	6.5E-01	2.9E+03	1.4E-01				
				5.0E-04	I	2.0E-05	I	V		2.3E+04	1.4E+09	6.9E+03	1		Acrolein	107-02-8					3.9E+00		1.4E-02	1.4E-02
5.0E-01	I	1.0E-04	I	2.0E-03	I	6.0E-03	I		M		1.4E+09		1	0.1	Acrylamide	79-06-1	3.1E-01	1.2E+00	1.4E+04	2.4E-01	1.6E+01	6.6E+01	8.6E+05	1.3E+01
				5.0E-01	I	1.0E-03	I	V		1.1E+05	1.4E+09	9.5E+04	1		Acrylic Acid	79-10-7					3.9E+03		9.9E+00	9.9E+00
5.4E-01	I	6.8E-05	I	4.0E-02	A	2.0E-03	I	V		1.1E+04	1.4E+09	7.7E+03	1		Acrylonitrile	107-13-1	1.3E+00		3.2E-01	2.5E-01	3.1E+02		1.6E+00	1.6E+00
						6.0E-03	P				1.4E+09		1	0.1	Adiponitrile	111-69-3							8.5E+05	8.5E+05
5.6E-02	C			1.0E-02	I						1.4E+09		1	0.1	Alachlor	15972-60-8	1.2E+01	4.4E+01		9.7E+00	7.8E+01	3.3E+02		6.3E+01
				1.0E-03	I						1.4E+09		1	0.1	Aldicarb	116-06-3					7.8E+00	3.3E+01		6.3E+00
				1.0E-03	I						1.4E+09		1	0.1	Aldicarb Sulfone	1646-88-4					7.8E+00	3.3E+01		6.3E+00
											1.4E+09		1	0.1	Aldicarb sulfoxide	1646-87-3								
1.7E+01	I	4.9E-03	I	3.0E-05	I			V			1.4E+09	1.7E+06	1		Aldrin	309-00-2	4.1E-02		9.8E-01	3.9E-02	2.3E-01			2.3E-01
				5.0E-03	I	1.0E-04	X	V		1.1E+05	1.4E+09	3.4E+04	1		Allyl Alcohol	107-18-6					3.9E+01		3.6E-01	3.6E-01
2.1E-02	C	6.0E-06	C			1.0E-03	I	V		1.4E+03	1.4E+09	1.6E+03	1		Allyl Chloride	107-05-1	3.3E+01		7.4E-01	7.2E-01			1.7E-01	1.7E-01
				1.0E+00	P	5.0E-03	P				1.4E+09		1		Aluminum	7429-90-5					7.8E+03		7.1E+05	7.7E+03
				4.0E-04	I						1.4E+09		1		Aluminum Phosphide	20859-73-8					3.1E+00			3.1E+00
				9.0E-03	I						1.4E+09		1	0.1	Ametryn	834-12-8					7.0E+01	3.0E+02		5.7E+01
2.1E+01	C	6.0E-03	C								1.4E+09		1	0.1	Aminobiphenyl, 4-	92-67-1	3.3E-02	1.2E-01	6.4E+02	2.6E-02				
				8.0E-02	P						1.4E+09		1	0.1	Aminophenol, m-	591-27-5					6.3E+02	2.6E+03		5.1E+02
				4.0E-03	X						1.4E+09		1	0.1	Aminophenol, o-	95-55-6					3.1E+01	1.3E+02		2.5E+01
				2.0E-02	P						1.4E+09		1	0.1	Aminophenol, p-	123-30-8					1.6E+02	6.6E+02		1.3E+02
				2.5E-03	I						1.4E+09		1	0.1	Amitraz	33089-61-1					2.0E+01	8.2E+01		1.6E+01
						5.0E-01	I	V					1		Ammonia	7664-41-7								
				2.0E-01	I						1.4E+09		1		Ammonium Sulfamate	7773-06-0					1.6E+03			1.6E+03
						3.0E-03	X	V		1.4E+04	1.4E+09	2.6E+04	1		Amyl Alcohol, tert-	75-85-4							8.2E+00	8.2E+00
5.7E-03	I	1.6E-06	C	7.0E-03	P	1.0E-03	I				1.4E+09		1	0.1	Aniline	62-53-3	1.2E+02	4.3E+02	2.4E+06	9.5E+01	5.5E+01	2.3E+02	1.4E+05	4.4E+01
4.0E-02	P			2.0E-03	X						1.4E+09		1	0.1	Anthraquinone, 9,10-	84-65-1	1.7E+01	6.2E+01		1.4E+01	1.6E+01	6.6E+01		1.3E+01
				4.0E-04	I						1.4E+09		0.15		Antimony (metallic)	7440-36-0					3.1E+00			3.1E+00
				5.0E-04	H						1.4E+09		0.15		Antimony Pentoxide	1314-60-9					3.9E+00			3.9E+00
				4.0E-04	H						1.4E+09		0.15		Antimony Tetroxide	1332-81-6					3.1E+00			3.1E+00
						2.0E-04	I				1.4E+09		0.15		Antimony Trioxide	1309-64-4							2.8E+04	2.8E+04
1.5E+00	I	4.3E-03	I	3.0E-04	I	1.5E-05	C				1.4E+09		1	0.03	Arsenic, Inorganic	7440-38-2	7.7E-01	5.5E+00	8.9E+02	6.8E-01	3.9E+00	3.3E+01	2.1E+03	3.5E+00
				3.5E-06	C	5.0E-05	I				1.4E+09		1		Arsine	7784-42-1					2.7E-02		7.1E+03	2.7E-02
				3.6E-02	O						1.4E+09		1	0.1	Asulam	3337-71-1					2.8E+02	1.2E+03		2.3E+02
2.3E-01	C			3.5E-02	I						1.4E+09		1	0.1	Atrazine	1912-24-9	3.0E+00	1.1E+01		2.4E+00	2.7E+02	1.2E+03		2.2E+02
8.8E-01	C	2.5E-04	C								1.4E+09		1	0.1	Auramine	492-80-8	7.9E-01	2.8E+00	1.5E+04	6.2E-01				
				4.0E-04	I						1.4E+09		1	0.1	Avermectin B1	65195-55-3					3.1E+00	1.3E+01		2.5E+00
				3.0E-03	A	1.0E-02	A				1.4E+09		1	0.1	Azinphos-methyl	86-50-0					2.3E+01	9.9E+01	1.4E+06	1.9E+01
1.1E-01	I	3.1E-05	I					V			1.4E+09	5.2E+05	1		Azobenzene	103-33-3	6.3E+00		4.7E+01	5.6E+00				
				1.0E+00	P	7.0E-06	P				1.4E+09		1	0.1	Azodicarbonamide	123-77-3					7.8E+03	3.3E+04	9.9E+02	8.6E+02
				2.0E-01	I	5.0E-04	H				1.4E+09		0.07		Barium	7440-39-3					1.6E+03		7.1E+04	1.5E+03
5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M		1.4E+09		0.025		Barium Chromate	10294-40-3	3.1E-01		9.2E+00	3.0E-01	1.6E+02		2.6E+04	1.6E+02
				5.0E-03	O			V			1.4E+09	3.1E+05	1		Benfluralin	1861-40-1					3.9E+01			3.9E+01
				5.0E-02	I						1.4E+09		1	0.1	Benomyl	17804-35-2					3.9E+02	1.6E+03		3.2E+02
				2.0E-01	I						1.4E+09		1	0.1	Bensulfuron-methyl	83055-99-6					1.6E+03	6.6E+03		1.3E+03
				3.0E-02	I						1.4E+09		1	0.1	Bentazon	25057-89-0					2.3E+02	9.9E+02		1.9E+02
4.0E-03	P			1.0E-01	I			V		1.2E+03	1.4E+09	2.3E+04	1		Benzaldehyde	100-52-7	1.7E+02			1.7E+02	7.8E+02			7.8E+02
5.5E-02	I	7.8E-06	I	4.0E-03	I	3.0E-02	I	V		1.8E+03	1.4E+09	3.5E+03	1		Benzene	71-43-2	1.3E+01		1.3E+00	1.2E+00	3.1E+01		1.1E+01	8.2E+00
1.0E-01	X			3.0E-04	X						1.4E+09		1	0.1	Benzenediamine-2-methyl sulfate, 1,4-	6369-59-1	7.0E+00	2.5E+01		5.4E+00	2.3E+00	9.9E+00		1.9E+00
				1.0E-03	P			V		1.3E+03	1.4E+09	1.9E+04	1		Benzenethiol	108-98-5					7.8E+00			7.8E+00
2.3E+02	I	6.7E-02	I	3.0E-03	I				M		1.4E+09		1	0.1	Benzidine	92-87-5	6.7E-04	2.6E-03	2.1E+01	5.3E-04	2.3E+01	9.9E+01		1.9E+01
				4.0E+00	I						1.4E+09		1	0.1	Benzoic Acid	65-85-0					3.1E+04	1.3E+05		2.5E+04
1.3E+01	I							V		3.2E+02	1.4E+09	6.8E+04	1		Benzotrichloride	98-07-7	5.3E-02			5.3E-02				
				1.0E-01	P						1.4E+09		1	0.1	Benzyl Alcohol	100-51-6					7.8E+02	3.3E+03		6.3E+02
1.7E-01	I	4.9E-05	C	2.0E-03	P	1.0E-03	P	V		1.5E+03	1.4E+09	2.6E+04	1		Benzyl Chloride	100-44-7	4.1E+00		1.5E+00	1.1E+00	1.6E+01		2.7E+00	2.3E+00
		2.4E-03	I	2.0E-03	I	2.0E-05	I				1.4E+09		0.007		Beryllium and compounds	7440-41-7			1.6E+03	1.6E+03	1.6E+01		2.8E+03	1.6E+01
				9.0E-03	P						1.4E+09		1	0.1	Bifenox	42576-02-3					7.0E+01	3.0E+02		5.7E+01
				1.5E-02	I						1.4E+09		1	0.1	Biphenthrin	82657-04-3					1.2E+02	4.9E+02		9.5E+01
8.0E-03	I			5.0E-01	I	4.0E-04	X	V			1.4E+09	1.1E+05	1		Biphenyl, 1,1-	92-52-4	8.7E+01			8.7E+01	3.9E+03		4.8E+00	4.7E+00
				4.0E-02	I			V		1.0E+03	1.4E+09	3.5E+04	1		Bis(2-chloro-1-methylethyl) ether	108-60-1					3.1E+02			3.1E+02
				3.0E-03	P						1.4E+09		1	0.1	Bis(2-chloroethoxy)methane	111-91-1					2.3E+01	9.9E+01		1.9E+01
1.1E+00	I	3.3E-04	I					V		5.1E+03	1.4E+09	4.3E+04	1		Bis(2-chloroethyl)ether	111-44-4	6.3E-01		3.6E-01	2.3E-01				
2.2E+02	I	6.2E-02	I					V		4.2E+03	1.4E+09	1.9E+03	1		Bis(chloromethyl)ether	542-88-1	3.2E-03		8.5E-05	8.3E-05				
				5.0E-02	I						1.4E+09		1	0.1	Bisphenol A	80-05-7					3.9E+02	1.6E+03		3.2E+02
				2.0E-01	I	2.0E-02	H				1.4E+09		1		Boron And Borates Only	7440-42-8					1.6E+03		2.8E+06	1.6E+03
				2.0E+00	P	2.0E-02	P	V			1.4E+09		1		Boron Trichloride	10294-34-5					1.6E+04		2.8E+06	1.6E+04
				4.0E-02	C	1.3E-02	C	V			1.4E+09		1		Boron Trifluoride	7637-07-2					3.1E+02		1.8E+06	3.1E+02
7.0E-01	I			4.0E-03	I						1.4E+09		1		Bromate	15541-45-4	9.9E-01			9.9E-01	3.1E+01			3.1E+01
2.0E+00	X	6.0E-04	X					V		2.4E+03	1.4E+09	5.9E+03	1		Bromo-2-chloroethane, 1-	107-04-0	3.5E-01		2.8E-02	2.8E-02				

TR=1E-06
HQ=0.1

ED_002624_00006427-00165

Key: I = IRIS; P = PPRTV; D = DWSHA; O = OPP; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #29); H = HEAST; F = See FAQ; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Child Hazard Index (HI) = 0.1			
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	GIABS	ABS	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL Child THQ=0.1 (mg/kg)	Dermal SL Child THQ=0.1 (mg/kg)	Inhalation SL Child THQ=0.1 (mg/kg)	Noncarcinogenic SL Child THI=0.1 (mg/kg)
				8.0E-03	I	6.0E-02	I	V		6.8E+02	1.4E+09	8.4E+03	1		Bromobenzene	108-86-1					6.3E+01		5.2E+01	2.9E+01
						4.0E-02	X	V		4.0E+03	1.4E+09	3.6E+03	1		Bromochloromethane	74-97-5							1.5E+01	1.5E+01
6.2E-02	I	3.7E-05	C	2.0E-02	I			V		9.3E+02	1.4E+09	4.0E+03	1		Bromodichloromethane	75-27-4	1.1E+01		3.0E-01	2.9E-01	1.6E+02			1.6E+02
7.9E-03	I	1.1E-06	I	2.0E-02	I			V		9.2E+02	1.4E+09	9.7E+03	1		Bromoform	75-25-2	8.8E+01		2.5E+01	1.9E+01	1.6E+02			1.6E+02
				1.4E-03	I	5.0E-03	I	V		3.6E+03	1.4E+09	1.4E+03	1		Bromomethane	74-83-9					1.1E+01		7.3E-01	6.8E-01
				5.0E-03	H			V			1.4E+09	1.2E+05	1		Bromophos	2104-96-3					3.9E+01			3.9E+01
1.0E-01	O			1.5E-02	O						1.4E+09		1	0.1	Bromoxynil	1689-84-5	6.7E+00	2.4E+01		5.3E+00	1.2E+02	4.9E+02		9.5E+01
				1.5E-02	O			V			1.4E+09	4.7E+05	1		Bromoxynil Octanoate	1689-99-2					1.2E+02			1.2E+02
3.4E+00	C	3.0E-05	I			2.0E-03	I	V		6.7E+02	1.4E+09	8.7E+02	1		Butadiene, 1,3-	106-99-0	2.0E-01		8.1E-02	5.6E-02			1.8E-01	1.8E-01
				3.0E-02	O						1.4E+09		1	0.1	Butanoic acid, 4-(2,4-dichlorophenoxy)-	94-82-6					2.3E+02	9.9E+02		1.9E+02
				1.0E-01	I			V		7.6E+03	1.4E+09	3.0E+04	1		Butanol, N-	71-36-3					7.8E+02			7.8E+02
				2.0E+00	P	3.0E+01	P	V		2.1E+04	1.4E+09	2.9E+04	1		Butyl alcohol, sec-	78-92-2					1.6E+04		9.1E+04	1.3E+04
				5.0E-02	I			V			1.4E+09	8.6E+04	1		Butylate	2008-41-5					3.9E+02			3.9E+02
2.0E-04	C	5.7E-08	C								1.4E+09		1	0.1	Butylated hydroxyanisole	25013-16-5	3.5E+03	1.2E+04	6.7E+07	2.7E+03				
3.6E-03	P			3.0E-01	P						1.4E+09		1	0.1	Butylated hydroxytoluene	128-37-0	1.9E+02	6.9E+02		1.5E+02	2.3E+03	9.9E+03		1.9E+03
				5.0E-02	P			V		1.1E+02	1.4E+09	8.1E+03	1		Butylbenzene, n-	104-51-8					3.9E+02			3.9E+02
				1.0E-01	X			V		1.5E+02	1.4E+09	7.4E+03	1		Butylbenzene, sec-	135-98-8					7.8E+02			7.8E+02
				1.0E-01	X			V		1.8E+02	1.4E+09	7.4E+03	1		Butylbenzene, tert-	98-06-6					7.8E+02			7.8E+02
				2.0E-02	A						1.4E+09		1	0.1	Cacodylic Acid	75-60-5					1.6E+02	6.6E+02		1.3E+02
		1.8E-03	I	1.0E-03	I	1.0E-05	A				1.4E+09		0.025	0.001	Cadmium (Diet)	7440-43-9			2.1E+03	2.1E+03	7.8E+00	8.2E+01	1.4E+03	7.1E+00
		1.8E-03	I	5.0E-04	I	1.0E-05	A						0.05	0.001	Cadmium (Water)	7440-43-9								
5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M		1.4E+09		0.025		Calcium Chromate	13765-19-0	3.1E-01		9.2E+00	3.0E-01	1.6E+02		2.8E+04	1.6E+02
				5.0E-01	I	2.2E-03	C				1.4E+09		1	0.1	Caprolactam	105-60-2					3.9E+03	1.6E+04	3.1E+05	3.1E+03
1.5E-01	C	4.3E-05	C	2.0E-03	I						1.4E+09		1	0.1	Captafol	2425-06-1	4.6E+00	1.6E+01	8.9E+04	3.6E+00	1.6E+01	6.6E+01		1.3E+01
2.3E-03	C	6.6E-07	C	1.3E-01	I						1.4E+09		1	0.1	Captan	133-06-2	3.0E+02	1.1E+03	5.8E+06	2.4E+02	1.0E+03	4.3E+03		8.2E+02
				1.0E-01	I						1.4E+09		1	0.1	Carbaryl	63-25-2					7.8E+02	3.3E+03		6.3E+02
				5.0E-03	I						1.4E+09		1	0.1	Carbofuran	1563-66-2					3.9E+01	1.6E+02		3.2E+01
				1.0E-01	I	7.0E-01	I	V		7.4E+02	1.4E+09	1.2E+03	1		Carbon Disulfide	75-15-0					7.8E+02		8.5E+01	7.7E+01
7.0E-02	I	6.0E-06	I	4.0E-03	I	1.0E-01	I	V		4.6E+02	1.4E+09	1.5E+03	1		Carbon Tetrachloride	56-23-5	9.9E+00		7.0E-01	6.5E-01	3.1E+01		1.6E+01	1.0E+01
						1.0E-01	P	V		5.9E+03	1.4E+09	6.5E+02	1		Carbonyl Sulfide	463-58-1							6.7E+00	6.7E+00
				1.0E-02	I						1.4E+09		1	0.1	Carbosulfan	55285-14-8					7.8E+01	3.3E+02		6.3E+01
				1.0E-01	I						1.4E+09		1	0.1	Carboxin	5234-68-4					7.8E+02	3.3E+03		6.3E+02
						9.0E-04	I				1.4E+09		1		Ceric oxide	1306-38-3							1.3E+05	1.3E+05
				1.0E-01	I			V			1.4E+09	1.5E+05	1		Chloral Hydrate	302-17-0					7.8E+02			7.8E+02
				1.5E-02	I						1.4E+09		1	0.1	Chloramben	133-90-4					1.2E+02	4.9E+02		9.5E+01
4.0E-01	H										1.4E+09		1	0.1	Chloranil	118-75-2	1.7E+00	6.1E+00		1.3E+00				
3.5E-01	I	1.0E-04	I	5.0E-04	I	7.0E-04	I	V			1.4E+09	1.5E+06	1	0.04	Chlordane	12789-03-6	2.0E+00	1.8E+01	4.3E+01	1.7E+00	3.9E+00	4.1E+01	1.1E+02	3.5E+00
1.0E+01	I	4.6E-03	C	3.0E-04	I						1.4E+09		1	0.1	Chlordecone (Kepone)	143-50-0	7.0E-02	2.5E-01	8.3E+02	5.4E-02	2.3E+00	9.9E+00		1.9E+00
				7.0E-04	A						1.4E+09		1	0.1	Chlorfenvinphos	470-90-6					5.5E+00	2.3E+01		4.4E+00
				9.0E-02	O						1.4E+09		1	0.1	Chlorimuron, Ethyl-	90982-32-4					7.0E+02	3.0E+03		5.7E+02
				1.0E-01	I	1.5E-04	A	V		2.8E+03	1.4E+09	1.2E+03	1		Chlorine	7782-50-5					7.8E+02		1.8E-02	1.8E-02
				3.0E-02	I	2.0E-04	I	V			1.4E+09		1		Chlorine Dioxide	10049-04-4					2.3E+02		2.8E+04	2.3E+02
				3.0E-02	I						1.4E+09		1		Chlorite (Sodium Salt)	7758-19-2					2.3E+02			2.3E+02
						5.0E+01	I	V		1.2E+03	1.4E+09	1.0E+03	1		Chloro-1,1-difluoroethane, 1-	75-68-3							5.4E+03	5.4E+03
		3.0E-04	I	2.0E-02	H	2.0E-02	I	V		7.9E+02	1.4E+09	1.1E+03	1		Chloro-1,3-butadiene, 2-	126-99-8			1.0E-02	1.0E-02	1.6E+02		2.2E+00	2.2E+00
4.6E-01	H										1.4E+09		1	0.1	Chloro-2-methylaniline HCl, 4-	3165-93-3	1.5E+00	5.4E+00		1.2E+00				
1.0E-01	P	7.7E-05	C	3.0E-03	X						1.4E+09		1	0.1	Chloro-2-methylaniline, 4-	95-69-2	7.0E+00	2.5E+01	5.0E+04	5.4E+00	2.3E+01	9.9E+01		1.9E+01
2.7E-01	X							V		1.2E+04	1.4E+09	1.6E+04	1		Chloroacetaldehyde, 2-	107-20-0	2.6E+00			2.6E+00				
											1.4E+09		1	0.1	Chloroacetic Acid	79-11-8								
						3.0E-05	I				1.4E+09		1	0.1	Chloroacetophenone, 2-	532-27-4							4.3E+03	4.3E+03
2.0E-01	P			4.0E-03	I						1.4E+09		1	0.1	Chloroaniline, p-	106-47-8	3.5E+00	1.2E+01		2.7E+00	3.1E+01	1.3E+02		2.5E+01
				2.0E-02	I	5.0E-02	P	V		7.6E+02	1.4E+09	6.5E+03	1		Chlorobenzene	108-90-7					1.6E+02		3.4E+01	2.8E+01
				1.0E-01	X						1.4E+09		1	0.1	Chlorobenzene sulfonic acid, p-	98-66-8					7.8E+02	3.3E+03		6.3E+02
1.1E-01	C	3.1E-05	C	2.0E-02	I						1.4E+09		1	0.1	Chlorobenzilate	510-15-6	6.3E+00	2.2E+01	1.2E+05	4.9E+00	1.6E+02	6.6E+02		1.3E+02
				3.0E-02	X						1.4E+09		1	0.1	Chlorobenzoic Acid, p-	74-11-3					2.3E+02	9.9E+02		1.9E+02
				3.0E-03	P	3.0E-01	P	V		2.9E+02	1.4E+09	6.8E+03	1		Chlorobenzotrifluoride, 4-	98-56-6					2.3E+01		2.1E+02	2.1E+01
				4.0E-02	P			V		7.3E+02	1.4E+09	1.8E+03	1		Chlorobutane, 1-	109-69-3					3.1E+02			3.1E+02
						5.0E+01	I	V		1.7E+03	1.4E+09	9.4E+02	1		Chlorodifluoromethane	75-45-6							4.9E+03	4.9E+03
				2.0E-02	P			V		1.1E+05	1.4E+09	7.8E+04	1		Chloroethanol, 2-	107-07-3					1.6E+02			1.6E+02
3.1E-02	C	2.3E-05	I	1.0E-02	I	9.8E-02	A	V		2.5E+03	1.4E+09	2.6E+03	1		Chloroform	67-66-3	2.2E+01		3.2E-01	3.2E-01	7.8E+01		2.7E+01	2.0E+01
						9.0E-02	I	V		1.3E+03	1.4E+09	1.2E+03	1		Chloromethane	74-87-3							1.1E+01	1.1E+01
2.4E+00	C	6.9E-04	C					V		9.3E+03	1.4E+09	5.3E+03	1		Chloromethyl Methyl Ether	107-30-2	2.9E-01		2.2E-02	2.0E-02				
3.0E-01	P			3.0E-03	P	1.0E-05	X				1.4E+09		1	0.1	Chloronitrobenzene, o-	88-73-3	2.3E+00	8.2E+00		1.8E+00	2.3E+01	9.9E+01	1.4E+03	1.9E+01
6.0E-02	P			7.0E-04	P	2.0E-03	P				1.4E+09		1	0.1	Chloronitrobenzene, p-	100-00-5	1.2E+01	4.1E+01		9.0E+00	5.5E+00	2.3E+01	2.6E+05	4.4E+00
				5.0E-03	I			V		2.7E+04	1.4E+09	1.4E+05	1		Chlorophenol, 2-	95-57-8					3.9E+01			3.9E+01
						4.0E-04	C	V		6.2E+02	1.4E+09	4.7E+03	1		Chloropicrin	76-06-2							2.0E-01	2.0E-01
3.1E-03	C	8.9E-07	C	1.5E-02	I						1.4E+09		1	0.1	Chlorothalonil	1897-45-6	2.2E+02	8.0E+02	4.3E+06	1.8E+02	1.2E+02	4.9E+02		9.5E+01
				2.0E-02	I			V		9.1E+02	1.4E+09	8.1E+03	1		Chlorotoluene, o-	95-49-8					1.6E+02			1.6E+02
				2.0E-02	X			V		2.5E+02	1.4E+09	7.3E+03	1		Chlorotoluene, p-	106-43-4					1.6E+02			1.6E+02
2.4E+02	C	6.9E-02	C								1.4E+09		1	0.1	Chlorozotocin	54749-90-5	2.9E-03	1.0E-02	5.5E+01	2.3E-03				
				5.0E-02	O						1.4E+09		1	0.1	Chlorpropham	101-21-3					3.9E+02	1.6E+03		3.2E+02
				1.0E-03	A						1.4E+09		1	0.1	Chlorpyrifos	2921-88-2					7.8E+00	3.3E+01		6.3E+00
				1.0E-02	H						1.4E+09		1	0.1	Chlorpyrifos Methyl	5598-13-0					7.8E+01	3.3E+02		6.3E+01
				2.0E-02	O						1.4E+09		1	0.1	Chlorsulfuron	64902-72-3					1.6E+02	6.6E+02		1.3E+02
				1.0E-02	I						1.4E+09		1	0.1	Chlorthal-dimethyl	1861-32-1					7.8E+01	3.3E+02		6.3E+01

TR=1E-06
HQ=0.1

ED_002624_00006427-00166

Key: I = IRIS; P = PPRTV; D = DWSHA; O = OPP; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #29); H = HEAST; F = See FAQ; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information																Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Child Hazard Index (HI) = 0.1			
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	GIABS	ABS	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL Child THQ=0.1 (mg/kg)	Dermal SL Child THQ=0.1 (mg/kg)	Inhalation SL Child THQ=0.1 (mg/kg)	Noncarcinogenic SL Child THI=0.1 (mg/kg)
				8.0E-04	H						1.4E+09		1	0.1	Chlorthiophos	60238-56-4					6.3E+00	2.6E+01		5.1E+00
				1.5E+00	I						1.4E+09		0.013		Chromium(III), Insoluble Salts	16065-83-1					1.2E+04			1.2E+04
5.0E-01	C	8.4E-02	S	3.0E-03	I	1.0E-04	I		M		1.4E+09		0.025		Chromium(VI)	18540-29-9	3.1E-01		1.6E+01	3.0E-01	2.3E+01		1.4E+04	2.3E+01
											1.4E+09		0.013		Chromium, Total	7440-47-3								
				1.3E-02	I						1.4E+09		1	0.1	Clofentezine	74115-24-5					1.0E+02	4.3E+02		8.2E+01
		9.0E-03	P	3.0E-04	P	6.0E-06	P				1.4E+09		1		Cobalt	7440-48-4			4.2E+02	4.2E+02	2.3E+00		8.5E+02	2.3E+00
		6.2E-04	I					V	M				1		Coke Oven Emissions	8007-45-2								
				4.0E-02	H						1.4E+09		1		Copper	7440-50-8					3.1E+02			3.1E+02
				5.0E-02	I	6.0E-01	C				1.4E+09		1	0.1	Cresol, m-	108-39-4					3.9E+02	1.6E+03	8.5E+07	3.2E+02
				5.0E-02	I	6.0E-01	C				1.4E+09		1	0.1	Cresol, o-	95-48-7					3.9E+02	1.6E+03	8.5E+07	3.2E+02
				1.0E-01	A	6.0E-01	C				1.4E+09		1	0.1	Cresol, p-	106-44-5					7.8E+02	3.3E+03	8.5E+07	6.3E+02
				1.0E-01	A						1.4E+09		1	0.1	Cresol, p-chloro-m-	59-50-7					7.8E+02	3.3E+03		6.3E+02
				1.0E-01	A	6.0E-01	C				1.4E+09		1	0.1	Cresols	1319-77-3					7.8E+02	3.3E+03	8.5E+07	6.3E+02
1.9E+00	H			1.0E-03	P			V		1.7E+04	1.4E+09	1.9E+04	1		Crotonaldehyde, trans-	123-73-9	3.7E-01			3.7E-01	7.8E+00			7.8E+00
				1.0E-01	I	4.0E-01	I	V		2.7E+02	1.4E+09	6.2E+03	1		Cumene	98-82-8					7.8E+02		2.6E+02	1.9E+02
2.2E-01	C	6.3E-05	C								1.4E+09		1	0.1	Cupferron	135-20-6	3.2E+00	1.1E+01	6.1E+04	2.5E+00				
8.4E-01	H			2.0E-03	H						1.4E+09		1	0.1	Cyanazine	21725-46-2	6.3E-01	2.9E+00		6.5E-01	1.6E+01	6.6E+01		1.3E+01
															Cyanides									
				1.0E-03	I						1.4E+09		1		~Calcium Cyanide	592-01-6					7.8E+00			7.8E+00
				5.0E-03	I						1.4E+09		1		~Copper Cyanide	544-92-3					3.9E+01			3.9E+01
				6.0E-04	I	8.0E-04	S	V		9.5E+05	1.4E+09	5.3E+04	1		~Cyanide (CN-)	57-12-5					4.7E+00		4.4E+00	2.3E+00
				1.0E-03	I			V			1.4E+09		1		~Cyanogen	460-19-5					7.8E+00			7.8E+00
				9.0E-02	I			V			1.4E+09		1		~Cyanogen Bromide	506-68-3					7.0E+02			7.0E+02
				5.0E-02	I			V			1.4E+09		1		~Cyanogen Chloride	506-77-4					3.9E+02			3.9E+02
				6.0E-04	I	8.0E-04	I	V		1.0E+07	1.4E+09	5.2E+04	1		~Hydrogen Cyanide	74-90-8					4.7E+00		4.4E+00	2.3E+00
				2.0E-03	I						1.4E+09		1		~Potassium Cyanide	151-50-8					1.6E+01			1.6E+01
				5.0E-03	I						1.4E+09		0.04		~Potassium Silver Cyanide	506-61-6					3.9E+01			3.9E+01
				1.0E-01	I						1.4E+09		0.04		~Silver Cyanide	506-64-9					7.8E+02			7.8E+02
				1.0E-03	I						1.4E+09		1		~Sodium Cyanide	143-33-9					7.8E+00			7.8E+00
				2.0E-04	P						1.4E+09		1		~Thiocyanates	E1790664					1.6E+00			1.6E+00
				2.0E-04	X			V			1.4E+09		1		~Thiocyanic Acid	463-56-9					1.6E+00			1.6E+00
				5.0E-02	I						1.4E+09		1		~Zinc Cyanide	557-21-1					3.9E+02			3.9E+02
						6.0E+00	I	V		1.2E+02	1.4E+09	1.0E+03	1		Cyclohexane	110-82-7							6.5E+02	6.5E+02
2.0E-02	X			2.0E-02	X						1.4E+09		1	0.1	Cyclohexane, 1,2,3,4,5-pentabromo-6-chloro-	87-84-3	3.5E+01	1.2E+02		2.7E+01	1.6E+02	6.6E+02		1.3E+02
				5.0E+00	I	7.0E-01	P	V		5.1E+03	1.4E+09	4.2E+04	1		Cyclohexanone	108-94-1					3.9E+04		3.0E+03	2.8E+03
				5.0E-03	P	1.0E+00	X	V		2.8E+02	1.4E+09	1.5E+03	1		Cyclohexene	110-83-8					3.9E+01		1.5E+02	3.1E+01
				2.0E-01	I			V		2.9E+05	1.4E+09	7.5E+04	1		Cyclohexylamine	108-91-8					1.6E+03			1.6E+03
				2.5E-02	I						1.4E+09		1	0.1	Cyfluthrin	68359-37-5					2.0E+02	8.2E+02		1.6E+02
				1.0E-03	O						1.4E+09		1	0.1	Cyhalothrin	68085-85-8					7.8E+00	3.3E+01		6.3E+00
				6.0E-02	O						1.4E+09		1	0.1	Cypermethrin	52315-07-8					4.7E+02	2.0E+03		3.8E+02
				1.5E-02	O						1.4E+09		1	0.1	Cyromazine	66215-27-8					1.2E+02	4.9E+02		9.5E+01
2.4E-01	I	6.9E-05	C								1.4E+09		1	0.1	DDD	72-54-8	2.9E+00	1.0E+01	5.5E+04	2.3E+00				
3.4E-01	I	9.7E-05	C					V			1.4E+09	2.1E+06	1		DDE, p,p'-	72-55-9	2.0E+00		6.1E+01	2.0E+00				
3.4E-01	I	9.7E-05	I	5.0E-04	I						1.4E+09		1	0.03	DDT	50-29-3	2.0E+00	2.4E+01	3.9E+04	1.9E+00	3.9E+00	5.5E+01		3.7E+00
				3.0E-02	I						1.4E+09		1	0.1	Dalapon	75-99-0					2.3E+02	9.9E+02		1.9E+02
1.8E-02	C	5.1E-06	C	1.5E-01	I						1.4E+09		1	0.1	Daminozide	1596-84-5	3.9E+01	1.4E+02	7.5E+05	3.0E+01	1.2E+03	4.9E+03		9.5E+02
7.0E-04	I			7.0E-03	I						1.4E+09		1	0.1	Decabromodiphenyl ether, 2,2',3,3',4,4',5,5',6,6'- (BDE-209)	1163-19-5	9.9E+02	3.5E+03		7.8E+02	5.5E+01	2.3E+02		4.4E+01
				4.0E-05	I						1.4E+09		1	0.1	Demeton	8065-48-3					3.1E-01	1.3E+00		2.5E-01
1.2E-03	I			6.0E-01	I						1.4E+09		1	0.1	Di(2-ethylhexyl)adipate	103-23-1	5.8E+02	2.1E+03		4.5E+02	4.7E+03	2.0E+04		3.8E+03
6.1E-02	H										1.4E+09		1	0.1	Diallate	2303-16-4	1.1E+01	4.1E+01		8.9E+00				
				7.0E-04	A						1.4E+09		1	0.1	Diazinon	333-41-5					5.5E+00	2.3E+01		4.4E+00
				1.0E-02	X			V			1.4E+09	5.2E+05	1		Dibenzothiophene	132-65-0					7.8E+01			7.8E+01
8.0E-01	P	6.0E-03	P	2.0E-04	P	2.0E-04	I	V	M	9.8E+02	1.4E+09	3.2E+04	1		Dibromo-3-chloropropane, 1,2-	96-12-8	1.9E-01		5.4E-03	5.3E-03	1.6E+00		6.7E-01	4.7E-01
				4.0E-04	X			V		1.6E+02	1.4E+09	1.9E+04	1		Dibromobenzene, 1,3-	108-36-1					3.1E+00			3.1E+00
				1.0E-02	I			V			1.4E+09	2.2E+04	1		Dibromobenzene, 1,4-	106-37-6					7.8E+01			7.8E+01
8.4E-02	I			2.0E-02	I			V		8.0E+02	1.4E+09	8.0E+03	1		Dibromochloromethane	124-48-1	8.3E+00			8.3E+00	1.6E+02			1.6E+02
2.0E+00	I	6.0E-04	I	9.0E-03	I	9.0E-03	I	V		1.3E+03	1.4E+09	8.6E+03	1		Dibromoethane, 1,2-	106-93-4	3.5E-01		4.0E-02	3.6E-02	7.0E+01		8.1E+00	7.3E+00
						4.0E-03	X	V		2.8E+03	1.4E+09	5.6E+03	1		Dibromomethane (Methylene Bromide)	74-95-3							2.4E+00	2.4E+00
				3.0E-04	P						1.4E+09		1	0.1	Dibutyltin Compounds	E1790660					2.3E+00	9.9E+00		1.9E+00
				3.0E-02	I						1.4E+09		1	0.1	Dicamba	1918-00-9					2.3E+02	9.9E+02		1.9E+02
		4.2E-03	P					V		5.5E+02	1.4E+09	3.2E+03	1		Dichloro-2-butene, 1,4-	764-41-0			2.1E-03	2.1E-03				
		4.2E-03	P					V		5.2E+02	1.4E+09	1.1E+04	1		Dichloro-2-butene, cis-1,4-	1476-11-5			7.4E-03	7.4E-03				
		4.2E-03	P					V		7.6E+02	1.4E+09	1.1E+04	1		Dichloro-2-butene, trans-1,4-	110-57-6			7.4E-03	7.4E-03				
5.0E-02	I			4.0E-03	I						1.4E+09		1	0.1	Dichloroacetic Acid	79-43-6	1.4E+01	4.9E+01		1.1E+01	3.1E+01	1.3E+02		2.5E+01
				9.0E-02	I	2.0E-01	H	V		3.8E+02	1.4E+09	1.2E+04	1		Dichlorobenzene, 1,2-	95-50-1					7.0E+02		2.4E+02	1.8E+02
5.4E-03	C	1.1E-05	C	7.0E-02	A	8.0E-01	I	V			1.4E+09	1.0E+04	1		Dichlorobenzene, 1,4-	106-46-7	1.3E+02		2.7E+00	2.6E+00	5.5E+02		8.7E+02	3.4E+02
4.5E-01	I	3.4E-04	C								1.4E+09		1	0.1	Dichlorobenzidine, 3,3'-	91-94-1	1.5E+00	5.5E+00	1.1E+04	1.2E+00				
				9.0E-03	X						1.4E+09		1	0.1	Dichlorobenzophenone, 4,4'-	90-98-2					7.0E+01	3.0E+02		5.7E+01
				2.0E-01	I	1.0E-01	X	V		8.5E+02	1.4E+09	8.4E+02	1		Dichlorodifluoromethane	75-71-8					1.6E+03		8.8E+00	8.7E+00
5.7E-03	C	1.6E-06	C	2.0E-01	P			V		1.7E+03	1.4E+09	2.1E+03	1		Dichloroethane, 1,1-	75-34-3	1.2E+02		3.7E+00	3.6E+00	1.6E+03			1.6E+03
9.1E-02	I	2.6E-05	I	6.0E-03	X	7.0E-03	P	V		3.0E+03	1.4E+09	4.6E+03	1		Dichloroethane, 1,2-	107-06-2	7.6E+00		4.9E-01	4.6E-01	4.7E+01		3.3E+00	3.1E+00
				5.0E-02	I	2.0E-01	I	V		1.2E+03	1.4E+09	1.2E+03	1		Dichloroethylene, 1,1-	75-35-4					3.9E+02		2.4E+01	2.3E+01
				2.0E-03	I			V		2.4E+03	1.4E+09	2.5E+03	1		Dichloroethylene, 1,2-cis-	156-59-2					1.6E+01			1.6E+01
				2.0E-02	I			V		1.9E+03	1.4E+09	1.8E+03	1		Dichloroethylene, 1,2-trans-	156-60-5					1.6E+02			1.6E+02
				3.0E-03	I						1.4E+09		1	0.1	Dichlorophenol, 2,4-	120-83-2					2.3E+01	9.9E+01		1.9E+01

