Missouri
Department of
Natural Resources

Site Investigation Findings Report
Tannery Sludge Farm Fields Site
Andrew, Buchanan, Clinton and DeKalb Counties, MO
Order Numbers: 100129004, 100202002, 100203001 and 100211001

Site Information:

ESP LDPR Code: FEPA8

ESP Staff: Ken Hannon, Sean Counihan, Ben Frissell, & Pam Hackler

Job Code: NJ10TSFF

Investigation Date: 1/25 through 1/28, 2010

Introduction:

The Missouri Department of Natural Resources (MDNR) Hazardous Waste Program (HWP) requested Environmental Services Program (ESP) personnel to conduct sampling related to an ongoing investigation involving the Prime Tanning Corporation located at 205 Florence Road in St. Joseph, Missouri. This Findings Report is intended as an interim measure to document recent sampling activities. A full project report will be written by the HWP project manager when sample results have been received and evaluated. ESP Environmental Specialists Ken Hannon, Ben Frissell, Pam Hackler, and Sean Counihan traveled to the site on January 25 through 28, 2010, to collect grab samples of soils and a private well water from selected residences and farm fields where tannery sludge was historically applied as a fertilizer. Additional MDNR personnel on site included Valerie Wilder, Michael Stroh, Hillary Wakefield, Paul Embree, and Shelly Jackson with the HWP, site assessment unit. Ray Franson with the MDNR Kansas City Regional Office was also present to assist. Sampling was conducted in accordance with established standard operating procedures (SOPs) within the MDNR, ESP and outlined in the Tannery Sludge Farm Field Sampling and Analysis Plan (SAP), January 14, 2010.

Observations:

Personnel arrived on-site the afternoon of January 25, 2010, and began sampling agricultural field soils. Custody of all samples collected was maintained by ESP personnel. Weather conditions varied but were predominantly cold with temperatures ranging from morning lows of 16 degrees to afternoon highs around 30 degrees Fahrenheit. Winds were heavy to moderate and from the west to northwest, tapering off towards the afternoons. One private well was re-sampled to confirm the sample results obtained from sampling conducted on December 16, 2009, (Residence ID number 102). Eleven residential yard decision units (including one background yard), and 19 farm field decision units were also sampled during this event. No deviations from the SAP were noted at any sample locations. Specific information regarding the owner's names and addresses are not documented in this report due to confidentiality concerns. Names and addresses of residents and property owners are kept on file with the HWP project manager.

Field Methods:
Below is a brief discussion of the sampling activities conducted. A more detailed description of sampling procedures is outlined in the SAP.

Residential yards were divided into Sampling Units (SU) according to each specific site location and recorded on specially designed forms that are on file with the HWP project manager. Five-aliquot Incremental Samples (IS) were collected from within each SU at a depth of 0-2 inches. All soil samples were brought back to the ESP lab and allowed to thaw and dry for at least three days (some samples took four days to dry). All soil samples were then disaggregated and passed through a #60 mesh (0.25mm) sieve. Second-tier Decision Unit Incremental Samples (DUIS) were created using the Sampling Unit Incremental Samples (SUIS), and then all 60 residential yard IS were placed into sample containers and submitted for hexavalent chromium analysis on February 2, 2010.

Farm field samples were collected from the 0-2 inch depth from three SUs in 19 farm field DUs. Each SU was comprised of an acre plot of land within which ten discrete soil samples were collected. Following drying, disaggregation, and sieving, selected soil samples were then analyzed for total chromium with an x-ray fluorescence (XRF) analyzer. The discrete samples were combined to form first-tier SUIS. Second-tier DUIS samples were then created from the SUIS. All IS were then also analyzed by XRF. The resulting 76 SUIS and DUIS farm field samples were then placed into sample containers and submitted for hexavalent chromium analysis on February 11, 2010.

One private well was sampled, plus a duplicate and a field blank. All water samples were shipped overnight to the contract laboratory for hexavalent chromium analysis the same day they were collected. Water samples were also later submitted to the ESP laboratory for total chromium analysis. Water samples collected for total chromium were preserved with nitric acid while samples collected for hexavalent chromium were first filtered then placed into sample containers and preserved in a buffer solution containing ammonium sulfate.

Table 1 is a listing of the samples collected.

Table 1: Sample Collection Data

Sample Number	Date Collected	Time Collected	Location Collected & Description
AB14142	1/26/10	1627	Water grab sample collected from residence 102. Clear, colorless and odorless sample.
AB14143	1/26/10	1635	Field Blank.
AB14144	1/26/10	1627	Duplicate of AB14142.
AB14289	1/27/10	1435	Residential soil composite collected from location ID 319 at Y1.
AB14290	1/27/10	1440	Residential soil composite collected from location ID 319 at Y2.
AB14291	1/27/10	1449	Residential soil composite collected from location ID 319 at Y3.
AB14292	1/27/10	1457	Residential soil composite collected from location ID 319 at Y4.
AB14293	1/27/10	------	DUIS of residential yard 319.
AB14294	1/27/10	1026	Residential soil composite collected from location ID 305 at Y1.
AB14295	1/27/10	1037	Residential soil composite collected from location ID 305 at Y2.
AB14296	1/27/10	1046	Residential soil composite collected from location ID 305 at Y3.
AB14297	1/27/10	------	DUIS of residential yard 305.

Table 1: Sample Collection Data			
Sample Number	**Date Collected**	**Time Collected**	**Location Collected & Description**
AB14298	1/26/10	1150	Residential soil composite collected from location ID 320 at Y1.
AB14299	1/26/10	1202	Residential soil composite collected from location ID 320 at Y2.
AB14300	1/26/10	1122	Residential soil composite collected from location ID 320 at Y3.
AB14301	1/26/10	1134	Residential soil composite collected from location ID 320 at Y4.
AB14302	1/26/10	------	DUIS of residential yard 320.
AB14303	1/26/10	0930	Residential soil composite collected from location ID 325 at Y1.
AB14304	1/26/10	0910	Residential soil composite collected from location ID 325 at Y2.
AB14305	1/26/10	0900	Residential soil composite collected from location ID 325 at Y3.
AB14306	1/26/10	0920	Residential soil composite collected from location ID 325 at Y4.
AB14307	1/26/10	------	DUIS of residential yard 325.
AB14308	1/26/10	0940	Residential soil composite collected from location ID 326 at Y1.
AB14309	1/26/10	0950	Residential soil composite collected from location ID 326 at Y2.
AB14310	1/26/10	1000	Residential soil composite collected from location ID 326 at Y3.
AB14311	1/26/10	1010	Residential soil composite collected from location ID 326 at Y4.
AB14312	1/26/10	------	DUIS of residential yard 326.
AB14313	1/27/10	0820	Residential soil composite collected from location ID 312 at Y1.
AB14314	1/27/10	0835	Residential soil composite collected from location ID 312 at Y2.
AB14315	1/26/10	0850	Residential soil composite collected from location ID 312 at Y3.
AB14316	1/26/10	------	DUIS of residential yard 312.
AB14317	1/26/10	1525	Residential soil composite collected from location ID 313 at Y1.
AB14318	1/26/10	1530	Residential soil composite collected from location ID 313 at Y2.
AB14319	1/26/10	1535	Residential soil composite collected from location ID 313 at Y3.
AB14320	1/26/10	1545	Residential soil composite collected from location ID 313 at Y4.
AB14321	1/26/10	------	DUIS of residential yard 313.
AB14322	1/27/10	1435	Residential soil composite collected from location ID 301 at Y1.
AB14323	1/27/10	1440	Residential soil composite collected from location ID 301 at Y2.
AB14324	1/27/10	1449	Residential soil composite collected from location ID 301 at Y3.
AB14325	1/27/10	1457	Residential soil composite collected from location ID 301 at Y4.
AB14326	1/27/10	------	DUIS of residential yard 301.
AB14327	1/27/10	1430	Residential soil composite collected from location ID 304 at Y1.
AB14328	1/27/10	1434	Residential soil composite collected from location ID 304 at Y1, replicate #1.
AB14329	1/27/10	1438	Residential soil composite collected from location ID 304 at Y1, replicate #2.
AB14330	1/27/10	1440	Residential soil composite collected from location ID 304 at Y2.
AB14331	1/27/10	1450	Residential soil composite collected from location ID 304 at Y3.
AB14332	1/27/10	1500	Residential soil composite collected from location ID 304 at Y4.
AB14333	1/27/10	------	DUIS of residential yard 304.
AB14334	1/27/10	1500	Residential soil composite collected from location ID 303 at Y1.
AB14335	1/27/10	1510	Residential soil composite collected from location ID 303 at Y2.
AB14336	1/27/10	1520	Residential soil composite collected from location ID 303 at Y3.
AB14337	1/27/10	1530	Residential soil composite collected from location ID 303 at Y4.
AB14338	1/27/10	-------	DUIS of residential yard 303.
AB14339	1/27/10	1254	Residential soil composite collected from location ID 306 at Y1.
AB14340	1/27/10	1302	Residential soil composite collected from location ID 306 at Y2.
AB14341	1/27/10	1310	Residential soil composite collected from location ID 306 at Y3.
AB14342	1/27/10	------	DUIS of residential yard 306.
AB14343	1/26/10	1610	Residential soil composite collected from location ID 302 at Y1.
AB14344	1/26/10	1615	Residential soil composite collected from location ID 302 at Y2.
AB14345	1/26/10	1625	Residential soil composite collected from location ID 302 at Y3.
AB14346	1/26/10	1625	Residential soil composite collected from location ID 302 at Y3. replicate #1

Table 1: Sample Collection Data			
Sample Number	**Date Collected**	**Time Collected**	**Location Collected & Description**
AB14347	1/26/10	1625	Residential soil composite collected from location ID 302 at Y3. replicate #2
AB14348	1/26/10	------	DUIS of residential yard 302.
AB14404	1/26/10	1415	Farm field soil location ID 202, SUIS 59.
AB14405	1/26/10	1530	Farm field soil location ID 203, SUIS 18.
AB14406	1/27/10	1256	Farm field soil location ID 204, SUIS 42.
AB14407	1/26/10	1100	Farm field soil location ID 205, SUIS 96.
AB14408	1/25/10	1400	Farm field soil location ID 209, SUIS 109.
AB14409	1/26/10	1200	Farm field soil location ID 210, SUIS 30.
AB14410	1/27/10	0902	Farm field soil location ID 212, SUIS 53.
AB14411	1/26/10	1600	Farm field soil location ID 213, SUIS 44.
AB14412	1/27/10	1118	Farm field soil location ID 214, SUIS 25.
AB14413	1/27/10	1046	Farm field soil location ID 215, SUIS 55.
AB14414	1/26/10	1540	Farm field soil location ID 216, SUIS 50.
AB14415	1/26/10	1245	Farm field soil location ID 217, SUIS 103.
AB14416	1/26/10	0940	Farm field soil location ID218, SUIS 146.
AB14417	1/26/10	0900	Farm field soil location ID 219, SUIS 55.
AB14418	1/25/10	1704	Farm field soil location ID 221, SUIS 150.
AB14419	1/25/10	1658	Farm field soil location ID 222, SUIS 41.
AB14420	1/26/10	1444	Farm field soil location ID 202, SUIS 29.
AB14421	1/26/10	1415	Farm field soil location ID 202, SUIS 79.
*AB14422	1/26/10	1415	Farm field soil location ID 202, DUIS.
AB14423	1/27/10	1530	Farm field soil location ID 203, SUIS 7.
AB14424	1/27/10	1530	Farm field soil location ID 203, SUIS 27.
*AB14425	1/27/10	1530	Farm field soil location ID 203, DUIS.
AB14426	1/27/10	1256	Farm field soil location ID 204, SUIS 99.
AB14427	1/27/10	1350	Farm field soil location ID 204, SUIS 23.
*AB14428	1/27/10	1256	Farm field soil location ID 204, DUIS.
AB14429	1/26/10	1120	Farm field soil location ID 205, SUIS 71.
AB14430	1/26/10	1100	Farm field soil location ID 205, SUIS 34.
AB14431	1/26/10	1100	Farm field soil location ID 205, DUIS.
AB14432	1/25/10	1400	Farm field soil location ID 209, SUIS 138.
AB14433	1/25/10	1405	Farm field soil location ID 209, SUIS 144.
*AB14434	1/25/10	1400	Farm field soil location ID 209, DUIS.
AB14435	1/26/10	1530	Farm field soil location ID 210, SUIS 15.
AB14436	1/26/10	1600	Farm field soil location ID 210, SUIS 62.
*AB14437	1/26/10	150	Farm field soil location ID 210, DUIS.
AB14438	1/27/10	0948	Farm field soil location ID 212, SUIS 16.
AB14439	1/27/10	1030	Farm field soil location ID 212, SUIS 86.
AB14440	1/27/10	0902	Farm field soil location ID 212, DUIS
AB14441	1/26/10	1600	Farm field soil location ID 213, SUIS 9.
AB14442	1/26/10	1626	Farm field soil location ID 213, SUIS 15.
AB14443	1/26/10	1600	Farm field soil location ID 213, DUIS.
AB14444	1/27/10	1118	Farm field soil location ID 214, SUIS 53.
AB14445	1/27/10	1210	Farm field soil location ID 214, SUIS 23.
AB14446	1/27/10	1118	Farm field soil location ID 214, DUIS.
AB14447	1/27/10	1110	Farm field soil location ID 215, SUIS 82.
AB14448	1/27/10	1046	Farm field soil location ID 215, SUIS 110.
AB14449	1/27/10	1046	Farm field soil location ID 215, DUIS.
AB14450	1/26/10	1540	Farm field soil location ID 216, SUIS 32.

Table 1: Sample Collection Data			
Sample Number	**Date Collected**	**Time Collected**	**Location Collected & Description**
AB14451	1/26/10	1603	Farm field soil location ID 216, SUIS 16.
*AB14452	1/26/10	1540	Farm field soil location ID 216, DUIS.
AB14453	1/26/10	1321	Farm field soil location ID 217, SUIS 22.
AB14454	1/26/10	1147	Farm field soil location ID 217, SUIS 50.
AB14455	1/26/10	1245	Farm field soil location ID 217, DUIS.
AB14456	1/26/10	1055	Farm field soil location ID 218, SUIS 102.
AB14457	1/26/10	0940	Farm field soil location ID 218, SUIS 87.
AB14458	1/26/10	0940	Farm field soil location ID 218, DUIS.
AB14459	1/26/10	1255	Farm field soil location ID 219, SUIS 42.
AB14460	1/26/10	0900	Farm field soil location ID 219, SUIS 15.
*AB14461	1/26/10	0900	Farm field soil location ID 219, DUIS.
AB14462	1/25/10	1704	Farm field soil location ID 221, SUIS 164.
AB14463	1/25/10	1730	Farm field soil location ID 221, SUIS 109.
*AB14464	1/25/10	1704	Farm field soil location ID 221, DUIS.
AB14465	1/25/10	1710	Farm field soil location ID 222, SUIS 10.
AB14466	1/25/10	1730	Farm field soil location ID 222, SUIS 27.
*AB14467	1/25/10	1658	Farm field soil location ID 222, DUIS.
AB14468	1/27/10	0940	Farm field soil location ID 224, SUIS 19.
AB14469	1/27/10	0900	Farm field soil location ID 224, SUIS 23.
AB14470	1/27/10	0920	Farm field soil location ID 224, SUIS 74.
*AB14471	1/27/10	0900	Farm field soil location ID 224, DUIS.
AB14472	1/26/10	1210	Farm field soil location ID 223, SUIS 4.
AB14473	1/26/10	1240	Farm field soil location ID 223, SUIS 28.
AB14474	1/26/10	1210	Farm field soil location ID 223, DUIS.
AB14475	1/26/10	1650	Farm field soil location ID 225, SUIS 60.
AB14476	1/26/10	1120	Farm field soil location ID 225, SUIS 8.
AB14477	1/26/10	1020	Farm field soil location ID 225, DUIS.
AB14478	1/26/10	1322	Farm field soil location ID 223, SUIS 44.
AB14479	1/26/10	1020	Farm field soil location ID 225, SUIS 32.
AB14350	1/26/10	1057	Farm field soil location ID 218, SU 102.02.
AB14351	1/26/10	0946	Farm field soil location ID 218, SU 87.04.
AB14352	1/26/10	1200	Farm field soil location ID 202, SU 59.09.
AB14353	1/26/10	1150	Farm field soil location ID 202, SU 59.07.
AB14354	1/26/10	1310	Farm field soil location ID 202, SU 79.03.
AB14355	1/26/10	1330	Farm field soil location ID 218, SU 146.08.

* Denotes samples that were held at the request of HWP for possible later analysis. These samples will not appear in the analytical results section of this report.

Submitted by:

Kenneth Hannon
Environmental Specialist
Field Services Unit
Environmental Services Program

Approved by:

Digitally signed by Eric Sappington
DN: cn=Eric Sappington, c=US, o=Environmental Services Program, ou=Department of Natural Resources, email=eric.sappington@dnr.mo.gov
Date: 2010.03.25 10:25:19 -05'00'

Eric Sappington
Unit Chief
Field Services Unit
Environmental Services Program

ES:khd

c: Michael Stroh, Environmental Specialist, HWP

APPENDIX A

Chain of Custody/Analytical Results

Tannery Sludge Farm Fields Site
Andrew, Buchanan, Clinton and DeKalb Counties, MO

B-5

MISSOURI DEPARTMENT OF NATURAL RESOURCES

FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

LABORATORY ORDER ID: 10021001

Collector's Name: (Please Print) Ken Hannon

Affiliation: (circle one) (ESP) KCRO NERO SERO SLRO SWRO WPP DGLS HWP Other:

Description of Shipment

Shipped-Carrier:

_ Tape sealed and initialed

x Hand Delivered

No. Of Containers: 8

Sample Number	Sample Collected	Analyses	Sample Type	For Lab Use Only: Matrix / Container / Preserved
1000354 (Sample A)	Date: 1-26-10	Hexavalent Chromium , TOC, pH, Percent Moisture, ORP, Total Metals (Fe, Mn, Mo, V, Al)	_ Grab x Composite _ Modified	Water ✓Soil Organic Sludge Other: / 1L amber Cubitainer 2 oz glass 8 oz glass ✓ VOA vial Encore ✓Other: Ziplock / 120 mL Nalgene 1L 500mL 250mL
For Lab Use Only AB14404	Time: 1415	D.O | Flow | pH | Spec. Cond. | Temp. | Other:	_ Other:	H2SO4 HNO3 NAOH HCL 2 4°C(None) Disinfected Other
1000355 (Sample B)	Date: 1-26-10	Hexavalent Chromium , TOC, pH, Percent Moisture, ORP, Total Metals (Fe, Mn, Mo, V, Al)	_ Grab x Composite _ Modified	Water ✓Soil Organic Sludge Other: / 1L amber Cubitainer 2 oz glass 8 oz glass VOA vial Encore Other: Ziplock / 120 mL Nalgene 1L 500mL 250mL
For Lab Use Only AB14405	Time: 1530	D.O | Flow | pH | Spec. Cond. | Temp. | Other:	_ Other:	H2SO4 HNO3 NAOH HCL 2 4°C(None) Disinfected Other
1000356 (Sample C)	Date: 1-27-10	Hexavalent Chromium , TOC, pH, Percent Moisture, ORP, Total Metals (Fe, Mn, Mo, V, Al)	_ Grab x Composite _ Modified	Water ✓Soil Organic Sludge Other: / 1L amber Cubitainer 2 oz glass 8 oz glass VOA vial Encore Other: Ziplock / 120 mL Nalgene 1L 500mL 250mL
For Lab Use Only AB14406	Time: 1256	D.O | Flow | pH | Spec. Cond. | Temp. | Other:	_ Other:	H2SO4 HNO3 NAOH HCL 2 4°C(None) Disinfected Other
1000357 (Sample D)	Date: 1-26-10	Hexavalent Chromium , TOC, pH, Percent Moisture, ORP, Total Metals (Fe, Mn, Mo, V, Al) RUN LAB DUP (cr6+ only)	_ Grab x Composite _ Modified	Water ✓Soil Organic Sludge Other: / 1L amber Cubitainer 2 oz glass 8 oz glass VOA vial Encore Other: Ziplock / 120 mL Nalgene 1L 500mL 250mL
For Lab Use Only AB14407	Time: 1100	D.O | Flow | pH | Spec. Cond. | Temp. | Other:	_ Other:	H2SO4 HNO3 NAOH HCL 2 4°C(None) Disinfected Other