TR=1E-06
THQ=0.1

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Key: I = IRIS; P = PPRTV; D = DWSHA; O = OPP; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #29); H = HEAST; F = See FAQ; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Child Hazard Index (HI) = 0.1			
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	GIABS	ABS	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL Child THQ=0.1 (mg/kg)	Dermal SL Child THQ=0.1 (mg/kg)	Inhalation SL Child THQ=0.1 (mg/kg)	Noncarcinogenic SL Child THI=0.1 (mg/kg)
				1.0E-02	I						1.4E+09		1	0.05	Dichlorophenoxy Acetic Acid, 2,4-	94-75-7					7.8E+01	6.6E+02		7.0E+01
3.7E-02	P	3.7E-05	P	4.0E-02	P	4.0E-03	I	V		1.4E+03	1.4E+09	3.8E+03	1		Dichloropropane, 1,2-	78-87-5	1.9E+01		2.9E-01	2.8E-01	3.1E+02		1.6E+00	1.6E+00
				2.0E-02	P			V		1.5E+03	1.4E+09	6.8E+03	1		Dichloropropane, 1,3-	142-28-9					1.6E+02			1.6E+02
				3.0E-03	I						1.4E+09		1	0.1	Dichloropropanol, 2,3-	616-23-9					2.3E+01	9.9E+01		1.9E+01
1.0E-01	I	4.0E-06	I	3.0E-02	I	2.0E-02	I	V		1.6E+03	1.4E+09	3.6E+03	1		Dichloropropene, 1,3-	542-75-6	7.0E+00		2.5E+00	1.8E+00	2.3E+02		7.4E+00	7.2E+00
2.9E-01	I	8.3E-05	C	5.0E-04	I	5.0E-04	I				1.4E+09		1	0.1	Dichlorvos	62-73-7	2.4E+00	8.5E+00	4.6E+04	1.9E+00	3.9E+00	1.6E+01	7.1E+04	3.2E+00
				7.0E-05	O						1.4E+09		1	0.1	Dicrotophos	141-66-2					5.5E-01	2.3E+00		4.4E-01
				8.0E-02	P	3.0E-04	X	V		2.6E+02	1.4E+09	4.1E+03	1		Dicyclopentadiene	77-73-6					6.3E+02		1.3E-01	1.3E-01
1.6E+01	I	4.6E-03	I	5.0E-05	I						1.4E+09		1	0.1	Dieldrin	60-57-1	4.3E-02	1.5E-01	8.3E+02	3.4E-02	3.9E-01	1.6E+00		3.2E-01
		3.0E-04	C			5.0E-03	I						1	0.1	Diesel Engine Exhaust	E1713661 5								
				2.0E-03	P	2.0E-04	P				1.4E+09		1	0.1	Diethanolamine	111-42-2					1.6E+01	6.6E+01	2.8E+04	1.3E+01
				3.0E-02	P	1.0E-04	P				1.4E+09		1	0.1	Diethylene Glycol Monobutyl Ether	112-34-5					2.3E+02	9.9E+02	1.4E+04	1.9E+02
				6.0E-02	P	3.0E-04	P				1.4E+09		1	0.1	Diethylene Glycol Monoethyl Ether	111-90-0					4.7E+02	2.0E+03	4.3E+04	3.8E+02
				1.0E-03	P			V		1.1E+05	1.4E+09	1.4E+05	1		Diethylformamide	617-84-5					7.8E+00			7.8E+00
3.5E+02	C	1.0E-01	C								1.4E+09		1	0.1	Diethylstilbestrol	56-53-1	2.0E-03	7.1E-03	3.8E+01	1.6E-03				
				8.3E-02	O						1.4E+09		1	0.1	Difenzoquat	43222-48-6					6.5E+02	2.7E+03		5.2E+02
				2.0E-02	I						1.4E+09		1	0.1	Diflubenzuron	35367-38-5					1.6E+02	6.6E+02		1.3E+02
						4.0E+01	I	V		1.4E+03	1.4E+09	1.2E+03	1		Difluoroethane, 1,1-	75-37-6							4.8E+03	4.8E+03
4.4E-02	C	1.3E-05	C					V			1.4E+09	1.2E+05	1		Dihydrosafrole	94-58-6	1.6E+01		2.7E+01	9.9E+00				
						7.0E-01	P	V		2.3E+03	1.4E+09	3.1E+03	1		Diisopropyl Ether	108-20-3							2.2E+02	2.2E+02
				8.0E-02	I			V		5.3E+02	1.4E+09	3.8E+04	1		Diisopropyl Methylphosphonate	1445-75-6					6.3E+02			6.3E+02
				2.2E-02	O						1.4E+09		1	0.1	Dimethipin	55290-64-7					1.7E+02	7.2E+02		1.4E+02
				2.2E-03	O						1.4E+09		1	0.1	Dimethoate	60-51-5					1.7E+01	7.3E+01		1.4E+01
1.6E+00	P										1.4E+09		1	0.1	Dimethoxybenzidine, 3,3'-	119-90-4	4.3E-01	1.5E+00		3.4E-01				
1.7E-03	P			6.0E-02	P						1.4E+09		1	0.1	Dimethyl methylphosphonate	756-79-6	4.1E+02	1.5E+03		3.2E+02	4.7E+02	2.0E+03		3.8E+02
4.6E+00	C	1.3E-03	C								1.4E+09		1	0.1	Dimethylamino azobenzene [p-]	60-11-7	1.5E-01	5.4E-01	2.9E+03	1.2E-01				
5.8E-01	H										1.4E+09		1	0.1	Dimethylaniline HCl, 2,4-	21436-96-4	1.2E+00	4.3E+00		9.4E-01				
2.0E-01	P			2.0E-03	X						1.4E+09		1	0.1	Dimethylaniline, 2,4-	95-68-1	3.5E+00	1.2E+01		2.7E+00	1.6E+01	6.6E+01		1.3E+01
2.7E-02	P			2.0E-03	I			V		8.3E+02	1.4E+09	3.1E+04	1		Dimethylaniline, N,N-	121-69-7	2.6E+01			2.6E+01	1.6E+01			1.6E+01
1.1E+01	P										1.4E+09		1	0.1	Dimethylbenzidine, 3,3'-	119-93-7	6.3E-02	2.2E-01		4.9E-02				
				1.0E-01	P	3.0E-02	I	V		1.1E+05	1.4E+09	1.3E+05	1		Dimethylformamide	68-12-2					7.8E+02		4.0E+02	2.8E+02
				1.0E-04	X	2.0E-06	X	V		1.7E+05	1.4E+09	2.8E+04	1		Dimethylhydrazine, 1,1-	57-14-7					7.8E-01		5.8E-03	5.7E-03
5.5E+02	C	1.6E-01	C					V		1.9E+05	1.4E+09	1.7E+05	1		Dimethylhydrazine, 1,2-	540-73-8	1.3E-03		2.9E-03	6.8E-04				
				2.0E-02	I						1.4E+09		1	0.1	Dimethylphenol, 2,4-	105-67-9					1.6E+02	6.6E+02		1.3E+02
				6.0E-04	I						1.4E+09		1	0.1	Dimethylphenol, 2,6-	576-26-1					4.7E+00	2.0E+01		3.8E+00
				1.0E-03	I						1.4E+09		1	0.1	Dimethylphenol, 3,4-	95-65-8					7.8E+00	3.3E+01		6.3E+00
4.5E-02	C	1.3E-05	C					V		4.7E+02	1.4E+09	5.5E+03	1		Dimethylvinylchloride	513-37-1	1.5E+01		1.2E+00	1.1E+00				
				8.0E-05	X						1.4E+09		1	0.1	Dinitro-o-cresol, 4,6-	534-52-1					6.3E-01	2.6E+00		5.1E-01
				2.0E-03	I						1.4E+09		1	0.1	Dinitro-o-cyclohexyl Phenol, 4,6-	131-89-5					1.6E+01	6.6E+01		1.3E+01
				1.0E-04	P						1.4E+09		1	0.1	Dinitrobenzene, 1,2-	528-29-0					7.8E-01	3.3E+00		6.3E-01
				1.0E-04	I						1.4E+09		1	0.1	Dinitrobenzene, 1,3-	99-65-0					7.8E-01	3.3E+00		6.3E-01
				1.0E-04	P						1.4E+09		1	0.1	Dinitrobenzene, 1,4-	100-25-4					7.8E-01	3.3E+00		6.3E-01
				2.0E-03	I						1.4E+09		1	0.1	Dinitrophenol, 2,4-	51-28-5					1.6E+01	6.6E+01		1.3E+01
6.8E-01	I										1.4E+09		1	0.1	Dinitrotoluene Mixture, 2,4/2,6-	E1615210	1.0E+00	3.6E+00		8.0E-01				
3.1E-01	C	8.9E-05	C	2.0E-03	I						1.4E+09		1	0.102	Dinitrotoluene, 2,4-	121-14-2	2.2E+00	7.8E+00	4.3E+04	1.7E+00	1.6E+01	6.5E+01		1.3E+01
1.5E+00	P			3.0E-04	X						1.4E+09		1	0.099	Dinitrotoluene, 2,6-	606-20-2	4.8E-01	1.7E+00		3.6E-01	2.3E+00	1.0E+01		1.9E+00
				2.0E-03	S						1.4E+09		1	0.006	Dinitrotoluene, 2-Amino-4,6-	35572-78-2					1.6E+01	1.1E+03		1.5E+01
				2.0E-03	S						1.4E+09		1	0.009	Dinitrotoluene, 4-Amino-2,6-	19406-51-0					1.6E+01	7.3E+02		1.5E+01
4.5E-01	X			9.0E-04	X						1.4E+09		1	0.1	Dinitrotoluene, Technical grade	25321-14-6	1.5E+00	5.5E+00		1.2E+00	7.0E+00	3.0E+01		5.7E+00
				1.0E-03	I						1.4E+09		1	0.1	Dinoseb	88-85-7					7.8E+00	3.3E+01		6.3E+00
1.0E-01	I	5.0E-06	I	3.0E-02	I	3.0E-02	I	V		1.2E+05	1.4E+09	4.0E+04	1		Dioxane, 1,4-	123-91-1	7.0E+00		2.2E+01	5.3E+00	2.3E+02		1.2E+02	8.1E+01
															Dioxins									
6.2E+03	I	1.3E+00	I								1.4E+09		1	0.03	~Hexachlorodibenzo-p-dioxin, Mixture		1.1E-04	1.3E-03	2.9E+00	1.0E-04				
1.3E+05	C	3.8E+01	C	7.0E-10	I	4.0E-08	C	V			1.4E+09	2.0E+06	1	0.03	~TCDD, 2,3,7,8-	1746-01-6	5.3E-06	6.3E-05	1.4E-04	4.6E-06	5.5E-06	7.7E-05	8.2E-03	5.1E-06
				3.0E-02	I						1.4E+09		1	0.1	Diphenamid	957-51-7					2.3E+02	9.9E+02		1.9E+02
				8.0E-04	X						1.4E+09		1	0.1	Diphenyl Sulfone	127-63-9					6.3E+00	2.6E+01		5.1E+00
				1.0E-01	O						1.4E+09		1	0.1	Diphenylamine	122-39-4					7.8E+02	3.3E+03		6.3E+02
8.0E-01	I	2.2E-04	I								1.4E+09		1	0.1	Diphenylhydrazine, 1,2-	122-66-7	8.7E-01	3.1E+00	1.7E+04	6.8E-01				
				2.2E-03	I						1.4E+09		1	0.1	Diquat	85-00-7					1.7E+01	7.3E+01		1.4E+01
7.1E+00	C	1.4E-01	C								1.4E+09		1	0.1	Direct Black 38	1937-37-7	9.8E-02	3.5E-01	2.7E+01	7.6E-02				
7.4E+00	C	1.4E-01	C								1.4E+09		1	0.1	Direct Blue 6	2602-46-2	9.4E-02	3.3E-01	2.7E+01	7.3E-02				
6.7E+00	C	1.4E-01	C								1.4E+09		1	0.1	Direct Brown 95	16071-86-6	1.0E-01	3.7E-01	2.7E+01	8.1E-02				
				4.0E-05	I						1.4E+09		1	0.1	Disulfoton	298-04-4					3.1E-01	1.3E+00		2.5E-01
				1.0E-02	I			V			1.4E+09	4.5E+04	1		Dithiane, 1,4-	505-29-3					7.8E+01			7.8E+01
				2.0E-03	I						1.4E+09		1	0.1	Diuron	330-54-1					1.6E+01	6.6E+01		1.3E+01
				2.0E-02	O						1.4E+09		1	0.1	Dodine	2439-10-3					1.6E+02	6.6E+02		1.3E+02
				5.0E-02	O			V			1.4E+09	1.2E+05	1		EPTC	759-94-4					3.9E+02			3.9E+02
				6.0E-03	I			V			1.4E+09	4.1E+05	1		Endosulfan	115-29-7					4.7E+01			4.7E+01
				2.0E-02	I						1.4E+09		1	0.1	Endothall	145-73-3					1.6E+02	6.6E+02		1.3E+02
				3.0E-04	I						1.4E+09		1	0.1	Endrin	72-20-8					2.3E+00	9.9E+00		1.9E+00
9.9E-03	I	1.2E-06	I	6.0E-03	P	1.0E-03	I	V		1.1E+04	1.4E+09	1.9E+04	1		Epichlorohydrin	106-89-8	7.0E+01		4.4E+01	2.7E+01	4.7E+01		2.0E+00	1.9E+00
						2.0E-02	I	V		1.5E+04	1.4E+09	7.7E+03	1		Epoxybutane, 1,2-	106-88-7							1.6E+01	1.6E+01
				4.0E-02	P						1.4E+09		1	0.1	Ethanol, 2-(2-methoxyethoxy)-	111-77-3					3.1E+02	1.3E+03		2.5E+02
				5.0E-03	I						1.4E+09		1	0.1	Ethephon	16672-87-0					3.9E+01	1.6E+02		3.2E+01
				5.0E-04	I						1.4E+09		1	0.1	Ethion	563-12-2					3.9E+00	1.6E+01		3.2E+00

TR=1E-06
HQ=0.1

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Key: I = IRIS; P = PPRTV; D = DWSHA; O = OPP; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #29); H = HEAST; F = See FAQ; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information														Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Child Hazard Index (HI) = 0.1			
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	GIABS	ABS	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL Child THQ=0.1 (mg/kg)	Dermal SL Child THQ=0.1 (mg/kg)	Inhalation SL Child THQ=0.1 (mg/kg)	Noncarcinogenic SL Child THI=0.1 (mg/kg)
				1.0E-01	P	6.0E-02	P	V		2.4E+04	1.4E+09	6.2E+04	1		Ethoxyethanol Acetate, 2-	111-15-9					7.8E+02		3.8E+02	2.6E+02
				9.0E-02	P	2.0E-01	I	V		1.1E+05	1.4E+09	9.8E+04	1		Ethoxyethanol, 2-	110-80-5					7.0E+02		2.1E+03	5.2E+02
				9.0E-01	I	7.0E-02	P	V		1.1E+04	1.4E+09	8.6E+03	1		Ethyl Acetate	141-78-6					7.0E+03		6.3E+01	6.2E+01
				5.0E-03	P	8.0E-03	P	V		2.5E+03	1.4E+09	6.3E+03	1		Ethyl Acrylate	140-88-5					3.9E+01		5.3E+00	4.7E+00
						1.0E+01	I	V		2.1E+03	1.4E+09	1.3E+03	1		Ethyl Chloride (Chloroethane)	75-00-3							1.4E+03	1.4E+03
				2.0E-01	I			V		1.0E+04	1.4E+09	3.1E+03	1		Ethyl Ether	60-29-7					1.6E+03			1.6E+03
						3.0E-01	P	V		1.1E+03	1.4E+09	5.8E+03	1		Ethyl Methacrylate	97-63-2							1.8E+02	1.8E+02
				1.0E-05	I						1.4E+09		1	0.1	Ethyl-p-nitrophenyl Phosphonate	2104-64-5					7.8E-02	3.3E-01		6.3E-02
1.1E-02	C	2.5E-06	C	1.0E-01	I	1.0E+00	I	V		4.8E+02	1.4E+09	5.7E+03	1		Ethylbenzene	100-41-4	6.3E+01		6.4E+00	5.8E+00	7.8E+02		5.9E+02	3.4E+02
				7.0E-02	P						1.4E+09		1	0.1	Ethylene Cyanohydrin	109-78-4					5.5E+02	2.3E+03		4.4E+02
				9.0E-02	P			V		1.9E+05	1.4E+09	1.8E+05	1		Ethylene Diamine	107-15-3					7.0E+02			7.0E+02
				2.0E+00	I	4.0E-01	C				1.4E+09		1	0.1	Ethylene Glycol	107-21-1					1.6E+04	6.6E+04	5.7E+07	1.3E+04
				1.0E-01	I	1.6E+00	I				1.4E+09		1	0.1	Ethylene Glycol Monobutyl Ether	111-76-2					7.8E+02	3.3E+03	2.3E+08	6.3E+02
3.1E-01	C	3.0E-03	I			3.0E-02	C	V	M	1.2E+05	1.4E+09	6.1E+03	1		Ethylene Oxide	75-21-8	4.9E-01		2.1E-03	2.0E-03			1.9E+01	1.9E+01
4.5E-02	C	1.3E-05	C	8.0E-05	I						1.4E+09		1	0.1	Ethylene Thiourea	96-45-7	1.6E+01	5.5E+01	2.9E+05	1.2E+01	6.3E-01	2.6E+00		5.1E-01
6.5E+01	C	1.9E-02	C					V		1.5E+05	1.4E+09	2.4E+04	1		Ethyleneimine	151-56-4	1.1E-02		3.5E-03	2.7E-03				
				3.0E+00	I						1.4E+09		1	0.1	Ethylphthalyl Ethyl Glycolate	84-72-0					2.3E+04	9.9E+04		1.9E+04
				2.5E-04	I						1.4E+09		1	0.1	Fenamiphos	22224-92-6					2.0E+00	8.2E+00		1.6E+00
				2.5E-02	I						1.4E+09		1	0.1	Fenpropathrin	39515-41-8					2.0E+02	8.2E+02		1.6E+02
				2.5E-02	I						1.4E+09		1	0.1	Fenvalerate	51630-58-1					2.0E+02	8.2E+02		1.6E+02
				1.3E-02	I						1.4E+09		1	0.1	Fluometuron	2164-17-2					1.0E+02	4.3E+02		8.2E+01
				4.0E-02	C	1.3E-02	C				1.4E+09		1		Fluoride	16984-48-8					3.1E+02		1.8E+06	3.1E+02
				6.0E-02	I	1.3E-02	C				1.4E+09		1		Fluorine (Soluble Fluoride)	7782-41-4					4.7E+02		1.8E+06	4.7E+02
				8.0E-02	I						1.4E+09		1	0.1	Fluridone	59756-60-4					6.3E+02	2.6E+03		5.1E+02
				1.5E-02	O						1.4E+09		1	0.1	Flurprimidol	56425-91-3					1.2E+02	4.9E+02		9.5E+01
				2.0E-03	O						1.4E+09		1	0.1	Flusilazole	85509-19-9					1.6E+01	6.6E+01		1.3E+01
				5.0E-01	O						1.4E+09		1	0.1	Flutolanil	66332-96-5					3.9E+03	1.6E+04		3.2E+03
				1.0E-02	I						1.4E+09		1	0.1	Fluvalinate	69409-94-5					7.8E+01	3.3E+02		6.3E+01
				9.0E-02	O						1.4E+09		1	0.1	Folpet	133-07-3					7.0E+02	3.0E+03		5.7E+02
				2.5E-03	O						1.4E+09		1	0.1	Fomesafen	72178-02-0					2.0E+01	8.2E+01		1.6E+01
				2.0E-03	I						1.4E+09		1	0.1	Fonofos	944-22-9					1.6E+01	6.6E+01		1.3E+01
		1.3E-05	I	2.0E-01	I	9.8E-03	A	V		4.2E+04	1.4E+09	7.8E+04	1		Formaldehyde	50-00-0			1.7E+01	1.7E+01	1.6E+03		8.0E+01	7.6E+01
				9.0E-01	P	3.0E-04	X	V		1.1E+05	1.4E+09	9.3E+04	1		Formic Acid	64-18-6					7.0E+03		2.9E+00	2.9E+00
				2.5E+00	O						1.4E+09		1	0.1	Fosetyl-Al	39148-24-8					2.0E+04	8.2E+04		1.6E+04
															Furans									
				1.0E-03	X			V			1.4E+09	1.6E+05	1	0.03	~Dibenzofuran	132-64-9					7.8E+00	1.1E+02		7.3E+00
				1.0E-03	I			V		6.2E+03	1.4E+09	2.6E+03	1	0.03	~Furan	110-00-9					7.8E+00	1.1E+02		7.3E+00
				9.0E-01	I	2.0E+00	I	V		1.7E+05	1.4E+09	1.2E+04	1	0.03	~Tetrahydrofuran	109-99-9					7.0E+03	9.9E+04	2.5E+03	1.8E+03
3.8E+00	H										1.4E+09		1	0.1	Furazolidone	67-45-8	1.8E-01	6.5E-01		1.4E-01				
				3.0E-03	I	5.0E-02	H	V		1.0E+04	1.4E+09	4.9E+04	1		Furfural	98-01-1					2.3E+01		2.5E+02	2.1E+01
1.5E+00	C	4.3E-04	C								1.4E+09		1	0.1	Furium	531-82-8	4.6E-01	1.6E+00	8.9E+03	3.6E-01				
3.0E-02	I	8.6E-06	C								1.4E+09		1	0.1	Furmecyclox	60568-05-0	2.3E+01	8.2E+01	4.4E+05	1.8E+01				
				6.0E-03	O						1.4E+09		1	0.1	Glufosinate, Ammonium	77182-82-2					4.7E+01	2.0E+02		3.8E+01
						8.0E-05	C				1.4E+09		1	0.1	Glutaraldehyde	111-30-8							1.1E+04	1.1E+04
				4.0E-04	I	1.0E-03	H	V		1.1E+05	1.4E+09	8.4E+04	1		Glycidyl	765-34-4					3.1E+00		8.8E+00	2.3E+00
				1.0E-01	I						1.4E+09		1	0.1	Glyphosate	1071-83-6					7.8E+02	3.3E+03		6.3E+02
				1.0E-02	X			V			1.4E+09	1.5E+05	1		Guanidine	113-00-8					7.8E+01			7.8E+01
				2.0E-02	P						1.4E+09		1	0.1	Guanidine Chloride	50-01-1					1.6E+02	6.6E+02		1.3E+02
				3.0E-02	X						1.4E+09		1	0.1	Guanidine Nitrate	506-93-4					2.3E+02	9.9E+02		1.9E+02
				5.0E-05	I						1.4E+09		1	0.1	Haloxyfop, Methyl	69806-40-2					3.9E-01	1.6E+00		3.2E-01
4.5E+00	I	1.3E-03	I	5.0E-04	I			V			1.4E+09	4.8E+05	1		Heptachlor	76-44-8	1.5E-01		1.0E+00	1.3E-01	3.9E+00			3.9E+00
9.1E+00	I	2.6E-03	I	1.3E-05	I			V			1.4E+09	8.4E+05	1		Heptachlor Epoxide	1024-57-3	7.6E-02		9.1E-01	7.0E-02	1.0E-01			1.0E-01
				3.0E-04	X	4.0E-01	P	V		5.8E+01	1.4E+09	9.0E+02	1		Heptane, N-	142-82-5					2.3E+00		3.7E+01	2.2E+00
				2.0E-03	I			V			1.4E+09	3.8E+05	1		Hexabromobenzene	87-82-1					1.6E+01			1.6E+01
				2.0E-04	I						1.4E+09		1	0.1	Hexabromodiphenyl ether, 2,2',4,4',5,5'- (BDE-153)	68631-49-2					1.6E+00	6.6E+00		1.3E+00
1.6E+00	I	4.6E-04	I	8.0E-04	I			V			1.4E+09	6.8E+04	1		Hexachlorobenzene	118-74-1	4.3E-01		4.1E-01	2.1E-01	6.3E+00			6.3E+00
7.8E-02	I	2.2E-05	I	1.0E-03	P			V		1.7E+01	1.4E+09	1.1E+04	1		Hexachlorobutadiene	87-68-3	8.9E+00		1.4E+00	1.2E+00	7.8E+00			7.8E+00
6.3E+00	I	1.8E-03	I	8.0E-03	A						1.4E+09		1	0.1	Hexachlorocyclohexane, Alpha-	319-84-6	1.1E-01	3.9E-01	2.1E+03	8.6E-02	6.3E+01	2.6E+02		5.1E+01
1.8E+00	I	5.3E-04	I								1.4E+09		1	0.1	Hexachlorocyclohexane, Beta-	319-85-7	3.9E-01	1.4E+00	7.2E+03	3.0E-01				
1.1E+00	C	3.1E-04	C	3.0E-04	I						1.4E+09		1	0.04	Hexachlorocyclohexane, Gamma- (Lindane)	58-89-9	6.3E-01	5.6E+00	1.2E+04	5.7E-01	2.3E+00	2.5E+01		2.1E+00
1.8E+00	I	5.1E-04	I								1.4E+09		1	0.1	Hexachlorocyclohexane, Technical	608-73-1	3.9E-01	1.4E+00	7.5E+03	3.0E-01				
				6.0E-03	I	2.0E-04	I	V		1.6E+01	1.4E+09	8.5E+03	1		Hexachlorocyclopentadiene	77-47-4					4.7E+01		1.8E-01	1.8E-01
4.0E-02	I	1.1E-05	C	7.0E-04	I	3.0E-02	I	V			1.4E+09	8.0E+03	1		Hexachloroethane	67-72-1	1.7E+01		2.0E+00	1.8E+00	5.5E+00		2.5E+01	4.5E+00
				3.0E-04	I						1.4E+09		1	0.1	Hexachlorophene	70-30-4					2.3E+00	9.9E+00		1.9E+00
1.1E-01	I			3.0E-03	I						1.4E+09		1	0.015	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	121-82-4	6.3E+00	1.5E+02		6.1E+00	2.3E+01	6.6E+02		2.3E+01
						1.0E-05	I	V		3.4E+03	1.4E+09	3.0E+05	1		Hexamethylene Diisocyanate, 1,6-	822-06-0							3.1E-01	3.1E-01
				4.0E-04	P						1.4E+09		1	0.1	Hexamethylphosphoramide	680-31-9					3.1E+00	1.3E+01		2.5E+00
						7.0E-01	I	V		1.4E+02	1.4E+09	8.3E+02	1		Hexane, N-	110-54-3							6.1E+01	6.1E+01
				2.0E+00	P						1.4E+09		1	0.1	Hexanedioic Acid	124-04-9					1.6E+04	6.6E+04		1.3E+04
				5.0E-03	I	3.0E-02	I	V		3.3E+03	1.4E+09	1.3E+04	1		Hexanone, 2-	591-78-6					3.9E+01		4.2E+01	2.0E+01
				3.3E-02	I						1.4E+09		1	0.1	Hexazinone	51235-04-2					2.6E+02	1.1E+03		2.1E+02
				2.5E-02	I						1.4E+09		1	0.1	Hexythiazox	78587-05-0					2.0E+02	8.2E+02		1.6E+02
				1.7E-02	O						1.4E+09		1	0.1	Hydramethylnon	67485-29-4					1.3E+02	5.6E+02		1.1E+02
3.0E+00	I	4.9E-03	I			3.0E-05	P	V			1.4E+09		1		Hydrazine	302-01-2	2.3E-01		7.8E+02	2.3E-01			4.3E+03	4.3E+03
3.0E+00	I	4.9E-03	I								1.4E+09		1		Hydrazine Sulfate	10034-93-2	2.3E-01		7.8E+02	2.3E-01				

TR=1E-06
HQ=0.1

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Key: I = IRIS; P = PPRTV; D = DWSHA; O = OPP; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #29); H = HEAST; F = See FAQ; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Child Hazard Index (HI) = 0.1			
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	GIABS	ABS	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL Child THQ=0.1 (mg/kg)	Dermal SL Child THQ=0.1 (mg/kg)	Inhalation SL Child THQ=0.1 (mg/kg)	Noncarcinogenic SL Child THI=0.1 (mg/kg)
						2.0E-02	I	V			1.4E+09		1		Hydrogen Chloride	7647-01-0							2.8E+06	2.8E+06
				4.0E-02	C	1.4E-02	C	V			1.4E+09		1		Hydrogen Fluoride	7664-39-3					3.1E+02		2.0E+06	3.1E+02
						2.0E-03	I	V			1.4E+09		1		Hydrogen Sulfide	7783-06-4							2.8E+05	2.8E+05
6.0E-02	P			4.0E-02	P						1.4E+09		1	0.1	Hydroquinone	123-31-9	1.2E+01	4.1E+01		9.0E+00	3.1E+02	1.3E+03		2.5E+02
6.1E-02	O			2.5E-03	O						1.4E+09		1	0.1	Imazalil	35554-44-0	1.1E+01	4.0E+01		8.9E+00	2.0E+01	8.2E+01		1.6E+01
				2.5E-01	I						1.4E+09		1	0.1	Imazaquin	81335-37-7					2.0E+03	8.2E+03		1.6E+03
				2.5E+00	O						1.4E+09		1	0.1	Imazethapyr	81335-77-5					2.0E+04	8.2E+04		1.6E+04
				1.0E-02	A						1.4E+09		1		Iodine	7553-56-2					7.8E+01			7.8E+01
				4.0E-02	I						1.4E+09		1	0.1	Iprodione	36734-19-7					3.1E+02	1.3E+03		2.5E+02
				7.0E-01	P						1.4E+09		1		Iron	7439-89-6					5.5E+03			5.5E+03
				3.0E-01	I			V		1.0E+04	1.4E+09	2.8E+04	1		Isobutyl Alcohol	78-83-1					2.3E+03			2.3E+03
9.5E-04	I			2.0E-01	I	2.0E+00	C				1.4E+09		1	0.1	Isophorone	78-59-1	7.3E+02	2.6E+03		5.7E+02	1.6E+03	6.6E+03	2.8E+08	1.3E+03
				1.5E-02	I			V			1.4E+09	4.2E+05	1		Isopropalin	33820-53-0					1.2E+02			1.2E+02
				2.0E+00	P	2.0E-01	P	V		1.1E+05	1.4E+09	2.8E+04	1		Isopropanol	67-63-0					1.6E+04		5.8E+02	5.6E+02
				1.0E-01	I						1.4E+09		1	0.1	Isopropyl Methyl Phosphonic Acid	1832-54-8					7.8E+02	3.3E+03		6.3E+02
				5.0E-02	I						1.4E+09		1	0.1	Isoxaben	82558-50-7					3.9E+02	1.6E+03		3.2E+02
						3.0E-01	A	V			1.4E+09		1		UP-7	E1737665							4.3E+07	4.3E+07
				8.0E-03	O						1.4E+09		1	0.1	Lactofen	77501-63-4					6.3E+01	2.6E+02		5.1E+01
															Lead Compounds									
5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M		1.4E+09		0.025		~Lead Chromate	7758-97-6	3.1E-01		9.2E+00	3.0E-01	1.6E+02		2.8E+04	1.6E+02
8.5E-03	C	1.2E-05	C								1.4E+09		1		~Lead Phosphate	7446-27-7	8.2E+01		3.2E+05	8.2E+01				
8.5E-03	C	1.2E-05	C								1.4E+09		1	0.1	~Lead acetate	301-04-2	8.2E+01	2.9E+02	3.2E+05	6.4E+01				
											1.4E+09		1		~Lead and Compounds	7439-92-1								4.0E+02
8.5E-03	C	1.2E-05	C								1.4E+09		1	0.1	~Lead subacetate	1335-32-6	8.2E+01	2.9E+02	3.2E+05	6.4E+01				
				1.0E-07	I			V		2.4E+00	1.4E+09	1.9E+03	1		~Tetraethyl Lead	78-00-2					7.8E-04			7.8E-04
				5.0E-06	P			V		3.8E+02	1.4E+09	2.6E+04	1		Lewisite	541-25-3					3.9E-02			3.9E-02
				7.7E-03	O						1.4E+09		1	0.1	Linuron	330-55-2					6.0E+01	2.5E+02		4.9E+01
				2.0E-03	P						1.4E+09		1		Lithium	7439-93-2					1.6E+01			1.6E+01
				5.0E-04	I						1.4E+09		1	0.1	MCPA	94-74-6					3.9E+00	1.6E+01		3.2E+00
				4.4E-03	O						1.4E+09		1	0.1	MCPB	94-81-5					3.4E+01	1.5E+02		2.8E+01
				1.0E-03	I						1.4E+09		1	0.1	MCPP	93-65-2					7.8E+00	3.3E+01		6.3E+00
				2.0E-02	I						1.4E+09		1	0.1	Malathion	121-75-5					1.6E+02	6.6E+02		1.3E+02
				1.0E-01	I	7.0E-04	C				1.4E+09		1	0.1	Maleic Anhydride	108-31-6					7.8E+02	3.3E+03	9.9E+04	6.3E+02
				5.0E-01	I						1.4E+09		1	0.1	Maleic Hydrazide	123-33-1					3.9E+03	1.6E+04		3.2E+03
				1.0E-04	P						1.4E+09		1	0.1	Malononitrile	109-77-3					7.8E-01	3.3E+00		6.3E-01
				3.0E-02	H						1.4E+09		1	0.1	Mancozeb	8018-01-7					2.3E+02	9.9E+02		1.9E+02
				5.0E-03	I						1.4E+09		1	0.1	Maneb	12427-38-2					3.9E+01	1.6E+02		3.2E+01
				1.4E-01	I	5.0E-05	I						1		Manganese (Diet)	7439-96-5								
				2.4E-02	S	5.0E-05	I				1.4E+09		0.04		Manganese (Non-diet)	7439-96-5					1.9E+02		7.1E+03	1.8E+02
				9.0E-05	H						1.4E+09		1	0.1	Mephosfolan	950-10-7					7.0E-01	3.0E+00		5.7E-01
				3.0E-02	I						1.4E+09		1	0.1	Mepiquat Chloride	24307-26-4					2.3E+02	9.9E+02		1.9E+02
1.1E-02	P			4.0E-03	P						1.4E+09		1	0.1	Mercaptobenzothiazole, 2-	149-30-4	6.3E+01	2.2E+02		4.9E+01	3.1E+01	1.3E+02		2.5E+01
															Mercury Compounds									
				3.0E-04	I	3.0E-04	S				1.4E+09		0.07		~Mercuric Chloride (and other Mercury salts)	7487-94-7					2.3E+00		4.3E+04	2.3E+00
						3.0E-04	I	V		3.1E+00	1.4E+09	3.5E+04	1		~Mercury (elemental)	7439-97-6							1.1E+00	1.1E+00
				1.0E-04	I						1.4E+09		1		~Methyl Mercury	22967-92-6					7.8E-01			7.8E-01
				8.0E-05	I						1.4E+09		1	0.1	~Phenylmercuric Acetate	62-38-4					6.3E-01	2.6E+00		5.1E-01
				3.0E-05	I			V			1.4E+09	1.9E+06	1		Merphos	150-50-5					2.3E-01			2.3E-01
				1.0E-04	O						1.4E+09		1	0.1	Merphos Oxide	78-48-8					7.8E-01	3.3E+00		6.3E-01
				6.0E-02	I						1.4E+09		1	0.1	Metalaxyl	57837-19-1					4.7E+02	2.0E+03		3.8E+02
				1.0E-04	I	3.0E-02	P	V		4.6E+03	1.4E+09	6.8E+03	1		Methacrylonitrile	126-98-7					7.8E-01		2.1E+01	7.5E-01
				5.0E-05	I						1.4E+09		1	0.1	Methamidophos	10265-92-6					3.9E-01	1.6E+00		3.2E-01
				2.0E+00	I	2.0E+01	I	V		1.1E+05	1.4E+09	2.9E+04	1		Methanol	67-56-1					1.6E+04		6.1E+04	1.2E+04
				1.5E-03	O						1.4E+09		1	0.1	Methidathion	950-37-8					1.2E+01	4.9E+01		9.5E+00
				2.5E-02	I						1.4E+09		1	0.1	Methomyl	16752-77-5					2.0E+02	8.2E+02		1.6E+02
4.9E-02	C	1.4E-05	C								1.4E+09		1	0.1	Methoxy-5-nitroaniline, 2-	99-59-2	1.4E+01	5.0E+01	2.7E+05	1.1E+01				
				5.0E-03	I						1.4E+09		1	0.1	Methoxychlor	72-43-5					3.9E+01	1.6E+02		3.2E+01
				8.0E-03	P	1.0E-03	P	V		1.2E+05	1.4E+09	1.2E+05	1		Methoxyethanol Acetate, 2-	110-49-6					6.3E+01		1.3E+01	1.1E+01
				5.0E-03	P	2.0E-02	I	V		1.1E+05	1.4E+09	1.0E+05	1		Methoxyethanol, 2-	109-86-4					3.9E+01		2.1E+02	3.3E+01
				1.0E+00	X			V		2.9E+04	1.4E+09	8.1E+03	1		Methyl Acetate	79-20-9					7.8E+03			7.8E+03
						2.0E-02	P	V		6.8E+03	1.4E+09	7.0E+03	1		Methyl Acrylate	96-33-3							1.5E+01	1.5E+01
				6.0E-01	I	5.0E+00	I	V		2.8E+04	1.4E+09	1.2E+04	1		Methyl Ethyl Ketone (2-Butanone)	78-93-3					4.7E+03		6.4E+03	2.7E+03
		1.0E-03	X	1.0E-03	P	2.0E-05	X	V		1.8E+05	1.4E+09	5.0E+04	1		Methyl Hydrazine	60-34-4			1.4E-01	1.4E-01	7.8E+00		1.1E-01	1.0E-01
						3.0E+00	I	V		3.4E+03	1.4E+09	1.1E+04	1		Methyl Isobutyl Ketone (4-methyl-2-pentanone)	108-10-1							3.3E+03	3.3E+03
						1.0E-03	C	V		1.0E+04	1.4E+09	4.4E+03	1		Methyl Isocyanate	624-83-9							4.6E-01	4.6E-01
				1.4E+00	I	7.0E-01	I	V		2.4E+03	1.4E+09	6.3E+03	1		Methyl Methacrylate	80-62-6					1.1E+04		4.6E+02	4.4E+02
				2.5E-04	I						1.4E+09		1	0.1	Methyl Parathion	298-00-0					2.0E+00	8.2E+00		1.6E+00
				6.0E-02	X						1.4E+09		1	0.1	Methyl Phosphonic Acid	993-13-5					4.7E+02	2.0E+03		3.8E+02
				6.0E-03	H	4.0E-02	H	V		3.9E+02	1.4E+09	2.4E+04	1		Methyl Styrene (Mixed Isomers)	25013-15-4					4.7E+01		1.0E+02	3.2E+01
9.9E-02	C	2.8E-05	C								1.4E+09		1	0.1	Methyl methanesulfonate	66-27-3	7.0E+00	2.5E+01	1.4E+05	5.5E+00				
1.8E-03	C	2.6E-07	C			3.0E+00	I	V		8.9E+03	1.4E+09	4.9E+03	1		Methyl tert-Butyl Ether (MTBE)	1634-04-4	3.9E+02		5.3E+01	4.7E+01			1.5E+03	1.5E+03
				3.0E-04	X						1.4E+09		1	0.1	Methyl-1,4-benzenediamine dihydrochloride, 2-	615-45-2					2.3E+00	9.9E+00		1.9E+00
9.0E-03	P			2.0E-02	X						1.4E+09		1	0.1	Methyl-5-Nitroaniline, 2-	99-55-8	7.7E+01	2.7E+02		6.0E+01	1.6E+02	6.6E+02		1.3E+02
8.3E+00	C	2.4E-03	C								1.4E+09		1	0.1	Methyl-N-nitro-N-nitrosoguanidine, N-	70-25-7	8.4E-02	3.0E-01	1.6E+03	6.5E-02				
1.3E-01	C	3.7E-05	C								1.4E+09		1	0.1	Methylaniline Hydrochloride, 2-	636-21-5	5.3E+00	1.9E+01	1.0E+05	4.2E+00				

TR=1E-06
HQ=0.1

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Toxicity and Chemical-specific Information															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Child Hazard Index (HI) = 0.1			
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	GIABS	ABS	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL Child THQ=0.1 (mg/kg)	Dermal SL Child THQ=0.1 (mg/kg)	Inhalation SL Child THQ=0.1 (mg/kg)	Noncarcinogenic SL Child THI=0.1 (mg/kg)
				1.0E-02	A						1.4E+09		1	0.1	Methylarsonic acid	124-58-3					7.8E+01	3.3E+02		6.3E+01
				2.0E-04	X						1.4E+09		1	0.1	Methylbenzene,1-4-diamine monohydrochloride, 2-	74612-12-7					1.6E+00	6.6E+00		1.3E+00
1.0E-01	X			3.0E-04	X						1.4E+09		1	0.1	Methylbenzene-1,4-diamine sulfate, 2-	615-50-9	7.0E+00	2.5E+01		5.4E+00	2.3E+00	9.9E+00		1.9E+00
2.2E+01	C	6.3E-03	C						M		1.4E+09		1	0.1	Methylcholanthrene, 3-	56-49-5	7.0E-03	2.7E-02	2.2E+02	5.5E-03				
2.0E-03	I	1.0E-08	I	6.0E-03	I	6.0E-01	I	V	M	3.3E+03	1.4E+09	2.2E+03	1		Methylene Chloride	75-09-2	7.7E+01		2.2E+02	5.7E+01	4.7E+01		1.4E+02	3.5E+01
1.0E-01	P	4.3E-04	C	2.0E-03	P				M		1.4E+09		1	0.1	Methylene-bis(2-chloroaniline), 4,4'-	101-14-4	1.5E+00	6.0E+00	3.2E+03	1.2E+00	1.6E+01	6.6E+01		1.3E+01
4.6E-02	I	1.3E-05	C								1.4E+09		1	0.1	Methylene-bis(N,N-dimethyl) Aniline, 4,4'-	101-61-1	1.5E+01	5.4E+01	2.9E+05	1.2E+01				
1.6E+00	C	4.6E-04	C			2.0E-02	C				1.4E+09		1	0.1	Methylenebisbenzenamine, 4,4'-	101-77-9	4.3E-01	1.5E+00	8.3E+03	3.4E-01			2.8E+06	2.8E+06
						6.0E-04	I				1.4E+09		1	0.1	Methylenediphenyl Diisocyanate	101-68-8							8.5E+04	8.5E+04
				7.0E-02	H			V		5.0E+02	1.4E+09	1.3E+04	1		Methylstyrene, Alpha-	98-83-9					5.5E+02			5.5E+02
				1.5E-01	I						1.4E+09		1	0.1	Metolachlor	51218-45-2					1.2E+03	4.9E+03		9.5E+02
				2.5E-02	I						1.4E+09		1	0.1	Metribuzin	21087-64-9					2.0E+02	8.2E+02		1.6E+02
				2.5E-01	I						1.4E+09		1	0.1	Metsulfuron-methyl	74223-64-6					2.0E+03	8.2E+03		1.6E+03
				3.0E+00	P			V		3.4E-01	1.4E+09	1.4E+03	1		Mineral oils	8012-95-1					2.3E+04			2.3E+04
1.8E+01	C	5.1E-03	C	2.0E-04	I			V			1.4E+09	8.6E+05	1		Mirex	2385-85-5	3.9E-02		4.7E-01	3.6E-02	1.6E+00			1.6E+00
				2.0E-03	I						1.4E+09		1	0.1	Molinate	2212-67-1					1.6E+01	6.6E+01		1.3E+01
				5.0E-03	I						1.4E+09		1		Molybdenum	7439-98-7					3.9E+01			3.9E+01
				1.0E-01	I						1.4E+09		1		Monochloramine	10599-90-3					7.8E+02			7.8E+02
				2.0E-03	P						1.4E+09		1	0.1	Monomethylaniline	100-61-8					1.6E+01	6.6E+01		1.3E+01
				2.5E-02	I						1.4E+09		1	0.1	Myclobutanil	88671-89-0					2.0E+02	8.2E+02		1.6E+02
				3.0E-04	X						1.4E+09		1	0.1	N,N'-Diphenyl-1,4-benzenediamine	74-31-7					2.3E+00	9.9E+00		1.9E+00
				2.0E-03	I			V			1.4E+09	5.7E+04	1		Naled	300-76-5					1.6E+01			1.6E+01
				3.0E-02	X	1.0E-01	P	V			1.4E+09		1		Naphtha, High Flash Aromatic (HFAN)	64742-95-6					2.3E+02		1.4E+07	2.3E+02
1.8E+00	C	0.0E+00	C								1.4E+09		1	0.1	Naphthylamine, 2-	91-59-8	3.9E-01	1.4E+00		3.0E-01				
				1.2E-01	O						1.4E+09		1	0.1	Napropamide	15299-99-7					9.4E+02	4.0E+03		7.6E+02
		2.6E-04	C	1.1E-02	C	1.4E-05	C				1.4E+09		1	0.1	Nickel Acetate	373-02-4			1.5E+04	1.5E+04	8.6E+01	3.6E+02	2.0E+03	6.7E+01
		2.6E-04	C	1.1E-02	C	1.4E-05	C				1.4E+09		1	0.1	Nickel Carbonate	3333-67-3			1.5E+04	1.5E+04	8.6E+01	3.6E+02	2.0E+03	6.7E+01
		2.6E-04	C	1.1E-02	C	1.4E-05	C	V			1.4E+09		1		Nickel Carbonyl	13463-39-3			1.5E+04	1.5E+04	8.6E+01		2.0E+03	8.2E+01
		2.6E-04	C	1.1E-02	C	1.4E-05	C				1.4E+09		0.04		Nickel Hydroxide	12054-48-7			1.5E+04	1.5E+04	8.6E+01		2.0E+03	8.2E+01
		2.6E-04	C	1.1E-02	C	2.0E-05	C				1.4E+09		0.04		Nickel Oxide	1313-99-1			1.5E+04	1.5E+04	8.6E+01		2.8E+03	8.4E+01
		2.4E-04	I	1.1E-02	C	1.4E-05	C				1.4E+09		0.04		Nickel Refinery Dust	E719532			1.6E+04	1.6E+04	8.6E+01		2.0E+03	8.2E+01
		2.6E-04	C	2.0E-02	I	9.0E-05	A				1.4E+09		0.04		Nickel Soluble Salts	7440-02-0			1.5E+04	1.5E+04	1.6E+02		1.3E+04	1.5E+02
1.7E+00	C	4.8E-04	I	1.1E-02	C	1.4E-05	C				1.4E+09		0.04		Nickel Subsulfide	12035-72-2	4.1E-01		8.0E+03	4.1E-01	8.6E+01		2.0E+03	8.2E+01
		2.6E-04	C	1.1E-02	C	1.4E-05	C				1.4E+09		1	0.1	Nickelocene	1271-28-9			1.5E+04	1.5E+04	8.6E+01	3.6E+02	2.0E+03	6.7E+01
				1.6E+00	I						1.4E+09		1		Nitrate	14797-55-8					1.3E+04			1.3E+04
											1.4E+09		1		Nitrate + Nitrite (as N)	E701177								
				1.0E-01	I						1.4E+09		1		Nitrite	14797-65-0					7.8E+02			7.8E+02
				1.0E-02	X	5.0E-05	X				1.4E+09		1	0.1	Nitroaniline, 2-	88-74-4					7.8E+01	3.3E+02	7.1E+03	6.3E+01
2.0E-02	P			4.0E-03	P	6.0E-03	P				1.4E+09		1	0.1	Nitroaniline, 4-	100-01-6	3.5E+01	1.2E+02		2.7E+01	3.1E+01	1.3E+02	8.5E+05	2.5E+01
		4.0E-05	I	2.0E-03	I	9.0E-03	I	V		3.1E+03	1.4E+09	7.3E+04	1		Nitrobenzene	98-95-3			5.1E+00	5.1E+00	1.6E+01		6.9E+01	1.3E+01
				3.0E+03	P						1.4E+09		1	0.1	Nitrocellulose	9004-70-0					2.3E+07	9.9E+07		1.9E+07
				7.0E-02	H						1.4E+09		1	0.1	Nitrofurantoin	67-20-9					5.5E+02	2.3E+03		4.4E+02
1.3E+00	C	3.7E-04	C								1.4E+09		1	0.1	Nitrofurazone	59-87-0	5.3E-01	1.9E+00	1.0E+04	4.2E-01				
1.7E-02	P			1.0E-04	P						1.4E+09		1	0.1	Nitroglycerin	55-63-0	4.1E+01	1.5E+02		3.2E+01	7.8E-01	3.3E+00		6.3E-01
				1.0E-01	I						1.4E+09		1	0.1	Nitroguanidine	556-88-7					7.8E+02	3.3E+03		6.3E+02
		8.8E-06	P			5.0E-03	P	V		1.8E+04	1.4E+09	1.7E+04	1		Nitromethane	75-52-5			5.4E+00	5.4E+00			8.8E+00	8.8E+00
		2.7E-03	H			2.0E-02	I	V		4.9E+03	1.4E+09	1.3E+04	1		Nitropropane, 2-	79-46-9			1.4E-02	1.4E-02			2.7E+01	2.7E+01
2.7E+01	C	7.7E-03	C						M		1.4E+09		1	0.1	Nitroso-N-ethylurea, N-	759-73-9	5.7E-03	2.2E-02	1.6E+02	4.5E-03				
1.2E+02	C	3.4E-02	C						M		1.4E+09		1	0.1	Nitroso-N-methylurea, N-	684-93-5	1.3E-03	5.0E-03	4.1E+01	1.0E-03				
5.4E+00	I	1.6E-03	I					V			1.4E+09	2.4E+05	1		Nitroso-di-N-butylamine, N-	924-16-3	1.3E-01		4.3E-01	9.9E-02				
7.0E+00	I	2.0E-03	C								1.4E+09		1	0.1	Nitroso-di-N-propylamine, N-	621-64-7	9.9E-02	3.5E-01	1.9E+03	7.8E-02				
2.8E+00	I	8.0E-04	C								1.4E+09		1	0.1	Nitrosodiethanolamine, N-	1116-54-7	2.5E-01	8.8E-01	4.8E+03	1.9E-01				
1.5E+02	I	4.3E-02	I						M		1.4E+09		1	0.1	Nitrosodiethylamine, N-	55-18-5	1.0E-03	4.0E-03	3.2E+01	8.1E-04				
5.1E+01	I	1.4E-02	I	8.0E-06	P	4.0E-05	X	V	M	2.4E+05	1.4E+09	8.2E+04	1		Nitrosodimethylamine, N-	62-75-9	3.0E-03		6.0E-03	2.0E-03	6.3E-02		3.4E-01	5.3E-02
4.9E-03	I	2.6E-06	C								1.4E+09		1	0.1	Nitrosodiphenylamine, N-	86-30-6	1.4E+02	5.0E+02	1.5E+06	1.1E+02				
2.2E+01	I	6.3E-03	C						V	1.1E+05	1.4E+09	1.2E+05	1		Nitrosomethylethylamine, N-	10595-95-6	3.2E-02		5.4E-02	2.0E-02				
6.7E+00	C	1.9E-03	C								1.4E+09		1	0.1	Nitrosomorpholine [N-]	59-89-2	1.0E-01	3.7E-01	2.0E+03	8.1E-02				
9.4E+00	C	2.7E-03	C								1.4E+09		1	0.1	Nitrosopiperidine [N-]	100-75-4	7.4E-02	2.6E-01	1.4E+03	5.8E-02				
2.1E+00	I	6.1E-04	I								1.4E+09		1	0.1	Nitrosopyrrolidine, N-	930-55-2	3.3E-01	1.2E+00	6.3E+03	2.6E-01				
				1.0E-04	X						1.4E+09		1	0.1	Nitrotoluene, m-	99-08-1					7.8E-01	3.3E+00		6.3E-01
2.2E-01	P			9.0E-04	P			V		1.5E+03	1.4E+09	1.4E+05	1		Nitrotoluene, o-	88-72-2	3.2E+00			3.2E+00	7.0E+00			7.0E+00
1.6E-02	P			4.0E-03	P						1.4E+09		1	0.1	Nitrotoluene, p-	99-99-0	4.3E+01	1.5E+02		3.4E+01	5.1E+01	1.3E+02		2.5E+01
				3.0E-04	X	2.0E-02	P	V		6.9E+00	1.4E+09	1.0E+03	1		Nonane, n-	111-84-2					2.3E+00		2.2E+00	1.1E+00
				1.5E-02	O						1.4E+09		1	0.1	Norflurazon	27314-13-2					1.2E+02	4.9E+02		9.5E+01
				3.0E-03	I						1.4E+09		1	0.1	Octabromodiphenyl Ether	32536-52-0					2.3E+01	9.9E+01		1.9E+01
				5.0E-02	I						1.4E+09		1	0.006	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0					3.9E+02	2.7E+04		3.9E+02
				2.0E-03	H						1.4E+09		1	0.1	Octamethylpyrophosphoramide	152-16-9					1.6E+01	6.6E+01		1.3E+01
7.8E-03	O			1.4E-01	O						1.4E+09		1	0.1	Oryzalin	19044-88-3	8.9E+01	3.2E+02		7.0E+01	1.1E+03	4.6E+03		8.8E+02
				5.0E-03	I						1.4E+09		1	0.1	Oxadiazon	19666-30-9					3.9E+01	1.6E+02		3.2E+01
				2.5E-02	I						1.4E+09		1	0.1	Oxamyl	23135-22-0					2.0E+02	8.2E+02		1.6E+02
7.3E-02	O			3.0E-02	O						1.4E+09		1	0.1	Oxyfluorfen	42874-03-3	9.5E+00	3.4E+01		7.4E+00	2.3E+02	9.9E+02		1.9E+02
				1.3E-02	I						1.4E+09		1	0.1	Paclobutrazol	76738-62-0					1.0E+02	4.3E+02		8.2E+01
				4.5E-03	I						1.4E+09		1	0.1	Paraquat Dichloride	1910-42-5					3.5E+01	1.5E+02		2.8E+01
				6.0E-03	H						1.4E+09		1	0.1	Parathion	56-38-2					4.7E+01	2.0E+02		3.8E+01
				5.0E-02	H			V			1.4E+09	4.5E+04	1		Pebulate	1114-71-2					3.9E+02			3.9E+02

TR=1E-06
HQ=0.1

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Key: I = IRIS; P = PPRTV; D = DWSHA; O = OPP; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #29); H = HEAST; F = See FAQ; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information														Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Child Hazard Index (HI) = 0.1			
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	GIABS	ABS	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL Child THQ=0.1 (mg/kg)	Dermal SL Child THQ=0.1 (mg/kg)	Inhalation SL Child THQ=0.1 (mg/kg)	Noncarcinogenic SL Child THI=0.1 (mg/kg)
				3.0E-02	O						1.4E+09		1	0.1	Pendimethalin	40487-42-1					2.3E+02	9.9E+02		1.9E+02
				2.0E-03	I			V		3.1E-01	1.4E+09	5.1E+05	1		Pentabromodiphenyl Ether	32534-81-9					1.6E+01			1.6E+01
				1.0E-04	I						1.4E+09		1	0.1	Pentabromodiphenyl ether, 2,2',4,4',5- (BDE-99)	60348-60-9					7.8E-01	3.3E+00		6.3E-01
				8.0E-04	I			V			1.4E+09	8.1E+04	1		Pentachlorobenzene	608-93-5					6.3E+00			6.3E+00
9.0E-02	P							V		4.6E+02	1.4E+09	9.7E+03	1		Pentachloroethane	76-01-7	7.7E+00			7.7E+00				
2.6E-01	H			3.0E-03	I			V			1.4E+09	4.3E+05	1		Pentachloronitrobenzene	82-68-8	2.7E+00			2.7E+00	2.3E+01			2.3E+01
4.0E-01	I	5.1E-06	C	5.0E-03	I						1.4E+09		1	0.25	Pentachlorophenol	87-86-5	1.7E+00	2.5E+00	7.5E+05	1.0E+00	3.9E+01	6.6E+01		2.5E+01
4.0E-03	X			2.0E-03	P						1.4E+09		1	0.1	Pentaerythritol tetranitrate (PETN)	78-11-5	1.7E+02	6.2E+02		1.4E+02	1.6E+01	6.6E+01		1.3E+01
						1.0E+00	P	V		3.9E+02	1.4E+09	7.8E+02	1		Pentane, n-	109-66-0							8.1E+01	8.1E+01
															Perchlorates									
				7.0E-04	I						1.4E+09		1		~Ammonium Perchlorate	7790-98-9					5.5E+00			5.5E+00
				7.0E-04	I						1.4E+09		1		~Lithium Perchlorate	7791-03-9					5.5E+00			5.5E+00
				7.0E-04	I						1.4E+09		1		~Perchlorate and Perchlorate Salts	14797-73-0					5.5E+00			5.5E+00
				7.0E-04	I						1.4E+09		1		~Potassium Perchlorate	7778-74-7					5.5E+00			5.5E+00
				7.0E-04	I						1.4E+09		1		~Sodium Perchlorate	7601-89-0					5.5E+00			5.5E+00
				2.0E-02	P						1.4E+09		1	0.1	Perfluorobutane sulfonic acid (PFBS)	375-73-5					1.6E+02	6.6E+02		1.3E+02
				2.0E-02	P						1.4E+09		1	0.1	Perfluorobutanesulfonate	45187-15-3					1.6E+02	6.6E+02		1.3E+02
				5.0E-02	I						1.4E+09		1	0.1	Permethrin	52645-53-1					3.9E+02	1.6E+03		3.2E+02
2.2E-03	C	6.3E-07	C								1.4E+09		1	0.1	Phenacetin	62-44-2	3.2E+02	1.1E+03	6.1E+06	2.5E+02				
				2.4E-01	O						1.4E+09		1	0.1	Phenmedipham	13684-63-4					1.9E+03	7.9E+03		1.5E+03
				3.0E-01	I	2.0E-01	C				1.4E+09		1	0.1	Phenol	108-95-2					2.3E+03	9.9E+03	2.8E+07	1.9E+03
				4.0E-03	I						1.4E+09		1	0.1	Phenol, 2-(1-methylethoxy)-, methylcarbamate	114-26-1					3.1E+01	1.3E+02		2.5E+01
				5.0E-04	X						1.4E+09		1	0.1	Phenothiazine	92-84-2					3.9E+00	1.6E+01		3.2E+00
				2.0E-04	X			V		1.3E+02	1.4E+09	7.1E+03	1		Phenyl Isothiocyanate	103-72-0					1.6E+00			1.6E+00
				6.0E-03	I						1.4E+09		1	0.1	Phenylenediamine, m-	108-45-2					4.7E+01	2.0E+02		3.8E+01
1.2E-01	P			4.0E-03	P						1.4E+09		1	0.1	Phenylenediamine, o-	95-54-5	5.8E+00	2.1E+01		4.5E+00	3.1E+01	1.3E+02		2.5E+01
				1.0E-03	X						1.4E+09		1	0.1	Phenylenediamine, p-	106-50-3					7.8E+00	3.3E+01		6.3E+00
1.9E-03	H										1.4E+09		1	0.1	Phenylphenol, 2-	90-43-7	3.6E+02	1.3E+03		2.8E+02				
				2.0E-04	H						1.4E+09		1	0.1	Phorate	298-02-2					1.6E+00	6.6E+00		1.3E+00
						3.0E-04	I	V		1.6E+03	1.4E+09	9.8E+02	1		Phosgene	75-44-5							3.1E-02	3.1E-02
				2.0E-02	I						1.4E+09		1	0.1	Phosmet	732-11-6					1.6E+02	6.6E+02		1.3E+02
															Phosphates, Inorganic									
				4.9E+01	P						1.4E+09		1		~Aluminum metaphosphate	13776-88-0					3.8E+05			3.8E+05
				4.9E+01	P						1.4E+09		1		~Ammonium polyphosphate	68333-79-9					3.8E+05			3.8E+05
				4.9E+01	P						1.4E+09		1		~Calcium pyrophosphate	7790-76-3					3.8E+05			3.8E+05
				4.9E+01	P						1.4E+09		1		~Diammonium phosphate	7783-28-0					3.8E+05			3.8E+05
				4.9E+01	P						1.4E+09		1		~Dicalcium phosphate	7757-93-9					3.8E+05			3.8E+05
				4.9E+01	P						1.4E+09		1		~Dimagnesium phosphate	7782-75-4					3.8E+05			3.8E+05
				4.9E+01	P						1.4E+09		1		~Dipotassium phosphate	7758-11-4					3.8E+05			3.8E+05
				4.9E+01	P						1.4E+09		1		~Disodium phosphate	7558-79-4					3.8E+05			3.8E+05
				4.9E+01	P						1.4E+09		1		~Monoaluminum phosphate	13530-50-2					3.8E+05			3.8E+05
				4.9E+01	P						1.4E+09		1		~Monoammonium phosphate	7722-76-1					3.8E+05			3.8E+05
				4.9E+01	P						1.4E+09		1		~Monocalcium phosphate	7758-23-8					3.8E+05			3.8E+05
				4.9E+01	P						1.4E+09		1		~Monomagnesium phosphate	7757-86-0					3.8E+05			3.8E+05
				4.9E+01	P						1.4E+09		1		~Monopotassium phosphate	7778-77-0					3.8E+05			3.8E+05
				4.9E+01	P						1.4E+09		1		~Monosodium phosphate	7558-80-7					3.8E+05			3.8E+05
				4.9E+01	P						1.4E+09		1		~Polyphosphoric acid	8017-16-1					3.8E+05			3.8E+05
				4.9E+01	P						1.4E+09		1		~Potassium tripolyphosphate	13845-36-8					3.8E+05			3.8E+05
				4.9E+01	P						1.4E+09		1		~Sodium acid pyrophosphate	7758-16-9					3.8E+05			3.8E+05
				4.9E+01	P						1.4E+09		1		~Sodium aluminum phosphate (acidic)	7785-88-8					3.8E+05			3.8E+05
				4.9E+01	P						1.4E+09		1		~Sodium aluminum phosphate (anhydrous)	10279-59-1					3.8E+05			3.8E+05
				4.9E+01	P						1.4E+09		1		~Sodium aluminum phosphate (tetrahydrate)	10305-76-7					3.8E+05			3.8E+05
				4.9E+01	P						1.4E+09		1		~Sodium hexametaphosphate	10124-56-8					3.8E+05			3.8E+05
				4.9E+01	P						1.4E+09		1		~Sodium polyphosphate	68915-31-1					3.8E+05			3.8E+05
				4.9E+01	P						1.4E+09		1		~Sodium trimetaphosphate	7785-84-4					3.8E+05			3.8E+05
				4.9E+01	P						1.4E+09		1		~Sodium tripolyphosphate	7758-29-4					3.8E+05			3.8E+05
				4.9E+01	P						1.4E+09		1		~Tetrapotassium phosphate	7320-34-5					3.8E+05			3.8E+05
				4.9E+01	P						1.4E+09		1		~Tetrasodium pyrophosphate	7722-88-5					3.8E+05			3.8E+05
				4.9E+01	P						1.4E+09		1		~Trialuminum sodium tetra decahydrogenoctaorthophosphate (dihydrate)	15136-87-5					3.8E+05			3.8E+05
				4.9E+01	P						1.4E+09		1		~Tricalcium phosphate	7758-87-4					3.8E+05			3.8E+05
				4.9E+01	P						1.4E+09		1		~Trimagnesium phosphate	7757-87-1					3.8E+05			3.8E+05
				4.9E+01	P						1.4E+09		1		~Tripotassium phosphate	7778-53-2					3.8E+05			3.8E+05
				4.9E+01	P						1.4E+09		1		~Trisodium phosphate	7601-54-9					3.8E+05			3.8E+05
				3.0E-04	I	3.0E-04	I	V			1.4E+09		1		Phosphine	7803-51-2					2.3E+00		4.3E+04	2.3E+00
				4.9E+01	P	1.0E-02	I				1.4E+09		1		Phosphoric Acid	7664-38-2					3.8E+05		1.4E+06	3.0E+05
				2.0E-05	I			V			1.4E+09	6.9E+03	1		Phosphorus, White	7723-14-0					1.6E-01			1.6E-01
															Phthalates									
1.4E-02	I	2.4E-06	C	2.0E-02	I						1.4E+09		1	0.1	~Bis(2-ethylhexyl)phthalate	117-81-7	5.0E+01	1.8E+02	1.6E+06	3.9E+01	1.6E+02	6.6E+02		1.3E+02
1.9E-03	P			2.0E-01	I						1.4E+09		1	0.1	~Butyl Benzyl Phthalate	85-68-7	3.7E+02	1.3E+03		2.9E+02	1.6E+03	6.6E+03		1.3E+03
				1.0E+00	I						1.4E+09		1	0.1	~Butylphthalyl Butylglycolate	85-70-1					7.8E+03	3.3E+04		6.3E+03
				1.0E-01	I						1.4E+09		1	0.1	~Dibutyl Phthalate	84-74-2					7.8E+02	3.3E+03		6.3E+02
				8.0E-01	I						1.4E+09		1	0.1	~Diethyl Phthalate	84-66-2					6.3E+03	2.6E+04		5.1E+03
				1.0E-01	I			V			1.4E+09	2.1E+04	1		~Dimethylterephthalate	120-61-6					7.8E+02			7.8E+02
				1.0E-02	P						1.4E+09		1	0.1	~Octyl Phthalate, di-N-	117-84-0					7.8E+01	3.3E+02		6.3E+01
				1.0E+00	H						1.4E+09		1	0.1	~Phthalic Acid, P-	100-21-0					7.8E+03	3.3E+04		6.3E+03