Relinquished By:	Received By:	Date:	Time:
Kenneth Hannon	Mandi Stampfer	2-11-10	1058
Relinquished By:	Received By:	Date:	Time:
Relinquished By:	Received By:	Date:	Time:

Sample I.D. Letter	Site Description				
Sample A	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 59 SUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 202	
Sample B	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 18 SUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 203 #	
Sample C	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 42 SUIS			204 ~~SUIS~~ MS	
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:**	
Sample D	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): MS 96 SUIS			205 ~~SUIS~~ MS	
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:**	

REMARKS:
HWP: Michael Stroh

B-5

MISSOURI DEPARTMENT OF NATURAL RESOURCES
FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

LABORATORY ORDER ID: _____

Collector's Name: *(Please Print)* Ken Hannon	**Description of Shipment**
Affiliation: (ESP) KCRO NERO SERO SLRO SWRO WPP *(circle one)* DGLS HWP Other:	Shipped-Carrier: _____
	Tape sealed and initialed
	x Hand Delivered — No. Of Containers: 8

Sample Number	Sample Collected	Analyses	Sample Type	For Lab Use Only: Matrix	Container	Preserved
1000358 **(Sample A)**	Date: 1-25-10	Hexavalent Chromium , TOC. pH, Percent Moisture, ORP, Total Metals (Fe, Mn, Mo, V, Al)	Grab; x Composite; Modified; Other:	Water; ✓Soil; Organic; Sludge; Other:	1L amber; 120 mL; Cubitainer; 2 oz glass; Nalgene; 8 oz glass; 1L; VOA vial; 500mL; Encore; 250mL; 1 Other: Ziplock	H_2SO_4; HNO_3; NAOH; HCL; 2 4° C(None); Disinfected; Other
For Lab Use Only AB14408	Time: 1400	D.O; Flow; pH; Spec. Cond.; Temp.; Other:				
1000359 **(Sample B)**	Date: 1-26-10	Hexavalent Chromium , TOC, pH. Percent Moisture, ORP, Total Metals (Fe, Mn, Mo, V, Al)	Grab; x Composite; Modified; Other:	Water; ✓Soil; Organic; Sludge; Other:	1L amber; 120 mL; Cubitainer; 2 oz glass; Nalgene; 8 oz glass; 1L; VOA vial; 500mL; Encore; 250mL; 1 Other: Ziplock	H_2SO_4; HNO_3; NAOH; HCL; 2 4° C(None); Disinfected; Other
For Lab Use Only AB14409	Time: 1200	D.O; Flow; pH; Spec Cond.; Temp.; Other:				
1000360 **(Sample C)**	Date: 1-27-10	Hexavalent Chromium , TOC, pH, Percent Moisture, ORP, Total Metals (Fe, Mn, Mo, V, Al) RUN LAB DUP (Cr^{+6} only)	Grab; x Composite; Modified; Other:	Water; ✓Soil; Organic; Sludge; Other:	1L amber; 120 mL; Cubitainer; 2 oz glass; Nalgene; 8 oz glass; 1L; VOA vial; 500mL; Encore; 250mL; 1 Other: Ziplock	H_2SO_4; HNO_3; NAOH; HCL; 2 4° C(None); Disinfected; Other
For Lab Use Only AB14410	Time: 0902	D.O; Flow; pH; Spec. Cond.; Temp.; Other:				
1000361 **(Sample D)**	Date: 1-26-10	Hexavalent Chromium , TOC, pH, Percent Moisture, ORP, Total Metals (Fe, Mn, Mo, V, Al) RUN LAB DUP (Cr^{6+} only)	Grab; x Composite; Modified; Other:	Water; ✓Soil; Organic; Sludge; Other:	1L amber; 120 mL; Cubitainer; 2 oz glass; Nalgene; 8 oz glass; 1L; VOA vial; 500mL; Encore; 250mL; 1 Other: Ziplock	H_2SO_4; HNO_3; NAOH; HCL; 2 4° C(None); Disinfected; Other
For Lab Use Only AB14411	Time: 1600	D.O; Flow; pH; Spec. Cond.; Temp.; Other:				

Relinquished By:	Received By:	Date:	Time:
Kenneth Hannon	Marla Thompson	2-11-10	1058
Relinquished By:	Received By:	Date:	Time:
Relinquished By:	Received By:	Date:	Time:

Sample I.D. Letter	Site Description				
Sample A	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 109 SUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing	**Accuracy** (check one) EPE (meters) / PDOP		**Sample Reference ID:** 209	
Sample B	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 30 SUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing	**Accuracy** (check one) EPE (meters) / PDOP		**Sample Reference ID:** 210	
Sample C	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 53 SUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing	**Accuracy** (check one) EPE (meters) / PDOP		**Sample Reference ID:** 212	
Sample D	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 44 SUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing	**Accuracy** (check one) EPE (meters) / PDOP		**Sample Reference ID:** 213	

REMARKS:
HWP: Michael Stroh

P, -5

MISSOURI DEPARTMENT OF NATURAL RESOURCES

FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

LABORATORY ORDER ID: _____

Collector's Name: *(Please Print)* Ken Hannon

Affiliation: *(circle one)* (ESP) KCRO NERO SERO SLRO SWRO WPP DGLS HWP Other:

Description of Shipment

Shipped-Carrier:

Tape sealed and initialed

x Hand Delivered

No. Of Containers: 8

Sample Number	Sample Collected	Analyses	Sample Type	For Lab Use Only: Matrix	Container	Preserved
1000362 (Sample A)	Date: 1-27-10	Hexavalent Chromium , TOC, pH, Percent Moisture, ORP, Total Metals (Fe, Mn, Mo, V, Al) RUN LAB Dup (Cr^{6+} only)	Grab; x Composite; Modified; Other:	Water; ✓ Soil; Organic; Sludge; Other:	1L amber; 120 mL; Cubitainer; 2 oz glass; Nalgene; 8 oz glass; 1L; VOA vial; 500mL; Encore; 250mL; Other: Ziplock	H_2SO_4; HNO_3; NAOH; HCL; 2 4° C(None); Disinfected; Other
For Lab Use Only AB14412	Time: 1118	D.O; Flow; pH; Spec. Cond.; Temp.; Other:				
1000363 (Sample B)	Date: 1-27-10	Hexavalent Chromium , TOC, pH, Percent Moisture, ORP, Total Metals (Fe, Mn, Mo, V, Al) RUN LAB Dup (Cr^{6+} only)	Grab; x Composite; Modified; Other:	Water; ✓ Soil; Organic; Sludge; Other:	1L amber; 120 mL; Cubitainer; 2 oz glass; Nalgene; 8 oz glass; 1L; VOA vial; 500mL; Encore; 250mL; Other: Ziplock	H_2SO_4; HNO_3; NAOH; HCL; 2 4° C(None); Disinfected; Other
For Lab Use Only AB14413	Time: 1046	D.O; Flow; pH; Spec. Cond.; Temp.; Other:				
1000364 (Sample C)	Date: 1-26-10	Hexavalent Chromium , TOC, pH, Percent Moisture, ORP, Total Metals (Fe, Mn, Mo, V, Al) ~~RUN LAB Dup~~ KH	Grab; x Composite; Modified; Other:	Water; ✓ Soil; Organic; Sludge; Other:	1L amber; 120 mL; Cubitainer; 2 oz glass; Nalgene; 8 oz glass; 1L; VOA vial; 500mL; Encore; 250mL; Other: Ziplock	H_2SO_4; HNO_3; NAOH; HCL; 2 4° C(None); Disinfected; Other
For Lab Use Only AB14414	Time: 1540	D.O; Flow; pH; Spec. Cond.; Temp.; Other:				
1000365 (Sample D)	Date: 1-26-10	Hexavalent Chromium , TOC, pH, Percent Moisture, ORP, Total Metals (Fe, Mn, Mo, V, Al) RUN LAB Dup (Cr^{6+} only)	Grab; x Composite; Modified; Other:	Water; ✓ Soil; Organic; Sludge; Other:	1L amber; 120 mL; Cubitainer; 2 oz glass; Nalgene; 8 oz glass; 1L; VOA vial; 500mL; Encore; 250mL; Other: Ziplock	H_2SO_4; HNO_3; NAOH; HCL; 2 4° C(None); Disinfected; Other
For Lab Use Only AB14415	Time: 1245	D.O; Flow; pH; Spec. Cond.; Temp.; Other:				

Relinquished By:	Received By:	Date:	Time:
Kenneth Hannon	Linda S Thompson	2-11-10	1058
Relinquished By:	Received By:	Date:	Time:
Relinquished By:	Received By:	Date:	Time:

Sample I.D. Letter	Site Description					
Sample A	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 25 SuIS					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): **X Easting** / **Y Northing**		**Accuracy** (check one) **EPE (meters)** / **PDOP**	**Sample Reference ID:** 214		
Sample B	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 55 SuIS					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): **X Easting** / **Y Northing**		**Accuracy** (check one) **EPE (meters)** / **PDOP**	**Sample Reference ID:** 215		
Sample C	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 50 SuIS					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): **X Easting** / **Y Northing**		**Accuracy** (check one) **EPE (meters)** / **PDOP**	**Sample Reference ID:** 216		
Sample D	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 103 SuIS					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): **X Easting** / **Y Northing**		**Accuracy** (check one) **EPE (meters)** / **PDOP**	**Sample Reference ID:** 217		

REMARKS:
HWP: Michael Stroh

MISSOURI DEPARTMENT OF NATURAL RESOURCES

FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

B-5

LABORATORY ORDER ID: _____

Collector's Name: (Please Print) Ken Hannon

Affiliation: (circle one) ESP KCRO NERO SERO SLRO SWRO WPP DGLS HWP Other:

Description of Shipment

- Shipped-Carrier:
- Tape sealed and initialed
- x Hand Delivered

No. Of Containers: 8

Sample Number	Sample Collected	Analyses	Sample Type	For Lab Use Only: Matrix / Container / Preserved
1000366 (Sample A)	Date: 1-26-10	Hexavalent Chromium, TOC, pH, Percent Moisture, ORP, Total Metals (Fe, Mn, Mo, V, Al)	Grab; x Composite; Modified	Water; ✓ Soil; Organic; Sludge; Other: / 1L amber; Cubitainer; 2 oz glass; 8 oz glass; VOA vial; Encore; Other: 2 ziplock / 120 mL; Nalgene; 1L; 500mL; 250mL / H_2SO_4; HNO_3; NAOH; HCL; 4° C (None); Disinfected; Other
For Lab Use Only AB14416	Time: 0940	D.O; Flow; pH; Spec. Cond.; Temp.; Other:	Other:	
1000367 (Sample B)	Date: 1-26-10	Hexavalent Chromium, TOC, pH, Percent Moisture, ORP, Total Metals (Fe, Mn, Mo, V, Al)	Grab; x Composite; Modified	Water; ✓ Soil; Organic; Sludge; Other: / 1L amber; Cubitainer; 2 oz glass; 8 oz glass; VOA vial; Encore; Other: 2 ziplock / 120 mL; Nalgene; 1L; 500mL; 250mL / H_2SO_4; HNO_3; NAOH; HCL; 4° C (None); Disinfected; Other
For Lab Use Only AB14417	Time: 0900	D.O; Flow; pH; Spec. Cond.; Temp.; Other:	Other:	
1000368 (Sample C)	Date: 1-25-10	Hexavalent Chromium, TOC, pH, Percent Moisture, ORP, Total Metals (Fe, Mn, Mo, V, Al)	Grab; x Composite; Modified	Water; ✓ Soil; Organic; Sludge; Other: / 1L amber; Cubitainer; 2 oz glass; 8 oz glass; VOA vial; Encore; Other: 2 ziplock / 120 mL; Nalgene; 1L; 500mL; 250mL / H_2SO_4; HNO_3; NAOH; HCL; 4° C (None); Disinfected; Other
For Lab Use Only AB14418	Time: 1704	D.O; Flow; pH; Spec. Cond.; Temp.; Other:	Other:	
1000369 (Sample D)	Date: 1-25-10 ~~1658~~ KH	Hexavalent Chromium, TOC, pH, Percent Moisture, ORP, Total Metals (Fe, Mn, Mo, V, Al)	Grab; x Composite; Modified	Water; ✓ Soil; Organic; Sludge; Other: / 1L amber; Cubitainer; 2 oz glass; 8 oz glass; VOA vial; Encore; Other: 2 ziplock / 120 mL; Nalgene; 1L; 500mL; 250mL / H_2SO_4; HNO_3; NAOH; HCL; 4° C (None); Disinfected; Other
For Lab Use Only AB14419	Time: 1658	D.O; Flow; pH; Spec. Cond.; Temp.; Other:	Other:	

Relinquished By:	Received By:	Date:	Time:
Kenneth Hannon	Linda S Thompson	2-11-10	1058
Relinquished By:	Received By:	Date:	Time:
Relinquished By:	Received By:	Date:	Time:

Sample I.D. Letter	Site Description				
Sample A	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 146 SUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing	**Accuracy**	(check one) EPE (meters) / PDOP	**Sample Reference ID:** 218	
Sample B	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 55 SUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing	**Accuracy**	(check one) EPE (meters) / PDOP	**Sample Reference ID:** 219	
Sample C	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 150 SUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing	**Accuracy**	(check one) EPE (meters) / PDOP	**Sample Reference ID:** 221	
Sample D	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 41 SUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing	**Accuracy**	(check one) EPE (meters) / PDOP	**Sample Reference ID:** 222	

REMARKS:
HWP: Michael Stroh

MISSOURI DEPARTMENT OF NATURAL RESOURCES

FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

B-5

LABORATORY ORDER ID: _____

Collector's Name: (Please Print) Ken Hannon

Affiliation: (circle one) ESP KCRO NERO SERO SLRO SWRO WPP DGLS HWP Other:

Description of Shipment

- ___ Shipped-Carrier:
- ___ Tape sealed and initialed
- x Hand Delivered

No. Of Containers: 4

Sample Number	Sample Collected	Analyses						Sample Type	For Lab Use Only: Matrix / Container / Preserved
1000370 (Sample A)	Date: 1.26.10	Hexavalent Chromium; Percent Moisture						___ Grab; x Composite; ___ Modified; ___ Other:	___ Water; ✓ Soil; ___ Organic; ___ Sludge; ___ Other: / 1 8 oz glass; ___ VOA vial; ___ Encore; ~~Other:~~ 2 / 1 H_2SO_4; ___ HNO_3; ___ NAOH; ___ HCL; 1 4° C(None); ___ Disinfected; ___ Other
For Lab Use Only AB14420	Time: 14:44	D.O	Flow	pH	Spec. Cond.	Temp.	Other:		
1000371 (Sample B)	Date: 1.26.10	Hexavalent Chromium; Percent Moisture						___ Grab; x Composite; ___ Modified; ___ Other:	___ Water; ✓ Soil; ___ Organic; ___ Sludge; ___ Other: / 1 8 oz glass; ___ VOA vial; ___ Encore; ___ Other: / 1 H_2SO_4; ___ HNO_3; ___ NAOH; ___ HCL; 1 4° C(None); ___ Disinfected; ___ Other
For Lab Use Only AB14421	Time: 14:15	D.O	Flow	pH	Spec. Cond.	Temp.	Other:		
1000372 (Sample C)	Date: 1.26.10	Hexavalent Chromium; Percent Moisture; HOLD FOR LATER ANALYSIS						___ Grab; x Composite; ___ Modified; ___ Other:	___ Water; ✓ Soil; ___ Organic; ___ Sludge; ___ Other: / 1 8 oz glass; ___ VOA vial; ___ Encore; ___ Other: / 1 H_2SO_4; ___ HNO_3; ___ NAOH; ___ HCL; 1 4° C(None); ___ Disinfected; ___ Other
For Lab Use Only AB14422	Time: 14:15	D.O	Flow	pH	Spec. Cond.	Temp.	Other:		
1000373 (Sample D)	Date: 1.27.10	Hexavalent Chromium; Percent Moisture						___ Grab; x Composite; ___ Modified; ___ Other:	___ Water; ✓ Soil; ___ Organic; ___ Sludge; ___ Other: / 1 8 oz glass; ___ VOA vial; ___ Encore; ___ Other: / 1 H_2SO_4; ___ HNO_3; ___ NAOH; ___ HCL; 1 4° C(None); ___ Disinfected; ___ Other
For Lab Use Only AB14423	Time: 15:30	D.O	Flow	pH	Spec. Cond.	Temp.	Other:		

Relinquished By: Kenneth Hannon	Received By: Melissa Thompson	Date: 2-11-10	Time: 1104
Relinquished By:	Received By:	Date:	Time:
Relinquished By:	Received By:	Date:	Time:

Sample I.D. Letter	Site Description				
Sample A	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 29 SUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 202	
Sample B	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 79 SUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 202	
Sample C	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): DUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 202	
Sample D	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 7 SUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 203	

REMARKS:
HWP: Michael Stroh

MISSOURI DEPARTMENT OF NATURAL RESOURCES

FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

B-5

LABORATORY ORDER ID: _____

Collector's Name: (Please Print) Ken Hannon

Affiliation: (circle one) (ESP) KCRO NERO SERO SLRO SWRO WPP DGLS HWP Other:

Description of Shipment

- Shipped-Carrier:
- Tape sealed and initialed
- x Hand Delivered

No. Of Containers: 4

Sample Number	Sample Collected	Analyses						Sample Type	For Lab Use Only: Matrix	Container		Preserved
1000374 (Sample A)	Date: 1-27-10	Hexavalent Chromium; Percent Moisture						Grab; x Composite; Modified; Other:	Water; ✓ Soil; Organic; Sludge; Other:	1L amber; Cubitainer; 2 oz glass; 8 oz glass; VOA vial; Encore; Other:	120 mL; Nalgene 1L; 500mL; 250mL	H_2SO_4; HNO_3; NAOH; HCL; 4° C(None); Disinfected; Other
For Lab Use Only AB14424	Time: 1530	D.O	Flow	pH	Spec. Cond.	Temp.	Other:					
1000375 (Sample B)	Date: 1-27-10	Hexavalent Chromium; Percent Moisture; HOLD FOR LATER ANALYSIS						Grab; x Composite; Modified; Other:	Water; ✓ Soil; Organic; Sludge; Other:	1L amber; Cubitainer; 2 oz glass; 8 oz glass; VOA vial; Encore; Other:	120 mL; Nalgene 1L; 500mL; 250mL	H_2SO_4; HNO_3; NAOH; HCL; 4° C(None); Disinfected; Other
For Lab Use Only AB14425	Time: 1530	D.O	Flow	pH	Spec. Cond.	Temp.	Other:					
1000376 (Sample C)	Date: 1-27-10	Hexavalent Chromium; Percent Moisture						Grab; x Composite; Modified; Other:	Water; ✓ Soil; Organic; Sludge; Other:	1L amber; Cubitainer; 2 oz glass; 8 oz glass; VOA vial; Encore; Other:	120 mL; Nalgene 1L; 500mL; 250mL	H_2SO_4; HNO_3; NAOH; HCL; 4° C(None); Disinfected; Other
For Lab Use Only AB14426	Time: 1256	D.O	Flow	pH	Spec. Cond.	Temp.	Other:					
1000377 (Sample D)	Date: 1-27-10	Hexavalent Chromium; Percent Moisture						Grab; x Composite; Modified; Other:	Water; ✓ Soil; Organic; Sludge; Other:	1L amber; Cubitainer; 2 oz glass; 8 oz glass; VOA vial; Encore; Other:	120 mL; Nalgene 1L; 500mL; 250mL	H_2SO_4; HNO_3; NAOH; HCL; 4° C(None); Disinfected; Other
For Lab Use Only AB14427	Time: 1350	D.O	Flow	pH	Spec. Cond.	Temp.	Other:					