RSL TR=1E-06 HQ=0.1

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Key: I = IRIS; P = PPRTV; D = DWSHA; O = OPP; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #29); H = HEAST; F = See FAQ; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Child Hazard Index (HI) = 0.1			
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	GIABS	ABS	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL Child THQ=0.1 (mg/kg)	Dermal SL Child THQ=0.1 (mg/kg)	Inhalation SL Child THQ=0.1 (mg/kg)	Noncarcinogenic SL Child THI=0.1 (mg/kg)
				2.0E+00	I	2.2E-02	C				1.4E+09		1	0.1	~Phthalic Anhydride	85-44-9					1.6E+04	6.6E+04	2.6E+06	1.3E+04
				7.0E-02	I						1.4E+09		1	0.1	Picloram	1918-02-1					5.5E+02	2.3E+03		4.4E+02
				1.0E-04	X						1.4E+09		1	0.1	Picramic Acid (2-Amino-4,6-dinitrophenol)	96-91-3					7.8E-01	3.3E+00		6.3E-01
				9.0E-04	X						1.4E+09		1	0.1	Picric Acid (2,4,6-Trinitrophenol)	88-89-1					7.0E+00	3.0E+01		5.7E+00
				6.7E-05	O						1.4E+09		1	0.1	Pirimiphos, Methyl	29232-93-7					5.2E-01	2.2E+00		4.2E-01
3.0E+01	C	8.6E-03	C	7.0E-06	H						1.4E+09		1	0.1	Polybrominated Biphenyls	59536-65-1	2.3E-02	8.2E-02	4.4E+02	1.8E-02	5.5E-02	2.3E-01		4.4E-02
															Polychlorinated Biphenyls (PCBs)									
7.0E-02	S	2.0E-05	S	7.0E-05	I			V			1.4E+09	7.1E+05	1	0.14	~Aroclor 1016	12674-11-2	9.9E+00	2.5E+01	1.0E+02	6.7E+00	5.5E-01	1.6E+00		4.1E-01
2.0E+00	S	5.7E-04	S					V			1.4E+09	2.0E+05	1	0.14	~Aroclor 1221	11104-28-2	3.5E-01	8.8E-01	1.0E+00	2.0E-01				
2.0E+00	S	5.7E-04	S					V			1.4E+09	1.1E+05	1	0.14	~Aroclor 1232	11141-16-5	3.5E-01	8.8E-01	5.5E-01	1.7E-01				
2.0E+00	S	5.7E-04	S					V			1.4E+09	5.9E+05	1	0.14	~Aroclor 1242	53469-21-9	3.5E-01	8.8E-01	2.9E+00	2.3E-01				
2.0E+00	S	5.7E-04	S					V			1.4E+09	6.3E+05	1	0.14	~Aroclor 1248	12672-29-6	3.5E-01	8.8E-01	3.1E+00	2.3E-01				
2.0E+00	S	5.7E-04	S	2.0E-05	I			V			1.4E+09	8.4E+05	1	0.14	~Aroclor 1254	11097-69-1	3.5E-01	8.8E-01	4.1E+00	2.4E-01	1.6E-01	4.7E-01		1.2E-01
2.0E+00	S	5.7E-04	S					V			1.4E+09	1.3E+06	1	0.14	~Aroclor 1260	11096-82-5	3.5E-01	8.8E-01	6.5E+00	2.4E-01				
				6.0E-04	X			V			1.4E+09	9.6E+05	1	0.14	~Aroclor 5460	11126-42-4					4.7E+00	1.4E+01		3.5E+00
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V			1.4E+09	2.4E+06	1	0.14	~Heptachlorobiphenyl, 2,3,3',4,4',5,5'- (PCB 189)	39635-31-9	1.8E-01	4.5E-01	6.0E+00	1.3E-01	1.8E-01	5.5E-01	3.4E+02	1.4E-01
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V			1.4E+09	1.6E+06	1	0.14	~Hexachlorobiphenyl, 2,3',4,4',5,5'- (PCB 167)	52663-72-6	1.8E-01	4.5E-01	3.9E+00	1.2E-01	1.8E-01	5.5E-01	2.2E+02	1.4E-01
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V			1.4E+09	1.0E+06	1	0.14	~Hexachlorobiphenyl, 2,3,3',4,4',5'- (PCB 157)	69782-90-7	1.8E-01	4.5E-01	2.6E+00	1.2E-01	1.8E-01	5.5E-01	1.4E+02	1.4E-01
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V			1.4E+09	1.1E+06	1	0.14	~Hexachlorobiphenyl, 2,3,3',4,4',5- (PCB 156)	38380-08-4	1.8E-01	4.5E-01	2.7E+00	1.2E-01	1.8E-01	5.5E-01	1.5E+02	1.4E-01
3.9E+03	E	1.1E+00	E	2.3E-08	E	1.3E-06	E	V			1.4E+09	1.6E+06	1	0.14	~Hexachlorobiphenyl, 3,3',4,4',5,5'- (PCB 169)	32774-16-6	1.8E-04	4.5E-04	3.9E-03	1.2E-04	1.8E-04	5.5E-04	2.2E-01	1.4E-04
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V			1.4E+09	7.3E+05	1	0.14	~Pentachlorobiphenyl, 2',3,4,4',5- (PCB 123)	65510-44-3	1.8E-01	4.5E-01	1.8E+00	1.2E-01	1.8E-01	5.5E-01	1.0E+02	1.4E-01
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V			1.4E+09	5.9E+05	1	0.14	~Pentachlorobiphenyl, 2,3',4,4',5- (PCB 118)	31508-00-6	1.8E-01	4.5E-01	1.5E+00	1.2E-01	1.8E-01	5.5E-01	8.2E+01	1.4E-01
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V			1.4E+09	6.0E+05	1	0.14	~Pentachlorobiphenyl, 2,3,3',4,4'- (PCB 105)	32598-14-4	1.8E-01	4.5E-01	1.5E+00	1.2E-01	1.8E-01	5.5E-01	8.4E+01	1.4E-01
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V			1.4E+09	1.1E+06	1	0.14	~Pentachlorobiphenyl, 2,3,4,4',5- (PCB 114)	74472-37-0	1.8E-01	4.5E-01	2.6E+00	1.2E-01	1.8E-01	5.5E-01	1.5E+02	1.4E-01
1.3E+04	E	3.8E+00	E	7.0E-09	E	4.0E-07	E	V			1.4E+09	7.3E+05	1	0.14	~Pentachlorobiphenyl, 3,3',4,4',5- (PCB 126)	57465-28-8	5.3E-05	1.4E-04	5.4E-04	3.6E-05	5.5E-05	1.8E-04	3.0E-02	4.1E-05
2.0E+00	I	5.7E-04	I					V			1.4E+09	5.3E+05	1	0.14	~Polychlorinated Biphenyls (high risk)	1336-36-3	3.5E-01	8.8E-01	2.6E+00	2.3E-01				
4.0E-01	I	1.0E-04	I					V					1	0.14	~Polychlorinated Biphenyls (low risk)	1336-36-3								
7.0E-02	I	2.0E-05	I					V					1	0.14	~Polychlorinated Biphenyls (lowest risk)	1336-36-3								
1.3E+01	E	3.8E-03	E	7.0E-06	E	4.0E-04	E				1.4E+09		1	0.14	~Tetrachlorobiphenyl, 3,3',4,4'- (PCB 77)	32598-13-3	5.3E-02	1.4E-01	1.0E+03	3.8E-02	5.5E-02	1.8E-01	5.7E+04	4.1E-02
3.9E+01	E	1.1E-02	E	2.3E-06	E	1.3E-04	E	V			1.4E+09	5.1E+05	1	0.14	~Tetrachlorobiphenyl, 3,4,4',5- (PCB 81)	70362-50-4	1.8E-02	4.5E-02	1.3E-01	1.2E-02	1.8E-02	5.5E-02	7.1E+00	1.4E-02
						6.0E-04	I				1.4E+09		1	0.1	Polymeric Methylene Diphenyl Diisocyanate (PMDI)	9016-87-9							8.5E+04	8.5E+04
															Polynuclear Aromatic Hydrocarbons (PAHs)									
				6.0E-02	I			V			1.4E+09	1.4E+05	1	0.13	~Acenaphthene	83-32-9					4.7E+02	1.5E+03		3.6E+02
				3.0E-01	I			V			1.4E+09	5.2E+05	1	0.13	~Anthracene	120-12-7					2.3E+03	7.6E+03		1.8E+03
1.0E-01	E	6.0E-05	E					V	M		1.4E+09	4.4E+06	1	0.13	~Benz[a]anthracene	56-55-3	1.5E+00	4.6E+00	7.4E+01	1.1E+00				
1.2E+00	C	1.1E-04	C								1.4E+09		1	0.13	~Benzo(j)fluoranthene	205-82-3	5.8E-01	1.6E+00	3.5E+04	4.2E-01				
1.0E+00	I	6.0E-04	I	3.0E-04	I	2.0E-06	I		M		1.4E+09		1	0.13	~Benzo[a]pyrene	50-32-8	1.5E-01	4.6E-01	2.3E+03	1.1E-01	2.3E+00	7.6E+00	2.8E+02	1.8E+00
1.0E-01	E	6.0E-05	E						M		1.4E+09		1	0.13	~Benzo[b]fluoranthene	205-99-2	1.5E+00	4.6E+00	2.3E+04	1.1E+00				
1.0E-02	E	6.0E-06	E						M		1.4E+09		1	0.13	~Benzo[k]fluoranthene	207-08-9	1.5E+01	4.6E+01	2.3E+05	1.1E+01				
				8.0E-02	I			V			1.4E+09	8.0E+04	1	0.13	~Chloronaphthalene, Beta-	91-58-7					6.3E+02	2.0E+03		4.8E+02
1.0E-03	E	6.0E-07	E						M		1.4E+09		1	0.13	~Chrysene	218-01-9	1.5E+02	4.6E+02	2.3E+06	1.1E+02				
1.0E+00	E	6.0E-04	E						M		1.4E+09		1	0.13	~Dibenz[a,h]anthracene	53-70-3	1.5E-01	4.6E-01	2.3E+03	1.1E-01				
1.2E+01	C	1.1E-03	C								1.4E+09		1	0.13	~Dibenzo(a,e)pyrene	192-65-4	5.8E-02	1.6E-01	3.5E+03	4.2E-02				
2.5E+02	C	7.1E-02	C						M		1.4E+09		1	0.13	~Dimethylbenz(a)anthracene, 7,12-	57-97-6	6.1E-04	1.8E-03	1.9E+01	4.6E-04				
				4.0E-02	I						1.4E+09		1	0.13	~Fluoranthene	206-44-0					3.1E+02	1.0E+03		2.4E+02
				4.0E-02	I			V			1.4E+09	2.8E+05	1	0.13	~Fluorene	86-73-7					3.1E+02	1.0E+03		2.4E+02
1.0E-01	E	6.0E-05	E						M		1.4E+09		1	0.13	~Indeno[1,2,3-cd]pyrene	193-39-5	1.5E+00	4.6E+00	2.3E+04	1.1E+00				
2.9E-02	P			7.0E-02	A			V		3.9E+02	1.4E+09	5.9E+04	1	0.13	~Methylnaphthalene, 1-	90-12-0	2.4E+01	6.6E+01		1.8E+01	5.5E+02	1.8E+03		4.2E+02
				4.0E-03	I			V			1.4E+09	5.8E+04	1	0.13	~Methylnaphthalene, 2-	91-57-6					3.1E+01	1.0E+02		2.4E+01
		3.4E-05	C	2.0E-02	I	3.0E-03	I	V			1.4E+09	4.6E+04	1	0.13	~Naphthalene	91-20-3			3.8E+00	3.8E+00	1.6E+02	5.1E+02	1.4E+01	1.3E+01
1.2E+00	C	1.1E-04	C								1.4E+09		1	0.13	~Nitropyrene, 4-	57835-92-4	5.8E-01	1.6E+00	3.5E+04	4.2E-01				
				3.0E-02	I			V			1.4E+09	2.4E+06	1	0.13	~Pyrene	129-00-0					2.3E+02	7.6E+02		1.8E+02
				2.0E-02	P						1.4E+09		1	0.1	Potassium Perfluorobutane Sulfonate	29420-49-3					1.6E+02	6.6E+02		1.3E+02
1.5E-01	I			9.0E-03	I						1.4E+09		1	0.1	Prochloraz	67747-09-5	4.6E+00	1.6E+01		3.6E+00	7.0E+01	3.0E+02		5.7E+01
				6.0E-03	H			V			1.4E+09	4.2E+05	1		Profluralin	26399-36-0					4.7E+01			4.7E+01
				1.5E-02	I						1.4E+09		1	0.1	Prometon	1610-18-0					1.2E+02	4.9E+02		9.5E+01
				4.0E-02	O						1.4E+09		1	0.1	Prometryn	7287-19-6					3.1E+02	1.3E+03		2.5E+02
				1.3E-02	I						1.4E+09		1	0.1	Propachlor	1918-16-7					1.0E+02	4.3E+02		8.2E+01
				5.0E-03	I						1.4E+09		1	0.1	Propanil	709-98-8					3.9E+01	1.6E+02		3.2E+01
3.3E-02	O			4.0E-02	O						1.4E+09		1	0.1	Propargite	2312-35-8	2.1E+01	7.6E+01		1.7E+01	3.1E+02	1.3E+03		2.5E+02
				2.0E-03	I			V		1.1E+05	1.4E+09	6.3E+04	1		Propargyl Alcohol	107-19-7					1.6E+01			1.6E+01
				2.0E-02	I						1.4E+09		1	0.1	Propazine	139-40-2					1.6E+02	6.6E+02		1.3E+02
				2.0E-02	I						1.4E+09		1	0.1	Propham	122-42-9					1.6E+02	6.6E+02		1.3E+02
				1.0E-01	O						1.4E+09		1	0.1	Propiconazole	60207-90-1					7.8E+02	3.3E+03		6.3E+02
						8.0E-03	I	V		3.3E+04	1.4E+09	8.9E+03	1		Propionaldehyde	123-38-6							7.5E+00	7.5E+00
				1.0E-01	X	1.0E+00	X	V		2.6E+02	1.4E+09	7.0E+03	1		Propyl benzene	103-65-1					7.8E+02		7.3E+02	3.8E+02
						3.0E+00	C	V		3.5E+02	1.4E+09	7.0E+02	1		Propylene	115-07-1							2.2E+02	2.2E+02
				2.0E+01	P						1.4E+09		1	0.1	Propylene Glycol	57-55-6					1.6E+05	6.6E+05		1.3E+05
						2.7E-04	A				1.4E+09		1	0.1	Propylene Glycol Dinitrate	6423-43-4							3.9E+04	3.9E+04
				7.0E-01	H	2.0E+00	I	V		1.1E+05	1.4E+09	7.8E+04	1		Propylene Glycol Monomethyl Ether	107-98-2					5.5E+03		1.6E+04	4.1E+03
2.4E-01	I	3.7E-06	I			3.0E-02	I	V		7.8E+04	1.4E+09	1.0E+04	1		Propylene Oxide	75-56-9	2.9E+00		7.8E+00	2.1E+00			3.2E+01	3.2E+01
				7.5E-02	I						1.4E+09		1	0.1	Propyzamide	23950-58-5					5.9E+02	2.5E+03		4.7E+02
				1.0E-03	I			V		5.3E+05	1.4E+09	5.5E+04	1		Pyridine	110-86-1					7.8E+00			7.8E+00
				5.0E-04	I						1.4E+09		1	0.1	Quinalphos	13593-03-8					3.9E+00	1.6E+01		3.2E+00
3.0E+00	I										1.4E+09		1	0.1	Quinoline	91-22-5	2.3E-01	8.2E-01		1.8E-01				

TR=1E-06
HQ=0.1

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Key: I = IRIS; P = PPRTV; D = DWSHA; O = OPP; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #29); H = HEAST; F = See FAQ; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Child Hazard Index (HI) = 0.1			
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	GIABS	ABS	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL Child THQ=0.1 (mg/kg)	Dermal SL Child THQ=0.1 (mg/kg)	Inhalation SL Child THQ=0.1 (mg/kg)	Noncarcinogenic SL Child THI=0.1 (mg/kg)
				9.0E-03	I						1.4E+09		1	0.1	Quizalofop-ethyl	76578-14-8					7.0E+01	3.0E+02		5.7E+01
						3.0E-02	A				1.4E+09		1		Refractory Ceramic Fibers	E715557							4.3E+06	4.3E+06
				3.0E-02	I						1.4E+09		1	0.1	Resmethrin	10453-86-8					2.3E+02	9.9E+02		1.9E+02
				5.0E-02	H			V			1.4E+09	4.7E+05	1		Ronnel	299-84-3					3.9E+02			3.9E+02
				4.0E-03	I						1.4E+09		1	0.1	Rotenone	83-79-4					3.1E+01	1.3E+02		2.5E+01
2.2E-01	C	6.3E-05	C						M		1.4E+09		1	0.1	Safrole	94-59-7	7.0E-01	2.7E+00	2.2E+04	5.5E-01				
				5.0E-03	I						1.4E+09		1		Selenious Acid	7783-00-8					3.9E+01			3.9E+01
				5.0E-03	I	2.0E-02	C				1.4E+09		1		Selenium	7782-49-2					3.9E+01		2.8E+06	3.9E+01
				5.0E-03	C	2.0E-02	C				1.4E+09		1		Selenium Sulfide	7446-34-6					3.9E+01		2.8E+06	3.9E+01
				1.4E-01	O						1.4E+09		1	0.1	Sethoxydim	74051-80-2					1.1E+03	4.6E+03		8.8E+02
						3.0E-03	C				1.4E+09		1		Silica (crystalline, respirable)	7631-86-9							4.3E+05	4.3E+05
				5.0E-03	I						1.4E+09		0.04		Silver	7440-22-4					3.9E+01			3.9E+01
1.2E-01	H			5.0E-03	I						1.4E+09		1	0.1	Simazine	122-34-9	5.8E+00	2.1E+01		4.5E+00	3.9E+01	1.6E+02		3.2E+01
				1.3E-02	I						1.4E+09		1	0.1	Sodium Acifluorfen	62476-59-9					1.0E+02	4.3E+02		8.2E+01
				4.0E-03	I						1.4E+09		1		Sodium Azide	26628-22-8					3.1E+01			3.1E+01
5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M		1.4E+09		0.025		Sodium Dichromate	10588-01-9	3.1E-01		9.2E+00	3.0E-01	1.6E+02		2.8E+04	1.6E+02
2.7E-01	H			3.0E-02	I						1.4E+09		1	0.1	Sodium Diethyldithiocarbamate	148-18-5	2.6E+00	9.2E+00		2.0E+00	2.3E+02	9.9E+02		1.9E+02
				5.0E-02	A	1.3E-02	C				1.4E+09		1		Sodium Fluoride	7681-49-4					3.9E+02		1.8E+06	3.9E+02
				2.0E-05	I						1.4E+09		1	0.1	Sodium Fluoroacetate	62-74-8					1.6E-01	6.6E-01		1.3E-01
				1.0E-03	H						1.4E+09		1		Sodium Metavanadate	13718-26-8					7.8E+00			7.8E+00
				8.0E-04	P						1.4E+09		1		Sodium Tungstate	13472-45-2					6.3E+00			6.3E+00
				8.0E-04	P						1.4E+09		1		Sodium Tungstate Dihydrate	10213-10-2					6.3E+00			6.3E+00
2.4E-02	H			3.0E-02	I						1.4E+09		1	0.1	Stirofos (Tetrachlorovinphos)	961-11-5	2.9E+01	1.0E+02		2.3E+01	2.3E+02	9.9E+02		1.9E+02
5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M		1.4E+09		0.025		Strontium Chromate	7789-06-2	3.1E-01		9.2E+00	3.0E-01	1.6E+02		2.8E+04	1.6E+02
				6.0E-01	I						1.4E+09		1		Strontium, Stable	7440-24-6					4.7E+03			4.7E+03
				3.0E-04	I						1.4E+09		1	0.1	Strychnine	57-24-9					2.3E+00	9.9E+00		1.9E+00
				2.0E-01	I	1.0E+00	I	V		8.7E+02	1.4E+09	9.4E+03	1		Styrene	100-42-5					1.6E+03		9.7E+02	6.0E+02
				3.0E-03	P						1.4E+09		1	0.1	Styrene-Acrylonitrile (SAN) Trimer						2.3E+01	9.9E+01		1.9E+01
				1.0E-03	P	2.0E-03	X				1.4E+09		1	0.1	Sulfolane	126-33-0					7.8E+00	3.3E+01	2.8E+05	6.3E+00
				8.0E-04	P						1.4E+09		1	0.1	Sulfonylbis(4-chlorobenzene), 1,1'-	80-07-9					6.3E+00	2.6E+01		5.1E+00
						1.0E-03	C	V			1.4E+09		1		Sulfur Trioxide	7446-11-9							1.4E+05	1.4E+05
						1.0E-03	C				1.4E+09		1		Sulfuric Acid	7664-93-9							1.4E+05	1.4E+05
2.5E-02	I	7.1E-06	I	5.0E-02	H						1.4E+09		1	0.1	Sulfurous acid, 2-chloroethyl 2-[4-(1,1-dimethylethyl)phenoxy]-1-methylethyl ester	140-57-8	2.8E+01	9.9E+01	5.4E+05	2.2E+01	3.9E+02	1.6E+03		3.2E+02
				3.0E-02	H						1.4E+09		1	0.1	TCMTB	21564-17-0					2.3E+02	9.9E+02		1.9E+02
				7.0E-02	I						1.4E+09		1	0.1	Tebuthiuron	34014-18-1					5.5E+02	2.3E+03		4.4E+02
				2.0E-02	H						1.4E+09		1	0.1	Temephos	3383-96-8					1.6E+02	6.6E+02		1.3E+02
				1.3E-02	I						1.4E+09		1	0.1	Terbacil	5902-51-2					1.0E+02	4.3E+02		8.2E+01
				2.5E-05	H			V		3.1E+01	1.4E+09	2.6E+05	1		Terbufos	13071-79-9					2.0E-01			2.0E-01
				1.0E-03	I						1.4E+09		1	0.1	Terbutryn	886-50-0					7.8E+00	3.3E+01		6.3E+00
				1.0E-04	I						1.4E+09		1	0.1	Tetrabromodiphenyl ether, 2,2',4,4'- (BDE-47)	5436-43-1					7.8E-01	3.3E+00		6.3E-01
				3.0E-04	I			V			1.4E+09	5.1E+04	1		Tetrachlorobenzene, 1,2,4,5-	95-94-3					2.3E+00			2.3E+00
2.6E-02	I	7.4E-06	I	3.0E-02	I			V		6.8E+02	1.4E+09	5.7E+03	1		Tetrachloroethane, 1,1,1,2-	630-20-6	2.7E+01		2.2E+00	2.0E+00	2.3E+02			2.3E+02
2.0E-01	I	5.8E-05	C	2.0E-02	I			V		1.9E+03	1.4E+09	1.5E+04	1		Tetrachloroethane, 1,1,2,2-	79-34-5	3.5E+00		7.3E-01	6.0E-01	1.6E+02			1.6E+02
2.1E-03	I	2.6E-07	I	6.0E-03	I	4.0E-02	I	V		1.7E+02	1.4E+09	2.4E+03	1		Tetrachloroethylene	127-18-4	3.3E+02		2.5E+01	2.4E+01	4.7E+01		9.8E+00	8.1E+00
				3.0E-02	I						1.4E+09		1	0.1	Tetrachlorophenol, 2,3,4,6-	58-90-2					2.3E+02	9.9E+02		1.9E+02
2.0E+01	H							V			1.4E+09	1.1E+05	1		Tetrachlorotoluene, p- alpha, alpha, alpha-	5216-25-1	3.5E-02			3.5E-02				
				5.0E-04	I						1.4E+09		1	0.1	Tetraethyl Dithiopyrophosphate	3689-24-5					3.9E+00	1.6E+01		3.2E+00
						8.0E+01	I	V		2.1E+03	1.4E+09	1.2E+03	1		Tetrafluoroethane, 1,1,1,2-	811-97-2							1.0E+04	1.0E+04
				2.0E-03	P						1.4E+09		1	0.0007	Tetryl (Trinitrophenylmethylnitramine)	479-45-8					1.6E+01	1.0E+04		1.6E+01
				2.0E-05	S						1.4E+09		1		Thallic Oxide	1314-32-5					1.6E-01			1.6E-01
				1.0E-05	X						1.4E+09		1		Thallium (I) Nitrate	10102-45-1					7.8E-02			7.8E-02
				1.0E-05	X						1.4E+09		1		Thallium (Soluble Salts)	7440-28-0					7.8E-02			7.8E-02
				1.0E-05	X			V			1.4E+09		1		Thallium Acetate	563-68-8					7.8E-02			7.8E-02
				2.0E-05	X			V			1.4E+09		1		Thallium Carbonate	6533-73-9					1.6E-01			1.6E-01
				1.0E-05	X						1.4E+09		1		Thallium Chloride	7791-12-0					7.8E-02			7.8E-02
				1.0E-05	S						1.4E+09		1		Thallium Selenite	12039-52-0					7.8E-02			7.8E-02
				2.0E-05	X						1.4E+09		1		Thallium Sulfate	7446-18-6					1.6E-01			1.6E-01
				4.3E-02	O						1.4E+09		1	0.1	Thifensulfuron-methyl	79277-27-3					3.4E+02	1.4E+03		2.7E+02
				1.0E-02	I						1.4E+09		1	0.1	Thiobencarb	28249-77-6					7.8E+01	3.3E+02		6.3E+01
				7.0E-02	X						1.4E+09		1	0.0075	Thiodiglycol	111-48-8					5.5E+02	3.1E+04		5.4E+02
				3.0E-04	H						1.4E+09		1	0.1	Thiofanox	39196-18-4					2.3E+00	9.9E+00		1.9E+00
1.2E-02	O			2.7E-02	O						1.4E+09		1	0.1	Thiophanate, Methyl	23564-05-8	6.0E+01	2.1E+02		4.7E+01	2.1E+02	8.8E+02		1.7E+02
				1.5E-02	O						1.4E+09		1	0.1	Thiram	137-26-8					1.2E+02	4.9E+02		9.5E+01
				6.0E-01	H						1.4E+09		1		Tin	7440-31-5					4.7E+03			4.7E+03
						1.0E-04	A	V			1.4E+09		1		Titanium Tetrachloride	7550-45-0							1.4E+04	1.4E+04
				8.0E-02	I	5.0E+00	I	V		8.2E+02	1.4E+09	4.3E+03	1		Toluene	108-88-3					6.3E+02		2.2E+03	4.9E+02
		1.1E-05	C			8.0E-06	C	V			1.4E+09	7.6E+05	1		Toluene-2,4-diisocyanate	584-84-9			1.9E+02	1.9E+02			6.4E-01	6.4E-01
1.8E-01	X			2.0E-04	X						1.4E+09		1	0.1	Toluene-2,5-diamine	95-70-5	3.9E+00	1.4E+01		3.0E+00	1.6E+00	6.6E+00		1.3E+00
		1.1E-05	C			8.0E-06	C	V		1.7E+03	1.4E+09	6.3E+05	1		Toluene-2,6-diisocyanate	91-08-7			1.6E+02	1.6E+02			5.3E-01	5.3E-01
1.6E-02	P	5.1E-05	C								1.4E+09		1	0.1	Toluidine, o- (Methylaniline, 2-)	95-53-4	4.3E+01	1.5E+02	7.5E+04	3.4E+01				
3.0E-02	P			4.0E-03	X						1.4E+09		1	0.1	Toluidine, p-	106-49-0	2.3E+01	8.2E+01		1.8E+01	3.1E+01	1.3E+02		2.5E+01
				3.0E+00	P			V		3.4E-01	1.4E+09	1.4E+03	1		Total Petroleum Hydrocarbons (Aliphatic High)	E1790670					2.3E+04			2.3E+04
						6.0E-01	P	V		1.4E+02	1.4E+09	8.3E+02	1		Total Petroleum Hydrocarbons (Aliphatic Low)	E1790666							5.2E+01	5.2E+01
				1.0E-02	X	1.0E-01	P	V		6.9E+00	1.4E+09	1.0E+03	1		Total Petroleum Hydrocarbons (Aliphatic Medium)	E1790668					7.8E+01		1.1E+01	9.8E+00
				4.0E-02	P						1.4E+09		1	0.1	Total Petroleum Hydrocarbons (Aromatic High)	E1790676					3.1E+02	1.3E+03		2.5E+02

TR=1E-06
HQ=0.1

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Toxicity and Chemical-specific Information															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Child Hazard Index (HI) = 0.1			
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	GIABS	ABS	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL Child THQ=0.1 (mg/kg)	Dermal SL Child THQ=0.1 (mg/kg)	Inhalation SL Child THQ=0.1 (mg/kg)	Noncarcinogenic SL Child THI=0.1 (mg/kg)
				4.0E-03	P	3.0E-02	P	V		1.8E+03	1.4E+09	3.5E+03	1		Total Petroleum Hydrocarbons (Aromatic Low)	E1790672					3.1E+01		1.1E+01	8.2E+00
				4.0E-03	P	3.0E-03	P	V			1.4E+09	5.2E+04	1		Total Petroleum Hydrocarbons (Aromatic Medium)	E1790674					3.1E+01		1.6E+01	1.1E+01
1.1E+00	I	3.2E-04	I								1.4E+09		1	0.1	Toxaphene	8001-35-2	6.3E-01	2.2E+00	1.2E+04	4.9E-01				
				7.5E-03	I						1.4E+09		1	0.1	Tralomethrin	66841-25-6					5.9E+01	2.5E+02		4.7E+01
				3.0E-04	A			V			1.4E+09	3.4E+03	1		Tri-n-butyltin	688-73-3					2.3E+00			2.3E+00
				8.0E+01	X						1.4E+09		1	0.1	Triacetin	102-76-1					6.3E+05	2.6E+06		5.1E+05
				3.4E-02	O						1.4E+09		1	0.1	Triadimefon	43121-43-3					2.7E+02	1.1E+03		2.1E+02
7.2E-02	O			2.5E-02	O			V			1.4E+09	3.6E+05	1		Triallate	2303-17-5	9.7E+00			9.7E+00	2.0E+02			2.0E+02
				1.0E-02	I						1.4E+09		1	0.1	Triasulfuron	82097-50-5					7.8E+01	3.3E+02		6.3E+01
				8.0E-03	I						1.4E+09		1	0.1	Tribenuron-methyl	101200-48-0					6.3E+01	2.6E+02		5.1E+01
				5.0E-03	I			V			1.4E+09	4.8E+04	1		Tribromobenzene, 1,2,4-	615-54-3					3.9E+01			3.9E+01
				9.0E-03	X						1.4E+09		1	0.1	Tribromophenol, 2,4,6-	118-79-6					7.0E+01	3.0E+02		5.7E+01
9.0E-03	P			1.0E-02	P						1.4E+09		1	0.1	Tributyl Phosphate	126-73-8	7.7E+01	2.7E+02		6.0E+01	7.8E+01	3.3E+02		6.3E+01
				3.0E-04	P						1.4E+09		1	0.1	Tributyltin Compounds	E1790678					2.3E+00	9.9E+00		1.9E+00
				3.0E-04	I						1.4E+09		1	0.1	Tributyltin Oxide	56-35-9					2.3E+00	9.9E+00		1.9E+00
				3.0E+01	I	5.0E+00	P	V		9.1E+02	1.4E+09	1.3E+03	1		Trichloro-1,2,2-trifluoroethane, 1,1,2-	76-13-1					2.3E+05		6.7E+02	6.7E+02
7.0E-02	I			2.0E-02	I						1.4E+09		1	0.1	Trichloroacetic Acid	76-03-9	9.9E+00	3.5E+01		7.8E+00	1.6E+02	6.6E+02		1.3E+02
2.9E-02	H										1.4E+09		1	0.1	Trichloroaniline HCl, 2,4,6-	33663-50-2	2.4E+01	8.5E+01		1.9E+01				
7.0E-03	X			3.0E-05	X						1.4E+09		1	0.1	Trichloroaniline, 2,4,6-	634-93-5	9.9E+01	3.5E+02		7.8E+01	2.3E-01	9.9E-01		1.9E-01
				8.0E-04	X			V			1.4E+09	3.2E+04	1		Trichlorobenzene, 1,2,3-	87-61-6					6.3E+00			6.3E+00
2.9E-02	P			1.0E-02	I	2.0E-03	P	V		4.0E+02	1.4E+09	3.0E+04	1		Trichlorobenzene, 1,2,4-	120-82-1	2.4E+01			2.4E+01	7.8E+01		6.2E+00	5.8E+00
				2.0E+00	I	5.0E+00	I	V		6.4E+02	1.4E+09	1.7E+03	1		Trichloroethane, 1,1,1-	71-55-6					1.6E+04		8.6E+02	8.1E+02
5.7E-02	I	1.6E-05	I	4.0E-03	I	2.0E-04	X	V		2.2E+03	1.4E+09	7.2E+03	1		Trichloroethane, 1,1,2-	79-00-5	1.2E+01		1.3E+00	1.1E+00	3.1E+01		1.5E-01	1.5E-01
4.6E-02	I	4.1E-06	I	5.0E-04	I	2.0E-03	I	V	M	6.9E+02	1.4E+09	2.2E+03	1		Trichloroethylene	79-01-6	8.8E+00		1.1E+00	9.4E-01	3.9E+00		4.6E-01	4.1E-01
				3.0E-01	I			V		1.2E+03	1.4E+09	1.0E+03	1		Trichlorofluoromethane	75-69-4					2.3E+03			2.3E+03
				1.0E-01	I						1.4E+09		1	0.1	Trichlorophenol, 2,4,5-	95-95-4					7.8E+02	3.3E+03		6.3E+02
1.1E-02	I	3.1E-06	I	1.0E-03	P						1.4E+09		1	0.1	Trichlorophenol, 2,4,6-	88-06-2	6.3E+01	2.2E+02	1.2E+06	4.9E+01	7.8E+00	3.3E+01		6.3E+00
				1.0E-02	I						1.4E+09		1	0.1	Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5					7.8E+01	3.3E+02		6.3E+01
				8.0E-03	I						1.4E+09		1	0.1	Trichlorophenoxypropionic acid, -2,4,5	93-72-1					6.3E+01	2.6E+02		5.1E+01
				5.0E-03	I			V		1.3E+03	1.4E+09	1.5E+04	1		Trichloropropane, 1,1,2-	598-77-6					3.9E+01			3.9E+01
3.0E+01	I			4.0E-03	I	3.0E-04	I	V	M	1.4E+03	1.4E+09	1.6E+04	1		Trichloropropane, 1,2,3-	96-18-4	5.1E-03			5.1E-03	3.1E+01		4.9E-01	4.8E-01
				3.0E-03	X	3.0E-04	P	V		3.1E+02	1.4E+09	2.3E+03	1		Trichloropropene, 1,2,3-	96-19-5					2.3E+01		7.3E-02	7.3E-02
				2.0E-02	A						1.4E+09		1	0.1	Tricresyl Phosphate (TCP)	1330-78-5					1.6E+02	6.6E+02		1.3E+02
				3.0E-03	I						1.4E+09		1	0.1	Tridiphane	58138-08-2					2.3E+01	9.9E+01		1.9E+01
						7.0E-03	I	V		2.8E+04	1.4E+09	1.6E+04	1		Triethylamine	121-44-8							1.2E+01	1.2E+01
				2.0E+00	P						1.4E+09		1	0.1	Triethylene Glycol	112-27-6					1.6E+04	6.6E+04		1.3E+04
						2.0E+01	P	V		4.8E+03	1.4E+09	7.1E+02	1		Trifluoroethane, 1,1,1-	420-46-2							1.5E+03	1.5E+03
7.7E-03	I			7.5E-03	I			V			1.4E+09	5.1E+05	1		Trifluralin	1582-09-8	9.0E+01			9.0E+01	5.9E+01			5.9E+01
2.0E-02	P			1.0E-02	P						1.4E+09		1	0.1	Trimethyl Phosphate	512-56-1	3.5E+01	1.2E+02		2.7E+01	7.8E+01	3.3E+02		6.3E+01
				1.0E-02	I	6.0E-02	I	V		2.9E+02	1.4E+09	9.4E+03	1		Trimethylbenzene, 1,2,3-	526-73-8					7.8E+01		5.9E+01	3.4E+01
				1.0E-02	I	6.0E-02	I	V		2.2E+02	1.4E+09	7.9E+03	1		Trimethylbenzene, 1,2,4-	95-63-6					7.8E+01		5.0E+01	3.0E+01
				1.0E-02	I	6.0E-02	I	V		1.8E+02	1.4E+09	6.6E+03	1		Trimethylbenzene, 1,3,5-	108-67-8					7.8E+01		4.1E+01	2.7E+01
				1.0E-02	X			V		3.0E+01	1.4E+09	1.0E+03	1		Trimethylpentene, 2,4,4-	25167-70-8					7.8E+01			7.8E+01
				3.0E-02	I						1.4E+09		1	0.019	Trinitrobenzene, 1,3,5-	99-35-4					2.3E+02	5.2E+03		2.2E+02
3.0E-02	I			5.0E-04	I						1.4E+09		1	0.032	Trinitrotoluene, 2,4,6-	118-96-7	2.3E+01	2.6E+02		2.1E+01	3.9E+00	5.2E+01		3.6E+00
				2.0E-02	P						1.4E+09		1	0.1	Triphenylphosphine Oxide	791-28-6					1.6E+02	6.6E+02		1.3E+02
				2.0E-02	A						1.4E+09		1	0.1	Tris(1,3-Dichloro-2-propyl) Phosphate	13674-87-8					1.6E+02	6.6E+02		1.3E+02
				1.0E-02	X						1.4E+09		1	0.1	Tris(1-chloro-2-propyl)phosphate	13674-84-5					7.8E+01	3.3E+02		6.3E+01
2.3E+00	C	6.6E-04	C					V		4.7E+02	1.4E+09	9.0E+05	1		Tris(2,3-dibromopropyl)phosphate	126-72-7	3.0E-01		3.8E+00	2.6E-01				
2.0E-02	P			7.0E-03	P						1.4E+09		1	0.1	Tris(2-chloroethyl)phosphate	115-96-8	3.5E+01	1.2E+02		2.7E+01	5.5E+01	2.3E+02		4.4E+01
3.2E-03	P			1.0E-01	P						1.4E+09		1	0.1	Tris(2-ethylhexyl)phosphate	78-42-2	2.2E+02	7.7E+02		1.7E+02	7.8E+02	3.3E+03		6.3E+02
				8.0E-04	P						1.4E+09		1		Tungsten	7440-33-7					6.3E+00			6.3E+00
				2.0E-04	A	4.0E-05	A				1.4E+09		1		Uranium (Soluble Salts)	E715565					1.6E+00		5.7E+03	1.6E+00
1.0E+00	C	2.9E-04	C						M		1.4E+09		1	0.1	Urethane	51-79-6	1.5E-01	6.0E-01	4.8E+03	1.2E-01				
		8.3E-03	P	9.0E-03	I	7.0E-06	P				1.4E+09		0.026		Vanadium Pentoxide	1314-62-1			4.6E+02	4.6E+02	7.0E+01		9.9E+02	6.6E+01
				5.0E-03	S	1.0E-04	A				1.4E+09		0.026		Vanadium and Compounds	7440-62-2					3.9E+01		1.4E+04	3.9E+01
				1.0E-03	I			V			1.4E+09	1.2E+05	1		Vernolate	1929-77-7					7.8E+00			7.8E+00
				1.2E-03	O						1.4E+09		1	0.1	Vinclozolin	50471-44-8					9.4E+00	4.0E+01		7.6E+00
				1.0E+00	H	2.0E-01	I	V		2.8E+03	1.4E+09	4.4E+03	1		Vinyl Acetate	108-05-4					7.8E+03		9.2E+01	9.1E+01
		3.2E-05	H			3.0E-03	I	V		2.5E+03	1.4E+09	1.4E+03	1		Vinyl Bromide	593-60-2			1.2E-01	1.2E-01			4.3E-01	4.3E-01
7.2E-01	I	4.4E-06	I	3.0E-03	I	1.0E-01	I	V	M	3.9E+03	1.4E+09	9.6E+02	1		Vinyl Chloride	75-01-4	9.4E-02		1.6E-01	5.9E-02	2.3E+01		1.0E+01	7.0E+00
				3.0E-04	I						1.4E+09		1	0.1	Warfarin	81-81-2					2.3E+00	9.9E+00		1.9E+00
				2.0E-01	S	1.0E-01	S	V		3.9E+02	1.4E+09	5.6E+03	1		Xylene, P-	106-42-3					1.6E+03		5.8E+01	5.6E+01
				2.0E-01	S	1.0E-01	S	V		3.9E+02	1.4E+09	5.5E+03	1		Xylene, m-	108-38-3					1.6E+03		5.7E+01	5.5E+01
				2.0E-01	S	1.0E-01	S	V		4.3E+02	1.4E+09	6.5E+03	1		Xylene, o-	95-47-6					1.6E+03		6.7E+01	6.5E+01
				2.0E-01	I	1.0E-01	I	V		2.6E+02	1.4E+09	5.7E+03	1		Xylenes	1330-20-7					1.6E+03		6.0E+01	5.8E+01
				3.0E-04	I						1.4E+09		1		Zinc Phosphide	1314-84-7					2.3E+00			2.3E+00
				3.0E-01	I						1.4E+09		1		Zinc and Compounds	7440-66-6					2.3E+03			2.3E+03
				5.0E-02	I						1.4E+09		1	0.1	Zineb	12122-67-7					3.9E+02	1.6E+03		3.2E+02
				8.0E-05	X						1.4E+09		1		Zirconium	7440-67-7					6.3E-01			6.3E-01

TR=1E-06
HQ=0.1

ED_002624_00006427-00175

APPENDIX D

TDD NO 0001/17-004

U.S. EPA, Region 6
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

Vendor : WESTON SOLUTIONS, INC.

TDD # : 0001/17-004
Amendment # :
Contract # : EP-S5-17-02

TDD Title : Frank J. Doyle Site
Purpose : TDD INITIATION

Verbal Date :
Start Date : 08/09/2017
Completion Date : 12/31/2017
Effective Date : 08/09/2017

Priority : HIGH
Overtime Authorized : Yes
Invoice Unit :

SSID : 0600
Project/Site Name : Frank J. Doyle Site
Project Address : Personal Address / Ex. 6
County : Fannin
City : Leonard
State : TX
Zip Code : 75452

Work Area : Response / Removal
Work Area Code : RS
Activity : Removal Ass'mnt w/On-Site (walk,survey, or sample
Activity Code : RS
Operable Unit :
Emergency Code :
FPN :
Performance Based : No

Authorized TDD Ceiling :

	Amount	LOE (Hours)
Previous Action(s) :	$0.00	0.00
This Action :	$0.00	0.00
New Total :	$0.00	0.00

Specific Elements :

Description of Work :

See Schedule

Region Specific :

CERCLIS: : TXD980865109

Misc 2 :

Accounting and Appropriation Information: **SFO:**

Line	Budget / FY	Approp.	Budget Org	Program Element	Object Class	Site Project	Cost Org	DCN Line-ID	Funding Category	TDD Amount

U.S. EPA, Region 6
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

Vendor : WESTON SOLUTIONS, INC.

TDD # : 0001/17-004
Amendment # :
Contract # : EP-S5-17-02

Project Officer : Will LaBombard (Signature) (Date)		**Branch Mail Code:** **Phone Number :** 214-665-7199 **Fax Number :**
Contracting Officer Representative Gary Moore (Signature) (Date)		**Branch Mail Code :** **Phone Number :** 214-665-6609 **Fax Number :**
Contract Specialist: Brian Delaney (Signature) (Date)		**Branch Mail Code :** **Phone Number :** 214-665-7473 **Fax Number :**
Contracting Officer : Brian Delaney Electronically Signed by Brian Delaney (Signature)	08/09/2017 (Date)	**Branch Mail Code :** **Phone Number :** 214-665-7473 **Fax Number :**
Other Agency Official (Signature) (Date)		**Branch Mail Code :** **Phone Number :** **Fax Number :**

Description of Work:The initial TDD ceiling is set at $30,000. When available, all TDD costs shall be invoiced against the oldest 6A00E or 6A00S task order funding.

The contractor shall use SSID 061D on all forms, reports, emails, communications, and deliverables.
The contractor shall perform the following:

1. Contact Task Monitor (TM) with name of Project Team Leader;
2. Review reports posted on epaosc.net as soon as access granted by TM;
3. Prepare analytical table from the data on historical reports and provide to TM; (Estimate of sample location coordinates should be made);
4. Obtain Fannin County parcel and owner information for at least city of Leonard;
5. Construct a flexviewer for the site including parcel and owner information;
6. Prepare and propose a sampling approach for site and offsite areas that may have been impacted by operations;
7. Prepare cost estimate to implement sampling plan;

U.S. EPA, Region 6
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

Vendor : WESTON SOLUTIONS, INC.

TDD # : 0001/17-004
Amendment # : 001
Contract # : EP-S5-17-02

TDD Title : Frank J. Doyle Site
Purpose : EXTEND POP

Verbal Date :
Start Date : 08/09/2017
Completion Date : 09/28/2018
Effective Date : 08/09/2017

Priority : HIGH
Overtime Authorized : Yes
Invoice Unit :

SSID : 0600
Project/Site Name : Frank J. Doyle Site
Project Address : Personal Address / Ex. 6
County : Fannin
City : Leonard
State : TX
Zip Code : 75452

Work Area : Response / Removal
Work Area Code : RS
Activity : Removal Ass'mnt w/On-Site (walk,survey, or sample
Activity Code : RS
Operable Unit :
Emergency Code :
FPN :
Performance Based : No

Authorized TDD Ceiling :

	Amount	LOE (Hours)
Previous Action(s) :	$0.00	0.00
This Action :	$0.00	0.00
New Total :	$0.00	0.00

Specific Elements :

Description of Work :

See Schedule

Region Specific :

CERCLIS: : TXD980865109

Misc 2 :

Accounting and Appropriation Information: **SFO:**

Line	Budget / FY	Approp.	Budget Org	Program Element	Object Class	Site Project	Cost Org	DCN Line-ID	Funding Category	TDD Amount

U.S. EPA, Region 6
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

Vendor : WESTON SOLUTIONS, INC.

TDD # : 0001/17-004
Amendment # : 001
Contract # : EP-S5-17-02

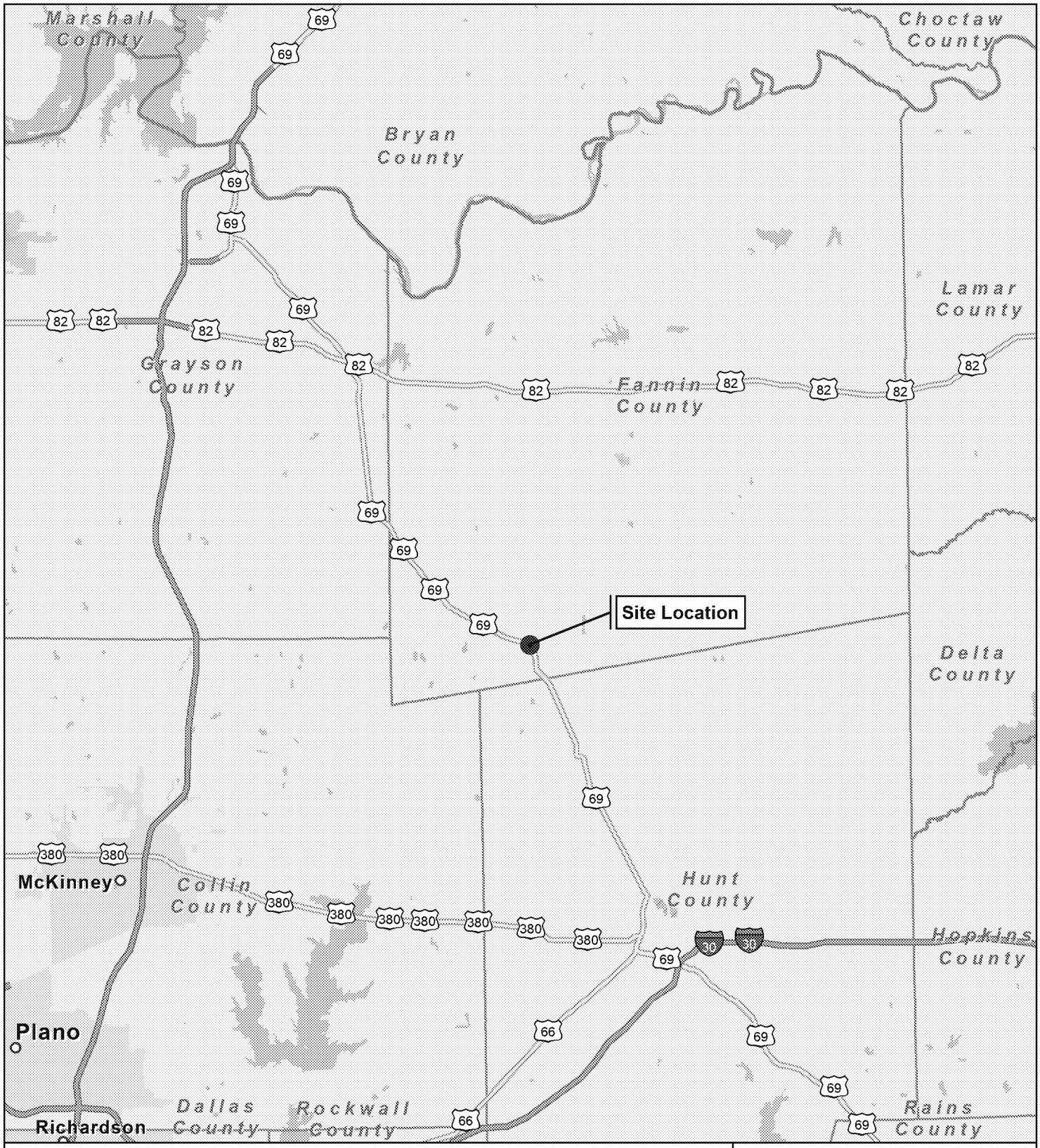
Project Officer : Will LaBombard (Signature) (Date)		**Branch Mail Code:** **Phone Number :** 214-665-7199 **Fax Number :**
Contracting Officer Representative Gary Moore (Signature) (Date)		**Branch Mail Code :** **Phone Number :** 214-665-6609 **Fax Number :**
Contract Specialist: Michael J. Pheeny (Signature) (Date)		**Branch Mail Code :** **Phone Number :** 214-665-2798 **Fax Number :**
Contracting Officer : Michael J. Pheeny Electronically Signed by Michael J. Pheeny (Signature)	12/11/2017 (Date)	**Branch Mail Code :** **Phone Number :** 214-665-2798 **Fax Number :**
Other Agency Official (Signature) (Date)		**Branch Mail Code :** **Phone Number :** **Fax Number :**

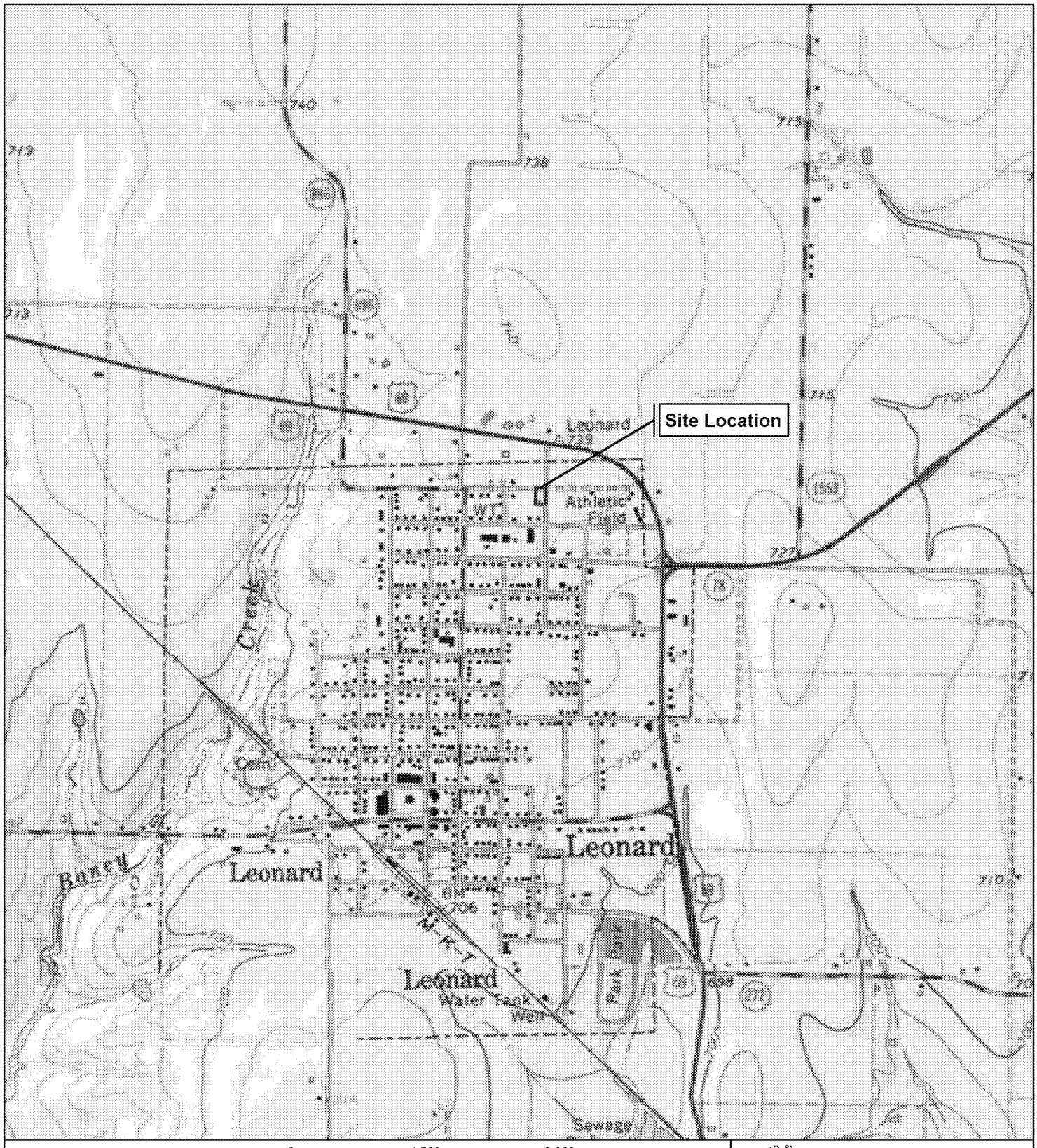
Description of Work:
Amendment 001 - Extend the TDD POP to 09/28/2018 so that work can continue.

Scope of Work Remains the same.
Base ORIG - The initial TDD ceiling is set at $30,000. When available, all TDD costs shall be invoiced against the oldest 6A00E or 6A00S task order funding.

The contractor shall use SSID 061D on all forms, reports, emails, communications, and deliverables.
The contractor shall perform the following:

1. Contact Task Monitor (TM) with name of Project Team Leader;
2. Review reports posted on epaosc.net as soon as access granted by TM;
3. Prepare analytical table from the data on historical reports and provide to TM; (Estimate of sample location coordinates should be made);
4. Obtain Fannin County parcel and owner information for at least city of Leonard;
5. Construct a flexviewer for the site including parcel and owner information;
6. Prepare and propose a sampling approach for site and offsite areas that may have been impacted by operations;
7. Prepare cost estimate to implement sampling plan;


Marshall County
Choctaw County
Bryan County
Lamar County
Grayson County
Fannin County
Site Location
Delta County
McKinney
Collin County
Hunt County
Hopkins County
Plano
Dallas County
Rockwall County
Rains County
Richardson
0 5 10 15
Miles
LEGEND
Site Location
Texas
N
USEPA REGION 6
FIGURE 1-1
SITE LOCATION MAP
FRANK J. DOYLE SITE
Personal Address / Ex. 6
LEONARD, FANNIN COUNTY, TEXAS
DATE
APR 2018
PROJECT NO
20600.012.001.1004
SCALE
AS SHOWN
TDD No: 0001/17-004
SEMS ID: TXD980865109
SSID: 061D
SOURCE:
1. © Esri StreetMap USA, 2014
FILE: Q:\GIS Project Files\20600_EPA START-4\FJ Doyle\mxd\Figure 1-1 Site Location Map.mxd 9:15:52 AM 4/23/2018 schluete



LEGEND

Site Boundary

TDD No: 0001/17-004
SEMS ID: TXD980865109
SSID: 061D

SOURCE:
1. U.S. Geological Survey, 7.5-Min Topographic Map, Leonard, Texas - 1998

USEPA REGION 6

FIGURE 2-1
SITE AREA MAP
FRANK J. DOYLE SITE
Personal Address / Ex. 6
LEONARD, FANNIN COUNTY, TEXAS

DATE	PROJECT NO	SCALE
APR 2018	20600.012.001.1004	AS SHOWN

FILE: Q:\GIS Project Files\20600_EPA START4\FJ Doyle\mxd\Figure 2-1 Site Area Map.mxd 9:00:56 AM 4/23/2018 schluete

LEGEND

- Fence Line
- Site Boundary
- Parcel Boundary with ID
- Structure

N

0 60 120

Feet

TDD No: 0001/17-004
SEMS ID: TXD980865109
SSID: 061D

SOURCE: Google, 2017

USEPA REGION 6

FIGURE 2-2
SITE LAYOUT MAP
FRANK J. DOYLE SITE
Personal Address / Ex. 6
LEONARD, FANNIN COUNTY, TEXAS

DATE	PROJECT NO	SCALE
APR 2018	20600.012.001.1004	AS SHOWN

FILE: Q:\GIS Project Files\20600_EPA START4\FJ Doyle\mxd\Figure 2-2 Site Layout Map.mxd 8:59:49 AM 4/23/2018 schluete

ED_002624_00006427-00183

90453
90454
90455
110958
90456
80352
Leonard High School
E COTTONWOOD ST
DRA01
DRA02
DRA03
DRA04
DRA05
DRA06
DRA07
DRA08
DRA09
DRA010
DRA011
DRA012
DRA013
DRA014
DRA015
DRA016
DRA017
DRA018
DRA019
DRA020
DRA021
DRA022
DRA023
ROW01
ROW02
ROW03
ROW04
89310
89311
89316
89297
FJD01
89298
FJD02
89299
FJD03
89300
FJD04
89301
FJD05
89302
FJD06
89303
FJD07
89304
FJD08
89305
FJD09
89306
Transformer Off-Load Area
Transformer Salvage Shop
Container Storage Area
Transformer Storage Area
N CEDAR ST
N POPLAR ST
EAS01
EAS02
EAS03
EAS04
EAS05
EAS06
EAS07
EAS08
Leonard Intermediate School
E HACKBERRY ST
Leonard Elementary School
TEXAS
LEGEND
Fence Line
Site Boundary
Parcel Boundary with ID
Structure
Sample Grid
Easement Grid (n = 8)
Property Grid (n = 9)
ROW Grid (n = 4)
Drainage Grid (n = 23)
Residential Grid (n = 54)
N
0
60
120
Feet
TDD No: 0001/17-004
SEMS ID: TXD980865109
SSID: 061D
SOURCE: Google, 2017
USEPA REGION 6
FIGURE 3-1
SAMPLE GRID MAP
FRANK J. DOYLE SITE
Personal Address / Ex. 6
LEONARD, FANNIN COUNTY, TEXAS
DATE
APR 2018
PROJECT NO
20600.012.001.1004
SCALE
AS SHOWN
FILE: Q:\GIS Project Files\20600_EPA START4\FJ Doyle\mxd\Figure 3-1 Sample Grid Map.mxd 9:08:31 AM 4/23/2018 schluete

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TEXAS 75202-2733

Property ID: _____
Longitude: _____
Latitude: _____
Type: Residential

CONSENT FOR ACCESS TO PROPERTY

Name of Owner: Frank J and Mary Doyle

Address/Description of Property:
905 N. Poplar St.
Leonard, TX 75452

I consent to officers, employees, contractors, and authorized representatives of the U.S. Environmental Protection Agency (EPA) entering and having continued access to my property for taking of such soil samples as may be determined by the EPA to be necessary.

I recognize that these actions by the EPA are undertaken in accordance with its response and enforcement authorities contained in the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"), 42 U.S.C. § 9601 *et seq.*

I am the property owner, and I warrant that I have the authority to enter into this access agreement. This written permission is given by me voluntarily with knowledge of my right to refuse and without threats or promises of any kind.

March 7, 2018
Date

Danny Doyle
Signature

First Successor Trustee
Title

Personal Phone / Ex. 6
Phone Number

ANALYTICAL RESULTS

Place a check mark in the appropriate space. Please note that if no selection is made, the EPA will assume that you do not wish to be provided with the analytical results.

(✓) Please provide me with a copy of the analytical results for my property.
- (✓) Send results to: Danny Doyle Personal Address / Ex. 6 Leonard Tx 75452
- (✓) Send results to: Gary Doyle Personal Address / Ex. 6 Leonard Tx 75452

( ) I do not wish to receive a copy of the analytical results for my property.

Please indicate if you are allowing access and your decision about sharing your results:
( ) Yes, I will allow access and I agree to allow the EPA to share the soil sampling results with state and local government.
(✓) Yes, I will allow access. Please do not share these results with other parties.
( ) No, I do not want the EPA to have access.

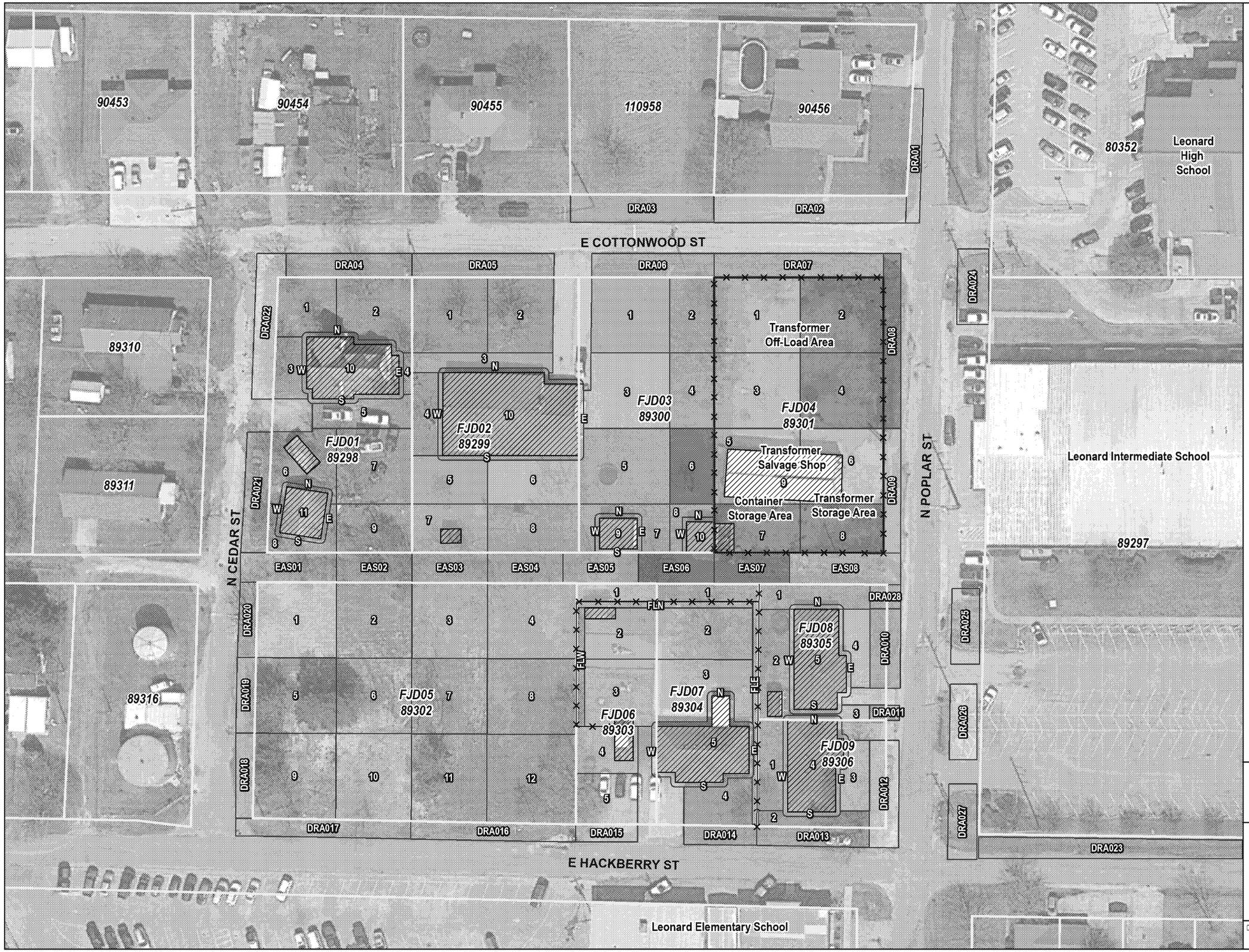
Property ID: _____
Longitude: _____

Site ID	Parcel ID	Address	Legal	Owner	Owner Mailing Address	Owner Mailing City	Sta
FJD04	89301	905 N. Poplar	COLLEGE ADDN, BLOCK 14, LOT 7,8, ACRES .344	Danny Doyle, Lynda Kaylor, Garry Doyle	Personal Address / Ex. 6	LEONARD	TX /
FJD03						LEONARD	TX
FJD02						LEONARD	TX
FJD01						LEONARD	TX
FJD05						LEONARD	TX
FJD06	89305	305 E. Hackberry	COLLEGE ADDN, BLOCK 14, LOT 13	Leonard ISD	1 TIGER ALLEY	LEONARD	TX
FJD07	89301	310 E. Hackberry	COLLEGE ADDN, BLOCK 15, LOT 13 & W 20' OF 15	Leonard ISD	1 TIGER ALLEY	LEONARD	TX
FJD08						LEONARD	TX
FJD09						LEONARD	TX
NS	89297	901 E. Hackberry	COLLEGE ADDN, BLOCK 13	Leonard ISD	1 TIGER ALLEY	LEONARD	TX
NS	89352	1002 N. Poplar	A0778 M MOORE, ACRES 5.647	Leonard ISD	1 TIGER ALLEY	LEONARD	TX
NS						LEONARD	TX /
NS						LEONARD	TX /
NS						LEONARD	TX /
NS						LEONARD	TX /
NS						GEORGETOWN	TX/
NS						LEONARD	TX /
NS	89316	N. Cedar	COLLEGE ADDN, BLOCK 15, LOT 15,16	City of Leonard	PO BOX 1270	LEONARD	TX /

Personal Information / Ex. 6

Frank J. Doyle Transformer Site

Site ID	Parcel ID	Address	Legal	Owner	Owner Mailing Address	Owner Mailing City	State / Zip	Type/Direction
FJD04	89301	905 N. Poplar	COLLEGE ADDN, BLOCK 14, LOT 7,8, ACRES .344	Danny Doyle, Lynda Kaylor, Garry Doyle	Personal Address / Ex. 6	LEONARD	TX / 75452	Site
FJD03	Personal Information / Ex. 6					LEONARD	TX / 75452	Personal Information / Ex. 6
FJD02						LEONARD	TX / 75452	
FJD01						LEONARD	TX / 75452	
FJD05	89302	900 N. Cedar	COLLEGE ADDN, BLOCK 14, LOT 9-12	Leonard ISD	1 TIGER ALLEY	LEONARD	TX / 75452	Residence, southwest of the site
FJD06	89303	308 E. Hackberry	COLLEGE ADDN, BLOCK 14, LOT 13	Leonard ISD	1 TIGER ALLEY	LEONARD	TX / 75452	Residence, southwest of the site
FJD07	89304	310 E. Hackberry	COLLEGE ADDN, BLOCK 14, LOT 14 & W 20' OF 15	Leonard ISD	1 TIGER ALLEY	LEONARD	TX / 75452	Residence, southwest of the site
FDJ08	Personal Information / Ex. 6					LEONARD	TX / 75452	Personal Information / Ex. 6
FJD09						LEONARD	TX / 75452	
NS	89297	400 E. Hackberry	COLLEGE ADDN, BLOCK 13	Leonard ISD	1 TIGER ALLEY	LEONARD	TX / 75452	Intermediate School, east of the site
NS	80352	1002 N. Poplar	A0778 M MOORE, ACRES 5.647	Leonard ISD	1 TIGER ALLEY	LEONARD	TX / 75452	High School, northeast of the site
NS	Personal Information / Ex. 6					LEONARD	TX / 75452	Personal Information / Ex. 6
NS						LEONARD	TX / 75452	
NS						LEONARD	TX / 75452	
NS						LEONARD	TX / 75452	
NS						GEORGETOWN	TX/ 78633	
NS						LEONARD	TX / 75452	
NS	89316	N. Cedar	COLLEGE ADDN, BLOCK 15, LOT 15,16	City of Leonard	PO BOX 1270	LEONARD	TX / 75452	City, west of the site



TEXAS

LEGEND

- Fence Line
- Site Boundary
- Parcel Boundary with ID
- Structure
- Sample Grid

Total PCBs Results

- Detection to < 0.24 mg/kg
- >= 0.24 to < 1 mg/kg
- >= 1 mg/kg to < 50 mg/kg
- >= 50 mg/kg

NOTE:
1. mg/kg - milligram per kilogram

N

0 60 120

Feet

SOURCES: © Google Imagery, 2017
TDD: 0001/17-004
SEMS: TXD980865109
SSID: 061D

USEPA REGION 6

FIGURE 5-1

SOIL SAMPLE GRID RESULTS
TOTAL PCBS
FRANK J. DOYLE SITE
Personal Address / Ex. 6
LEONARD, FANNIN COUNTY, TEXAS

DATE	PROJECT NO	SCALE
SEPTEMBER 2018	20600.012.001.1004	AS SHOWN

FILE: D:\20600_EPA_START4\FJ Doyle\mxd\Sample Grid Results Map - Total PCBs Breakout.mxd 9:55:55 AM 9/19/2018 wilsonj

LEGEND

- Fence Line
- Site Boundary
- Parcel Boundary with ID
- Structure

Sample Grid

- Easement Grid (n = 8)
- Property Grid (n = 9)
- ROW Grid (n = 4)
- Drainage Grid (n = 23)
- Residential Grid (n = 54)

N

0 60 120

Feet

TDD No: 0001/17-004
SEMS ID: TXD980865109
SSID: 061D

SOURCE: Google, 2017

USEPA REGION 6

FIGURE 3-1
SAMPLE GRID MAP
FRANK J. DOYLE SITE
Personal Address / Ex. 6
LEONARD, FANNIN COUNTY, TEXAS

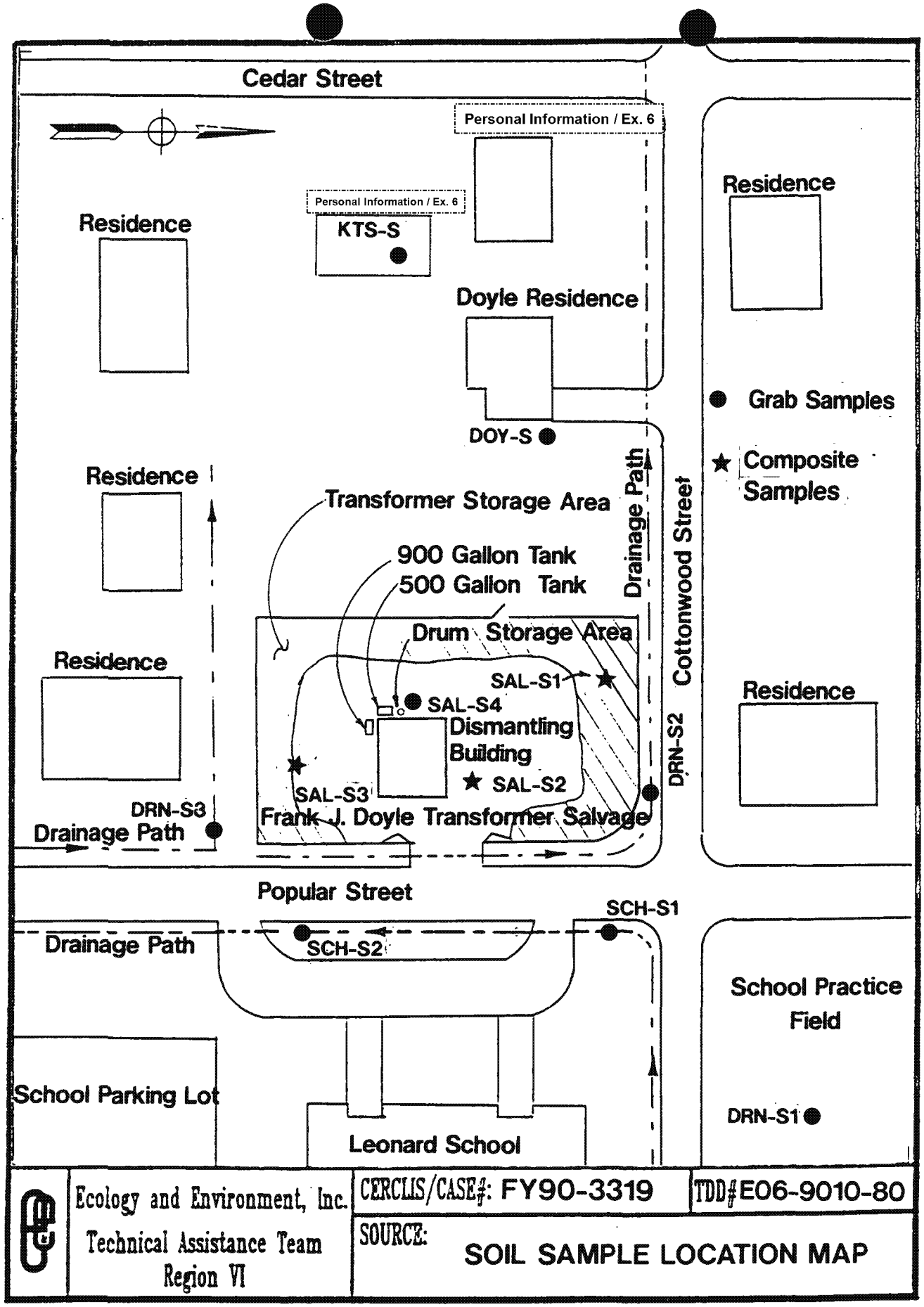
DATE	PROJECT NO	SCALE
APR 2018	20600.012.001.1004	AS SHOWN