Relinquished By:	Received By:	Date:	Time:
Kenneth Hannon	[signature]	2-11-10	1104
Relinquished By:	Received By:	Date:	Time:
Relinquished By:	Received By:	Date:	Time:

Sample I.D. Letter	Site Description				
Sample A	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 27 SUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 203	
Sample B	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): DUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 203	
Sample C	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 99 SUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** KH 209 204	
Sample D	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 23 SUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 204	

REMARKS:
HWP: Michael Stroh

MISSOURI DEPARTMENT OF NATURAL RESOURCES

FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

B-5

LABORATORY ORDER ID: _____

Collector's Name: (Please Print) Ken Hannon

Affiliation: (circle one) (ESP) KCRO NERO SERO SLRO SWRO WPP DGLS HWP Other:

Description of Shipment

Shipped-Carrier:

Tape sealed and initialed

x Hand Delivered

No. Of Containers: 4

Sample Number	Sample Collected	Analyses						Sample Type	For Lab Use Only: Matrix	Container		Preserved
1000378 (Sample A)	Date: 1-27-10	Hexavalent Chromium; Percent Moisture — HOLD FOR LATER ANALYSIS						Grab; x Composite; Modified; Other:	Water; ✓Soil; Organic; Sludge; Other:	1L amber; Cubitainer; 2 oz glass; 8 oz glass; VOA vial; Encore; Other:	120 mL; Nalgene 1L; 500mL; 250mL	H_2SO_4; HNO_3; NAOH; HCL; 4°C(None); Disinfected; Other
For Lab Use Only AB14428	Time: 1256	D.O	Flow	pH	Spec. Cond.	Temp.	Other:					
1000379 (Sample B)	Date: 1-26-10	Hexavalent Chromium; Percent Moisture						Grab; x Composite; Modified; Other:	Water; ✓Soil; Organic; Sludge; Other:	1L amber; Cubitainer; 2 oz glass; 8 oz glass; VOA vial; Encore; Other:	120 mL; Nalgene 1L; 500mL; 250mL	H_2SO_4; HNO_3; NAOH; HCL; 4°C(None); Disinfected; Other
For Lab Use Only AB14429	Time: 1120	D.O	Flow	pH	Spec. Cond.	Temp.	Other:					
(KH) 1000380 (Sample C)	Date: 1-26-10	Hexavalent Chromium; Percent Moisture						Grab; x Composite; Modified; Other:	Water; ✓Soil; Organic; Sludge; Other:	1L amber; Cubitainer; 2 oz glass; 8 oz glass; VOA vial; Encore; Other:	120 mL; Nalgene 1L; 500mL; 250mL	H_2SO_4; HNO_3; NAOH; HCL; 4°C(None); Disinfected; Other
For Lab Use Only AB14430	Time: 1100	D.O	Flow	pH	Spec. Cond.	Temp.	Other:					
(KH) 1000382 (Sample D)	Date: 1-26-10	Hexavalent Chromium; Percent Moisture						Grab; x Composite; Modified; Other:	Water; ✓Soil; Organic; Sludge; Other:	1L amber; Cubitainer; 2 oz glass; 8 oz glass; VOA vial; Encore; Other:	120 mL; Nalgene 1L; 500mL; 250mL	H_2SO_4; HNO_3; NAOH; HCL; 4°C(None); Disinfected; Other
For Lab Use Only AB14431	Time: 1100	D.O	Flow	pH	Spec. Cond.	Temp.	Other:					

Relinquished By:	Received By:	Date:	Time:
Kenneth Hannon	Paula S Thompson	2-11-10	1104
Relinquished By:	Received By:	Date:	Time:
Relinquished By:	Received By:	Date:	Time:

Sample I.D. Letter	Site Description				
Sample A	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): DUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing	**Accuracy** (check one) EPE (meters) / PDOP		**Sample Reference ID:** 204	
Sample B	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 71 SUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing	**Accuracy** (check one) EPE (meters) / PDOP		**Sample Reference ID:** 205	
Sample C	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 34 SUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing	**Accuracy** (check one) EPE (meters) / PDOP		**Sample Reference ID:** 205	
Sample D	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): DUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing	**Accuracy** (check one) EPE (meters) / PDOP		**Sample Reference ID:** 205	

REMARKS:
HWP: Michael Stroh

MISSOURI DEPARTMENT OF NATURAL RESOURCES

FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

B-5

LABORATORY ORDER ID: _____

Collector's Name: (Please Print) Ken Hannon

Affiliation: (circle one) ESP KCRO NERO SERO SLRO SWRO WPP DGLS HWP Other:

Description of Shipment

- Shipped-Carrier:
- Tape sealed and initialed
- x Hand Delivered

No. Of Containers: 4

Sample Number	Sample Collected	Analyses	Sample Type	For Lab Use Only: Matrix / Container / Preserved
1000382 (Sample A)	Date: 1-25-10	Hexavalent Chromium; Percent Moisture	Grab; x Composite; Modified; Other:	Water; ✓ Soil; Organic; Sludge; Other: — 1L amber; Cubitainer; 2 oz glass; 8 oz glass; VOA vial; Encore; Other: — 120 mL; Nalgene; 1L; 500mL; 250mL; Other: — H_2SO_4; HNO_3; NAOH; HCL; 4°C(None); Disinfected; Other
For Lab Use Only AB14432	Time: 1400	D.O; Flow; pH; Spec. Cond.; Temp.; Other:		
1000383 (Sample B)	Date: 1-25-10	Hexavalent Chromium; Percent Moisture	Grab; x Composite; Modified; Other:	Water; ✓ Soil; Organic; Sludge; Other: — 1L amber; Cubitainer; 2 oz glass; 8 oz glass; VOA vial; Encore; Other: — 120 mL; Nalgene; 1L; 500mL; 250mL; Other: — H_2SO_4; HNO_3; NAOH; HCL; 4°C(None); Disinfected; Other
For Lab Use Only AB14433	Time: 1405	D.O; Flow; pH; Spec. Cond.; Temp.; Other:		
1000384 (Sample C)	Date: 1-25-10	Hexavalent Chromium; Percent Moisture; HOLD FOR LATER ANALYSIS	Grab; x Composite; Modified; Other:	Water; ✓ Soil; Organic; Sludge; Other: — 1L amber; Cubitainer; 2 oz glass; 8 oz glass; VOA vial; Encore; Other: — 120 mL; Nalgene; 1L; 500mL; 250mL; Other: — H_2SO_4; HNO_3; NAOH; HCL; 4°C(None); Disinfected; Other
For Lab Use Only AB14434	Time: 1400	D.O; Flow; pH; Spec. Cond.; Temp.; Other:		
1000385 (Sample D)	Date: 1-26-10	Hexavalent Chromium; Percent Moisture	Grab; x Composite; Modified; Other:	Water; ✓ Soil; Organic; Sludge; Other: — 1L amber; Cubitainer; 2 oz glass; 8 oz glass; VOA vial; Encore; Other: — 120 mL; Nalgene; 1L; 500mL; 250mL; Other: — H_2SO_4; HNO_3; NAOH; HCL; 4°C(None); Disinfected; Other
For Lab Use Only AB14435	Time: 1530	D.O; Flow; pH; Spec. Cond.; Temp.; Other:		

Relinquished By:	Received By:	Date:	Time:
Kenneth Hannon	Linda Thompson	2-11-10	1104

Sample I.D. Letter	Site Description				
Sample A	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 138 SUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 209	
Sample B	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 144 SUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 209	
Sample C	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): DUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 209	
Sample D	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 15 SUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 210	

REMARKS:
HWP: Michael Stroh

MISSOURI DEPARTMENT OF NATURAL RESOURCES

FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

B-5

LABORATORY ORDER ID: _____

Collector's Name: (Please Print) Ken Hannon

Affiliation: (circle one) ESP KCRO NERO SERO SLRO SWRO WPP DGLS HWP Other:

Description of Shipment

- Shipped-Carrier:
- Tape sealed and initialed
- x Hand Delivered

No. Of Containers: 4

Sample Number	Sample Collected	Analyses	Sample Type	For Lab Use Only: Matrix / Container / Preserved
1000386 (Sample A)	Date: 1-26-10	Hexavalent Chromium; Percent Moisture	Grab; x Composite; Modified; Other:	Water; ✓ Soil; Organic; Sludge; Other: — 1L amber; Cubitainer; 2 oz glass; 8 oz glass; VOA vial; Encore; Other: — 120 mL; Nalgene; 1L; 500mL; 250mL; Other: — H_2SO_4; HNO_3; NAOH; HCL; 4° C(None); Disinfected; Other
For Lab Use Only A614436	Time: 1600	D.O; Flow; pH; Spec. Cond.; Temp.; Other:		
1000387 (Sample B)	Date: 1-26-10	Hexavalent Chromium; Percent Moisture; HOLD FOR LATER ANALYSIS	Grab; x Composite; Modified; Other:	Water; ✓ Soil; Organic; Sludge; Other: — 1L amber; Cubitainer; 2 oz glass; 8 oz glass; VOA vial; Encore; Other: — 120 mL; Nalgene; 1L; 500mL; 250mL; Other: — H_2SO_4; HNO_3; NAOH; HCL; 4° C(None); Disinfected; Other
For Lab Use Only A614437	Time: 1530	D.O; Flow; pH; Spec. Cond.; Temp.; Other:		
1000388 (Sample C)	Date: 1-27-10	Hexavalent Chromium; Percent Moisture	Grab; x Composite; Modified; Other:	Water; ✓ Soil; Organic; Sludge; Other: — 1L amber; Cubitainer; 2 oz glass; 8 oz glass; VOA vial; Encore; Other: — 120 mL; Nalgene; 1L; 500mL; 250mL; Other: — H_2SO_4; HNO_3; NAOH; HCL; 4° C(None); Disinfected; Other
For Lab Use Only A614438	Time: 0948	D.O; Flow; pH; Spec. Cond.; Temp.; Other:		
1000389 (Sample D)	Date: 1-27-10	Hexavalent Chromium; Percent Moisture	Grab; x Composite; Modified; Other:	Water; ✓ Soil; Organic; Sludge; Other: — 1L amber; Cubitainer; 2 oz glass; 8 oz glass; VOA vial; Encore; Other: — 120 mL; Nalgene; 1L; 500mL; 250mL; Other: — H_2SO_4; HNO_3; NAOH; HCL; 4° C(None); Disinfected; Other
For Lab Use Only A614439	Time: 1030	D.O; Flow; pH; Spec. Cond.; Temp.; Other:		

Relinquished By:	Received By:	Date:	Time:
Kenneth Hannon	Paula S Thompson	2-11-10	1104
Relinquished By:	Received By:	Date:	Time:
Relinquished By:	Received By:	Date:	Time:

Sample I.D. Letter	Site Description				
Sample A	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 62 SUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing	**Accuracy** (check one) EPE (meters) / PDOP		**Sample Reference ID:** 210	
Sample B	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): DUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing	**Accuracy** (check one) EPE (meters) / PDOP		**Sample Reference ID:** 210	
Sample C	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 16 SUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing	**Accuracy** (check one) EPE (meters) / PDOP		**Sample Reference ID:** 212	
Sample D	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 86 SUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing	**Accuracy** (check one) EPE (meters) / PDOP		**Sample Reference ID:** 212	

REMARKS:
HWP: Michael Stroh

B-5

MISSOURI DEPARTMENT OF NATURAL RESOURCES

FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

LABORATORY ORDER ID: _____

Collector's Name: (Please Print) Ken Hannon

Affiliation: (circle one) ESP KCRO NERO SERO SLRO SWRO WPP DGLS HWP Other:

Description of Shipment

- Shipped-Carrier:
- Tape sealed and initialed
- x Hand Delivered

No. Of Containers: 4

Sample Number	Sample Collected	Analyses						Sample Type	For Lab Use Only: Matrix	Container		Preserved
1000390 (Sample A)	Date: 1-27-10	Hexavalent Chromium; Percent Moisture ~~HOLD FOR LATER ANALYSIS~~ KH						Grab; x Composite; Modified; Other:	Water; ✓ Soil; Organic; Sludge; Other:	1L amber; Cubitainer; 2 oz glass; 8 oz glass; VOA vial; Encore; Other:	120 mL; Nalgene; 1L; 500mL; 250mL	H_2SO_4; HNO_3; NAOH; HCL; 4°C(None); Disinfected; Other
For Lab Use Only AG14440	Time: 0902	D.O	Flow	pH	Spec. Cond.	Temp.	Other:					
1000391 (Sample B)	Date: 1-26-10	Hexavalent Chromium; Percent Moisture						Grab; x Composite; Modified; Other:	Water; ✓ Soil; Organic; Sludge; Other:	1L amber; Cubitainer; 2 oz glass; 8 oz glass; VOA vial; Encore; Other:	120 mL; Nalgene; 1L; 500mL; 250mL	H_2SO_4; HNO_3; NAOH; HCL; 4°C(None); Disinfected; Other
For Lab Use Only AG14441	Time: 1600	D.O	Flow	pH	Spec. Cond.	Temp.	Other:					
1000392 (Sample C)	Date: 1-26-10	Hexavalent Chromium; Percent Moisture						Grab; x Composite; Modified; Other:	Water; ✓ Soil; Organic; Sludge; Other:	1L amber; Cubitainer; 2 oz glass; 8 oz glass; VOA vial; Encore; Other:	120 mL; Nalgene; 1L; 500mL; 250mL	H_2SO_4; HNO_3; NAOH; HCL; 4°C(None); Disinfected; Other
For Lab Use Only AG14442	Time: 1626	D.O	Flow	pH	Spec. Cond.	Temp.	Other:					
1000393 (Sample D)	Date: 1-26-10	Hexavalent Chromium; Percent Moisture						Grab; x Composite; Modified; Other:	Water; ✓ Soil; Organic; Sludge; Other:	1L amber; Cubitainer; 2 oz glass; 8 oz glass; VOA vial; Encore; Other:	120 mL; Nalgene; 1L; 500mL; 250mL	H_2SO_4; HNO_3; NAOH; HCL; 4°C(None); Disinfected; Other
For Lab Use Only AG14443	Time: 1600	D.O	Flow	pH	Spec. Cond.	Temp.	Other:					

Relinquished By: Kenneth Hannon	Received By: Linda S Hampton	Date: 2-11-10	Time: 1104
Relinquished By:	Received By:	Date:	Time:
Relinquished By:	Received By:	Date:	Time:

Sample I.D. Letter	Site Description				
Sample A	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): DuIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 212	
Sample B	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 9 SuIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 213	
Sample C	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 15 SuIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 213	
Sample D	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): DuIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 213	

REMARKS:
HWP: Michael Stroh

MISSOURI DEPARTMENT OF NATURAL RESOURCES

FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

B-5

LABORATORY ORDER ID: _____

Collector's Name: (Please Print) Ken Hannon

Affiliation: (circle one) (ESP) KCRO NERO SERO SLRO SWRO WPP DGLS HWP Other:

Description of Shipment

Shipped-Carrier:

Tape sealed and initialed

x Hand Delivered

No. Of Containers: 4

Sample Number	Sample Collected	Analyses						Sample Type	For Lab Use Only: Matrix	Container		Preserved
1000394 (Sample A)	Date: 1-27-10	Hexavalent Chromium Percent Moisture						Grab x Composite Modified	Water ✓ Soil Organic	1L amber 120 mL Cubitainer 2 oz glass Nalgene		H_2SO_4 HNO_3 NAOH
For Lab Use Only AB14444	Time: 1118	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Sludge Other:	8 oz glass 1L VOA vial 500mL Encore 250mL Other:		HCL 4° C(None) Disinfected Other
1000395 (Sample B)	Date: 1-27-10	Hexavalent Chromium Percent Moisture						Grab x Composite Modified	Water ✓ Soil Organic	1L amber 120 mL Cubitainer 2 oz glass Nalgene		H_2SO_4 HNO_3 NAOH
For Lab Use Only AB14445	Time: 1210	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Sludge Other:	8 oz glass 1L VOA vial 500mL Encore 250mL Other:		HCL 4° C(None) Disinfected Other
1000396 (Sample C)	Date: 1-27-10	Hexavalent Chromium Percent Moisture						Grab x Composite Modified	Water ✓ Soil Organic	1L amber 120 mL Cubitainer 2 oz glass Nalgene		H_2SO_4 HNO_3 NAOH
For Lab Use Only AB14446	Time: 1118	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Sludge Other:	8 oz glass 1L VOA vial 500mL Encore 250mL Other:		HCL 4° C(None) Disinfected Other
1000397 (Sample D)	Date: 1-27-10	Hexavalent Chromium Percent Moisture						Grab x Composite Modified	Water ✓ Soil Organic	1L amber 120 mL Cubitainer 2 oz glass Nalgene		H_2SO_4 HNO_3 NAOH
For Lab Use Only AB14447	Time: 1110	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Sludge Other:	8 oz glass 1L VOA vial 500mL Encore 250mL Other:		HCL 4° C(None) Disinfected Other

Relinquished By: Kenneth Hannon	Received By: Maida S Thompson	Date: 2-11-10	Time: 1110
Relinquished By:	Received By:	Date:	Time:
Relinquished By:	Received By:	Date:	Time:

Sample I.D. Letter	Site Description				
Sample A	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 53 SUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing	**Accuracy** (check one) EPE (meters) / PDOP		**Sample Reference ID:** 214	
Sample B	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 23 SUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing	**Accuracy** (check one) EPE (meters) / PDOP		**Sample Reference ID:** 214	
Sample C	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): DUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing	**Accuracy** (check one) EPE (meters) / PDOP		**Sample Reference ID:** 214	
Sample D	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 82 SUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing	**Accuracy** (check one) EPE (meters) / PDOP		**Sample Reference ID:** 215	

REMARKS:
HWP: Michael Stroh

MISSOURI DEPARTMENT OF NATURAL RESOURCES

FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

B-5

LABORATORY ORDER ID: _____

Collector's Name: (Please Print) Ken Hannon

Affiliation: (circle one) (ESP) KCRO NERO SERO SLRO SWRO WPP DGLS HWP Other:

Description of Shipment

Shipped-Carrier:

Tape sealed and initialed

x Hand Delivered

No. Of Containers: 4

Sample Number	Sample Collected	Analyses						Sample Type	For Lab Use Only: Matrix	Container		Preserved
1000398 (Sample A)	Date: 1-27-10	Hexavalent Chromium Percent Moisture						Grab x Composite Modified	Water ✓ Soil Organic	1L amber 120 mL Cubitainer 2 oz glass Nalgene		H_2SO_4 HNO_3 NAOH
For Lab Use Only AB14448	Time: 1046	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Sludge Other:	8 oz glass 1L VOA vial 500mL Encore 250mL Other:		HCL 4° C(None) Disinfected Other
1000399 (Sample B)	Date: 1-27-10	Hexavalent Chromium Percent Moisture						Grab x Composite Modified	Water ✓ Soil Organic	1L amber 120 mL Cubitainer 2 oz glass Nalgene		H_2SO_4 HNO_3 NAOH
For Lab Use Only AB14449	Time: 1046	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Sludge Other:	8 oz glass 1L VOA vial 500mL Encore 250mL Other:		HCL 4° C(None) Disinfected Other
1000400 (Sample C)	Date: 1-26-10	Hexavalent Chromium Percent Moisture						Grab x Composite Modified	Water ✓ Soil Organic	1L amber 120 mL Cubitainer 2 oz glass Nalgene		H_2SO_4 HNO_3 NAOH
For Lab Use Only AB14450	Time: 1540	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Sludge Other:	8 oz glass 1L VOA vial 500mL Encore 250mL Other:		HCL 4° C(None) Disinfected Other
1000401 (Sample D)	Date: 1-26-10	Hexavalent Chromium Percent Moisture						Grab x Composite Modified	Water ✓ Soil Organic	1L amber 120 mL Cubitainer 2 oz glass Nalgene		H_2SO_4 HNO_3 NAOH
For Lab Use Only AB14451	Time: 1603	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Sludge Other:	8 oz glass 1L VOA vial 500mL Encore 250mL Other:		HCL 4° C(None) Disinfected Other

Relinquished By: Kenneth Hannon	Received By: Linda Thompson	Date: 2-11-10	Time: 1110
Relinquished By:	Received By:	Date:	Time:
Relinquished By:	Received By:	Date:	Time:

Sample I.D. Letter	Site Description				
Sample A	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 110 SUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 215	
Sample B	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): DUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 215	
Sample C	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 32 SUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 216	
Sample D	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 16 SUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 216	

REMARKS:
HWP: Michael Stroh

MISSOURI DEPARTMENT OF NATURAL RESOURCES

FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

B-5

LABORATORY ORDER ID: _____

Collector's Name: (Please Print) Ken Hannon

Affiliation: (circle one) (ESP) KCRO NERO SERO SLRO SWRO WPP DGLS HWP Other:

Description of Shipment

- Shipped-Carrier:
- Tape sealed and initialed
- x Hand Delivered

No. Of Containers: 4

Sample Number	Sample Collected	Analyses						Sample Type	For Lab Use Only: Matrix	Container		Preserved
1000402 (Sample A)	Date: 1-26-10	Hexavalent Chromium; Percent Moisture — HOLD FOR LATER ANALYSIS						Grab; x Composite; Modified; Other:	Water; ✓Soil; Organic; Sludge; Other:	1L amber; Cubitainer; 2 oz glass; 8 oz glass; VOA vial; Encore; Other:	120 mL; Nalgene 1L; 500mL; 250mL	H_2SO_4; HNO_3; NAOH; HCL; 4°C(None); Disinfected; Other
For Lab Use Only AB14452	Time: 1540	D.O	Flow	pH	Spec. Cond.	Temp.	Other:					
1000403 (Sample B)	Date: 1-26-10	Hexavalent Chromium; Percent Moisture						Grab; x Composite; Modified; Other:	Water; ✓Soil; Organic; Sludge; Other:	1L amber; Cubitainer; 2 oz glass; 8 oz glass; VOA vial; Encore; Other:	120 mL; Nalgene 1L; 500mL; 250mL	H_2SO_4; HNO_3; NAOH; HCL; 4°C(None); Disinfected; Other
For Lab Use Only AB14453	Time: 1321	D.O	Flow	pH	Spec. Cond.	Temp.	Other:					
1000404 (Sample C)	Date: 1-26-10	Hexavalent Chromium; Percent Moisture						Grab; x Composite; Modified; Other:	Water; ✓Soil; Organic; Sludge; Other:	1L amber; Cubitainer; 2 oz glass; 8 oz glass; VOA vial; Encore; Other:	120 mL; Nalgene 1L; 500mL; 250mL	H_2SO_4; HNO_3; NAOH; HCL; 4°C(None); Disinfected; Other
For Lab Use Only AB14454	Time: 1147	D.O	Flow	pH	Spec. Cond.	Temp.	Other:					
1000405 (Sample D)	Date: 1-26-10	Hexavalent Chromium; Percent Moisture						Grab; x Composite; Modified; Other:	Water; ✓Soil; Organic; Sludge; Other:	1L amber; Cubitainer; 2 oz glass; 8 oz glass; VOA vial; Encore; Other:	120 mL; Nalgene 1L; 500mL; 250mL	H_2SO_4; HNO_3; NAOH; HCL; 4°C(None); Disinfected; Other
For Lab Use Only AB14455	Time: 1245	D.O	Flow	pH	Spec. Cond.	Temp.	Other:					

Relinquished By:	Received By:	Date:	Time:
Kenneth Hannon	[signature]	2-11-10	1110
Relinquished By:	Received By:	Date:	Time:
Relinquished By:	Received By:	Date:	Time:

Sample I.D. Letter	Site Description				
Sample A	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): DUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing	**Accuracy** (check one): EPE (meters) / PDOP		**Sample Reference ID:** 216	
Sample B	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 22 SUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing	**Accuracy** (check one): EPE (meters) / PDOP		**Sample Reference ID:** 217	
Sample C	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 50 SUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing	**Accuracy** (check one): EPE (meters) / PDOP		**Sample Reference ID:** 217	
Sample D	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): DUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing	**Accuracy** (check one): EPE (meters) / PDOP		**Sample Reference ID:** 217	

REMARKS:

HWP: Michael Stroh

MISSOURI DEPARTMENT OF NATURAL RESOURCES

FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

B-5

LABORATORY ORDER ID: _____

Collector's Name: (Please Print) Ken Hannon

Affiliation: (circle one) ESP KCRO NERO SERO SLRO SWRO WPP DGLS HWP Other:

Description of Shipment

Shipped-Carrier:

Tape sealed and initialed

x Hand Delivered

No. Of Containers: 4

Sample Number	Sample Collected	Analyses	Sample Type	For Lab Use Only: Matrix / Container / Preserved
1000406 (Sample A)	Date: 1-26-10	Hexavalent Chromium; Percent Moisture	Grab; x Composite; Modified; Other:	Water; Soil; Organic; Sludge; Other: / 1L amber; Cubitainer; 2 oz glass; 8 oz glass; VOA vial; Encore; Other: / 120 mL; Nalgene; 1L; 500mL; 250mL; Other: / H_2SO_4; HNO_3; NAOH; HCL; 4°C(None); Disinfected; Other
For Lab Use Only AB14456	Time: 1055	D.O; Flow; pH; Spec. Cond.; Temp.; Other:		
1000407 (Sample B)	Date: 1-26-10	Hexavalent Chromium; Percent Moisture	Grab; x Composite; Modified; Other:	Water; Soil; Organic; Sludge; Other: / 1L amber; Cubitainer; 2 oz glass; 8 oz glass; VOA vial; Encore; Other: / 120 mL; Nalgene; 1L; 500mL; 250mL; Other: / H_2SO_4; HNO_3; NAOH; HCL; 4°C(None); Disinfected; Other
For Lab Use Only AB14457	Time: 0940	D.O; Flow; pH; Spec. Cond.; Temp.; Other:		
1000408 (Sample C)	Date: 1-26-10	Hexavalent Chromium; Percent Moisture; HOLD FOR LATER ANALYSIS	Grab; x Composite; Modified; Other:	Water; Soil; Organic; Sludge; Other: / 1L amber; Cubitainer; 2 oz glass; 8 oz glass; VOA vial; Encore; Other: / 120 mL; Nalgene; 1L; 500mL; 250mL; Other: / H_2SO_4; HNO_3; NAOH; HCL; 4°C(None); Disinfected; Other
For Lab Use Only AB14458	Time: 0940	D.O; Flow; pH; Spec. Cond.; Temp.; Other:		
1000409 (Sample D)	Date: 1-26-10	Hexavalent Chromium; Percent Moisture	Grab; x Composite; Modified; Other:	Water; Soil; Organic; Sludge; Other: / 1L amber; Cubitainer; 2 oz glass; 8 oz glass; VOA vial; Encore; Other: / 120 mL; Nalgene; 1L; 500mL; 250mL; Other: / H_2SO_4; HNO_3; NAOH; HCL; 4°C(None); Disinfected; Other
For Lab Use Only AB14459	Time: 1255	D.O; Flow; pH; Spec. Cond.; Temp.; Other:		

Relinquished By:	Received By:	Date:	Time:
Kenneth Hannon	[signature]	2-11-10	1110
Relinquished By:	Received By:	Date:	Time:
Relinquished By:	Received By:	Date:	Time:

Sample I.D. Letter	Site Description				
Sample A	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 102 SUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 218	
Sample B	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): ~~#4 218~~ 87 SUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 218	
Sample C	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): DUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 218	
Sample D	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 42 SUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 219	

REMARKS:
HWP: Michael Stroh

MISSOURI DEPARTMENT OF NATURAL RESOURCES

FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

 B-5

LABORATORY ORDER ID: _____

Collector's Name: (Please Print) Ken Hannon

Affiliation: (circle one) (ESP) KCRO NERO SERO SLRO SWRO WPP DGLS HWP Other:

Description of Shipment

Shipped-Carrier:

Tape sealed and initialed

x Hand Delivered

No. Of Containers: 4

Sample Number	Sample Collected	Analyses						Sample Type	For Lab Use Only: Matrix	Container		Preserved
1000410 (Sample A)	Date: 1-26-10	Hexavalent Chromium Percent Moisture						Grab x Composite Modified	Water ✓ Soil	1L amber Cubitainer	120 mL	H_2SO_4 HNO_3
									Organic Sludge	2 oz glass 8 oz glass	Nalgene 1L	NAOH HCL
For Lab Use Only AB14460	Time: 0900	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial Encore Other:	500mL 250mL	4° C(None) Disinfected Other
1000411 (Sample B)	Date: 1-26-10	Hexavalent Chromium Percent Moisture HOLD FOR LATER ANALYSIS						Grab x Composite Modified	Water ✓ Soil	1L amber Cubitainer	120 mL	H_2SO_4 HNO_3
									Organic Sludge	2 oz glass 8 oz glass	Nalgene 1L	NAOH HCL
For Lab Use Only AB14461	Time: 0900	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial Encore Other:	500mL 250mL	4° C(None) Disinfected Other
1000412 (Sample C)	Date: 1-25-10	Hexavalent Chromium Percent Moisture						Grab x Composite Modified	Water ✓ Soil	1L amber Cubitainer	120 mL	H_2SO_4 HNO_3
									Organic Sludge	2 oz glass 8 oz glass	Nalgene 1L	NAOH HCL
For Lab Use Only AB14462	Time: 1704	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial Encore Other:	500mL 250mL	4° C(None) Disinfected Other
1000413 (Sample D)	Date: 1-25-10	Hexavalent Chromium Percent Moisture						Grab x Composite Modified	Water ✓ Soil	1L amber Cubitainer	120 mL	H_2SO_4 HNO_3
									Organic Sludge	2 oz glass 8 oz glass	Nalgene 1L	NAOH HCL
For Lab Use Only AB14463	Time: 1730	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial Encore Other:	500mL 250mL	4° C(None) Disinfected Other

Relinquished By:	Received By:	Date:	Time:
Kenneth Hannon	Mark Thompson	2-11-10	1110
Relinquished By:	Received By:	Date:	Time:
Relinquished By:	Received By:	Date:	Time:

Sample I.D. Letter	Site Description					
Sample A	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)		**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 15 SUIS					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): **X Easting**	**Y Northing**	**Accuracy**	(check one) EPE (meters) PDOP	**Sample Reference ID:** 219	
Sample B	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)		**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): ~~Kat~~ 215 DUIS					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): **X Easting**	**Y Northing**	**Accuracy**	(check one) EPE (meters) PDOP	**Sample Reference ID:** 219	
Sample C	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)		**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 164 SUIS					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): **X Easting**	**Y Northing**	**Accuracy**	(check one) EPE (meters) PDOP	**Sample Reference ID:** 221	
Sample D	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)		**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 109 SUIS					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): **X Easting**	**Y Northing**	**Accuracy**	(check one) EPE (meters) PDOP	**Sample Reference ID:** 221	

REMARKS:
HWP: Michael Stroh

MISSOURI DEPARTMENT OF NATURAL RESOURCES

FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

 B-5

LABORATORY ORDER ID: _____

Collector's Name: (Please Print) Ken Hannon

Affiliation: (circle one) (SP) KCRO NERO SERO SLRO SWRO WPP DGLS HWP Other:

Description of Shipment

- Shipped-Carrier:
- Tape sealed and initialed
- x Hand Delivered

No. Of Containers: 4

Sample Number	Sample Collected	Analyses	Sample Type	For Lab Use Only: Matrix / Container / Preserved
1000414 (Sample A)	Date: 1-25-10	Hexavalent Chromium; Percent Moisture — HOLD FOR LATER ANALYSIS	Grab; x Composite; Modified; Other:	Water; ✓ Soil; Organic; Sludge; Other: — 1L amber; Cubitainer; 2 oz glass; 8 oz glass; VOA vial; Encore; Other: — 120 mL; Nalgene 1L; 500mL; 250mL — H_2SO_4; HNO_3; NAOH; HCL; 4° C(None); Disinfected; Other
For Lab Use Only AB14464	Time: 1704	D.O; Flow; pH; Spec. Cond.; Temp.; Other:		
1000415 (Sample B)	Date: 1-25-10	Hexavalent Chromium; Percent Moisture	Grab; x Composite; Modified; Other:	Water; ✓ Soil; Organic; Sludge; Other: — 1L amber; Cubitainer; 2 oz glass; 8 oz glass; VOA vial; Encore; Other: — 120 mL; Nalgene 1L; 500mL; 250mL — H_2SO_4; HNO_3; NAOH; HCL; 4° C(None); Disinfected; Other
For Lab Use Only AB14465	Time: 1710	D.O; Flow; pH; Spec. Cond.; Temp.; Other:		
1000416 (Sample C)	Date: 1-25-10	Hexavalent Chromium; Percent Moisture	Grab; x Composite; Modified; Other:	Water; ✓ Soil; Organic; Sludge; Other: — 1L amber; Cubitainer; 2 oz glass; 8 oz glass; VOA vial; Encore; Other: — 120 mL; Nalgene 1L; 500mL; 250mL — H_2SO_4; HNO_3; NAOH; HCL; 4° C(None); Disinfected; Other
For Lab Use Only AB14466	Time: 1730	D.O; Flow; pH; Spec. Cond.; Temp.; Other:		
1000417 (Sample D)	Date: 1-25-10	Hexavalent Chromium; Percent Moisture — HOLD FOR LATER ANALYSIS	Grab; x Composite; Modified; Other:	Water; ✓ Soil; Organic; Sludge; Other: — 1L amber; Cubitainer; 2 oz glass; 8 oz glass; VOA vial; Encore; Other: — 120 mL; Nalgene 1L; 500mL; 250mL — H_2SO_4; HNO_3; NAOH; HCL; 4° C(None); Disinfected; Other
For Lab Use Only AB14467	Time: 1658	D.O; Flow; pH; Spec. Cond.; Temp.; Other:		

Relinquished By:	Received By:	Date:	Time:
Kenneth Hannon	Linda S Hampton	2-11-10	1110
Relinquished By:	Received By:	Date:	Time:
Relinquished By:	Received By:	Date:	Time:

Sample I.D. Letter	Site Description					
Sample A	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)		**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): DUIS					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy**	(check one) EPE (meters) / PDOP	**Sample Reference ID:** 221	
Sample B	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)		**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 10 SUIS					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy**	(check one) EPE (meters) / PDOP	**Sample Reference ID:** 222	
Sample C	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)		**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 27 SUIS					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy**	(check one) EPE (meters) / PDOP	**Sample Reference ID:** 222	
Sample D	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)		**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): DUIS					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy**	(check one) EPE (meters) / PDOP	**Sample Reference ID:** 222	

REMARKS:
HWP: Michael Stroh

MISSOURI DEPARTMENT OF NATURAL RESOURCES

FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

B-5

LABORATORY ORDER ID: _____

Collector's Name: (Please Print) Ken Hannon

Affiliation: (circle one) (ESP) KCRO NERO SERO SLRO SWRO WPP DGLS HWP Other:

Description of Shipment

Shipped-Carrier:

Tape sealed and initialed

x Hand Delivered

No. Of Containers: 4

Sample Number	Sample Collected	Analyses	Sample Type	For Lab Use Only: Matrix	Container		Preserved
1000418 (Sample A)	Date: 1-27-10	Hexavalent Chromium; Percent Moisture	Grab; x Composite; Modified; Other:	Water; ✓Soil; Organic; Sludge; Other:	1L amber; 120 mL; Cubitainer; 2 oz glass; Nalgene; 8 oz glass; 1L; VOA vial; 500mL; Encore; 250mL; Other:		H_2SO_4; HNO_3; NAOH; HCL; 1 4°C(None); Disinfected; Other
For Lab Use Only AB14468	Time: 0940	D.O; Flow; pH; Spec. Cond.; Temp.; Other:					
1000419 (Sample B)	Date: 1-27-10	Hexavalent Chromium; Percent Moisture	Grab; x Composite; Modified; Other:	Water; ✓Soil; Organic; Sludge; Other:	1L amber; 120 mL; Cubitainer; 2 oz glass; Nalgene; 8 oz glass; 1L; VOA vial; 500mL; Encore; 250mL; Other:		H_2SO_4; HNO_3; NAOH; HCL; 1 4°C(None); Disinfected; Other
For Lab Use Only AB14469	Time: 0900	D.O; Flow; pH; Spec. Cond.; Temp.; Other:					
1000420 (Sample C)	Date: 1-27-10	Hexavalent Chromium; Percent Moisture	Grab; x Composite; Modified; Other:	Water; ✓Soil; Organic; Sludge; Other:	1L amber; 120 mL; Cubitainer; 2 oz glass; Nalgene; 8 oz glass; 1L; VOA vial; 500mL; Encore; 250mL; Other:		H_2SO_4; HNO_3; NAOH; HCL; 1 4°C(None); Disinfected; Other
For Lab Use Only AB14470	Time: 0920	D.O; Flow; pH; Spec. Cond.; Temp.; Other:					
1000421 (Sample D)	Date: 1-27-10	Hexavalent Chromium; Percent Moisture; Hold for Later Analysis	Grab; x Composite; Modified; Other:	Water; ✓Soil; Organic; Sludge; Other:	1L amber; 120 mL; Cubitainer; 2 oz glass; Nalgene; 8 oz glass; 1L; VOA vial; 500mL; Encore; 250mL; Other:		H_2SO_4; HNO_3; NAOH; HCL; 1 4°C(None); Disinfected; Other
For Lab Use Only AB14471	Time: 0900	D.O; Flow; pH; Spec. Cond.; Temp.; Other:					

Relinquished By:	Received By:	Date:	Time:
Kenneth Hannon	Martha Thompson	2-11-10	1114
Relinquished By:	Received By:	Date:	Time:
Relinquished By:	Received By:	Date:	Time:

Sample I.D. Letter	Site Description					
Sample A	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)		**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 19 SUIS					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		**Accuracy**	(check one)	**Sample Reference ID:**	
	X Easting	**Y Northing**		**EPE (meters)**	224	
				PDOP		
Sample B	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)		**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 23 SUIS					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		**Accuracy**	(check one)	**Sample Reference ID:**	
	X Easting	**Y Northing**		**EPE (meters)**	224	
				PDOP		
Sample C	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)		**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 74 SUIS					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		**Accuracy**	(check one)	**Sample Reference ID:**	
	X Easting	**Y Northing**		**EPE (meters)**	224	
				PDOP		
Sample D	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)		**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): DUIS					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		**Accuracy**	(check one)	**Sample Reference ID:**	
	X Easting	**Y Northing**		**EPE (meters)**	224	
				PDOP		