FILE: Q:\GIS Project Files\20600_EPA START4\FJ Doyle\mxd\Figure 3-1 Sample Grid Map.mxd 9:08:31 AM 4/23/2018 schluete

Message

From: Moore, Gary [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=D9494EB3B37241B09CE3BDEAFF4C557A-MOORE, GARY]
Sent: 5/3/2018 11:02:34 PM
To: Personal Email Address / Ex. 6
Subject: FJ Doyle Salvage
Attachments: 1998.08 SSI Report.pdf

Gary W. Moore (6SF-ER)
Federal On-Scene Coordinator
U.S EPA Region 6
1445 Ross Ave, Suite 1200
Dallas, TX 75202-2733
Cell: 214.789.1627
moore.gary@epa.gov



ATTACHMENT C1

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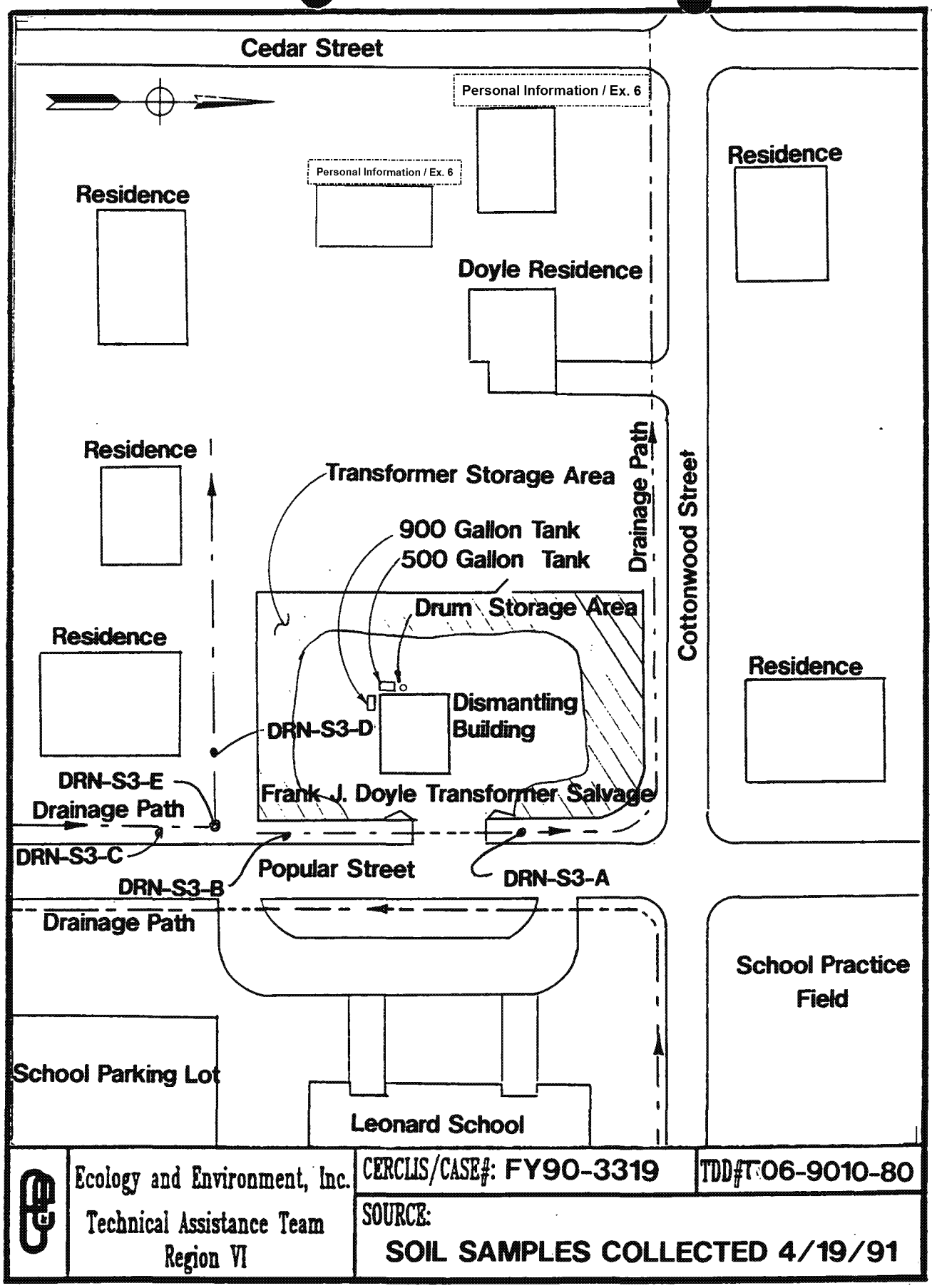

ATTACHMENT C5

United States Environmental Protection Agency
Region 6
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733

SEP - 7 2018

MEMORANDUM

SUBJECT: Approval and Funding for a Time-Critical Removal Action at the F.J. Doyle Salvage Site, Leonard, Fannin County, Texas

FROM: /s/ Gary Moore, On-Scene Coordinator
Emergency Management Branch (6SF-ER)

TO: Carl E. Edlund, P.E., Director
Superfund Division (6SF)

THRU: Ronnie Crossland, Chief
Emergency Management Branch (6SF-E)

I. PURPOSE

The purpose of this action memorandum is to request and document approval of the selected removal action described herein in accordance with the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), 42 U.S.C. § 9604, for the F.J. Doyle Salvage site (Site), Leonard, Fannin County, Texas. This time-critical removal action will involve the excavation and disposal of soils from the Site, city rights-of-ways, and residential properties contaminated by runoff from the Site. This action will remove the threat to human health and the environment posed by the identified contaminants of concern listed herein that were a result of the actions conducted at the Site.

The proposed plan of action meets the criteria for initiating a removal action under Section 300.415 of the National Contingency Plan (NCP), 40 C.F.R. § 300.415. This action is expected to require less than twelve months (from mobilization) and $2 million to complete.

II. SITE CONDITIONS AND BACKGROUND

CERCLIS:	TXD980865109
Category of Removal:	Time Critical
Site ID:	061D
Latitude:	33.389530° North
Longitude:	96.243160° West

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A. Site Description

1. Removal Site Evaluation

The Site is located at the southwest corner of North Poplar and East Cottonwood Street in Leonard, Fannin County, Texas, 75452. The previous address for the site was Personal Address / Ex. 6 however, the current address is 905 North Poplar Street, Leonard, Texas 75452. The Site consists of approximately 0.344 acres.

F.J. Doyle Salvage conducted salvage operations by stripping out-of-service power transmission transformers for recoverable metals. The facility consisted of a transformer storage shop/office with a surrounding yard used for transformer off-loading and storage. A concrete secondary containment pad was used for the storage of 55-gallon drums and oil storage tanks (1-375 gal and 2-500 gal) containing fluids drained from the transformers.

The facility also used a high-temperature oven to burn residual oils, paper and varnish from the copper and aluminum transformer cores. It was reported that Mr. Frank Doyle used the oil in the past for weed control and distributed the oil to various individuals for use as a weed killer in the 1970s. The past use of polychlorinated biphenyls (PCBs) in electrical equipment such as transformers and capacitors was common until 1979 when PCBs were banned in the United States and became regulated under 40 C.F.R. Part 761.

The transformer storage shop and concrete pad used for transformer off-loading and storage remain at the Site. The Site is directly bordered by residential properties and a Leonard Independent School District (LISD) Daycare Facility to the south with the LISD Intermediate and Elementary schools just south of the Daycare Facility; residences on the north and west; and Leonard High School to the East. The Site predominantly drains to the southeast; south along roadside ditches on North Poplar Street toward the Leonard Elementary school, then east along East Hackberry Street.

The Site is located within non-designated Segment No. 0306 at the western extreme of the Sulphur River Basin, which flows east joining the Middle and North Sulphur Rivers and converges with the Red River 308 miles downstream in Arkansas. The major tributaries of the Sulphur River are Days Creek and White Oak Bayou.

The average annual precipitation of Leonard, Texas is 43 inches with approximately 230 sunny days per year. The average temperature ranges from 33 degrees Fahrenheit in the winter to 93 degrees Fahrenheit in the summer. The average annual snowfall is 1 inch.

The Site lies approximately 700 feet above sea level with an apparent gentle slope to the south. The Site is within Fannin County, which lies in the northern fringe of the Texas Blackland Prairie, which extends through North Central Texas and is characterized by broad flood plains and shallow stream valleys. Information obtained from the U.S. Department of Agriculture (USDA) indicated that the soils generally consist of shallow, well-drained, moderately permeable, loamy soils that are formed in chalk or in chalk interbedded with marl.

The EPA removal program conducted an investigation of the Site in May 2018 and determined that various contaminants of concern (COCs), including PCBs, semi-volatile organic compounds (SVOCs), polycyclic aromatic hydrocarbons (PAHs), and metals, in the soil had migrated off-site.

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2. Physical Location

The Site is located at 905 North Poplar Street, Leonard, Fannin County, Texas 75452. The immediate area surrounding the Site is residential and includes multiple schools and a daycare center.

3. Site Characteristics

The Site is the location where salvage operations were conducted. Historical sampling conducted on the Site has shown PCB soil contamination. The contaminants identified on the on-site areas (industrial facility and associated drainage ditches) and those for the off-site areas (residential, school, daycare, alleyway and associated drainage ditches) during the April/May 2018 assessment are as follows:

Analyte	**On-Site Areas**	**Off-Site Areas**
PCB (total):	up to 175 mg/kg	up to 95.1 mg/kg
Arsenic:	up to 68.2 mg/kg	up to 59.1 mg/kg
Cobalt:	up to 30.9 mg/kg	up to 23.6 mg/kg
Copper:	up to 21,800 mg/kg	up to 6740 mg/kg
Lead:	up to 1,480 mg/kg	up to 402 mg/kg
Manganese:	up to 4,490 mg/kg	up to 3290 mg/kg
Benzo(a)pyrene:	up to 0.13 mg/kg	up to 13.3 mg/kg
Benzo(a)anthracene	less than 1.1 mg/kg	up to 9.8 mg/kg
Benzo(b)fluoranthene	less than 1.1 mg/kg	up to 16.5 mg/kg
Dibenzo(a,h)anthracene	less than 0.11 mg/kg	up to 2.97 mg/kg
Indeno(1,2,3-cd)pyrene	less than 1.1 mg/kg	up to 15.2 mg/kg

The Site and the surrounding alleyway, drainage ditches, residential properties, and school properties immediately surrounding the Site are the subject of this removal action and have been impacted by erosional runoff from the Site with similar contaminant impacts.

4. Release or Threatened Release into the Environment of a Hazardous Substance, or Pollutant or Contaminant

EPA has documented the contamination on the residential properties, alleyway, and drainage ditches surrounding the Site and have determined that it is associated with the operations conducted on the Site. EPA believes that much of the off-site contamination is associated with erosional migration from the Site. PCBs are the primary contaminant of concern although additional contaminants are co-located with the PCB contaminants and will be addressed as part of this response.

The contaminants listed in II.A.3 above, PCBs, arsenic, cobalt compounds, copper, lead, manganese compounds, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene are hazardous substances as defined by Section 101(14) of CERCLA, 42 U.S.C. 9601(14), and further defined at 40 C.F.R. § 302.4.

5. NPL Status

This Site is not on the National Priorities List (NPL). At this time, there is no effort to pursue NPL ranking.

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6. Maps, Pictures and Other Graphic Representations

Attachment 1 Site Location Maps
Attachment 2 Overall Contamination Area Map (Confidential)
Attachment 3 Site and ROW Contamination Area Map
Attachment 4 Enforcement Attachment (Confidential)

B. Other Actions to Date

1. Previous Actions

September 1990 – April 1991: The EPA removal program began a site investigation based upon a citizen complaint of improper handling and salvage of transformers and a referral by the EPA regional Toxic Substance and Control Act (TSCA) program. The goal of the investigation was to determine the presence and extent of on and off-site PCB and dioxin contamination. The results indicated no presence of dioxins, although PCBs were present in both on and offsite areas. The Site was referred back to TSCA program due to its active status.

June 1995: The TSCA program referred the Site back to the removal program due to recent PRP sampling revealing extremely elevated concentration of PCBs in off-site soil areas.

July 1995: The removal program began a site investigation to determine the extent of PCB contamination surrounding the Site. At the time of the investigation, the F.J. Doyle Salvage was still actively operating. The investigation revealed elevated PCB contamination to various depths down to two feet and concentrations of up to 2730 mg/kg. It also confirmed PCB contamination in offsite areas. The facility was still actively operated. EPA did not conduct a removal action at the Site.

May 1997: The EPA remedial program conducted a preliminary assessment to evaluate current information relative to the Site. EPA identified the previous investigations and noted the elevated PCB concentrations both on and offsite. The preliminary assessment indicated that it was unlikely that the City of Leonard drinking water wells would be impacted due to the lithology of the underlying formations and depth to groundwater.

August 1998: TNRCC (predecessor agency to Texas Commission on Environmental Quality (TCEQ)) contacted the EPA removal program and requested assistance to address contamination from the Site that had impacted both on and off-site areas near school, daycare, and residential properties. The TNRCC contacted the Texas Department of Health (TDH) to conduct a health consultation.

September 1998: TNRCC completed a remedial screening site investigation (SSI) under a cooperative agreement with EPA. TNRCC conducted soil sampling and verified elevated concentrations of PCBs in both on and offsite areas. Based upon the SSI and the fact that the Site was active, EPA determined that the Site would not meet the criteria to be listed on the NPL.

April 1999: The TNRCC transmitted the Texas Department of Health consultation to EPA. The consultation indicated that the PCBs in soil and in some of the off-site areas presented a public health hazard. The recommendations were to: remove PCB contamination in the alleyway, remove PCB contamination in the residential properties south of the Site, and remove PCB contamination near the on-site container storage area.

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August 1999: F.J. Doyle Salvage ceased operations.

July 2006 to January 2016: The TCEQ worked with the Site owners to address the issues through an affected property assessment report (APAR). No further actions were taken by F.J. Doyle Salvage as a result of a deficiency letter issued in January 2016.

February 2017: The TCEQ Voluntary Cleanup Program (VCP) requested the EPA Resource Conservation Recovery Act (RCRA) program assistance as the TCEQ was unable to get voluntary cleanup of the Site through the defunct company.

May 2017: The EPA RCRA program requested the EPA Superfund removal program assistance due to non-viability of owners/operators.

May 2018: The EPA removal program reviewed existing information and proceeded with an investigation of the surface and sub-surface soils to determine the lateral and vertical extent of contamination at the Site including off-site areas. Sample locations were based upon the results of earlier sampling investigations completed in the 1990s. The COCs for the Site are, but not limited to, PCBs, SVOCs/PAHs, and metals. The investigation revealed elevated concentrations of metals, SVOCs, and PCBs. EPA has determined that off-site migration of contaminants from the site has occurred.

2. Current Actions

No current ongoing actions are being conducted.

C. State and Local Authorities' Role

1. State and Local Actions to Date

See II.B.1 above.

2. Potential for continued State/Local response

At this time, there are no additional actions anticipated by the State or local government entities except for coordination with EPA on the planned action. After completion of the action, the Site will be referred back to the State. The Site was referred to EPA through the TCEQ VCP as there was no longer an entity available to complete the action.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT AND STATUTORY AND REGULATORY AUTHORITIES

Section 300.415 of the NCP lists the factors to be considered in determining the appropriateness of a removal action. Paragraphs (b)(2)(i), (iv), (v) and (vii) directly apply to the conditions at the Site. Any one of these factors may be sufficient to determine whether a removal action is appropriate.

A. Exposure to Human Populations, Animals or the Food Chain, 40 C.F.R. § 300.415(b)(2)(i).

The Site contaminants are migrating offsite by means of erosion. The Site is bordered by residential properties, school properties, and a daycare facility. Therefore, a threat of exposure to human populations exists from contaminated soils that have and continue to migrate off-site. Exposure to these

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hazardous substances could be from ingestion, skin absorption, and inhalation. Site contaminants include PCBs, arsenic, cobalt compounds, copper, lead, manganese compounds, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene, which are hazardous substances as defined at Section 101(14) of CERCLA, 42 U.S.C. 9601(14) and further defined at 40 C.F.R. § 302.4.

B. High Levels of Hazardous Substances or Pollutants or Contaminants Soils Largely at or Near the Surface, that May Migrate, 40 C.F.R. § 300.415(b)(2)(iv).

The hazardous substances and the concentrations located within the residential soils are identified in II.A.3 above. Those concentrations are elevated above EPA regional screening levels.

C. Weather Conditions that may cause Hazardous Substances or Pollutants or Contaminants to Migrate or be Released, 40 C.F.R. § 300.415(b)(2)(v)

Contaminants from the Site have migrated downgradient from the Site. These actions will continue during heavy rainfall events when sediment is displaced and moved by erosional forces.

D. Availability of Other Response Mechanisms, 40 C.F.R. § 300.415(b)(2)(vii)

There are no other response mechanisms available to conduct this action except for the EPA Superfund removal program. The State indicated it does not have the resources to conduct the cleanup, and F.J. Doyle Salvage is a defunct company. EPA will work with the TCEQ to determine areas where it may assist in this action.

IV. ENDANGERMENT DETERMINATION

Actual or threatened releases of hazardous substances, pollutants or contaminants from this Site, if not addressed by implementing the response action selected in this action memorandum, may present an imminent and substantial endangerment to the public health, welfare, or the environment.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed Action Description

EPA anticipates the excavation of soils from the Site and the surrounding properties believed to be impacted by the F.J. Doyle Salvage facility. In addition, this action will dismantle the existing structure and concrete slabs on the property to facilitate a complete cleanup. The excavated soils and related debris will be disposed within an appropriate and approved landfill followed by restoration of the properties to pre-removal conditions. The cleanup levels to be used for this action are:

Contaminant	Cleanup Level
PCB (Total):	< 1mg/kg
Arsenic:	< 20 mg/kg*
Cobalt:	< 23 mg/kg*
Copper	< 3,100 mg/kg*
Lead:	< 400 mg/kg*

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Manganese:	< 1,800 mg/kg*
Benzo(a)anthracene:	< 11 mg/kg*
Benzo(a)pyrene:	< 1.1 mg/kg*
Benzo(b)fluoranthene:	< 11 mg/kg*
DiBenzo(a,h)anthracene:	< 1.1 mg/kg*
Indeno(1,2,3-cd)pyrene:	< 11 mg/kg*

*EPA will be addressing areas with analytical results above or equal to 1 mg/kg total PCBs. Areas with analytical results that exceed site-specific action levels for PAH and metals will also be addressed if they are co-located with levels of total PCBs that are above or equal to 1 mg/kg. The soils at the Site will be excavated to maximum depth of two (2) feet below ground surface.

2. Contribution to Remedial Performance

The Site is not currently being evaluated for inclusion on the NPL although the removal actions being proposed in this action memorandum would be consistent with a potential remedial action that would be conducted.

3. Applicable or Relevant and Appropriate Requirements

This removal action will be conducted to eliminate the actual or potential release of a hazardous substance, pollutant, or contaminant to the environment, pursuant to CERCLA, 42 U.S.C. § 9601 *et seq.*, in a manner consistent with the NCP, 40 C.F.R. Part 300. As per 40 C.F.R. § 300.415(j), Fund-financed removal actions pursuant to CERCLA Section 104, 42 U.S.C. § 9604, and removal actions pursuant to CERCLA Section 106, 42 U.S.C. § 9606, shall, to the extent practicable considering the exigencies of the situation, attain the applicable or relevant and appropriate requirements under federal environmental law or state environmental law or facility siting laws.

Because consolidation and offsite disposal are the principal elements of this removal action, RCRA waste analysis requirements in 40 C.F.R. §§ 261.20 and 261.30, RCRA manifesting requirements in 40 C.F.R. § 262.20, and RCRA packaging and labeling requirements in 40 C.F.R. §§ 262.30 and 262.31 are deemed to be relevant and appropriate requirements for this removal action. All hazardous substances, pollutants, or contaminants removed offsite for treatment, storage, or disposal shall be treated, stored, or disposed at a facility in compliance, as determined by EPA, pursuant to 40 C.F.R. § 300.440. All offsite transportation of hazardous materials will be performed in conformity with U.S. Department of Transportation (DOT) requirements 49 C.F.R. Part 172. Because this action will involve disposal of PCB waste, it will be conducted in accordance with the substantive requirements of 40 C.F.R. Part 761.

4. Project Schedule

The EPA anticipates initiating such actions in September/October 2018 and take approximately three to four months to complete.

ED_002624_00006643-00007

B. Estimated Costs

Extramural Costs:

ERRS	$1,619,000
START-4	$ 200,000
Contingency	$ 161,000
TOTAL EXTRAMURAL COSTS	$1,980,000

VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

If this response action is not taken, residents will continue to be exposed to the contaminated soils. In addition, these contaminated soils may migrate by wind, water, and mechanical means which could result in the contamination of additional areas around the Site.

VII. OUTSTANDING POLICY ISSUES

There are no known outstanding policy issues associated with this Site.

VIII. ENFORCEMENT

See Enforcement Attachment.

The total EPA costs for this removal action based on full-cost accounting practices that will be eligible for cost recovery are estimated to be **$ 3,106,329.**

((Direct Extramural + Direct Intramural {Direct Costs}) + (45.02% of Direct Costs {Indirect Cost}) = Estimated EPA Cost for a Removal Action

$ 1,980,000 + 162,000 + (47.09% x $ 2,142,000) = **$ 3,150,667**

Direct costs include direct extramural costs and direct intramural costs. Indirect costs are calculated based on an estimated indirect cost rate expressed as a percentage of site-specific direct costs, consistent with the full cost accounting methodology effective October 2, 2002. These estimates do not include pre-judgment interest, do not take into account other enforcement costs, including Department of Justice costs, and may be adjusted during the course of a removal action. The estimates are for illustrative purposes only, and their use is not intended to create any rights for responsible parties. Neither the lack of a total cost estimate nor the deviation of actual total costs from this estimate will affect the United States' right to cost recovery.

IX. RECOMMENDATION

This decision documents the selected removal action for the F.J. Doyle Salvage Site, Leonard, Fannin County, Texas and surrounding areas identified by the EPA to have been impacted by such operations or otherwise migrated off the site. This action was developed in accordance with CERCLA, 42 U.S.C. § 9601 et seq., and not inconsistent with the NCP, 40 C.F.R. Part 300. This action was based on the administrative record for the Site. Because the conditions at the Site meet the criteria defined in Section

ED_002624_00006643-00008

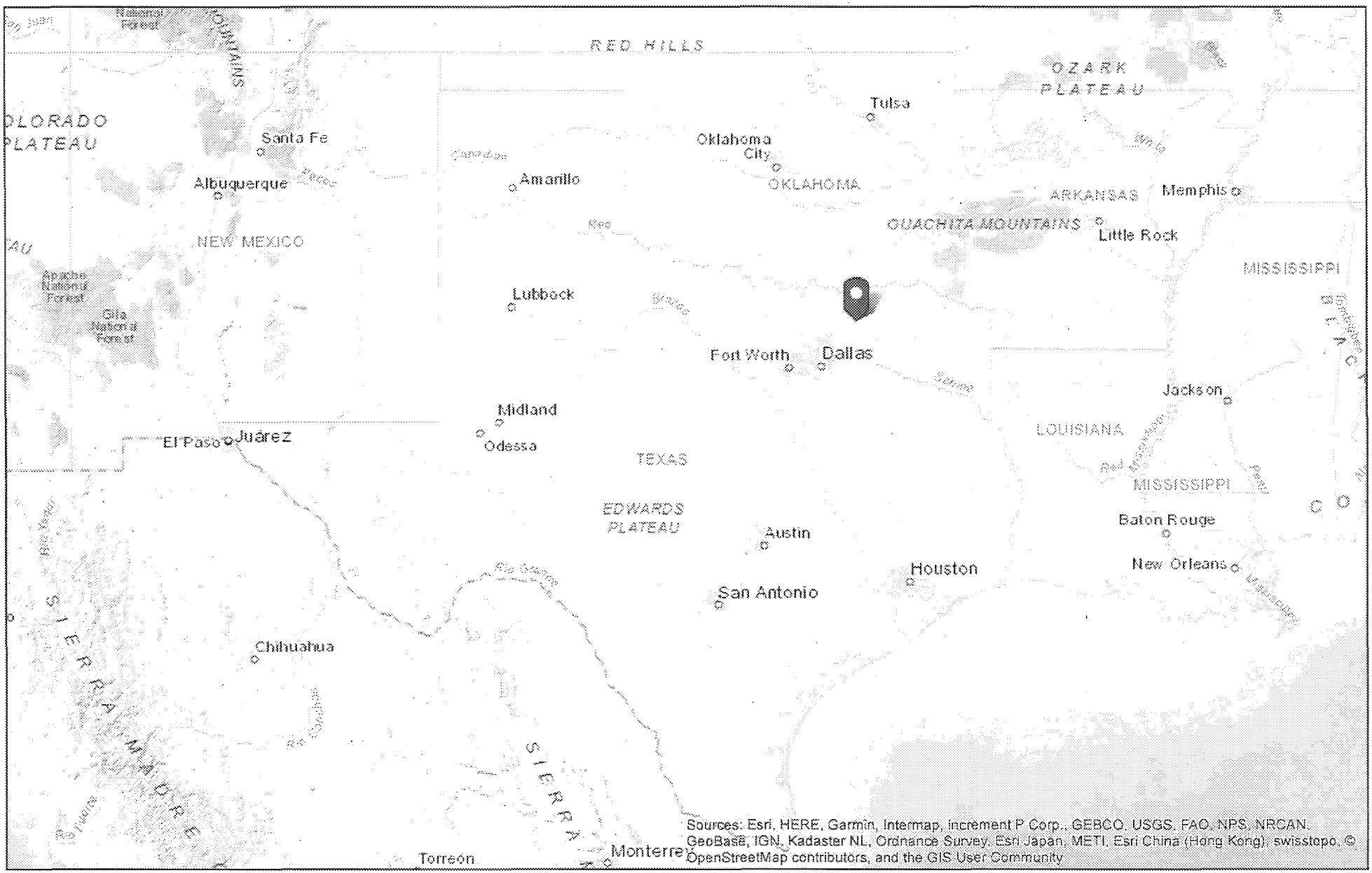
300.415 of the NCP, I recommend your approval of the proposed removal action. The total CERCLA extramural project ceiling if approved will be $ 1,980,000. Of this, an estimated $1,619,000 (without contingency) will come from the Regional Removal Allowance.

APPROVED: _____ DATE: 09/07/18

Carl E. Edlund, P.E., Director
Superfund Division

ED_002624_00006643-00009

ED_002624_00006643-00010



Legend

US EPA

F.J. Doyle Site Location Map (Attachment 1)

Copyright 2016

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EPA

Printed: 10:59:39 AM 8/22/2016

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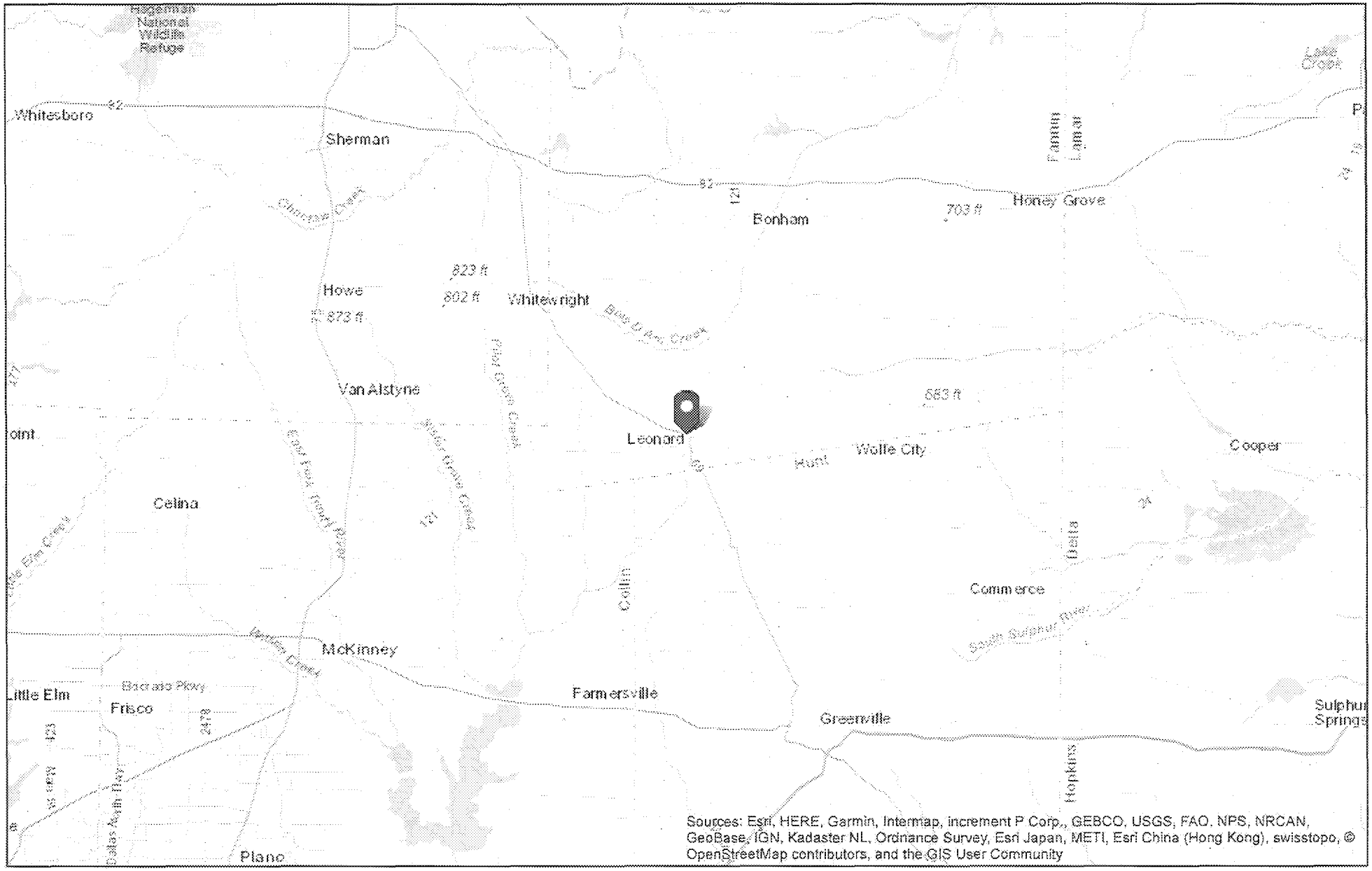

Legend

US EPA

F.J. Doyle Site Location Map (Attachment 1)

Copyright 2016

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EPA

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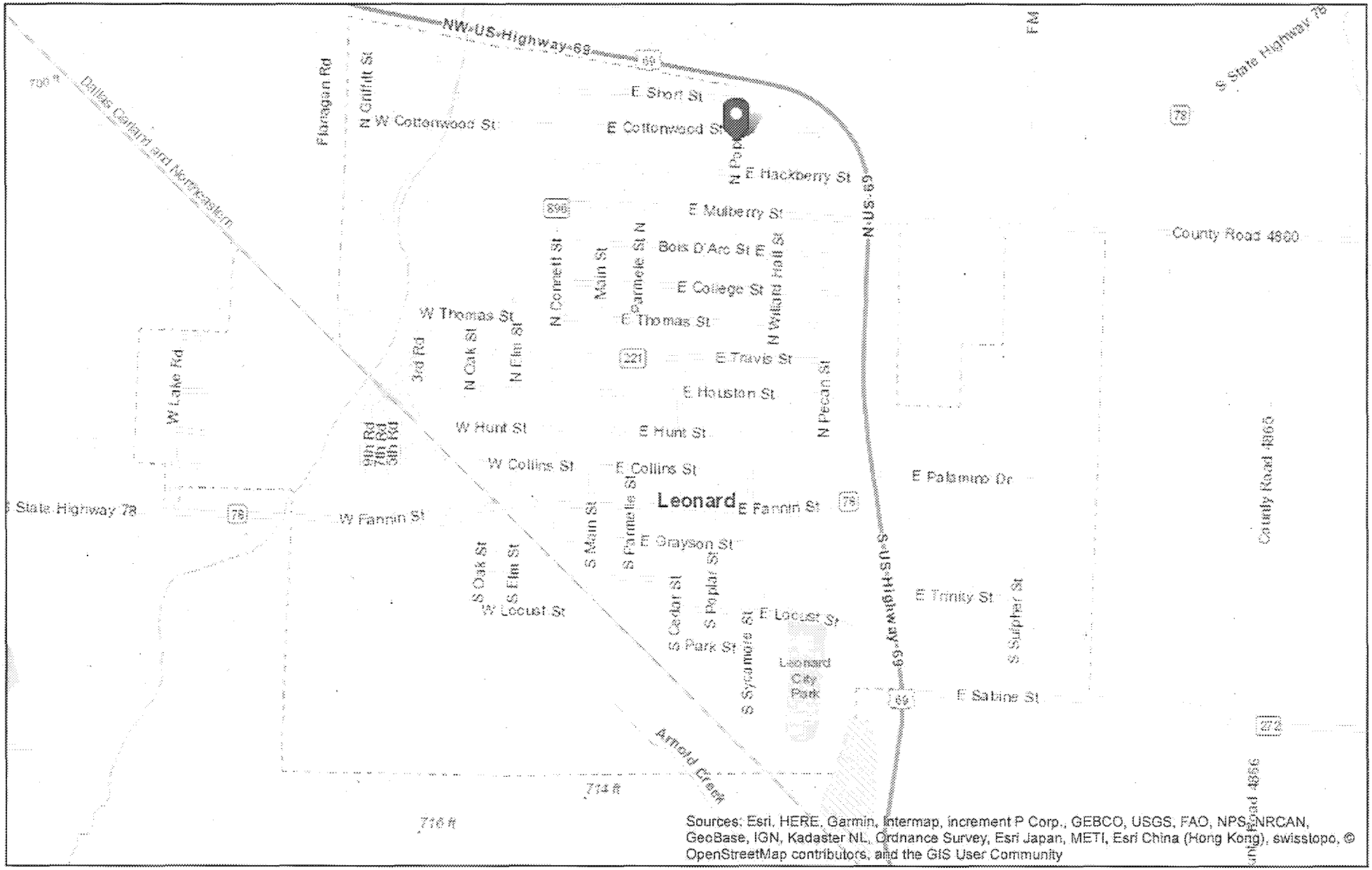

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

Legend

US EPA

F.J. Doyle Site Location Map (Attachment 1)

Copyright 2016

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EPA

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Legend

SiteSketchA...

Site Area

US EPA

F.J. Doyle Site Location Map (Attachment 1)

Copyright 2016

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EPA

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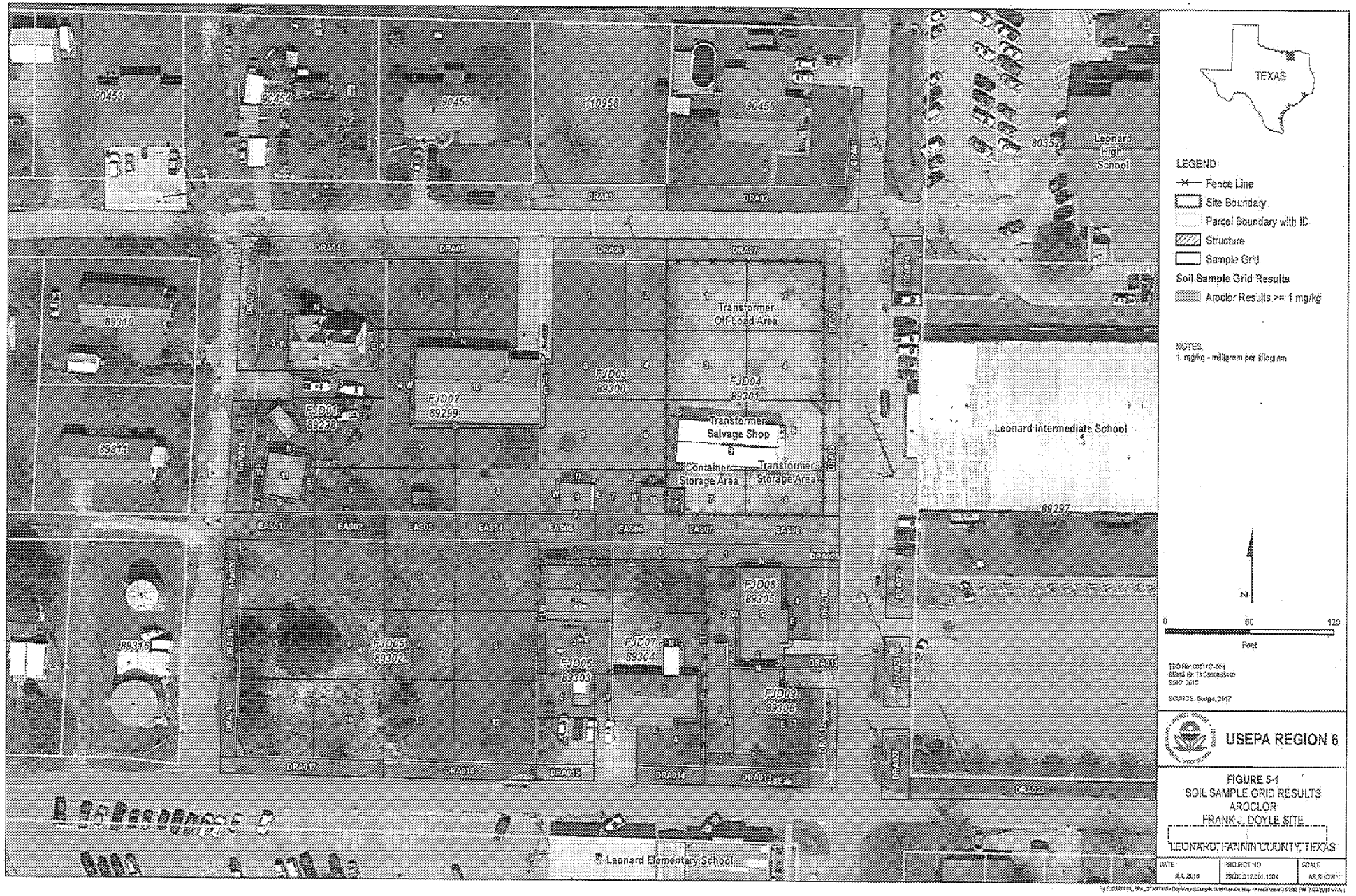
ATTACHMENT 2



LEGEND

- Fence Line
- Site Boundary
- Parcel Boundary with ID
- Structure

Sample Grid

- Easement Grid (n = 8)
- Site Grid (n = 8)
- Drainage Grid (n = 28)
- Residential Grid (n = 53)
- Structure (n = 9)

N

0 60 120

Feet

TDD No: 0001/17-004
SEMS ID: TXD980865109
SSID: 061D

SOURCE: Google, 2017

USEPA REGION 6

FIGURE 3-1
SAMPLE GRID MAP
FRANK J. DOYLE SITE
Personal Address / Ex. 6
LEONARD, FANNIN COUNTY, TEXAS

DATE	PROJECT NO	SCALE
JUL 2018	20600.012.001.1004	AS SHOWN

FILE: D:\20600_EPA_START4\FJ Doyle\mxd\Sample Grid Map.mxd 10:01:10 AM 7/17/2018 wilsonj

Message

From: Danny Doyle Personal Email / Ex. 6
Sent: 1/29/2019 5:43:19 PM
To: Moore, Gary [Moore.Gary@epa.gov]
Subject: Re: FJ Doyle Site

Thanks.

On Tue, Jan 29, 2019, 8:04 AM Moore, Gary <Moore.Gary@epa.gov wrote:

Hello Danny,

We hope to be complete mid to late February barring weather. We are eager to get it done but have been slowed by our contract trucking company with available trucks but are working through it.

The property will be going back with rock on it as previously discussed with you.

Thanks,
Gary Moore

Sent from my iPhone

> On Jan 29, 2019, at 7:16 AM, Danny Doyle Personal Email / Ex. 6 wrote:
>
> Good Morning Mr. Moore,
>
> It appears that ya'll are getting close to completion at dad's old shop. Do you have an estimation of when? I am looking forward to the opportunity of being able to finally wrap up the last date on dad's estate. He passed in March of 2006. I am ready to be done. Thanks so much for all your help.

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
F.J. Doyle Salvage - Removal Polrep

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region VI

Subject: **POLREP #2**
Removal Action Progress (DRAFT)
F.J. Doyle Salvage
061D
Leonard, TX

To: Ronnie Crossland, EPA R6
Anthony Buck, TCEQ
Reggie Cheatham, USEPA OLEM

From: Gary Moore, FOSC
Date: 12/6/2018
Reporting Period: 11/5/18-12/6/18

1. Introduction

1.1 Background

Site Number:	061D	**Contract Number:**	
D.O. Number:		**Action Memo Date:**	9/7/2018
Response Authority:	CERCLA	**Response Type:**	Time-Critical
Response Lead:	EPA	**Incident Category:**	Removal Action
NPL Status:	Non NPL	**Operable Unit:**	
Mobilization Date:	11/5/2018	**Start Date:**	11/5/2018
Demob Date:		**Completion Date:**	
CERCLIS ID:		**RCRIS ID:**	
ERNS No.:		**State Notification:**	
FPN#:		**Reimbursable Account #:**	

1.1.1 Incident Category

Time Critical Removal Action

1.1.2 Site Description

The Site is located at the southwest corner of North Poplar and East Cottonwood Street in Leonard, Fannin County, Texas, 75452. The previous address for the site was **Personal Address / Ex. 6** however, the current address is 905 North Poplar Street, Leonard, Texas 75452. The Site consists of approximately 0.344 acres.

F.J. Doyle Salvage conducted salvage operations by stripping out-of-service power transmission transformers for recoverable metals. The facility consisted of a transformer dismantling shop with a surrounding yard used for transformer off-loading and storage. A concrete secondary containment pad was used for the storage of 55-gallon drums and oil storage tanks (1-375 gal and 2-500 gal) containing fluids drained from the transformers.

The facility also used a high-temperature oven to burn residual oils, paper and varnish from the copper and aluminum transformer cores. It was reported that the owner used the oil in the p[illegible]r weed control in the 1970's. The past use of polychlorinated biphenyls (PCBs) in electrical equipme[illegible]h as transformers and capacitors was common until 1979 when PCBs were banned in the United States and became regulated under 40 C.F.R. Part 761.

The transformer dismantling shop and concrete containment pad were used for transformer dismantling and storage of transformer oil rema[illegible]he Site. The Site is directly bordered by residential properties and a Leonard Independent School D[illegible] (LISD) Daycare Facility to the south with the LISD Elementary schools just south of the Daycare Facility; residences on the north and west; and Leonard High School, Junior High School, and Intermediate School to the East. The Site predominantly drains to the southeast; south along roadside ditches on North Poplar Street toward the Leonard Elementary school, then east along East Hackberry Street.

The Site is located within non-designated Segment No. 0306 at the western extreme of the Sulphur River Basin, which flows east joining the Middle and North Sulphur Rivers and converges with the Red River 308 miles downstream in Arkansas. The major tributaries of the Sulphur River are Days Creek and White Oak Bayou.

The average annual precipitation of Leonard, Texas is 43 inches with approximately 230 sunny days per year. The average temperature ranges from 33 degrees Fahrenheit in the winter to 93 degrees Fahrenheit in the summer. The average annual snowfall is 1 inch.

The Site lies approximately 700 feet above sea level with an apparent gentle slope to the south. The Site is within Fannin County, which lies in the northern fringe of the Texas Blackland Prairie, which extends through

North Central Texas and is characterized by broad flood plains and shallow stream valleys. Information obtained from the U.S. Department of Agriculture (USDA) indicated that the soils generally consist of shallow, well-drained, moderately permeable, loamy soils that are formed in chalk or in chalk interbedded with marl.

The EPA removal program conducted an investigation of the Site in May 2018 and determined that various contaminants of concern (COCs), including PCBs, semi-volatile organic compounds (SVOCs), polycyclic aromatic hydrocarbons (PAHs), and metals, in the soil had migrated off-site.

1.1.2.1 Location

905 N. Poplar
Leonard, Fannin County, TX 75452

1.1.2.2 Description of Threat

EPA has documented the contamination on the residential properties, alleyway, and drainage ditches surrounding the Site and have determined that it is associated with the operations conducted on the Site. EPA believes that much of the off-site contamination is associated with erosional migration from the Site or application of the oils as a weed killer. PCBs are the primary contaminant of concern although additional contaminants are co-located with the PCB contaminants and will be addressed as part of this response.

The contaminants listed in 1.1.3 below, PCBs, arsenic, cobalt compounds, copper, lead, manganese compounds, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene are hazardous substances as defined by Section 101(14) of CERCLA, 42 U.S.C. 9601(14), and further defined at 40 C.F.R. § 302.4.

The contaminants listed above are located on the non-fenced facility property as well as within public right-of-ways and residential properties allowing public access and potential exposure to those entering or using those areas for recreation or other purposes. The primary threat is for inadvertent ingestion but also to direct contact and inhalation especially to young children whom have the tendency to play in the soils. It also presents a threat to workers who may have to perform utility repairs.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

The Site is the location where facility operations were conducted as well as those areas surrounding the facility property Historical sampling conducted on the Site has shown PCB soil contamination. The contaminants identified in the on-site areas (industrial facility and associated drainage ditches) and those for the off-site areas (residential, school, daycare, alleyway and associated drainage ditches) during the April/May 2018 assessment are as follows:

Analyte	On-Site Areas	Off-Site Areas
PCB (total):	up to 175 mg/kg	up to 95.1 mg/kg
Arsenic:	up to 68.2 mg/kg	up to 59.1 mg/kg
Cobalt:	up to 30.9 mg/kg	up to 23.6 mg/kg
Copper:	up to 21,800 mg/kg	up to 6740 mg/kg
Lead:	up to 1,480 mg/kg	up to 402 mg/kg
Manganese:	up to 4,490 mg/kg	up to 3290 mg/kg
Benzo(a)pyrene:	up to 0.13 mg/kg	up to 13.3 mg/kg
Benzo(a)anthracene	less than 1.1 mg/kg	up to 9.8 mg/kg
Benzo(b)fluoranthene	less than 1.1 mg/kg	up to 16.5 mg/kg
Dibenzo(a,h)anthracene	less than 0.11 mg/kg	up to 2.97 mg/kg
Indeno(1,2,3-cd)pyrene	less than 1.1 mg/kg	up to 15.2 mg/kg

The Site and the surrounding alleyway, drainage ditches, residential properties, and school properties immediately surrounding the Site are the subject of this removal action and have been impacted by erosional runoff from the Site with similar contaminant impacts.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

The EPA actions for this cleanup will be to excavate and dispose of contaminated soils to an approximate depth of 24 inches and restore those properties with clean backfill to pre-existing conditions.

2.1.2 Response Actions to Date

This action is the initial response action associated with this site. There have been previous investigations which occurred in 1990/1991, 1995, and 1998 which showed elevated concentrations of PCBs in on-site and off-site areas.

2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)

The EPA Superfund Enforcement team is continuing to evaluate the liability and viability of tentatively identified PRPs and will pursue those parties as evidence becomes available.

2.1.4 Progress Metrics

Waste Stream	*Medium*	*Quantity*	*Manifest #*	*Treatment*	*Disposal*

2.2 Planning Section

2.2.1 Anticipated Activities

The specific actions anticipated are as follows:

a. Demolish on-site transformer dismantling facility and dispose/recycle generated C&D wastes;
b. Evaluate and dispose of abandoned drums located on-site;
c. Excavate off-site areas from furthest away towards the site;
d. Stockpile waste based upon TSCA (50 ppm or greater PCBs) or Non-TSCA (< 50 ppm PCBs);
e. Dispose of waste at appropriate landfills based upon PCB concentration and other analytical results (ie. TSCA Landfill, Class 1 Industrial Landfill, or Class 2 Industrial Landfill); and
f. Restore properties to pre-existing conditions

2.2.1.1 Planned Response Activities

2.2.1.2 Next Steps

As of December 8, The EPA team has:

- demolished the F.J. Doyle process building and concrete slab/containment;
- excavated contaminated soil from 28 of 53 grids (residential properties and right-of-ways);
- collected soil confirmation samples from 28 grids to confirm grids meet defined cleanup criteria;
- transported 653 tons of non-TSCA PCB-contaminated soil for off-site disposal;
- transported 5 tons of construction debris (wood debris from building demolition) for off-site disposal, and
- initiated restoration of residential properties and right-of-ways that have been cleaned up and cleared restoration by confirmation sampling.

Site control measures are in place at the site to protect the workers, the environment and the public including: temporary fencing, surface water erosion controls, and air monitoring. The EPA team continues to coordinate with and be available to the School District, City and State representatives as well as citizens being impacted by the response activities.

2.2.2 Issues

Weather conditions have caused some impact to the schedule.

2.3 Logistics Section

No information available at this time.

2.4 Finance Section

Estimated Costs *

	Budgeted	Total To Date	Remaining	% Remaining
Extramural Costs				
ERRS - Cleanup Contractor	$1,619,000.00	$0.00	$1,619,000.00	100.00%
START - Tech Assistance	$200,000.00	$0.00	$200,000.00	100.00%
Contingency	$161,000.00	$0.00	$161,000.00	100.00%
Intramural Costs				
USEPA - Direct	$162,000.00	$0.00	$162,000.00	100.00%
USEPA - InDirect	$1,009,000.00	$0.00	$1,009,000.00	100.00%
Total Site Costs	$3,151,000.00	$0.00	$3,151,000.00	100.00%

* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

2.5 Other Command Staff

No information available at this time.

3. Participating Entities

3.1 Unified Command

3.2 Cooperating Agencies

Texas Commission on Environmental Quality
Texas Department of State Health Services
Agency for Toxic Substances and Disease Registry

4. Personnel On Site

2 EPA
1 START
9 ERRS

5. Definition of Terms

No information available at this time.

6. Additional sources of information

No information available at this time.

7. Situational Reference Materials

No information available at this time.

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
F.J. Doyle Salvage - Removal Polrep

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region VI

Subject: **POLREP #2**
Removal Action Progress (DRAFT)
F.J. Doyle Salvage
061D
Leonard, TX

To: Ronnie Crossland, EPA R6
Anthony Buck, TCEQ
Reggie Cheatham, USEPA OLEM

From: Gary Moore, FOSC
Date: 12/6/2018
Reporting Period: 11/5/18-12/6/18

1. Introduction

1.1 Background

Site Number:	061D	**Contract Number:**	
D.O. Number:		**Action Memo Date:**	9/7/2018
Response Authority:	CERCLA	**Response Type:**	Time-Critical
Response Lead:	EPA	**Incident Category:**	Removal Action
NPL Status:	Non NPL	**Operable Unit:**	
Mobilization Date:	11/5/2018	**Start Date:**	11/5/2018
Demob Date:		**Completion Date:**	
CERCLIS ID:		**RCRIS ID:**	
ERNS No.:		**State Notification:**	
FPN#:		**Reimbursable Account #:**	

1.1.1 Incident Category

Time Critical Removal Action

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The facility also used a high-temperature oven to burn residual oils, paper and varnish from the copper and aluminum transformer cores. It was reported that the owner used the oil in the past for weed control in the 1970's. The past use of polychlorinated biphenyls (PCBs) in electrical equipment such as transformers and capacitors was common until 1979 when PCBs were banned in the United States and became regulated under 40 C.F.R. Part 761.

The transformer dismantling shop and concrete containment pad were used for transformer dismantling and storage of transformer oil remain at the Site. The Site is directly bordered by residential properties and a Leonard Independent School District (LISD) Daycare Facility to the south with the LISD Elementary schools just south of the Daycare Facility; residences on the north and west; and Leonard High School, Junior High School, and Intermediate School to the East. The Site predominantly drains to the southeast; south along roadside ditches on North Poplar Street toward the Leonard Elementary school, then east along East Hackberry Street.

The Site is located within non-designated Segment No. 0306 at the western extreme of the Sulphur River Basin, which flows east joining the Middle and North Sulphur Rivers and converges with the Red River 308 miles downstream in Arkansas. The major tributaries of the Sulphur River are Days Creek and White Oak Bayou.

The average annual precipitation of Leonard, Texas is 43 inches with approximately 230 sunny days per year. The average temperature ranges from 33 degrees Fahrenheit in the winter to 93 degrees Fahrenheit in the summer. The average annual snowfall is 1 inch.

The Site lies approximately 700 feet above sea level with an apparent gentle slope to the south. The Site is within Fannin County, which lies in the northern fringe of the Texas Blackland Prairie, which extends through

North Central Texas and is characterized by broad flood plains and shallow stream valleys. Information obtained from the U.S. Department of Agriculture (USDA) indicated that the soils generally consist of shallow, well-drained, moderately permeable, loamy soils that are formed in chalk or in chalk interbedded with marl.

The EPA removal program conducted an investigation of the Site in May 2018 and determined that various contaminants of concern (COCs), including PCBs, semi-volatile organic compounds (SVOCs), polycyclic aromatic hydrocarbons (PAHs), and metals, in the soil had migrated off-site.

1.1.2.1 Location

905 N. Poplar
Leonard, Fannin County, TX 75452

1.1.2.2 Description of Threat

EPA has documented the contamination on the residential properties, alleyway, and drainage ditches surrounding the Site and have determined that it is associated with the operations conducted on the Site. EPA believes that much of the off-site contamination is associated with erosional migration from the Site or application of the oils as a weed killer. PCBs are the primary contaminant of concern although additional contaminants are co-located with the PCB contaminants and will be addressed as part of this response.

The contaminants listed in 1.1.3 below, PCBs, arsenic, cobalt compounds, copper, lead, manganese compounds, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene are hazardous substances as defined by Section 101(14) of CERCLA, 42 U.S.C. 9601(14), and further defined at 40 C.F.R. § 302.4.

The contaminants listed above are located on the non-fenced facility property as well as within public right-of-ways and residential properties allowing public access and potential exposure to those entering or using those areas for recreation or other purposes. The primary threat is for inadvertent ingestion but also to direct contact and inhalation especially to young children whom have the tendency to play in the soils. It also presents a threat to workers who may have to perform utility repairs.

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Analyte	On-Site Areas	Off-Site Areas
PCB (total):	up to 175 mg/kg	up to 95.1 mg/kg
Arsenic:	up to 68.2 mg/kg	up to 59.1 mg/kg
Cobalt:	up to 30.9 mg/kg	up to 23.6 mg/kg
Copper:	up to 21,800 mg/kg	up to 6740 mg/kg
Lead:	up to 1,480 mg/kg	up to 402 mg/kg
Manganese:	up to 4,490 mg/kg	up to 3290 mg/kg
Benzo(a)pyrene:	up to 0.13 mg/kg	up to 13.3 mg/kg
Benzo(a)anthracene	less than 1.1 mg/kg	up to 9.8 mg/kg
Benzo(b)fluoranthene	less than 1.1 mg/kg	up to 16.5 mg/kg
Dibenzo(a,h)anthracene	less than 0.11 mg/kg	up to 2.97 mg/kg
Indeno(1,2,3-cd)pyrene	less than 1.1 mg/kg	up to 15.2 mg/kg

The Site and the surrounding alleyway, drainage ditches, residential properties, and school properties immediately surrounding the Site are the subject of this removal action and have been impacted by erosional runoff from the Site with similar contaminant impacts.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

The EPA actions for this cleanup will be to excavate and dispose of contaminated soils to an approximate depth of 24 inches and restore those properties with clean backfill to pre-existing conditions.

2.1.2 Response Actions to Date

This action is the initial response action associated with this site. There have been previous investigations which occurred in 1990/1991, 1995, and 1998 which showed elevated concentrations of PCBs in on-site and off-site areas.

2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)

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2.1.4 Progress Metrics

Waste Stream	*Medium*	*Quantity*	*Manifest #*	*Treatment*	*Disposal*

2.2 Planning Section

2.2.1 Anticipated Activities

The specific actions anticipated are as follows:

a. Demolish on-site transformer dismantling facility and dispose/recycle generated C&D wastes;
b. Evaluate and dispose of abandoned drums located on-site;
c. Excavate off-site areas from furthest away towards the site;
d. Stockpile waste based upon TSCA (50 ppm or greater PCBs) or Non-TSCA (< 50 ppm PCBs);
e. Dispose of waste at appropriate landfills based upon PCB concentration and other analytical results (ie. TSCA Landfill, Class 1 Industrial Landfill, or Class 2 Industrial Landfill); and
f. Restore properties to pre-existing conditions

2.2.1.1 Planned Response Activities

2.2.1.2 Next Steps

As of December 8, The EPA team has:

- demolished the F.J. Doyle process building and concrete slab/containment;
- excavated contaminated soil from 28 of 53 grids (residential properties and right-of-ways);
- collected soil confirmation samples from 28 grids to confirm grids meet defined cleanup criteria;
- transported 653 tons of non-TSCA PCB-contaminated soil for off-site disposal;
- transported 5 tons of construction debris (wood debris from building demolition) for off-site disposal, and
- initiated restoration of residential properties and right-of-ways that have been cleaned up and cleared restoration by confirmation sampling.

Site control measures are in place at the site to protect the workers, the environment and the public including: temporary fencing, surface water erosion controls, and air monitoring. The EPA team continues to coordinate with and be available to the School District, City and State representatives as well as citizens being impacted by the response activities.

2.2.2 Issues

Weather conditions have caused some impact to the schedule.

2.3 Logistics Section

No information available at this time.

2.4 Finance Section

Estimated Costs *

	Budgeted	Total To Date	Remaining	% Remaining
Extramural Costs				
ERRS - Cleanup Contractor	$1,619,000.00	$0.00	$1,619,000.00	100.00%
START - Tech Assistance	$200,000.00	$0.00	$200,000.00	100.00%
Contingency	$161,000.00	$0.00	$161,000.00	100.00%
Intramural Costs				
USEPA - Direct	$162,000.00	$0.00	$162,000.00	100.00%
USEPA - InDirect	$1,009,000.00	$0.00	$1,009,000.00	100.00%
Total Site Costs	$3,151,000.00	$0.00	$3,151,000.00	100.00%

* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

2.5 Other Command Staff

No information available at this time.

3. Participating Entities

3.1 Unified Command

3.2 Cooperating Agencies

Texas Commission on Environmental Quality
Texas Department of State Health Services
Agency for Toxic Substances and Disease Registry

4. Personnel On Site

2 EPA
1 START
9 ERRS

5. Definition of Terms

No information available at this time.

6. Additional sources of information

No information available at this time.

7. Situational Reference Materials

No information available at this time.

Message

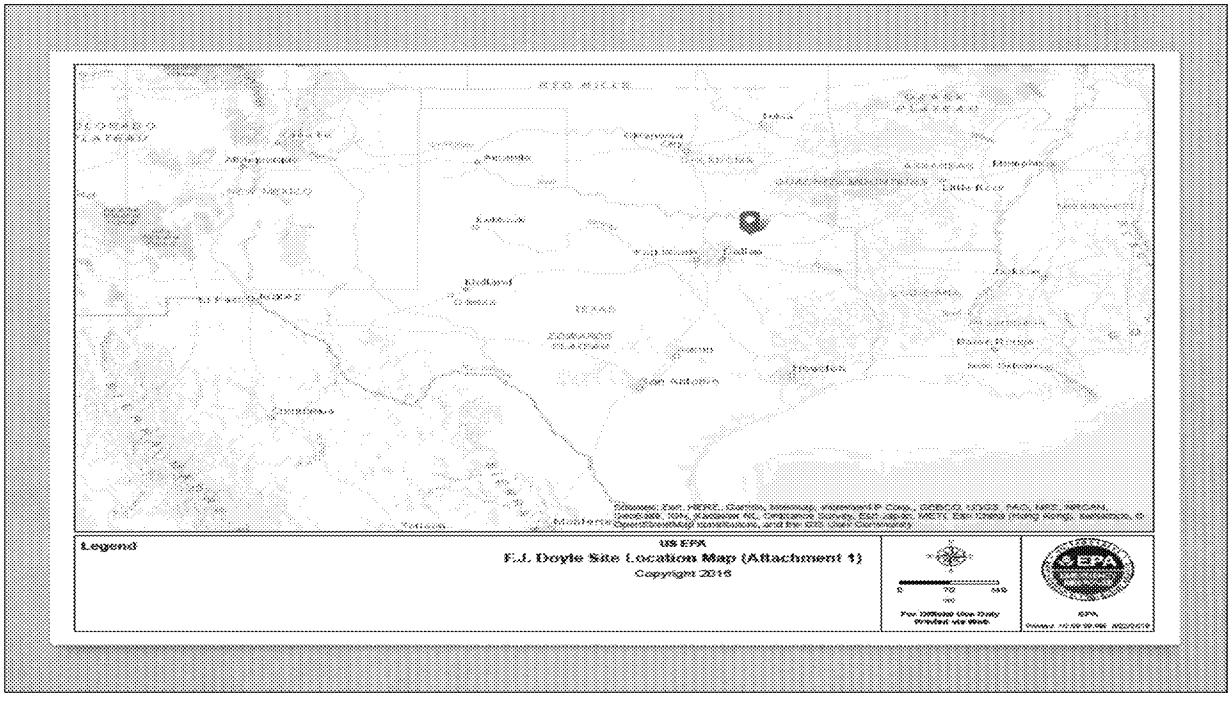
From: Danny Doyle Personal Email / Ex. 6
Sent: 1/29/2019 1:16:02 PM
To: Moore, Gary [Moore.Gary@epa.gov]

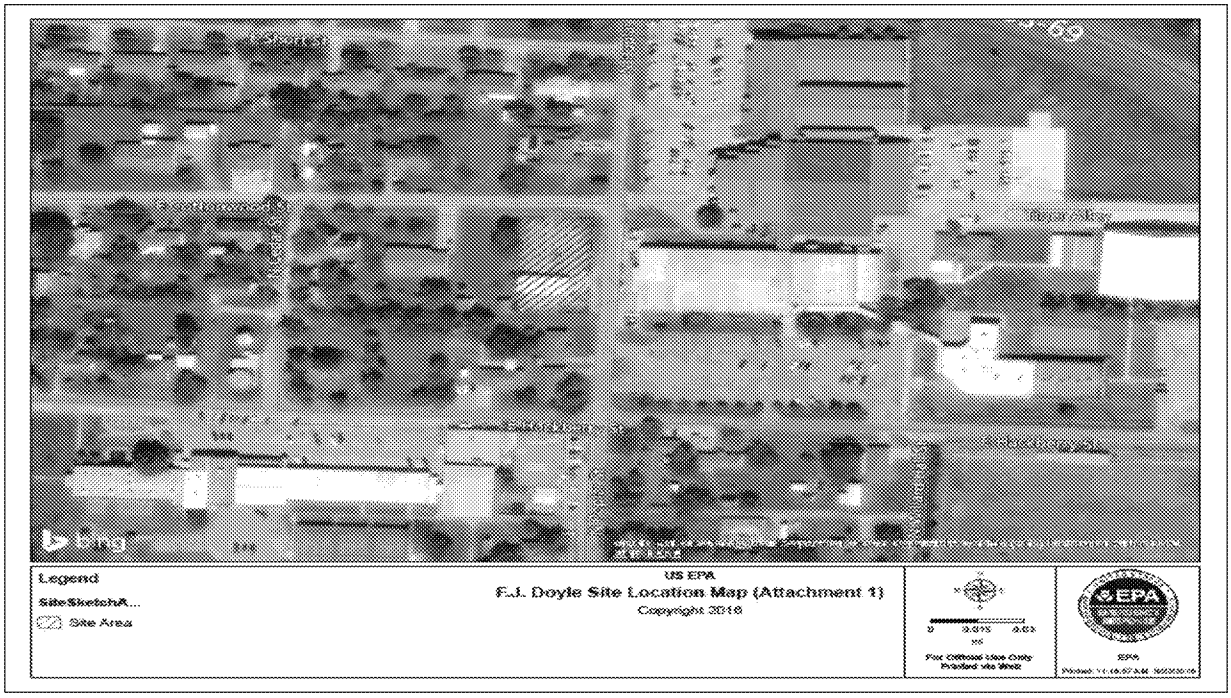
Good Morning Mr. Moore,

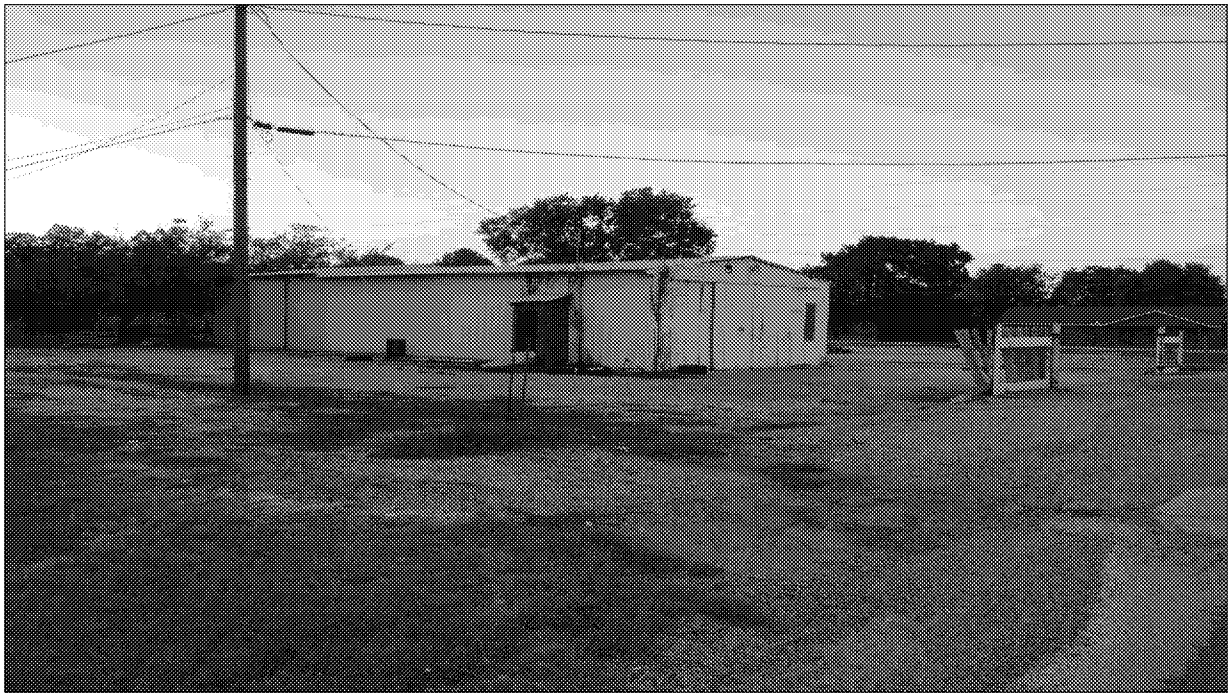
It appears that ya'll are getting close to completion at dad's old shop. Do you have an estimation of when? I am looking forward to the opportunity of being able to finally wrap up the last date on dad's estate. He passed in March of 2006. I am ready to be done. Thanks so much for all your help.