REMARKS:
HWP: Michael Stroh

MISSOURI DEPARTMENT OF NATURAL RESOURCES

FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

B-5

LABORATORY ORDER ID: _____

Collector's Name: (Please Print) Ken Hannon

Affiliation: (circle one) (ESP) KCRO NERO SERO SLRO SWRO WPP DGLS HWP Other:

Description of Shipment

- Shipped-Carrier:
- Tape sealed and initialed
- x Hand Delivered

No. Of Containers: 4

Sample Number	Sample Collected	Analyses						Sample Type	For Lab Use Only: Matrix	Container		Preserved
1000422 (Sample A)	Date: 1-26-10	Hexavalent Chromium; Percent Moisture						Grab; x Composite; Modified; Other:	Water; ✓Soil; Organic; Sludge; Other:	1L amber; Cubitainer; 2 oz glass; 8 oz glass; VOA vial; Encore; Other:	120 mL; Nalgene 1L; 500mL; 250mL	H_2SO_4; HNO_3; NAOH; HCL; 4°C(None); Disinfected; Other
For Lab Use Only AB14472	Time: 1210	D.O	Flow	pH	Spec. Cond.	Temp.	Other:					
1000423 (Sample B)	Date: 1-26-10	Hexavalent Chromium; Percent Moisture						Grab; x Composite; Modified; Other:	Water; ✓Soil; Organic; Sludge; Other:	1L amber; Cubitainer; 2 oz glass; 8 oz glass; VOA vial; Encore; Other:	120 mL; Nalgene 1L; 500mL; 250mL	H_2SO_4; HNO_3; NAOH; HCL; 4°C(None); Disinfected; Other
For Lab Use Only AB14473	Time: 1240	D.O	Flow	pH	Spec. Cond.	Temp.	Other:					
1000424 (Sample C)	Date: 1-26-10	Hexavalent Chromium; Percent Moisture						Grab; x Composite; Modified; Other:	Water; ✓Soil; Organic; Sludge; Other:	1L amber; Cubitainer; 2 oz glass; 8 oz glass; VOA vial; Encore; Other:	120 mL; Nalgene 1L; 500mL; 250mL	H_2SO_4; HNO_3; NAOH; HCL; 4°C(None); Disinfected; Other
For Lab Use Only AB14474	Time: 1210	D.O	Flow	pH	Spec. Cond.	Temp.	Other:					
1000425 (Sample D)	Date: 1-26-10	Hexavalent Chromium; Percent Moisture						Grab; x Composite; Modified; Other:	Water; ✓Soil; Organic; Sludge; Other:	1L amber; Cubitainer; 2 oz glass; 8 oz glass; VOA vial; Encore; Other:	120 mL; Nalgene 1L; 500mL; 250mL	H_2SO_4; HNO_3; NAOH; HCL; 4°C(None); Disinfected; Other
For Lab Use Only AB14475	Time: 1050	D.O	Flow	pH	Spec. Cond.	Temp.	Other:					

Relinquished By: Kenneth Hannon	Received By: Linda Thompson	Date: 2-11-10	Time: 1110
Relinquished By:	Received By:	Date:	Time:
Relinquished By:	Received By:	Date:	Time:

Sample I.D. Letter	Site Description				
Sample A	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 4 SUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing	**Accuracy** (check one) EPE (meters) / PDOP		**Sample Reference ID:** 223	
Sample B	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 28 SUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing	**Accuracy** (check one) EPE (meters) / PDOP		**Sample Reference ID:** 223	
Sample C	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): DUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing	**Accuracy** (check one) EPE (meters) / PDOP		**Sample Reference ID:** 223	
Sample D	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 60 SUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing	**Accuracy** (check one) EPE (meters) / PDOP		**Sample Reference ID:** 225	

REMARKS:
HWP: Michael Stroh

MISSOURI DEPARTMENT OF NATURAL RESOURCES

FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

 B-5

LABORATORY ORDER ID: _____

Collector's Name: (Please Print) Ken Hannon

Affiliation: (circle one) ESP KCRO NERO SERO SLRO SWRO WPP DGLS HWP Other:

Description of Shipment

- Shipped-Carrier:
- Tape sealed and initialed
- x Hand Delivered

No. Of Containers: 2

Sample Number	Sample Collected	Analyses						Sample Type	For Lab Use Only: Matrix	Container		Preserved
1000426 (Sample A)	Date: 1-26-10	Hexavalent Chromium Percent Moisture						Grab x Composite Modified	Water ✓ Soil Organic Sludge	1L amber 120 mL Cubitainer 2 oz glass Nalgene 1 8 oz glass 1L		H_2SO_4 HNO_3 NAOH HCL
For Lab Use Only AB14476	Time: 1120	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial 500mL Encore 250mL Other:		1 4° C(None) Disinfected Other
1000427 (Sample B)	Date: 1-26-10	Hexavalent Chromium Percent Moisture						Grab x Composite Modified	Water ✓ Soil Organic Sludge	1L amber 120 mL Cubitainer 2 oz glass Nalgene 1 8 oz glass 1L		H_2SO_4 HNO_3 NAOH HCL
For Lab Use Only AB14477	Time: 1020	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial 500mL Encore 250mL Other:		1 4° C(None) Disinfected Other
(Sample C)	Date:	Hexavalent Chromium Percent Moisture						Grab x Composite Modified	Water Soil Organic Sludge	1L amber 120 mL Cubitainer 2 oz glass Nalgene 8 oz glass 1L		H_2SO_4 HNO_3 NAOH HCL
For Lab Use Only	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial 500mL Encore 250mL Other:		4° C(None) Disinfected Other
(Sample D)	Date:	Hexavalent Chromium Percent Moisture						Grab x Composite Modified	Water Soil Organic Sludge	1L amber 120 mL Cubitainer 2 oz glass Nalgene 8 oz glass 1L		H_2SO_4 HNO_3 NAOH HCL
For Lab Use Only	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial 500mL Encore 250mL Other:		4° C(None) Disinfected Other

Relinquished By: Kenneth Hannon	Received By: Maida Thompson	Date: 2-11-10	Time: 1110
Relinquished By:	Received By:	Date:	Time:
Relinquished By:	Received By:	Date:	Time:

Sample I.D. Letter	Site Description				
Sample A	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 8 SUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 225	
Sample B	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): DUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 225	
Sample C	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:**	
Sample D	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:**	

REMARKS:
HWP: Michael Stroh

MISSOURI DEPARTMENT OF NATURAL RESOURCES

FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

B-5

LABORATORY ORDER ID: _____

Collector's Name: (Please Print) Ken Hannon

Affiliation: (circle one) ESP KCRO NERO SERO SLRO SWRO WPP DGLS HWP Other:

Description of Shipment

Shipped-Carrier: _____

_ Tape sealed and initialed

x Hand Delivered

No. Of Containers: 4

Sample Number	Sample Collected	Analyses	Sample Type	For Lab Use Only: Matrix	Container	Preserved
1000429 (Sample A)	Date: 1-26-10	Hexavalent Chromium , TOC, pH, Percent Moisture, ORP, Total Metals (Fe, Mn, Mo, V, Al)	_ Grab x Composite _ Modified	✓ Water ✓ Soil _ Organic _ Sludge	_ 1L amber _ 120 mL _ Cubitainer _ 2 oz glass Nalgene _ 8 oz glass _ 1L	_ H_2SO_4 _ HNO_3 _ NAOH _ HCL
For Lab Use Only AB14478	Time: 1322	D.O / Flow / pH / Spec. Cond. / Temp. / Other:	_ Other:	_ Other:	_ VOA vial _ 500mL _ Encore _ 250mL 1 Other: Ziplock	2 4° C(None) _ Disinfected _ Other
1000430 (Sample B)	Date: 1-26-10	Hexavalent Chromium , TOC, pH, Percent Moisture, ORP, Total Metals (Fe, Mn, Mo, V, Al)	_ Grab x Composite _ Modified	✓ Water ✓ Soil _ Organic _ Sludge	_ 1L amber _ 120 mL _ Cubitainer _ 2 oz glass Nalgene _ 8 oz glass _ 1L	_ H_2SO_4 _ HNO_3 _ NAOH _ HCL
For Lab Use Only AB14479	Time: 1020	D.O / Flow / pH / Spec. Cond. / Temp. / Other:	_ Other:	_ Other:	_ VOA vial _ 500mL _ Encore _ 250mL 1 Other: Ziplock	2 4° C(None) _ Disinfected _ Other
(Sample C)	Date:	Hexavalent Chromium , TOC, pH, Percent Moisture, ORP, Total Metals (Fe, Mn, Mo, V, Al)	_ Grab x Composite _ Modified	_ Water _ Soil _ Organic _ Sludge	_ 1L amber _ 120 mL _ Cubitainer _ 2 oz glass Nalgene _ 8 oz glass _ 1L	_ H_2SO_4 _ HNO_3 _ NAOH _ HCL
For Lab Use Only	Time:	D.O / Flow / pH / Spec. Cond. / Temp. / Other:	_ Other:	_ Other:	_ VOA vial _ 500mL _ Encore _ 250mL Other:	_ 4° C(None) _ Disinfected _ Other
(Sample D)	Date:	Hexavalent Chromium , TOC, pH, Percent Moisture, ORP, Total Metals (Fe, Mn, Mo, V, Al)	_ Grab x Composite _ Modified	_ Water _ Soil _ Organic _ Sludge	_ 1L amber _ 120 mL _ Cubitainer _ 2 oz glass Nalgene _ 8 oz glass _ 1L	_ H_2SO_4 _ HNO_3 _ NAOH _ HCL
For Lab Use Only	Time:	D.O / Flow / pH / Spec. Cond. / Temp. / Other:	_ Other:	_ Other:	_ VOA vial _ 500mL _ Encore _ 250mL Other:	_ 4° C(None) _ Disinfected _ Other

Relinquished By: Kenneth Hannon	Received By: Linda S Thompson	Date: 2-11-10	Time: 1058
Relinquished By:	Received By:	Date:	Time:
Relinquished By:	Received By:	Date:	Time:

Sample I.D. Letter	Site Description				
Sample A	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 44 SUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing	**Accuracy** (check one) EPE (meters) / PDOP		**Sample Reference ID:** 223	
Sample B	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 32 SUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing	**Accuracy** (check one) EPE (meters) / PDOP		**Sample Reference ID:** 225	
Sample C	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing	**Accuracy** (check one) EPE (meters) / PDOP		**Sample Reference ID:**	
Sample D	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing	**Accuracy** (check one) EPE (meters) / PDOP		**Sample Reference ID:**	

REMARKS:
HWP: Michael Stroh

MISSOURI DEPARTMENT OF NATURAL RESOURCES

FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

B22

LABORATORY ORDER ID: 100129004

Collector's Name: *(Please Print)*	Sean Counihan
Affiliation: *(circle one)*	(ESP) KCRO NERO SERO SLRO SWRO WPP DGLS HWP Other:

Description of Shipment

- ___ Shipped-Carrier:
- ___ Tape sealed and initialed
- x Hand Delivered — No. Of Containers: 3

Sample Number	Sample Collected	Analyses						Sample Type	For Lab Use Only: Matrix	Container		Preserved
1000501 (Sample A)	Date: 01/26/10	Total Metals (Cr) Hex. Cr 5mL						x Grab ___ Composite ___ Modified	___ Water ___ Soil ___ Organic ___ Sludge ___ Other:	___ 1L amber ___ Cubitainer ___ 2 oz glass ___ 8 oz glass ___ VOA vial ___ Encore ___ Other:	___ 120 mL ___ Nalgene ___ 1L ___ 500mL ___ 250mL	___ H_2SO_4 ___ HNO_3 ___ NAOH ___ HCL ___ 4° C(None) ___ Disinfected ___ Other
For Lab Use Only AB14142	Time: 1627	D.O	Flow	pH 6.82	Spec. Cond. 483uS	Temp. 12.7°C	Other:	___ Other:				
1000502 (Sample B)	Date: 01/26/10	Total Metals (Cr) Hex. Cr 5mL						x Grab ___ Composite ___ Modified	___ Water ___ Soil ___ Organic ___ Sludge ___ Other:	___ 1L amber ___ Cubitainer ___ 2 oz glass ___ 8 oz glass ___ VOA vial ___ Encore ___ Other:	___ 120 mL ___ Nalgene ___ 1L ___ 500mL ___ 250mL	___ H_2SO_4 ___ HNO_3 ___ NAOH ___ HCL ___ 4° C(None) ___ Disinfected ___ Other
For Lab Use Only AB14143	Time: 1635	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	___ Other:				
1000503 (Sample C)	Date: 01/26/10	Total Metals (Cr) Hex. Cr 5mL						x Grab ___ Composite ___ Modified	___ Water ___ Soil ___ Organic ___ Sludge ___ Other:	___ 1L amber ___ Cubitainer ___ 2 oz glass ___ 8 oz glass ___ VOA vial ___ Encore ___ Other:	___ 120 mL ___ Nalgene ___ 1L ___ 500mL ___ 250mL	___ H_2SO_4 ___ HNO_3 ___ NAOH ___ HCL ___ 4° C(None) ___ Disinfected ___ Other
For Lab Use Only AB14144	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	___ Other:				
(Sample D)	Date:							___ Grab ___ Composite ___ Modified	___ Water ___ Soil ___ Organic ___ Sludge ___ Other:	___ 1L amber ___ Cubitainer ___ 2 oz glass ___ 8 oz glass ___ VOA vial ___ Encore ___ Other:	___ 120 mL ___ Nalgene ___ 1L ___ 500mL ___ 250mL	___ H_2SO_4 ___ HNO_3 ___ NAOH ___ HCL ___ 4° C(None) ___ Disinfected ___ Other
For Lab Use Only	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	___ Other:				

Relinquished By:	Received By:	Date: 1-29-10	Time: 1129
Relinquished By:	Received By:	Date:	Time:
Relinquished By:	Received By:	Date:	Time:

Sample I.D. Letter	Site Description				
Sample A 1000501	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** Buchanan	**LDPR Code:** FEPA8	**Job Code:** NJ10TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Sample from well head Loc. 102 Applied Speciation Bottle # B02367 5mL				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy**	(check one) EPE (meters) / PDOP	**Sample Reference ID:** Parcel 3383
Sample B 1000502	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** Buchanan	**LDPR Code:**	**Job Code:**
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Field Blank Applied Speciation Bottle # B02363 5mL				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy**	(check one) EPE (meters) / PDOP	**Sample Reference ID:** Parcel 3383
Sample C 1000503	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** Buchanan	**LDPR Code:**	**Job Code:**
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Duplicate Applied Speciation Bottle # B02391 5mL				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy**	(check one) EPE (meters) / PDOP	**Sample Reference ID:** Parcel 3383
Sample D	**Facility ID:**	**Site/Study Name:**	**County:**	**LDPR Code:**	**Job Code:**
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy**	(check one) EPE (meters) / PDOP	**Sample Reference ID:**

REMARKS:

MISSOURI DEPARTMENT OF NATURAL RESOURCES

FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

B31

LABORATORY ORDER ID: 100202002

Collector's Name: (Please Print) Sean Counihan

Affiliation: (circle one) (ESP) KCRO NERO SERO SLRO SWRO WPP DGLS HWP Other:

Description of Shipment

- Shipped-Carrier:
- Tape sealed and initialed
- x Hand Delivered

No. Of Containers: 4

Sample Number	Sample Collected	Analyses						Sample Type
1000300 (Sample A)	Date: 1-27-10	Hexavalent Chromium, % moisture MS						Grab / x Composite / Modified
For Lab Use Only AB14289	Time: 1435	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:
1000301 (Sample B)	Date: 1-27-10	Hexavalent Chromium, % moist MS						Grab / x Composite / Modified
For Lab Use Only AB14290	Time: 1440	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:
1000302 (Sample C)	Date: 1-27-10	Hexavalent Chromium, % moist MS						Grab / x Composite / Modified
For Lab Use Only AB14291	Time: 1449	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:
1000303 (Sample D)	Date: 1-27-10	Hexavalent Chromium, % Moist MS						Grab / x Composite / Modified
For Lab Use Only AB14292	Time: 1457	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:

For Lab Use Only

Matrix	Container		Preserved
1 Water	1L amber	120mL	H_2SO_4
1 Soil	Cubitainer		HNO_3
Organic	2 oz glass	Nalgene	NAOH
Sludge	8 oz glass	1L	HCL
Other:	VOA vial	500mL	1 4°C(None)
	Encore	250mL	Disinfected
	Other:		Other

Relinquished By:	Received By:	Date:	Time:
[signature]	Kenneth Hannon	2/2/10	11:15
Kenneth Hannon	[signature]	2/2/10	1156
Relinquished By:	Received By:	Date:	Time:

Sample I.D. Letter	Site Description					
Sample A	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Y1					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing	**Accuracy**	(check one) EPE (meters) / PDOP	**Sample Reference ID:** 319		
Sample B	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Y2					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing	**Accuracy**	(check one) EPE (meters) / PDOP	**Sample Reference ID:** 319		
Sample C	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8 3+ MS	**Job Code:** NJ10 TSFF	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Y3					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing	**Accuracy**	(check one) EPE (meters) / PDOP	**Sample Reference ID:** 319		
Sample D	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Y4					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing	**Accuracy**	(check one) EPE (meters) / PDOP	**Sample Reference ID:** 319		

REMARKS:
HWP: Michael Stroh

RUN LAB DUP ON 1000300

MISSOURI DEPARTMENT OF NATURAL RESOURCES

FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

B31

LABORATORY ORDER ID: 100202002

Collector's Name: (Please Print) Sean Cowihan

Affiliation: (circle one) (ESP) KCRO NERO SERO SLRO SWRO WPP DGLS ~~HWP~~ Other:

Description of Shipment

- Shipped-Carrier:
- Tape sealed and initialed
- x Hand Delivered

No. Of Containers: 4

Sample Number	Sample Collected	Analyses						Sample Type
1000304 (Sample A)	Date: 1-27-10	Hexavalent Chromium, % moist m.s						Grab / x Composite / Modified
For Lab Use Only AB14295	Time: /	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:
1000305 (Sample B)	Date: 1-27-10	Hexavalent Chromium, % moist, ms						Grab / x Composite / Modified
For Lab Use Only AB14296	Time: 1026	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:
1000306 (Sample C)	Date: 1-27-10	Hexavalent Chromium % , moist ms						Grab / x Composite / Modified
For Lab Use Only AB14297	Time: 1037	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:
1000307 (Sample D)	Date: 1-27-10	Hexavalent Chromium, % moist ms						Grab / x Composite / Modified
For Lab Use Only AB14298	Time: 1046	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:

For Lab Use Only

Matrix	Container		Preserved
Water	1L amber	120 mL	H_2SO_4
/ Soil	Cubitainer		HNO_3
Organic	/ 2 oz glass	Nalgene	NAOH
Sludge	8 oz glass	1L	HCL
Other:	VOA vial	500mL	/ 4° C(None)
	Encore	250mL	Disinfected
	Other:		Other

Relinquished By:	Received By:	Date:	Time:
[signature]	Kenneth Hannon	2/2/10	11:15
Kenneth Hannon	[signature]	2/2/10	1157
Relinquished By:	Received By:	Date:	Time:

Sample I.D. Letter	Site Description				
Sample A	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): DUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one): EPE (meters) / PDOP	**Sample Reference ID:** 319	
Sample B	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Y1				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one): EPE (meters) / PDOP	**Sample Reference ID:** 305	
Sample C	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Y2				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one): EPE (meters) / PDOP	**Sample Reference ID:** 305	
Sample D	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Y3				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one): EPE (meters) / PDOP	**Sample Reference ID:** 305	

REMARKS:
HWP: Michael Stroh

RUN LAB Dup on 1000304

MISSOURI DEPARTMENT OF NATURAL RESOURCES

FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

B31

LABORATORY ORDER ID: 1002020002

Collector's Name: (Please Print) Sean Counihan

Affiliation: (circle one) (ESP) KCRO NERO SERO SLRO SWRO WPP DGLS (HWP) Other:

Description of Shipment

Shipped-Carrier:

Tape sealed and initialed

x Hand Delivered

No. Of Containers: 4

Sample Number	Sample Collected	Analyses						Sample Type
1000308 (Sample A)	Date: 1-27-10	Hexavalent Chromium, % moist ms						Grab / x Composite / Modified
For Lab Use Only AB14297	Time: ✓	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:
1000309 (Sample B)	Date: 1-26-10	Hexavalent Chromium % moist. ms						Grab / x Composite / Modified
For Lab Use Only AB14298	Time: 1150	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:
1000310 (Sample C)	Date: 1-26-10	Hexavalent Chromium, % moist ms						Grab / x Composite / Modified
For Lab Use Only AB14299	Time: 1202	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:
1000311 (Sample D)	Date: 1-26-10	Hexavalent Chromium, % moist ms						Grab / x Composite / Modified
For Lab Use Only AB14300	Time: 1122	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:

For Lab Use Only

Matrix	Container		Preserved
Water	1L amber	120mL	H_2SO_4
Soil	Cubitainer		HNO_3
Organic	2 oz glass	Nalgene	NAOH
Sludge	8 oz glass	1L	HCL
Other:	VOA vial	500mL	4° C(None)
	Encore	250mL	Disinfected
	Other:		Other

Relinquished By:	Received By:	Date:	Time:
Sean Coll	Kenneth Hannon	2/2/10	11:15
Kenneth Hannon	Dirk Rutz	2/2/10	11:58
Relinquished By:	Received By:	Date:	Time:

Sample I.D. Letter	Site Description				
Sample A	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): DUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 305	
Sample B	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Y1				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 320	
Sample C	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Y2				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 320	
Sample D	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Y3				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 320	

REMARKS:
HWP: Michael Stroh

MISSOURI DEPARTMENT OF NATURAL RESOURCES

FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

B31

LABORATORY ORDER ID: 100202002

Collector's Name: (Please Print) Sean Corrihan

Affiliation: (circle one) (ESP) KCRO NERO SERO SLRO SWRO WPP DGLS (HWP) Other:

Description of Shipment

- Shipped-Carrier:
- Tape sealed and initialed
- x Hand Delivered

No. Of Containers: 4

Sample Number	Sample Collected	Analyses						Sample Type
1000312 (Sample A)	Date: 1-26-10	Hexavalent Chromium, %Moist ms						Grab / x Composite / Modified
For Lab Use Only AB14302	Time: 1134	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:
1000313 (Sample B)	Date: 1-26-10	Hexavalent Chromium, % Moist ms						Grab / x Composite / Modified
For Lab Use Only AB14303	Time: —	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:
1000314 (Sample C)	Date: 1-26-10	Hexavalent Chromium % moist, ms						Grab / x Composite / Modified
For Lab Use Only AB14304	Time: 0930	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:
1000315 (Sample D)	Date: 1-26-10	Hexavalent Chromium % moist ms						Grab / x Composite / Modified
For Lab Use Only AB14305	Time: 0910	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:

For Lab Use Only

Matrix	Container		Preserved
Water	1L amber	120 mL	H_2SO_4
Soil	Cubitainer		HNO_3
Organic	2 oz glass	Nalgene	NAOH
Sludge	8 oz glass	1L	HCL
Other:	VOA vial	500mL	4° C(None)
	Encore	250mL	Disinfected
	Other:		Other

Relinquished By: [signature]	Received By: Kenneth Hannon	Date: 2/2/10	Time: 11:15
Relinquished By: Kenneth Hannon	Received By: [signature]	Date: 2/2/10	Time: 1159
Relinquished By:	Received By:	Date:	Time:

Sample I.D. Letter	Site Description				
Sample A	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Y4				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing	**Accuracy** (check one) EPE (meters) / PDOP		**Sample Reference ID:** 320	
Sample B	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): DUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing	**Accuracy** (check one) EPE (meters) / PDOP		**Sample Reference ID:** 320	
Sample C	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Y1				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing	**Accuracy** (check one) EPE (meters) / PDOP		**Sample Reference ID:** 325	
Sample D	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Y2				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing	**Accuracy** (check one) EPE (meters) / PDOP		**Sample Reference ID:** 325	

REMARKS:
HWP: Michael Stroh

RUN LAB DUP ON 1000315

MISSOURI DEPARTMENT OF NATURAL RESOURCES

FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

B31

LABORATORY ORDER ID: 10020202

Collector's Name: (Please Print) Pam BACKLER

Affiliation: (circle one) ESP KCRO NERO SERO SLRO SWRO WPP DGLS HWP Other:

Description of Shipment

Shipped-Carrier:

Tape sealed and initialed

x Hand Delivered

No. Of Containers: 4

Sample Number	Sample Collected	Analyses	Sample Type
1000316 (Sample A)	Date: 1-26-10	Hexavalent Chromium, % moist ms	Grab / x Composite / Modified
For Lab Use Only AB14305	Time: 0900	D.O | Flow | pH | Spec. Cond. | Temp. | Other:	Other:
1000317 (Sample B)	Date: 1-26-10	Hexavalent Chromium, % moist ms	Grab / x Composite / Modified
For Lab Use Only AB14306	Time: 0920	D.O | Flow | pH | Spec. Cond. | Temp. | Other:	Other:
1000318 (Sample C)	Date: 1-26-10	Hexavalent Chromium % moist ms	Grab / x Composite / Modified
For Lab Use Only AB14307	Time: /	D.O | Flow | pH | Spec. Cond. | Temp. | Other:	Other:
1000319 (Sample D)	Date: 1-26-10	Hexavalent Chromium % moist ms	Grab / x Composite / Modified
For Lab Use Only AB14308	Time: 0940	D.O | Flow | pH | Spec. Cond. | Temp. | Other:	Other:

For Lab Use Only

Matrix	Container		Preserved
Water	1L amber	120mL	H_2SO_4
1 Soil	Cubitainer		HNO_3
Organic	2 oz glass	Nalgene	NAOH
Sludge	1 8 oz glass	1L	HCL
Other:	VOA vial	500mL	1 4°C(None)
	Encore	250mL	Disinfected
	Other:		Other

Relinquished By:	Received By:	Date:	Time:
Marilyn A Heller	Kenneth Hannon	2/2/10	11:15
Kenneth Hannon	Dan Rudge	2/2/10	1200
Relinquished By:	Received By:	Date:	Time:

Sample I.D. Letter	Site Description				
Sample A	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Y3				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 325	
Sample B	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Y4				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 325	
Sample C	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): DUPS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 325	
Sample D	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Y1				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 326	

REMARKS:
HWP: Michael Stroh

MISSOURI DEPARTMENT OF NATURAL RESOURCES

FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

B31

LABORATORY ORDER ID: 1002202002

Collector's Name: (Please Print) PAM HACKLER

Affiliation: (circle one) (ESP) KCRO NERO SERO SLRO SWRO WPP DGLS (SWP) Other:

Description of Shipment

Shipped-Carrier:

Tape sealed and initialed

x Hand Delivered

No. Of Containers: 4

Sample Number	Sample Collected	Analyses						Sample Type
1000320 (Sample A)	Date: 1-26-10	Hexavalent Chromium, % moist m s						Grab / x Composite / Modified
For Lab Use Only AB14309	Time: 0950	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:
1000321 (Sample B)	Date: 1-26-10	Hexavalent Chromium % moist m s						Grab / x Composite / Modified
For Lab Use Only AB14310	Time: 1000	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:
1000322 (Sample C)	Date: 1-26-10	Hexavalent Chromium % moist m s						Grab / x Composite / Modified
For Lab Use Only AB14311	Time: 1010	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:
1000323 (Sample D)	Date: 1-26-10	Hexavalent Chromium % moist m s						Grab / x Composite / Modified
For Lab Use Only AB14312	Time: —	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:

For Lab Use Only

Matrix	Container		Preserved
1 Water	1L amber	120mL	H_2SO_4
1 Soil	Cubitainer		HNO_3
Organic	2 oz glass	Nalgene	NAOH
Sludge	8 oz glass	1L	HCL
Other:	VOA vial	500mL	1 4° C(None)
	Encore	250mL	Disinfected
	Other:		Other

Relinquished By:	Received By:	Date:	Time:
Pamela Hackler	Kenneth Hannon	2/2/10	11:15
Kenneth Hannon	David Rentz	2/2/10	1201
Relinquished By:	Received By:	Date:	Time:

Sample I.D. Letter	Site Description				
Sample A	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Y2				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing	**Accuracy** (check one) EPE (meters) / PDOP		**Sample Reference ID:** 326	
Sample B	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Y3				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing	**Accuracy** (check one) EPE (meters) / PDOP		**Sample Reference ID:** 326	
Sample C	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Y4				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing	**Accuracy** (check one) EPE (meters) / PDOP		**Sample Reference ID:** 326	
Sample D	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): DUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing	**Accuracy** (check one) EPE (meters) / PDOP		**Sample Reference ID:** 326	

REMARKS:
HWP: Michael Stroh

RUN LAB Dup on 1800321

MISSOURI DEPARTMENT OF NATURAL RESOURCES

FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

B31

LABORATORY ORDER ID: 100202002

Collector's Name: (Please Print) PAM HACKLER

Affiliation: (circle one) (ESP) KCRO NERO SERO SLRO SWRO WPP DGLS HWP Other:

Description of Shipment

- Shipped-Carrier:
- Tape sealed and initialed
- x Hand Delivered

No. Of Containers: 4

Sample Number	Sample Collected	Analyses						Sample Type
1000324 (Sample A)	Date: 1-27-10	Hexavalent Chromium, %moist MS						Grab / x Composite / Modified
For Lab Use Only AB14315	Time: 0820	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:
1000325 (Sample B)	Date: 1-27-10	Hexavalent Chromium, %moist MS						Grab / x Composite / Modified
For Lab Use Only AB14314	Time: 0835	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:
1000326 (Sample C)	Date: 1-27-10	Hexavalent Chromium, %moist MS						Grab / x Composite / Modified
For Lab Use Only AB14316	Time: 0850	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:
1000327 (Sample D)	Date: 1-27-10	Hexavalent Chromium, %moist MS						Grab / x Composite / Modified
For Lab Use Only AB14316	Time: —	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:

For Lab Use Only

Matrix	Container		Preserved
Water	1L amber	120 mL	H_2SO_4
1 Soil	Cubitainer		HNO_3
Organic	1 2 oz glass	Nalgene	NAOH
Sludge	8 oz glass	1L	HCL
Other:	VOA vial	500mL	1 4° C(None)
	Encore	250mL	Disinfected
	Other:		Other

Relinquished By:	Received By:	Date:	Time:
Pamellya A Hackler	Kenneth Hannon	2/2/10	1115
Kenneth Hannon	Dirk Rudzinski	2/2/10	1202
Relinquished By:	Received By:	Date:	Time:

Sample I.D. Letter	Site Description				
Sample A	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Y1				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing	**Accuracy** (check one) EPE (meters) / PDOP		**Sample Reference ID:** 312	
Sample B	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Y2				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing	**Accuracy** (check one) EPE (meters) / PDOP		**Sample Reference ID:** 312	
Sample C	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Y3				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing	**Accuracy** (check one) EPE (meters) / PDOP		**Sample Reference ID:** 312	
Sample D	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Du IS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing	**Accuracy** (check one) EPE (meters) / PDOP		**Sample Reference ID:** 312	

REMARKS:
HWP: Michael Stroh

MISSOURI DEPARTMENT OF NATURAL RESOURCES

FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

B31

LABORATORY ORDER ID: 100262002

Collector's Name: (Please Print) PAM HACKLER

Affiliation: (circle one) ESP KCRO NERO SERO SLRO SWRO WPP DGLS HWP Other:

Description of Shipment

- Shipped-Carrier:
- Tape sealed and initialed
- x Hand Delivered

No. Of Containers: 4

Sample Number	Sample Collected	Analyses						Sample Type
1000328 (Sample A)	Date: 1-26-10	Hexavalent Chromium, % moist ms						Grab / x Composite / Modified
For Lab Use Only AB14318	Time: 1525	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:
1000329 (Sample B)	Date: 1-26-10	Hexavalent Chromium, % moist ms						Grab / x Composite / Modified
For Lab Use Only AB14319	Time: 1530	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:
1000330 (Sample C)	Date: 1-26-10	Hexavalent Chromium, % moist ms						Grab / x Composite / Modified
For Lab Use Only AB14320	Time: 1535	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:
1000331 (Sample D)	Date: 1-26-10	Hexavalent Chromium, % moist ms						Grab / x Composite / Modified
For Lab Use Only AB14321	Time: 1545	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:

For Lab Use Only

Matrix	Container		Preserved
Water	1L amber	120 mL	H_2SO_4
1 Soil	Cubitainer		HNO_3
Organic	1 2 oz glass	Nalgene	NAOH
Sludge	8 oz glass	1L	HCL
Other:	VOA vial	500mL	1 4° C(None)
	Encore	250mL	Disinfected
	Other:		Other

Relinquished By: Marilyn A Hackler	Received By: Kenneth Hannon	Date: 2/2/10	Time: 1115
Relinquished By: Kenneth Hannon	Received By: Frank Rutzo	Date: 2/2/10	Time: 1203
Relinquished By:	Received By:	Date:	Time:

Sample I.D. Letter	Site Description				
Sample A	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Y1				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 313	
Sample B	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Y2				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 313	
Sample C	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Y3				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 313	
Sample D	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Y4				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 313	

REMARKS:
HWP: Michael Stroh

RUN LAB Dup on 1000329

MISSOURI DEPARTMENT OF NATURAL RESOURCES

FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

B31

LABORATORY ORDER ID: 100202002

Collector's Name: *(Please Print)* Sean Cowihan

Affiliation: *(circle one)* ESP KCRO NERO SERO SLRO SWRO WPP DGLS HWP Other:

Description of Shipment

Shipped-Carrier:

Tape sealed and initialed

x Hand Delivered

No. Of Containers: 4

Sample Number	Sample Collected	Analyses						Sample Type
1006333 (Sample A)	Date: 1-26-10	Hexavalent Chromium, % moist ms						Grab x Composite Modified
For Lab Use Only A0143227	Time: —	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:
1000334 (Sample B)	Date: 1-27-10	Hexavalent Chromium, % moist ms						Grab x Composite Modified
For Lab Use Only A0143228	Time: 1435	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:
1000335 (Sample C)	Date: 1-27-10	Hexavalent Chromium, % moist ms						Grab x Composite Modified
For Lab Use Only A0143229	Time: 1440	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:
1000336 (Sample D)	Date: 1-27-10	Hexavalent Chromium, % moist ms						Grab x Composite Modified
For Lab Use Only A0143230	Time: 1449	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:

For Lab Use Only

Matrix	Container		Preserved
Water	1L amber	120 mL	H_2SO_4
Soil	Cubitainer		HNO_3
Organic	2 oz glass	Nalgene	NAOH
Sludge	8 oz glass	1L	HCL
Other:	VOA vial	500mL	4° C(None)
	Encore	250mL	Disinfected
	Other:		Other

Relinquished By:	Received By:	Date:	Time:
[signature]	Kenneth Hannon	2/2/10	11:15
Kenneth Hannon	[signature]	2/2/10	1204
Relinquished By:	Received By:	Date:	Time:

Sample I.D. Letter	Site Description				
Sample A	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): DUP IS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 313	
Sample B	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Y1				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 301	
Sample C	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Y2				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 301	
Sample D	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Y3				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 301	

REMARKS:

HWP: Michael Stroh

RUN LAB DUP ON 1000333

MISSOURI DEPARTMENT OF NATURAL RESOURCES

FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

B31

LABORATORY ORDER ID: 1002202002

Collector's Name: (Please Print) Sean Counihan

Affiliation: (circle one) (ESP) KCRO NERO SERO SLRO SWRO WPP DGLS (HWP) Other:

Description of Shipment

Shipped-Carrier:

Tape sealed and initialed

x Hand Delivered

No. Of Containers: 4

Sample Number	Sample Collected	Analyses						Sample Type
1000337 (Sample A)	Date: 1-27-10	Hexavalent Chromium, %6 Moist ms						Grab x Composite Modified
For Lab Use Only A614325	Time: 1457	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:
1000338 (Sample B)	Date: 1-27-10	Hexavalent Chromium, %6 Moist ms						Grab x Composite Modified
For Lab Use Only A614326	Time: —	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:
1000339 (Sample C)	Date: 1-27-10	Hexavalent Chromium, %6 moist ms						Grab x Composite Modified
For Lab Use Only A614327	Time: 1430	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:
1000340 (Sample D)	Date: 1-27-10	Hexavalent Chromium, %6 Moist ms						Grab x Composite Modified
For Lab Use Only A614328	Time: 1434	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:

For Lab Use Only

Matrix	Container		Preserved
Water	1L amber	120 mL	H_2SO_4
Soil	Cubitainer		HNO_3
Organic	2 oz glass	Nalgene	NAOH
Sludge	8 oz glass	1L	HCL
Other:	VOA vial	500mL	4° C(None)
	Encore	250mL	Disinfected
	Other:		Other

Relinquished By: [signature]	Received By: Kenneth Hannon	Date: 2/2/10	Time: 11:15
Relinquished By: Kenneth Hannon	Received By: Derk Rudroff	Date: 2/2/10	Time: 1205
Relinquished By:	Received By:	Date:	Time:

Sample I.D. Letter	Site Description				
Sample A 5	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Y4				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 301	
Sample B 6	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): DUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 301	
Sample C 7	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Y1				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 304	
Sample D 8	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Y1 DUPLICATE #1				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 304	

REMARKS:
HWP: Michael Stroh

RUN LAB DUP ON 1000338

MISSOURI DEPARTMENT OF NATURAL RESOURCES

FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

B31

LABORATORY ORDER ID: 10020002

Collector's Name: (Please Print) Ken Hannon

Affiliation: (circle one) (ESP) KCRO NERO SERO SLRO SWRO WPP DGLS HWP Other:

Description of Shipment

- Shipped-Carrier:
- Tape sealed and initialed
- x Hand Delivered

No. Of Containers: 4

Sample Number	Sample Collected	Analyses	Sample Type
1000341 (Sample A)	Date: 1-27-10	Hexavalent Chromium, % moist MS	Grab / x Composite / Modified
For Lab Use Only AB14329	Time: 1438	D.O | Flow | pH | Spec. Cond. | Temp. | Other:	Other:
1000342 (Sample B)	Date: 1-27-10	Hexavalent Chromium % moist MS	Grab / x Composite / Modified
For Lab Use Only AB14330	Time: 1440	D.O | Flow | pH | Spec. Cond. | Temp. | Other:	Other:
1000343 (Sample C)	Date: 1-27-10	Hexavalent Chromium, % moist MS	Grab / x Composite / Modified
For Lab Use Only AB14331	Time: 1450	D.O | Flow | pH | Spec. Cond. | Temp. | Other:	Other:
1000344 (Sample D)	Date: 1-27-10	Hexavalent Chromium, % moist MS	Grab / x Composite / Modified
For Lab Use Only AB14332	Time: 1500	D.O | Flow | pH | Spec. Cond. | Temp. | Other:	Other:

For Lab Use Only

Matrix	Container		Preserved
1 Water	1L amber	120 mL	H_2SO_4
1 Soil	Cubitainer		HNO_3
Organic	2 oz glass	Nalgene	NAOH
Sludge	8 oz glass	1L	HCL
Other:	VOA vial	500mL	1 4° C(None)
	Encore	250mL	Disinfected
	Other:		Other

Relinquished By:	Received By:	Date:	Time:
Kenneth Hannon	Derek Rudroff	2/2/10	1206
Relinquished By:	Received By:	Date:	Time:
Relinquished By:	Received By:	Date:	Time:

Sample I.D. Letter	Site Description				
Sample A	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Y1 DUPLICATE #2				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 304	
Sample B	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Y2				
0	**GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):** X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 304	
Sample C	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Y3				
1	**GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):** X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 304	
Sample D	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Y4				
2	**GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):** X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 304	

REMARKS:
HWP: Michael Stroh

MISSOURI DEPARTMENT OF NATURAL RESOURCES

FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

B31

LABORATORY ORDER ID: 100202002

Collector's Name: (Please Print) Ken Hannon ~~Pam Boerger~~

Affiliation: (circle one) (ESP) KCRO NERO SERO SLRO SWRO WPP DGLS (HWP) Other:

Description of Shipment

- ___ Shipped-Carrier:
- ___ Tape sealed and initialed
- x Hand Delivered

No. Of Containers: 4

Sample Number	Sample Collected	Analyses						Sample Type
1000345 (Sample A)	Date: 1-27-10	Hexavalent Chromium, % moists						___ Grab x Composite ___ Modified
For Lab Use Only AB14333	Time: ~	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	___ Other:
1000346 (Sample B)	Date: 1-27-10	Hexavalent Chromium % moists						___ Grab x Composite ___ Modified
For Lab Use Only AB14334	Time: 1500	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	___ Other:
1000347 (Sample C)	Date: 1-27-10	Hexavalent Chromium, % moists						___ Grab x Composite ___ Modified
For Lab Use Only AB14335	Time: 1510	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	___ Other:
1000348 (Sample D)	Date: 1-27-10	Hexavalent Chromium, % moists						___ Grab x Composite ___ Modified
For Lab Use Only AB14336	Time: 1520	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	___ Other:

For Lab Use Only

Matrix	Container		Preserved
Water	1L amber	120 mL	H_2SO_4
Soil	Cubitainer		HNO_3
Organic	2 oz glass	Nalgene	NAOH
Sludge	8 oz glass	1L	HCL
Other:	VOA vial	500mL	4° C(None)
	Encore	250mL	Disinfected
	Other:		Other

Relinquished By: Kenneth Hannon	Received By: Derek Metzger	Date: 2/7/10	Time: 1207
Relinquished By:	Received By:	Date:	Time:
Relinquished By:	Received By:	Date:	Time:

Sample I.D. Letter	Site Description				
Sample A	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): DUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 304	
Sample B	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8 303	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Y1				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:**	
Sample C	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8 303	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Y2				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:**	
Sample D	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8 303	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Y3				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:**	

REMARKS:
HWP: Michael Stroh

RUN LAB DUP ON 1000345

MISSOURI DEPARTMENT OF NATURAL RESOURCES

FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

B31

LABORATORY ORDER ID: 100202002

Collector's Name: (Please Print) PAM HACKLER ~~SEAN Cunhan~~

Affiliation: (circle one) (ESP) KCRO NERO SERO SLRO SWRO WPP DGLS ~~HWP~~ Other:

Description of Shipment

Shipped-Carrier:

__ Tape sealed and initialed

x Hand Delivered

No. Of Containers: 4

Sample Number	Sample Collected	Analyses						Sample Type
1000349 (Sample A)	Date: 1-27-10	Hexavalent Chromium, %moist ms						__ Grab x Composite __ Modified
For Lab Use Only A614338	Time: 1530 ~~1-27-10~~ ms	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	__ Other:
1000350 (Sample B)	Date: 1-27-10	Hexavalent Chromium %moist ms						__ Grab x Composite __ Modified
For Lab Use Only A614~~339~~338	Time: /	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	__ Other:
1000351 (Sample C)	Date: 1-27-10	Hexavalent Chromium, %moist ms						__ Grab x Composite __ Modified
For Lab Use Only A614~~339~~	Time: 1254	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	__ Other:
1000352 (Sample D)	Date: 1-27-10	Hexavalent Chromium %moist ms						__ Grab x Composite __ Modified
For Lab Use Only A614340	Time: 1302	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	__ Other:

For Lab Use Only

Matrix	Container		Preserved
Water	1L amber	120 mL	H_2SO_4
Soil	Cubitainer		HNO_3
Organic	2 oz glass	Nalgene	NAOH
Sludge	8 oz glass	1L	HCL
Other:	VOA vial	500mL	4° C(None)
	Encore	250mL	Disinfected
	Other:		Other

Relinquished By:	Received By:	Date:	Time:
Tanya A Hackler	Kenneth Hannon	2/2/10	1115
Kenneth Hannon	Durk Prudzyn	2/2/10	1208

Sample I.D. Letter	Site Description				
Sample A	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Y4				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 303	
Sample B	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): DUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 303	
Sample C	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Y1				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 306	
Sample D	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Y2				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 306	

REMARKS:
HWP: Michael Stroh

MISSOURI DEPARTMENT OF NATURAL RESOURCES

FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

B31

LABORATORY ORDER ID: 100202002

Collector's Name: (Please Print) Sean Canihan

Affiliation: (circle one) (ESP) KCRO NERO SERO SLRO SWRO WPP DGLS HWP Other:

Description of Shipment

- ___ Shipped-Carrier:
- ___ Tape sealed and initialed
- x Hand Delivered

No. Of Containers: 4

Sample Number	Sample Collected	Analyses	Sample Type
1000353 (Sample A)	Date: 1-27-10	Hexavalent Chromium, % moist ms	___ Grab x Composite ___ Modified
For Lab Use Only AB14341	Time: 1310	D.O / Flow / pH / Spec. Cond. / Temp. / Other:	___ Other:
1000354 (Sample B)	Date: 1-27-10	Hexavalent Chromium, % moist ms	___ Grab x Composite ___ Modified
For Lab Use Only AB14342	Time: /	D.O / Flow / pH / Spec. Cond. / Temp. / Other:	___ Other:
1000355 (Sample C)	Date: 1-26-10	Hexavalent Chromium, % moist ms	___ Grab x Composite ___ Modified
For Lab Use Only AB14343	Time: 1610	D.O / Flow / pH / Spec. Cond. / Temp. / Other:	___ Other:
1000356 (Sample D)	Date: 1-26-10	Hexavalent Chromium % moist ms	___ Grab x Composite ___ Modified
For Lab Use Only AB14344	Time: 1615	D.O / Flow / pH / Spec. Cond. / Temp. / Other:	___ Other:

For Lab Use Only

Matrix	Container	Preserved
Water	1L amber ___ 120 mL	H_2SO_4
Soil	Cubitainer	HNO_3
Organic	2 oz glass Nalgene	NAOH
Sludge	8 oz glass 1L	HCL
Other:	VOA vial ___ 500mL	4° C(None)
	Encore ___ 250mL	Disinfected
	Other:	Other

Relinquished By:	Received By:	Date:	Time:
Sean Cahn	Kenneth Hannon	2/2/10	1115
Kenneth Hannon	Dirk Rudzinski	2/2/10	1209
Relinquished By:	Received By:	Date:	Time:

Sample I.D. Letter	Site Description				
Sample A	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Y3				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing	**Accuracy**	(check one) EPE (meters) / PDOP	**Sample Reference ID:** 306	
Sample B	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): DUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing	**Accuracy**	(check one) EPE (meters) / PDOP	**Sample Reference ID:** 306	
Sample C	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Y1				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing	**Accuracy**	(check one) EPE (meters) / PDOP	**Sample Reference ID:** 302	
Sample D	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Y2				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing	**Accuracy**	(check one) EPE (meters) / PDOP	**Sample Reference ID:** 302	

REMARKS:
HWP: Michael Stroh

MISSOURI DEPARTMENT OF NATURAL RESOURCES

FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

B31

LABORATORY ORDER ID: 1002002002

Collector's Name: (Please Print) Sean Counihan

Affiliation: (circle one) ESP KCRO NERO SERO SLRO SWRO WPP DGLS HWP Other:

Description of Shipment

Shipped-Carrier:

Tape sealed and initialed

x Hand Delivered

No. Of Containers: 4

Sample Number	Sample Collected	Analyses						Sample Type	For Lab Use Only: Matrix	Container		Preserved
1000357 (Sample A)	Date: 1-26-10	Hexavalent Chromium 1% moist ms						Grab / x Composite / Modified / Other:	Water / I Soil / Organic / Sludge / Other:	1L amber 120 mL / Cubitainer / 2 oz glass Nalgene / I 8 oz glass 1L / VOA vial 500mL / Encore 250mL / Other:		H_2SO_4 / HNO_3 / NAOH / HCL / I 4° C(None) / Disinfected / Other
For Lab Use Only AB14345	Time: 1625	D.O	Flow	pH	Spec. Cond.	Temp.	Other:					
1000358 (Sample B)	Date: 1-26-10	Hexavalent Chromium 0% moist ms						Grab / x Composite / Modified / Other:	I Soil / Organic / Sludge / Other:	1L amber 120 mL / Cubitainer / 2 oz glass Nalgene / I 8 oz glass 1L / VOA vial 500mL / Encore 250mL / Other:		H_2SO_4 / HNO_3 / NAOH / HCL / I 4° C(None) / Disinfected / Other
For Lab Use Only AB14346	Time: 1647	D.O	Flow	pH	Spec. Cond.	Temp.	Other:					
1000359 (Sample C)	Date: 1-26-10	Hexavalent Chromium 0% moist ms						Grab / x Composite / Modified / Other:	I Soil / Organic / Sludge / Other:	1L amber 120 mL / Cubitainer / 2 oz glass Nalgene / I 8 oz glass 1L / VOA vial 500mL / Encore 250mL / Other:		H_2SO_4 / HNO_3 / NAOH / HCL / I 4° C(None) / Disinfected / Other
For Lab Use Only AB14347	Time: 1650	D.O	Flow	pH	Spec. Cond.	Temp.	Other:					
1000360 (Sample D)	Date: 1-26-10	Hexavalent Chromium 0% moist ms						Grab / x Composite / Modified / Other:	I Soil / Organic / Sludge / Other:	1L amber 120 mL / Cubitainer / 2 oz glass Nalgene / I 8 oz glass 1L / VOA vial 500mL / Encore 250mL / Other:		H_2SO_4 / HNO_3 / NAOH / HCL / I 4° C(None) / Disinfected / Other
For Lab Use Only AB14348	Time: /	D.O	Flow	pH	Spec. Cond.	Temp.	Other:					

Relinquished By:	Received By: Kenneth Hannon	Date: 2/2/10	Time: 11:15
Relinquished By: Kenneth Hannon	Received By: Drink Mudryk	Date: 2/2/10	Time: 1210
Relinquished By:	Received By:	Date:	Time:

Sample I.D. Letter	Site Description				
Sample A	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Y3				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 302	
Sample B	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Y3 DUPLICATE #2				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 302	
Sample C	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Y3 DUPLICATE #2				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 302	
Sample D	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): DUP IS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 302	

REMARKS:
HWP: Michael Stroh

RUN LAB DUP ON 1000357

MISSOURI DEPARTMENT OF NATURAL RESOURCES

FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

LABORATORY ORDER ID: 1002033001

Collector's Name: (Please Print) PAM HACKLER

Affiliation: (circle one) (ESP) KCRO NERO SERO SLRO SWRO WPP DGLS HWP Other:

Description of Shipment

- Shipped-Carrier:
- Tape sealed and initialed
- x Hand Delivered

No. Of Containers: 4

Sample Number	Sample Collected	Analyses	Sample Type	For Lab Use Only: Matrix	Container	Preserved
1000361 (Sample A)	Date: 1-26-10	Hexavalent Chromium; Percent Moisture	x Grab; MS x Composite; Modified; Other:	Water; ✓ Soil; Organic; Sludge; Other:	1L amber; 120 mL; Cubitainer; 2 oz glass; Nalgene; ✓ 8 oz glass; 1L; VOA vial; 500mL; Encore; 250mL; Other:	H_2SO_4; HNO_3; NAOH; HCL; ✓ 4° C(None); Disinfected; Other
For Lab Use Only AB14350	Time: 1057	D.O; Flow; pH; Spec. Cond.; Temp.; Other:				
1000362 (Sample B)	Date: 1-26-10	Hexavalent Chromium; Percent Moisture	x Grab; MS x Composite; Modified; Other:	Water; ✓ Soil; Organic; Sludge; Other:	1L amber; 120 mL; Cubitainer; 2 oz glass; Nalgene; ✓ 8 oz glass; 1L; VOA vial; 500mL; Encore; 250mL; Other:	H_2SO_4; HNO_3; NAOH; HCL; ✓ 4° C(None); Disinfected; Other
For Lab Use Only AB14351	Time: 0946	D.O; Flow; pH; Spec. Cond.; Temp.; Other:				
1000363 (Sample C)	Date: 1-26-10	Hexavalent Chromium; Percent Moisture	x Grab; MS x Composite; Modified; Other:	Water; ✓ Soil; Organic; Sludge; Other:	1L amber; 120 mL; Cubitainer; 2 oz glass; Nalgene; ✓ 8 oz glass; 1L; VOA vial; 500mL; Encore; 250mL; Other:	H_2SO_4; HNO_3; NAOH; HCL; ✓ 4° C(None); Disinfected; Other
For Lab Use Only AB14352	Time: 1200	D.O; Flow; pH; Spec. Cond.; Temp.; Other:				
1000364 (Sample D)	Date: 1-26-10	Hexavalent Chromium; Percent Moisture	x Grab; MS x Composite; Modified; Other:	Water; ✓ Soil; Organic; Sludge; Other:	1L amber; 120 mL; Cubitainer; 2 oz glass; Nalgene; ✓ 8 oz glass; 1L; VOA vial; 500mL; Encore; 250mL; Other:	H_2SO_4; HNO_3; NAOH; HCL; ✓ 4° C(None); Disinfected; Other
For Lab Use Only AB14353	Time: 1150	D.O; Flow; pH; Spec. Cond.; Temp.; Other:				

Relinquished By: Pam Hackler	Received By:	Date: 2-2-10	Time: 1630
Relinquished By:	Received By: Freda Mace	Date: 2-2-10	Time: 16:38
Relinquished By:	Received By:	Date:	Time:

Sample I.D. Letter	Site Description				
Sample A 50	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): SU 102.02				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 218	
Sample B 51	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): ~~SU 218~~ MS SU 87.04				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 218	
Sample C 52	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): SU 59.09				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 207	
Sample D 53	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): SU 59.07				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 202	

REMARKS:
HWP: Michael Stroh

EXPIDITED 48 HR TURNAROUND

MISSOURI DEPARTMENT OF NATURAL RESOURCES

FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

LABORATORY ORDER ID: 10020 3001

Collector's Name: (Please Print) PAM HACKLER

Affiliation: (circle one) (ESP) KCRO NERO SERO SLRO SWRO WPP DGLS HWP Other:

Description of Shipment

Shipped-Carrier:

__ Tape sealed and initialed

x Hand Delivered

No. Of Containers: 2

Sample Number	Sample Collected	Analyses						Sample Type	For Lab Use Only: Matrix	Container		Preserved
1000365 (Sample A)	Date: 1-26-10	Hexavalent Chromium Percent Moisture						X Grab MS X Composite __ Modified	__ Water ✓ Soil __ Organic __ Sludge	__ 1L amber __ 120 mL __ Cubitainer __ 2 oz glass Nalgene ✓ 8 oz glass __ 1L		__ H_2SO_4 __ HNO_3 __ NAOH __ HCL
For Lab Use Only AB14354	Time: 1310	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	__ Other:	__ Other:	__ VOA vial __ 500mL __ Encore __ 250mL __ Other:		✓ 4° C(None) __ Disinfected __ Other
1000366 (Sample B)	Date: 1-26-10	Hexavalent Chromium Percent Moisture						X Grab X Composite MS __ Modified	__ Water ✓ Soil __ Organic __ Sludge	__ 1L amber __ 120 mL __ Cubitainer __ 2 oz glass Nalgene ✓ 8 oz glass __ 1L		__ H_2SO_4 __ HNO_3 __ NAOH __ HCL
For Lab Use Only AB14355	Time: 1330	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	__ Other:	__ Other:	__ VOA vial __ 500mL __ Encore __ 250mL __ Other:		✓ 4° C(None) __ Disinfected __ Other
~~1000367~~ MS (Sample C)	Date:	Hexavalent Chromium Percent Moisture						X Grab X Composite MS __ Modified	__ Water __ Soil __ Organic __ Sludge	__ 1L amber __ 120 mL __ Cubitainer __ 2 oz glass Nalgene __ 8 oz glass __ 1L		__ H_2SO_4 __ HNO_3 __ NAOH __ HCL
For Lab Use Only	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	__ Other:	__ Other:	__ VOA vial __ 500mL __ Encore __ 250mL __ Other:		__ 4° C(None) __ Disinfected __ Other
(Sample D)	Date:	Hexavalent Chromium Percent Moisture						MS X Grab X Composite __ Modified	__ Water __ Soil __ Organic __ Sludge	__ 1L amber __ 120 mL __ Cubitainer __ 2 oz glass Nalgene __ 8 oz glass __ 1L		__ H_2SO_4 __ HNO_3 __ NAOH __ HCL
For Lab Use Only	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	__ Other:	__ Other:	__ VOA vial __ 500mL __ Encore __ 250mL __ Other:		__ 4° C(None) __ Disinfected __ Other

Relinquished By: PAM HACKLER	Received By: Michael Stur	Date: 2-2-10	Time: 1630
Relinquished By: Michael Stur	Received By: Brenda Mace	Date: 2-2-10	Time: 16:38
Relinquished By:	Received By:	Date:	Time:

Sample I.D. Letter	Site Description				
Sample A 54	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): SA 79.03				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 202	
Sample B 55	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): SA 146.08				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:** 218	
Sample C	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:**	
Sample D	**Facility ID:**	**Site/Study Name:** Tannery Sludge Farm Fields	**County:** (Multiple)	**LDPR Code:** FEPA8	**Job Code:** NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): X Easting / Y Northing		**Accuracy** (check one) EPE (meters) / PDOP	**Sample Reference ID:**	

REMARKS:
HWP: Michael Stroh

EXPIDITED 48 HR TURN AROUND

Missouri Department of Natural Resources
Environmental Services Program

Order ID 100211001 **Program, Contact:** HWP Julieann Warren

Report Date: 03/18/2010 **LDPR/JobCode:** FEPA8 / NJ10TSFF

Sample: AB14404
Customer #: 1000354

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: 59 SUIS

Site: Tannery Sludge Farm Fields
Sample Reference ID: 202
Affiliation: ESP
Collect Date: 1/26/2010 2:15:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Aluminum	11700000	09	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Iron	24400000	09	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Manganese	527000		ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Molybdenum	1340		ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Vanadium	35700		ug/kg	3,884	SW 846 6010B
Hexavalent Chromium	Hexavalent Chromium	0.61	04	mg/Kg	3,996	Contract Lab Dep
Oxidation Reduction Potential	Oxidation Reduction Potential	449	04	mV	3,991	Contract Lab Dep
Percent Moisture	Percent Moisture	3.82		%	3,421	Infrared Drying
pH	pH	6.28	04	pH Units	3,992	Contract Lab Dep
Total Organic Carbon	Total Organic Carbon	4.4	04	%	3,993	Contract Lab Dep