F.J. Doyle Salvage Site

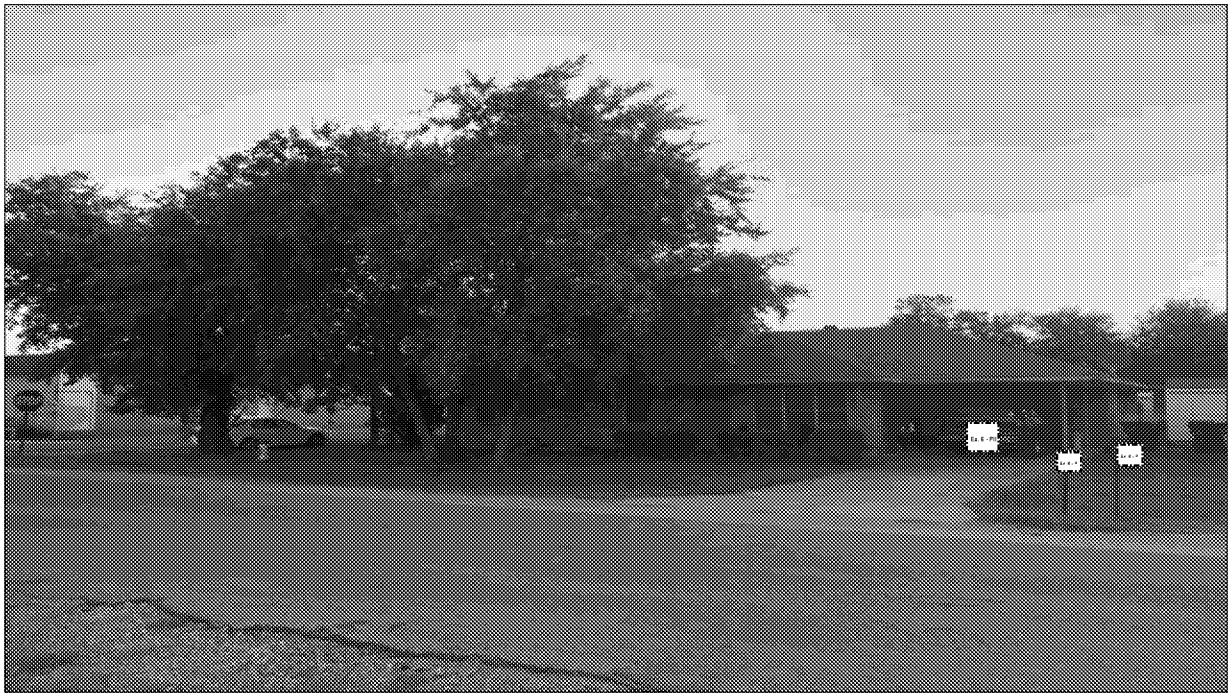
Leonard, Fannin County, Texas

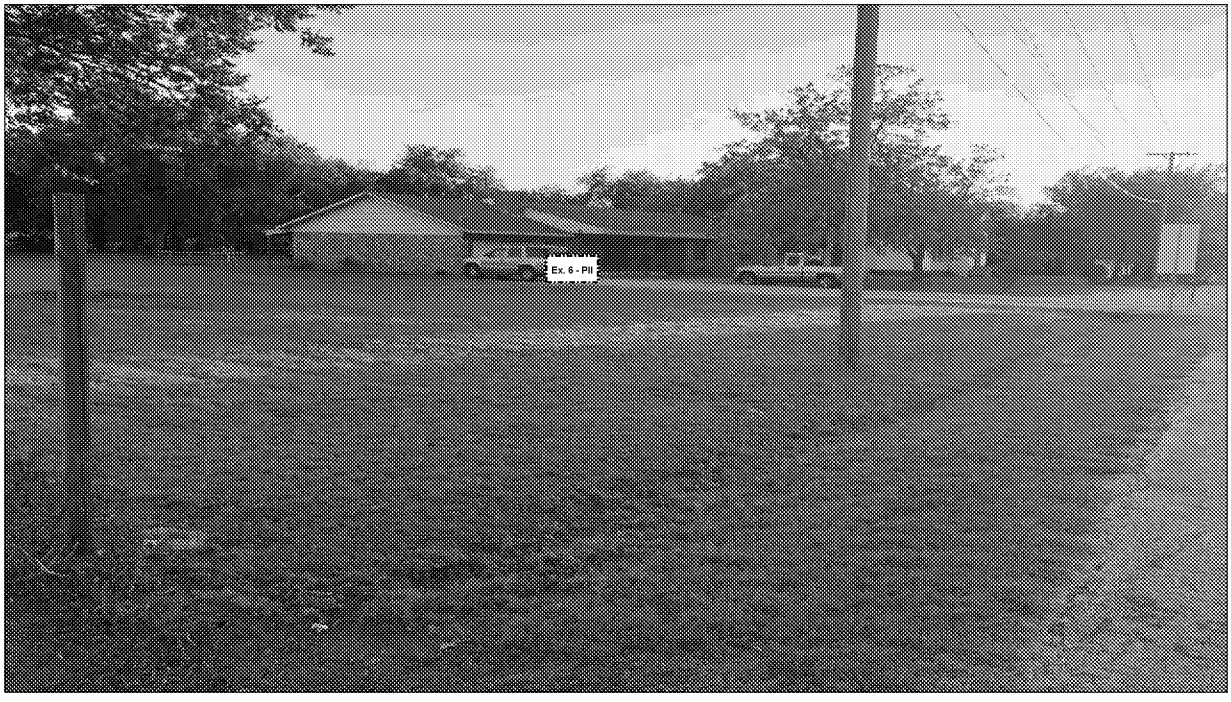

Legend
US EPA
F.J. Doyle Site Location Map (Attachment 1)
Copyright 2015
0
70
140
EPA

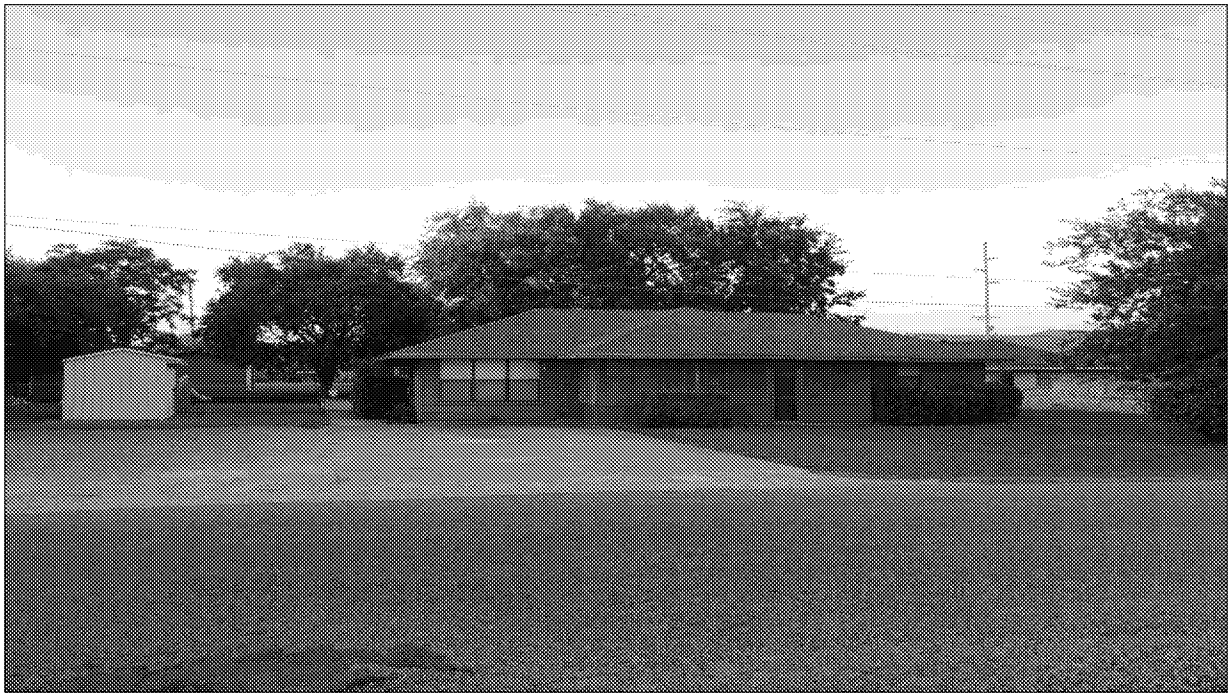

Legend
SiteSketchA...
Site Area
US EPA
F.J. Doyle Site Location Map (Attachment 1)
Copyright 2018
EPA

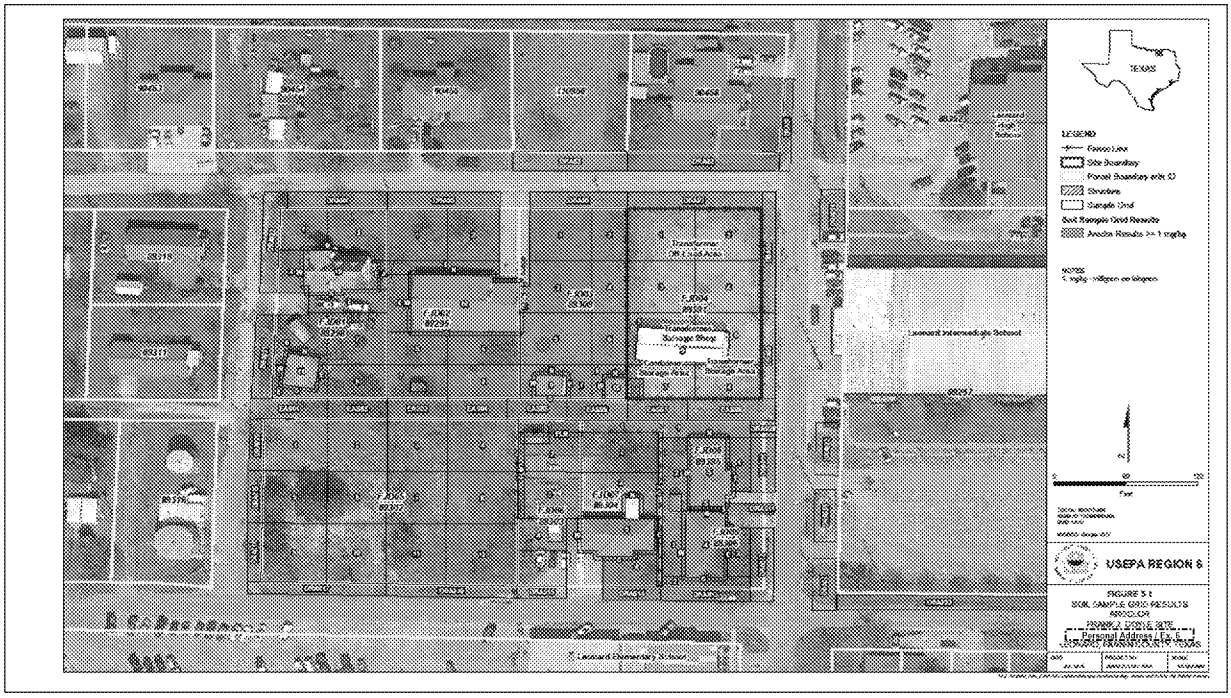


Ex. 6 - PII
Ex. 6 - PII
Ex. 6 - PII




Ex. 6 - PII




TEXAS
LEGEND
Fence Line
Site Boundary
Parcel Boundary with ID
Structure
Sample Grid
Soil Sample Grid Results
Arsenic Results >= 1 mg/kg
NOTES
1 mg/kg - milligrams per kilogram
Transformer Off Load Area
Transformer Storage Area
Transformer Storage Area
Leonard Intermediate School
Leonard Elementary School
0
60
120
Feet
USEPA REGION 6
FIGURE 5-1
SOIL SAMPLE GRID RESULTS
ARCOLOR
FRANKLIN DOUBLE SITE
Personal Address / Ex. 6
LEONARD, FRANKLIN COUNTY, TEXAS

F.J. Doyle Salvage

- Primary contaminants – Total PCBs
- Secondary contaminants (collocated) – Arsenic, Cobalt, Copper, Lead, Manganese, and PAHs

- EPA Action: Excavation/Restoration of Industrial Site, Residential Properties, Alleyway, and Drainage Ditches; Soil Disposal (TSCA/Non-TSCA), Building/Slab/Containment Demo.

Analyte	On-Site	Off-Site	Cleanup Level
PCB –Aroclor 1260	up to 175 mg/kg	up to 95.1 mg/kg	< 1 mg/kg (Total PCBs)
Arsenic	up to 68.2 mg/kg	up to 59.1 mg/kg	< 20 mg/kg
Cobalt	up to 30.9 mg/kg	up to 23.6 mg/kg	Co – located - < 23 mg/kg
Copper	up to 21,800 mg/kg	up to 6,740 mg/kg	Co – located - < 3100 mg/kg
Lead	up to 1,480 mg/kg	up to 402 mg/kg	Co-located - < 400 mg/kg
Manganese	up to 4,490 mg/kg	up to 3,290 mg/kg	Co – located - < 1800 mg/kg
Benzo(a)Anthracene	less than 1.1 mg/kg	up to 9.8 mg/kg	Co – located - < 11 mg/kg
Benzo(a)Pyrene	up to 0.13 mg/kg	up to 13.3 mg/kg	Co – located - < 1.1 mg/kg
Benzo(b)Flouranthene	less than 1.1 mg/kg	up to 16.5 mg/kg	Co – located - < 11 mg/kg
Dibenzo(a,h)Anthracene	less than 0.11 mg/kg	up to 2.97 mg/kg	Co – located – 1.1 mg/kg
Indeno(1,2,3-cd)Pyrene	less than 1.1 mg/kg	up to 15.2 mg/kg	Co – located – 11 mg/kg

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TEXAS 75202-2733

Property ID: _____
Longitude: _____
Latitude: _____
Type: Residential

CONSENT FOR ACCESS TO PROPERTY

Name of Owner: Frank J and Marie Doyle

Address/Description of Property:
905 N. Poplar St.
Leonard, TX 75452

I consent to officers, employees, contractors, and authorized representatives of the U.S. Environmental Protection Agency (EPA) entering and having continued access to my property for taking of such soil samples as may be determined by the EPA to be necessary.

I recognize that these actions by the EPA are undertaken in accordance with its response and enforcement authorities contained in the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"), 42 U.S.C. § 9601 *et seq.*

I am the property owner, and I warrant that I have the authority to enter into this access agreement. This written permission is given by me voluntarily with knowledge of my right to refuse and without threats or promises of any kind.

March 7, 2018
Date

Danny Doyle
Signature

First Successor Trustee
Title

Personal Phone / Ex. 6
Phone Number

ANALYTICAL RESULTS

Place a check mark in the appropriate space. Please note that if no selection is made, the EPA will assume that you do not wish to be provided with the analytical results.

(✓) Please provide me with a copy of the analytical results for my property.
- (✓) Send results to: Danny Doyle Personal Address / Ex. 6 Leonard Tx 75452
- (✓) Send results to: Gary Doyle Personal Address / Ex. 6 Leonard Tx 75452

( ) I do not wish to receive a copy of the analytical results for my property.

Please indicate if you are allowing access and your decision about sharing your results:
- ( ) Yes, I will allow access and I agree to allow the EPA to share the soil sampling results with state and local government.
- (✓) Yes, I will allow access. Please do not share these results with other parties.
- ( ) No, I do not want the EPA to have access.

Property ID: _____
Longitude: _____

Frank J. Doyle Transformer Site

Site ID	Parcel ID	Address	Legal	Owner	Owner Mailing Address	Owner Mailing City	State / Zip	Type/Direction
FJD04	89301	905 N. Poplar	COLLEGE ADDN, BLOCK 14, LOT 7,8, ACRES .344	Danny Doyle, Lynda Kaylor, Garry Doyle	Personal Address / Ex. 6	LEONARD	TX / 75452	Site
FJD03	Personal Address / Ex. 6					LEONARD	TX / 75452	Personal Address / Ex. 6
FJD02						LEONARD	TX / 75452	
FJD01						LEONARD	TX / 75452	
FJD05	89302	900 N. Cedar	COLLEGE ADDN, BLOCK 14, LOT 9-12	Leonard ISD	1 TIGER ALLEY	LEONARD	TX / 75452	Residence, southwest of the site
FJD06	89303	308 E. Hackberry	COLLEGE ADDN, BLOCK 14, LOT 13	Leonard ISD	1 TIGER ALLEY	LEONARD	TX / 75452	Residence, southwest of the site
FJD07	89304	310 E. Hackberry	COLLEGE ADDN, BLOCK 14, LOT 14 & W 20' OF 15	Leonard ISD	1 TIGER ALLEY	LEONARD	TX / 75452	Residence, southwest of the site
FDJ08	Personal Address / Ex. 6					LEONARD	TX / 75452	Personal Address / Ex. 6
FJD09						LEONARD	TX / 75452	
NS	89297	400 E. Hackberry	COLLEGE ADDN, BLOCK 13	Leonard ISD	1 TIGER ALLEY	LEONARD	TX / 75452	Intermediate School, east of the site
NS	80352	1002 N. Poplar	A0778 M MOORE, ACRES 5.647	Leonard ISD	1 TIGER ALLEY	LEONARD	TX / 75452	High School, northeast of the site
NS	Personal Address / Ex. 6					LEONARD	TX / 75452	Personal Address / Ex. 6
NS						LEONARD	TX / 75452	
NS						LEONARD	TX / 75452	
NS						LEONARD	TX / 75452	
NS						GEORGETOWN	TX/ 78633	
NS						LEONARD	TX / 75452	
NS	89316	N. Cedar	COLLEGE ADDN, BLOCK 15, LOT 15,16	City of Leonard	PO BOX 1270	LEONARD	TX / 75452	City, west of the site

Message

From: Moore, Gary [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=D9494EB3B37241B09CE3BDEAFF4C557A-MOORE, GARY]
Sent: 12/31/2018 5:46:39 PM
To: Danny Doyle Personal Email / Ex. 6
Subject: Re: update

Hello Danny,

We will start back on Jan 3. We have not started the excavation on the industrial property as we are bringing contaminated spoils fro off-site to on-site. We are close to starting the excavation on the site.

I hope to be complete by mid-February. Also, the rain has been an issue.

Gary Moore

Sent from my iPhone

> On Dec 31, 2018, at 7:37 AM, Danny Doyle Personal Email / Ex. 6 wrote:
>
> Mr. Moore,
> I hope you and your family had a wonderful Christmas. I would like to get an update on how the work at dad's shop is going. I am sure that all the rain is not helping. When you find time, please let me know about when it should be winding up. Also, let me know if you I can help. Thanks
>
> Danny Doyle
>

Message

From: Danny Doyle Personal Email / Ex. 6
Sent: 12/31/2018 1:37:25 PM
To: Moore, Gary [Moore.Gary@epa.gov]
Subject: update

Mr. Moore,
I hope you and your family had a wonderful Christmas. I would like to get an update on how the work at dad's shop is going. I am sure that all the rain is not helping. When you find time, please let me know about when it should be winding up. Also, let me know if you I can help. Thanks

Danny Doyle

ENVIRONMENTAL RESTORATION LLC.

Daily Work Order No. 45
U.S. EPA, Region 6

DAILY WORK ORDER

Operating Period: 01/9/19	Task Order: 0618F0308	Page 1 of 1
Project Name: F.J. Doyle Salvage Site	OSC: Gary Moore/Paige Delgado	
Location (City, State): Leonard, Texas	Shift: 1 2	Start Time: 07:00 / Stop Time: 17:30

1. Work Authorized for the Period	Work Accomplished for the Period
1) Complete excavations in Grid No. DRA02; commence excavations in Grid No. FJD05-01; 2) Continue site restoration (receive select borrow and install initial layer of backfill in Grid(s) FJD02-06, FJD03-04, FJD03-06, FJD03-08 and FJD04-07); 3) Continue off-site T&D of TSCA-contaminated soils; 4) Continue T&D of C&D debris; 5) Commence final restoration in Grid(s) No. FJD08 and FJD09 (all grids);	1) Complete: Excavations in Grid No. DRA03; 2) In Progress: Excavations in Grid No. FJD05-01; 3) In Progress. Receipt of select backfill and install initial layer of same in Grid(s) No. FJD02-06, FJD03-04, FJD03-06, FJD03-08 and FJD04-07; 4) In Progress: Off-site T&D of TSCA-contaminated soils; 5) In Progress: Off-site T&D of C&D debris; 6) In Progress: Final restoration in Grid(s) No. FJD08 and FJD09 (all grids);

OSC Signature:	Date: 1/9/19	OSC Signature:	Date: 1/9/19
RM Signature:	Date: 1/9/19	RM Signature:	Date: 1/9/19

2. Upcoming Work Authorized

Commence excavations in Grid No. DRA022; Continue off-site T&D of demolition debris and non-regulated soils. Subcontractor to complete site restoration at Personal Address / Ex. 6 (lay sod).

3. Quantity / Volume Tracking:

Description:	Current Period:	Total to Date:
2"– 3" Limestone Rock (Haul Road)		5 Truck Loads – 47.25 tons
Non-regulated, non-hazardous soils	15 Truck Loads –301.53 Tons	103 Truck Loads –2,458.27 tons
TSCA-contaminated soils		22 Truck Loads – 425.92 tons
Select Backfill, Wolf Creek Plant (12–15 PI)	9 Truck Loads – 111.07 Tons	94 Truck Loads – 1905.18 tons
C&D Debris (wooden portions of building stored in roll-off box)		1 30-yd. open-top box ≈5 tons 10 Truck Loads – 136.01 tons
Topsoil, Horn Plant		22 Truck Loads – 330.56 tons

4. Number of Personnel Authorized Current Period

Personnel Category:	Quantity:	Personnel Category:	Quantity:
Response Manager	1	Operator	3
FCA	1	Laborer	3
Foreman	1	Truck Driver/Laborer	1

5. Equipment Authorized for Current Period

Item	Qty	Used	Not Used / or Down	Item	Qty	Used	Not Used / or Down
½ ton crew-cab pickup (RM)	1	1		Portable toilets	3	3	
½ ton extended-cab	2	2		Hand-wash station	1	1	
¾ ton crew-cab flatbed w/ fuel cell	1	1		Skid steer with bucket/forks Bobcat TS90	1	1	
1-ton dump-truck	1	1		Mini-excavator (Bobcat E85)	1	1	
½ -ton extended cab (POV)	1	1		2,000-gallon Water Truck	1	1	
40' x 8' office trailer	1	1		Excavator (JD 210G)	1	1	
70 kW Generator	1	1		Front End Loader (JD 544K)	1	1	
Passenger car, FCA	1	1		Bulldozer (JD 650K-XLT)	1	1	
2" centrifugal pump/hoses	2	2		Plate compactors	2	2	
20' Conex Box	1	1					

6. Comments / Amendments (Include Time)

Signature of OSC	Date	Signature of RM	Date

Message

From: Hall,Emily (DSHS) [Emily.Hall@dshs.texas.gov]
Sent: 10/15/2018 7:01:02 PM
To: Moore, Gary [Moore.Gary@epa.gov]
Subject: RE: F.J. Doyle Salvage - Updated Draft Letter

Thanks, Gary.

I would also suggest adding clarification that DSHS can answer general health-related questions about PCBs, but can't provide information related to the clean-up.

Also, I imagine that parents would want to know more about the air monitoring, such as the plan to cease operations immediately if PM levels pass your monitoring threshold.

Thanks,
Emily

From: Moore, Gary [mailto:Moore.Gary@epa.gov]
Sent: Friday, October 12, 2018 4:31 PM
To: Hall,Emily (DSHS) <Emily.Hall@dshs.texas.gov>
Subject: RE: F.J. Doyle Salvage - Updated Draft Letter

Emily:

I would like to have you guys in the letter so that they know that we are working with the health department on this and you guys are familiar with the data and can assist if they need assistance.

I changed the letter a little so if you could review again, it would be appreciated.

Thanks
Gary Moore

From: Hall,Emily (DSHS)
Sent: Friday, October 12, 2018 1:48 PM
To: Moore, Gary <Moore.Gary@epa.gov>
Subject: RE: F.J. Doyle Salvage - Updated Draft Letter

Hi Gary,

It would be better to have EPA be the sole point of contact named in the letter, and to remove my info. Then if community members contact you all and have health concerns, you can refer them to us and we will be happy to speak with them. The best number to give them is: Personal Phone / Ex. 6 this is our program's main line, so they can reach one of our other team members if I happen to be unavailable.

Thanks!
Emily

From: Moore, Gary [mailto:Moore.Gary@epa.gov]
Sent: Tuesday, October 02, 2018 5:07 PM
To: Hall,Emily (DSHS) <Emily.Hall@dshs.texas.gov>
Subject: F.J. Doyle Salvage - Updated Draft Letter

WARNING: This email is from outside the HHS system. Do not click on links or attachments unless you expect them from the sender and know the content is safe.

See attached. Comments appreciated.

Gary W. Moore (6SF-ER)
Federal On-Scene Coordinator
U.S EPA Region 6
1445 Ross Ave, Suite 1200
Dallas, TX 75202-2733
Cell: 214.789.1627
moore.gary@epa.gov

Please note My email address has changed to reflect @dshs.texas.gov domain. Please be sure to update your contact information with the new address.
Please note My email address has changed to reflect @dshs.texas.gov domain. Please be sure to update your contact information with the new address.

Message

From: Moore, Gary [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=D9494EB3B37241B09CE3BDEAFF4C557A-MOORE, GARY]
Sent: 10/3/2018 12:05:16 PM
To: Danny Doyle Personal Email / Ex. 6
Subject: Re: access forms

I would assume you would have it by Thursday if actually mailed. If not I will call her and drop by and have her sign.

Thanks
Gary

Sent from my iPhone

On Oct 3, 2018, at 7:00 AM, Danny Doyle Personal Email / Ex. 6 wrote:

> Yeah, she told me the same thing. However, she has been known to tell you what you want to hear just because she wants to. If she has mailed it, as soon as I get it, I will send it to you.
>
> On Tue, Oct 2, 2018 at 4:27 PM Moore, Gary <Moore.Gary@epa.gov> wrote:
>
> > Danny:
> >
> > I just talked with your sister and she said that she mailed it to you. Please email me a copy once you get it.
> >
> > Thanks for your help
> >
> > Gary Moore
> >
> > **From:** Danny Doyle [mailto Personal Email / Ex. 6
> > **Sent:** Tuesday, October 02, 2018 9:10 AM
> > **To:** Moore, Gary <Moore.Gary@epa.gov>
> > **Subject:** Re: access forms
> >
> > I have her address. I am not sure that she has an email address.
> >
> > Lynda Kaylor
> >
> > Personal Address / Ex. 6

McKinney Texas 75070

On Tue, Oct 2, 2018 at 8:53 AM Moore, Gary <Moore.Gary@epa.gov> wrote:

Danny,

Thank you for the information, I have reached out and left a message. Hopefully she will return my call. Do you happen to have all of her contact information including addresss and email address?

Thanks

Gary Moore

From: Danny Doyle [mailto: **Personal Email / Ex. 6**
Sent: Tuesday, October 02, 2018 7:30 AM
To: Moore, Gary <Moore.Gary@epa.gov>
Subject: access forms

Mr. Moore,

I suppose that my sister has decided that she is not going to sign the access sheet.

She won't even discuss it period. She can be a major pain when she wants to. It might help if you spoke with her. Her name is Lynda Kaylor. Phone Number is **Personal Phone / Ex. 6**

She had told me that she would sign it and mail it right back to me and that did not happen. I am sorry. Let me know if there is anything else you need me to do.

Danny Doyle

Message

From: Moore, Gary [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=D9494EB3B37241B09CE3BDEAFF4C557A-MOORE, GARY]
Sent: 10/2/2018 9:27:20 PM
To: 'Danny Doyle' Personal Email / Ex. 6
Subject: RE: access forms

Danny:

I just talked with your sister and she said that she mailed it to you. Please email me a copy once you get it.

Thanks for your help
Gary Moore

From: Danny Doyle Personal Email / Ex. 6
Sent: Tuesday, October 02, 2018 9:10 AM
To: Moore, Gary <Moore.Gary@epa.gov>
Subject: Re: access forms

I have her address. I am not sure that she has an email address.

Lynda Kaylor
Personal Address / Ex. 6
McKinney Texas 75070

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> Thanks
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> **Sent:** Tuesday, October 02, 2018 7:30 AM
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> **Subject:** access forms
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Danny Doyle

Message

From: Moore, Gary [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=D9494EB3B37241B09CE3BDEAFF4C557A-MOORE, GARY]
Sent: 10/2/2018 2:20:41 PM
To: 'Danny Doyle' Personal Email / Ex. 6
Subject: RE: access forms

I live in Fairview which is not far from her location.

From: Danny Doyle [mailto Personal Email / Ex. 6
Sent: Tuesday, October 02, 2018 9:10 AM
To: Moore, Gary <Moore.Gary@epa.gov>
Subject: Re: access forms

I have her address. I am not sure that she has an email address.

Lynda Kaylor
Personal Address / Ex. 6
McKinney Texas 75070

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> **Sent:** Tuesday, October 02, 2018 7:30 AM
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Danny Doyle

Message

From: Moore, Gary [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=D9494EB3B37241B09CE3BDEAFF4C557A-MOORE, GARY]
Sent: 10/2/2018 1:53:23 PM
To: 'Danny Doyle' Personal Email / Ex. 6
Subject: RE: access forms

Danny,

Thank you for the information, I have reached out and left a message. Hopefully she will return my call. Do you happen to have all of her contact information including addresss and email address?

Thanks
Gary Moore

From: Danny Doyle [mailto: Personal Email / Ex. 6
Sent: Tuesday, October 02, 2018 7:30 AM
To: Moore, Gary <Moore.Gary@epa.gov>
Subject: access forms

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I suppose that my sister has decided that she is not going to sign the access sheet.
She won't even discuss it period. She can be a major pain when she wants to. It might help if you spoke with her. Her name is Lynda Kaylor. Phone Number is Personal Information/ Ex. 6
She had told me that she would sign it and mail it right back to me and that did not happen. I am sorry. Let me know if there is anything else you need me to do.

Danny Doyle

Message

From: Moore, Gary [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=D9494EB3B37241B09CE3BDEAFF4C557A-MOORE, GARY]
Sent: 10/5/2018 12:48:31 PM
To: Danny Doyle Personal Email / Ex. 6
Subject: Re: access form

Thank yo

Sent from my iPhone

> On Oct 5, 2018, at 6:51 AM, Danny Doyle Personal Email / Ex. 6 wrote:
>
> Gary,
>
> Here is the signed form from Lynda. Let me know when you get ready to start.
> see attachment
>
>
> <Image.jpg>

Message

From: Moore, Gary [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=D9494EB3B37241B09CE3BDEAFF4C557A-MOORE, GARY]
Sent: 9/24/2018 2:11:43 PM
To: 'Danny Doyle' Personal Email / Ex. 6
Subject: RE: Frank J. Doyle Salvage - EPA Cleanup Access Request

Mr. Doyle;

Thank you for coordinating this access approval. Please forward the other two as soon as you get them.

Thank You
Gary Moore

From: Danny Doyle [mailto: Personal Email / Ex. 6
Sent: Monday, September 24, 2018 7:04 AM
To: Moore, Gary <Moore.Gary@epa.gov>
Subject: Re: Frank J. Doyle Salvage - EPA Cleanup Access Request

Mr. Moore,

Here is my access form. Garry was out of town this weekend and I mailed one to my sister. I will get those 2 to you as soon as I can. I will be out of town tomorrow and Wednesday.

See attachment

On Fri, Sep 21, 2018 at 9:44 AM Moore, Gary <Moore.Gary@epa.gov> wrote:

> Hello Mr. Doyle:
>
> You can sign on the same document or sign a separate on individually (your preference). Yes, we are working on getting consent for access from the other owners.
>
> We are anticipating starting the work on October 22 or 29.
>
> Thanks
>
> Gary Moore
>
> 2147891627
>
> **From:** Danny Doyle [mailto: Personal Email / Ex. 6
> **Sent:** Thursday, September 20, 2018 8:34 PM

To: Moore, Gary <Moore.Gary@epa.gov>
Subject: Re: Frank J. Doyle Salvage - EPA Cleanup Access Request

Mr. Moore,

Got my computer this afternoon. The property is in my brother's, my sister's and my name. Should we all sign one document or each sign a separate sheet? Also, I assume that you folks are getting consent for access from the the other owners.

Garry wanted to know if you had an estimated time when this would start since he must move his things he has stored in the shop.

On Thu, Sep 20, 2018 at 12:59 PM Moore, Gary <Moore.Gary@epa.gov> wrote:

> Mr. Doyle:
>
> It was nice talking with you this morning. As I mentioned, I am sending you a request for access for EPA to clean-up the former Frank J. Doyle Salvage Site. Also, I am sending you some maps that show the PCB contamination throughout the area (Total PCB Breakout) and then a map which shows the areas that we anticipate cleaning up (Excavation Depths). The EPA cleanup level is less than 1 mg/kg Total PCBs. Please call if you have questions.
>
> Thanks
>
> **Gary W. Moore (6SF-ER)**
>
> **Federal On-Scene Coordinator**
>
> **U.S EPA Region 6**
>
> **1445 Ross Ave, Suite 1200**
>
> **Dallas, TX 75202-2733**
>
> **Cell: 214.789.1627**
>
> **moore.gary@epa.gov**

Message

From: Moore, Gary [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=D9494EB3B37241B09CE3BDEAFF4C557A-MOORE, GARY]
Sent: 9/21/2018 8:38:15 PM
To: Personal Phone / Ex. 6 Personal Email / Ex. 6
Subject: EPA Proposed Cleanup

Hello Citizen Name / Ex. 6

I met with Citizen Name / Ex. 6 today and let him know that EPA is planning a cleanup on the Doyle facility and other areas including the house you lease. I will send you the maps and data later this evening. We can talk after I send this information to you.

Thanks
Gary Moore

Sent from my iPhone

Message

From: Moore, Gary [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=D9494EB3B37241B09CE3BDEAFF4C557A-MOORE, GARY]
Sent: 9/21/2018 2:44:30 PM
To: 'Danny Doyle' Personal Email / Ex. 6
Subject: RE: Frank J. Doyle Salvage - EPA Cleanup Access Request

Hello Mr. Doyle:

You can sign on the same document or sign a separate on individually (your preference). Yes, we are working on getting consent for access from the other owners.

We are anticipating starting the work on October 22 or 29.

Thanks
Gary Moore
2147891627

From: Danny Doyle [mailto Personal Email / Ex. 6
Sent: Thursday, September 20, 2018 8:34 PM
To: Moore, Gary <Moore.Gary@epa.gov>
Subject: Re: Frank J. Doyle Salvage - EPA Cleanup Access Request

Mr. Moore,

Got my computer this afternoon. The property is in my brother's, my sister's and my name. Should we all sign one document or each sign a separate sheet? Also, I assume that you folks are getting consent for access from the the other owners.
Garry wanted to know if you had an estimated time when this would start since he must move his things he has stored in the shop.

On Thu, Sep 20, 2018 at 12:59 PM Moore, Gary <Moore.Gary@epa.gov> wrote:

> Mr. Doyle:
>
> It was nice talking with you this morning. As I mentioned, I am sending you a request for access for EPA to clean-up the former Frank J. Doyle Salvage Site. Also, I am sending you some maps that show the PCB contamination throughout the area (Total PCB Breakout) and then a map which shows the areas that we anticipate cleaning up (Excavation Depths). The EPA cleanup level is less than 1 mg/kg Total PCBs. Please call if you have questions.
>
> Thanks
>
> **Gary W. Moore (6SF-ER)**
>
> **Federal On-Scene Coordinator**

U.S EPA Region 6

1445 Ross Ave, Suite 1200

Dallas, TX 75202-2733

Cell: 214.789.1627

moore.gary@epa.gov

Message

From: Webster, Susan [webster.susan@epa.gov]
Sent: 2/19/2019 1:19:49 PM
To: Crossland, Ronnie [Crossland.Ronnie@epa.gov]
CC: Petersen, Chris [petersen.chris@epa.gov]
Subject: Fwd: FJ Doyle Salvage Update

FYI

Sent from my iPhone

Begin forwarded message:

> **From:** "Moore, Gary" <Moore.Gary@epa.gov>
> **Date:** February 18, 2019 at 7:30:36 PM CST
> **To:** "Smith, Monica" <smith.monica@epa.gov>
> **Cc:** "Webster, Susan" <webster.susan@epa.gov>, "Petersen, Chris" <petersen.chris@epa.gov>, "Delgado, Paige" <Delgado.Paige@epa.gov>, "Brescia, Nicolas" <brescia.nicolas@epa.gov>, "Robertson, David" <robertson.david@epa.gov>
> **Subject: FJ Doyle Salvage**
>
> **Plans for 2/19/19:**
> The EPA Team will be on-site tomorrow (2/19/19) as we did not receive all of the rock that was necessary to complete the industrial property. We should receive 3 truck loads of rock in the morning and will have 2 personnel on-site to complete this activity and demobe equipment which we anticipate to be completed on or before noon (barring impacts from rain). Since we are only working on the rock parking lot and demobe of equipment, we do not anticipate that rainfall will impact our activities. The ERRS Contractor has not requested additional funds at this time as we anticipate having approximately $30,000 left over but should additional funds need to be added, I have $ 161,000 in contingency. I will likely need some of this for the START Contractor to finish the report.
>
> **Site Status:**
> The F.J. Doyle Salvage Site is a transformer dismantling facility that operated from the approximately 1976 through 1999. The activities on-site resulted in the release of PCB Transformer Oil and metals associated with metal scraping activities. The areas impacted of EPA cleanup standards include the industrial facility, 3 residential properties, adjacent alleyway and adjacent drainage ditches. As of 2/18/2019, the EPA Team has completed the bulk of the cleanup activities and will be demobilizing personnel by 2/20/19. There remains additional activities to be completed by subcontract personnel. Those activities include:
>
> 1. Fine grading and hydro-seeding a property used as a laydown yard belonging the school;
> 2. Fine grading and sodding approximately 100 sq. ft. of previously missed areas;
> 3. Re-rolling sod on one of the residential properties;
> 4. Re-Installation of privacy fence between industrial property and residential property;
> 5. Street sweeping (as appropriate) of residual soil on roadways;
>
> The City of Leonard in cooperation with the EPA Team have identified areas where truck traffic has damaged city roadways. The City has invoiced the EPA Team for approximately $27,000 for the necessary repairs and the EPA believes that those cost are not unreasonable due to the significant number of trucks hauling waste and backfill to the site area.

The EPA Team is also evaluating the need to replace a sewer lines Personal Address / Ex. 6 for these residential properties due the potential that our equipment compressed the sewer lines impacting gravity flow to the main city sewer line. The City indicates that the property owner of both properties continually has sewer issues and that it is unlikely that our activities impacted this situation. It is possible that our activities could have impacted the gravity flow so we may need to make funds available to dig up and relay those sewer lines with proper gravity flow as well as bring the sewer lines to meet city code. It is anticipated that this may cost approximately $ 15,000.

Final completion except for the road repair and potential sewer line issue is anticipated by 3/8/19.

Gary W. Moore (6SF-ER)
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