Sample: AB14405
Customer #: 1000355

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: 18 SUIS

Site: Tannery Sludge Farm Fields
Sample Reference ID: 203
Affiliation: ESP
Collect Date: 1/26/2010 3:30:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Aluminum	13400000	09	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Iron	13300000	09	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Manganese	449000	09	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Molybdenum	365	05	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Vanadium	36400		ug/kg	3,884	SW 846 6010B
Hexavalent Chromium	Hexavalent Chromium	0.42	04	mg/Kg	3,996	Contract Lab Dep
Oxidation Reduction Potential	Oxidation Reduction Potential	433	04	mV	3,991	Contract Lab Dep

Sample: AB14405
Customer #: 1000355

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: 18 SUIS

Site: Tannery Sludge Farm Fields
Sample Reference ID: 203
Affiliation: ESP
Collect Date: 1/26/2010 3:30:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Percent Moisture	Percent Moisture	3.71		%	3,421	Infrared Drying
pH	pH	6.85	04	pH Units	3,992	Contract Lab Dep
Total Organic Carbon	Total Organic Carbon	4.1	04	%	3,993	Contract Lab Dep

Sample: AB14406
Customer #: 1000356

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: 42 SUIS

Site: Tannery Sludge Farm Fields
Sample Reference ID: 204
Affiliation: ESP
Collect Date: 1/27/2010 12:56:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Aluminum	18300000	09	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Iron	25000000	09	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Manganese	334000		ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Molybdenum	815		ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Vanadium	45100		ug/kg	3,884	SW 846 6010B
Hexavalent Chromium	Hexavalent Chromium	0.67	04	mg/Kg	3,996	Contract Lab Dep
Oxidation Reduction Potential	Oxidation Reduction Potential	465	04	mV	3,991	Contract Lab Dep
Percent Moisture	Percent Moisture	4.15		%	3,421	Infrared Drying
pH	pH	7.86	04	pH Units	3,992	Contract Lab Dep
Total Organic Carbon	Total Organic Carbon	4.9	04	%	3,993	Contract Lab Dep

Sample: AB14407
Customer #: 1000357

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: 96 SUIS

Site: Tannery Sludge Farm Fields
Sample Reference ID: 205
Affiliation: ESP
Collect Date: 1/26/2010 11:00:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Aluminum	12300000	09	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Iron	34300000	09	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Manganese	410000	09	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Molybdenum	2070		ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Vanadium	31900		ug/kg	3,884	SW 846 6010B

Sample: AB14407

Customer #: 1000357

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: 96 SUIS

Site: Tannery Sludge Farm Fields
Sample Reference ID: 205
Affiliation: ESP
Collect Date: 1/26/2010 11:00:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.05	04	mg/Kg	3,996	Contract Lab Dep
Oxidation Reduction Potential	Oxidation Reduction Potential	477	04	mV	3,991	Contract Lab Dep
Percent Moisture	Percent Moisture	5.48		%	3,421	Infrared Drying
pH	pH	5.90	04	pH Units	3,992	Contract Lab Dep
Total Organic Carbon	Total Organic Carbon	4.5	04	%	3,993	Contract Lab Dep

Sample: AB14408

Customer #: 1000358

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: 109 SUIS

Site: Tannery Sludge Farm Fields
Sample Reference ID: 209
Affiliation: ESP
Collect Date: 1/25/2010 2:00:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Aluminum	7440000	09	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Iron	16000000	09	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Manganese	649000	09	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Molybdenum	259	05	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Vanadium	19900		ug/kg	3,884	SW 846 6010B
Hexavalent Chromium	Hexavalent Chromium	0.66	04	mg/Kg	3,996	Contract Lab Dep
Oxidation Reduction Potential	Oxidation Reduction Potential	351	04	mV	3,991	Contract Lab Dep
Percent Moisture	Percent Moisture	1.4		%	3,421	Infrared Drying
pH	pH	7.87	04	pH Units	3,992	Contract Lab Dep
Total Organic Carbon	Total Organic Carbon	0.81	04	%	3,993	Contract Lab Dep

Sample: AB14409

Customer #: 1000359

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: 30 SUIS

Site: Tannery Sludge Farm Fields
Sample Reference ID: 210
Affiliation: ESP
Collect Date: 1/26/2010 12:00:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Aluminum	12700000	09	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Iron	16300000	09	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Manganese	472000		ug/kg	3,884	SW 846 6010B

Sample: AB14409

Customer #: 1000359

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: 30 SUIS

Site: Tannery Sludge Farm Fields
Sample Reference ID: 210
Affiliation: ESP
Collect Date: 1/26/2010 12:00:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Molybdenum	328	05	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Vanadium	34200		ug/kg	3,884	SW 846 6010B
Hexavalent Chromium	Hexavalent Chromium	0.22	04	mg/Kg	3,996	Contract Lab Dep
Oxidation Reduction Potential	Oxidation Reduction Potential	352	04	mV	3,991	Contract Lab Dep
Percent Moisture	Percent Moisture	1.96		%	3,421	Infrared Drying
pH	pH	7.87	04	pH Units	3,992	Contract Lab Dep
Total Organic Carbon	Total Organic Carbon	0.47	04	%	3,993	Contract Lab Dep

Sample: AB14410

Customer #: 1000360

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: 53 SUIS

Site: Tannery Sludge Farm Fields
Sample Reference ID: 212
Affiliation: ESP
Collect Date: 1/27/2010 9:02:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Aluminum	12600000	09	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Iron	44300000	09	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Manganese	585000	09	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Molybdenum	3210		ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Vanadium	31400		ug/kg	3,884	SW 846 6010B
Hexavalent Chromium	Hexavalent Chromium	0.60	04	mg/Kg	3,996	Contract Lab Dep
Oxidation Reduction Potential	Oxidation Reduction Potential	469	04	mV	3,991	Contract Lab Dep
Percent Moisture	Percent Moisture	4.02		%	3,421	Infrared Drying
pH	pH	6.61	04	pH Units	3,992	Contract Lab Dep
Total Organic Carbon	Total Organic Carbon	4.5	04	%	3,993	Contract Lab Dep

Sample: AB14411

Customer #: 1000361

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: 44 SUIS

Site: Tannery Sludge Farm Fields
Sample Reference ID: 213
Affiliation: ESP
Collect Date: 1/26/2010 4:00:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Aluminum	15000000	09	ug/kg	3,884	SW 846 6010B

Sample: AB14411

Customer #: 1000361

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: 44 SUIS

Site: Tannery Sludge Farm Fields
Sample Reference ID: 213
Affiliation: ESP
Collect Date: 1/26/2010 4:00:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Iron	34400000	09	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Manganese	358000		ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Molybdenum	2310		ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Vanadium	42200		ug/kg	3,884	SW 846 6010B
Hexavalent Chromium	Hexavalent Chromium	0.83	04	mg/Kg	3,996	Contract Lab Dep
Oxidation Reduction Potential	Oxidation Reduction Potential	407	04	mV	3,991	Contract Lab Dep
Percent Moisture	Percent Moisture	3.95		%	3,421	Infrared Drying
pH	pH	6.62	04	pH Units	3,992	Contract Lab Dep
Total Organic Carbon	Total Organic Carbon	5.5	04	%	3,993	Contract Lab Dep

Sample: AB14412

Customer #: 1000362

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: 25 SUIS

Site: Tannery Sludge Farm Fields
Sample Reference ID: 214
Affiliation: ESP
Collect Date: 1/27/2010 11:18:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Aluminum	13900000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Iron	55400000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Manganese	472000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Molybdenum	5310		ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Vanadium	30600	11	ug/kg	3,886	SW 846 6010B
Hexavalent Chromium	Hexavalent Chromium	1.61	04	mg/Kg	3,996	Contract Lab Dep
Oxidation Reduction Potential	Oxidation Reduction Potential	487	04	mV	3,991	Contract Lab Dep
Percent Moisture	Percent Moisture	5.35		%	3,421	Infrared Drying
pH	pH	6.78	04	pH Units	3,992	Contract Lab Dep
Total Organic Carbon	Total Organic Carbon	5.4	04	%	3,993	Contract Lab Dep

Sample: AB14413

Customer #: 1000363

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 215
Collector: KEN HANNON
Affiliation: ESP
Collect Date: 1/27/2010 10:46:00AM
Sample Comment: 55 SUIS

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Aluminum	16800000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Iron	18300000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Manganese	402000		ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Molybdenum	971		ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Vanadium	50500		ug/kg	3,886	SW 846 6010B
Hexavalent Chromium	Hexavalent Chromium	0.069	04	mg/Kg	3,996	Contract Lab Dep
Oxidation Reduction Potential	Oxidation Reduction Potential	420	04	mV	3,991	Contract Lab Dep
Percent Moisture	Percent Moisture	2.67		%	3,421	Infrared Drying
pH	pH	6.45	04	pH Units	3,992	Contract Lab Dep
Total Organic Carbon	Total Organic Carbon	4.4	04	%	3,993	Contract Lab Dep

Sample: AB14414

Customer #: 1000364

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 216
Collector: KEN HANNON
Affiliation: ESP
Collect Date: 1/26/2010 3:40:00PM
Sample Comment: 50 SUIS

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Aluminum	16400000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Iron	31500000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Manganese	462000		ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Molybdenum	1620		ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Vanadium	40500		ug/kg	3,886	SW 846 6010B
Hexavalent Chromium	Hexavalent Chromium	0.69	04	mg/Kg	3,996	Contract Lab Dep
Oxidation Reduction Potential	Oxidation Reduction Potential	422	04	mV	3,991	Contract Lab Dep
Percent Moisture	Percent Moisture	4.06		%	3,422	Infrared Drying
pH	pH	6.81	04	pH Units	3,992	Contract Lab Dep
Total Organic Carbon	Total Organic Carbon	5.1	04	%	3,993	Contract Lab Dep

Sample: AB14415
Customer #: 1000365

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: 103 SUIS

Site: Tannery Sludge Farm Fields
Sample Reference ID: 217
Affiliation: ESP
Collect Date: 1/26/2010 12:45:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Aluminum	14000000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Iron	40900000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Manganese	298000		ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Molybdenum	3230		ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Vanadium	41900		ug/kg	3,886	SW 846 6010B
Hexavalent Chromium	Hexavalent Chromium	0.79	04	mg/Kg	3,996	Contract Lab Dep
Oxidation Reduction Potential	Oxidation Reduction Potential	468	04	mV	3,991	Contract Lab Dep
Percent Moisture	Percent Moisture	3.36		%	3,422	Infrared Drying
pH	pH	5.91	04	pH Units	3,992	Contract Lab Dep
Total Organic Carbon	Total Organic Carbon	6.4	04	%	3,993	Contract Lab Dep

Sample: AB14416
Customer #: 1000366

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: 146 SUIS

Site: Tannery Sludge Farm Fields
Sample Reference ID: 218
Affiliation: ESP
Collect Date: 1/26/2010 9:40:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Aluminum	16100000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Iron	42500000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Manganese	493000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Molybdenum	2580		ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Vanadium	39300		ug/kg	3,886	SW 846 6010B
Hexavalent Chromium	Hexavalent Chromium	1.83	04	mg/Kg	3,996	Contract Lab Dep
Oxidation Reduction Potential	Oxidation Reduction Potential	444	04	mV	3,991	Contract Lab Dep
Percent Moisture	Percent Moisture	8.60		%	3,422	Infrared Drying
pH	pH	7.59	04	pH Units	3,992	Contract Lab Dep
Total Organic Carbon	Total Organic Carbon	6.3	04	%	3,993	Contract Lab Dep

Sample: AB14417
Customer #: 1000367

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: 55 SUIS

Site: Tannery Sludge Farm Fields
Sample Reference ID: 219
Affiliation: ESP
Collect Date: 1/26/2010 9:00:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Aluminum	19100000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Iron	21100000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Manganese	517000		ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Molybdenum	602		ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Vanadium	45300		ug/kg	3,886	SW 846 6010B
Hexavalent Chromium	Hexavalent Chromium	1.11	04	mg/Kg	3,996	Contract Lab Dep
Oxidation Reduction Potential	Oxidation Reduction Potential	475	04	mV	3,991	Contract Lab Dep
Percent Moisture	Percent Moisture	3.11		%	3,422	Infrared Drying
pH	pH	6.34	04	pH Units	3,992	Contract Lab Dep
Total Organic Carbon	Total Organic Carbon	1.3	04	%	3,993	Contract Lab Dep

Sample: AB14418
Customer #: 1000368

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: 150 SUIS

Site: Tannery Sludge Farm Fields
Sample Reference ID: 221
Affiliation: ESP
Collect Date: 1/25/2010 5:04:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Aluminum	23600000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Iron	21400000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Manganese	356000		ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Molybdenum	514		ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Vanadium	52500		ug/kg	3,886	SW 846 6010B
Hexavalent Chromium	Hexavalent Chromium	3.40	04	mg/Kg	3,996	Contract Lab Dep
Oxidation Reduction Potential	Oxidation Reduction Potential	434	04	mV	3,991	Contract Lab Dep
Percent Moisture	Percent Moisture	2.53		%	3,422	Infrared Drying
pH	pH	7.25	04	pH Units	3,992	Contract Lab Dep
Total Organic Carbon	Total Organic Carbon	2.1	04	%	3,993	Contract Lab Dep

Sample: AB14419
Customer #: 1000369
Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: 41 SUIS
Site: Tannery Sludge Farm Fields
Sample Reference ID: 222
Affiliation: ESP
Collect Date: 1/25/2010 4:58:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Aluminum	25700000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Iron	23100000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Manganese	456000		ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Molybdenum	701		ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Vanadium	59500		ug/kg	3,886	SW 846 6010B
Hexavalent Chromium	Hexavalent Chromium	3.29	04	mg/Kg	3,996	Contract Lab Dep
Oxidation Reduction Potential	Oxidation Reduction Potential	422	04	mV	3,991	Contract Lab Dep
Percent Moisture	Percent Moisture	2.90		%	3,422	Infrared Drying
pH	pH	7.38	04	pH Units	3,992	Contract Lab Dep
Total Organic Carbon	Total Organic Carbon	2.2	04	%	3,993	Contract Lab Dep

Sample: AB14420
Customer #: 1000370
Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: 29 SUIS
Site: Tannery Sludge Farm Fields
Sample Reference ID: 202
Affiliation: ESP
Collect Date: 1/26/2010 2:44:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.27	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	5.5	04	%	4,083	Infrared Drying

Sample: AB14421
Customer #: 1000371
Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: 79 SUIS
Site: Tannery Sludge Farm Fields
Sample Reference ID: 202
Affiliation: ESP
Collect Date: 1/26/2010 2:15:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.13	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	1.8	04	%	4,083	Infrared Drying

Sample: AB14423
Customer #: 1000373

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: 7 SUIS

Site: Tannery Sludge Farm Fields
Sample Reference ID: 203
Affiliation: ESP
Collect Date: 1/27/2010 3:30:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.39	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	4.3	04	%	4,083	Infrared Drying

Sample: AB14424
Customer #: 1000374

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: 27 SUIS

Site: Tannery Sludge Farm Fields
Sample Reference ID: 203
Affiliation: ESP
Collect Date: 1/27/2010 3:30:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.28	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	1.8	04	%	4,083	Infrared Drying

Sample: AB14426
Customer #: 1000376

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: 99 SUIS

Site: Tannery Sludge Farm Fields
Sample Reference ID: 204
Affiliation: ESP
Collect Date: 1/27/2010 12:56:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.41	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	2.3	04	%	4,083	Infrared Drying

Sample: AB14427
Customer #: 1000377

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: 23 SUIS

Site: Tannery Sludge Farm Fields
Sample Reference ID: 204
Affiliation: ESP
Collect Date: 1/27/2010 1:50:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.46	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	3.0	04	%	4,083	Infrared Drying

Sample: AB14429

Customer #: 1000379

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: 71 SUIS

Site: Tannery Sludge Farm Fields
Sample Reference ID: 205
Affiliation: ESP
Collect Date: 1/26/2010 11:20:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.27	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	1.2	04	%	4,083	Infrared Drying

Sample: AB14430

Customer #: 1000380

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: 34 SUIS

Site: Tannery Sludge Farm Fields
Sample Reference ID: 205
Affiliation: ESP
Collect Date: 1/26/2010 11:00:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.62	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	1.2	04	%	4,083	Infrared Drying

Sample: AB14431

Customer #: 1000381

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: DUIS

Site: Tannery Sludge Farm Fields
Sample Reference ID: 205
Affiliation: ESP
Collect Date: 1/26/2010 11:00:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.63	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	2.5	04	%	4,083	Infrared Drying

Sample: AB14432

Customer #: 1000382

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: 138 SUIS

Site: Tannery Sludge Farm Fields
Sample Reference ID: 209
Affiliation: ESP
Collect Date: 1/25/2010 2:00:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.69	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	0.8	04	%	4,083	Infrared Drying

Sample: AB14433
Customer #: 1000383

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: 144 SUIS

Site: Tannery Sludge Farm Fields
Sample Reference ID: 209
Affiliation: ESP
Collect Date: 1/25/2010 2:05:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.56	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	1.2	04	%	4,083	Infrared Drying

Sample: AB14435
Customer #: 1000385

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: 15 SUIS

Site: Tannery Sludge Farm Fields
Sample Reference ID: 210
Affiliation: ESP
Collect Date: 1/26/2010 3:30:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.24	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	1.4	04	%	4,083	Infrared Drying

Sample: AB14436
Customer #: 1000386

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: 62 SUIS

Site: Tannery Sludge Farm Fields
Sample Reference ID: 210
Affiliation: ESP
Collect Date: 1/26/2010 4:00:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.80	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	1.4	04	%	4,083	Infrared Drying

Sample: AB14438
Customer #: 1000388

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: 16 SUIS

Site: Tannery Sludge Farm Fields
Sample Reference ID: 212
Affiliation: ESP
Collect Date: 1/27/2010 9:48:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.47	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	2.8	04	%	4,083	Infrared Drying

Sample: AB14439

Customer #: 1000389

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: 86 SUIS

Site: Tannery Sludge Farm Fields
Sample Reference ID: 212
Affiliation: ESP
Collect Date: 1/27/2010 10:30:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.10	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	2.0	04	%	4,083	Infrared Drying

Sample: AB14440

Customer #: 1000390

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: DUIS

Site: Tannery Sludge Farm Fields
Sample Reference ID: 212
Affiliation: ESP
Collect Date: 1/27/2010 9:02:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.49	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	3.0	04	%	4,083	Infrared Drying

Sample: AB14441

Customer #: 1000391

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: 9 SUIS

Site: Tannery Sludge Farm Fields
Sample Reference ID: 213
Affiliation: ESP
Collect Date: 1/26/2010 4:00:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.54	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	1.6	04	%	4,083	Infrared Drying

Sample: AB14442

Customer #: 1000392

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: 15 SUIS

Site: Tannery Sludge Farm Fields
Sample Reference ID: 213
Affiliation: ESP
Collect Date: 1/26/2010 4:26:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.76	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	3.2	04	%	4,083	Infrared Drying

Sample: AB14443

Customer #: 1000393

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 213
Collector: KEN HANNON
Affiliation: ESP
Collect Date: 1/26/2010 4:00:00PM
Sample Comment: DUIS

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.70	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	3.2	04	%	4,083	Infrared Drying

Sample: AB14444

Customer #: 1000394

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 214
Collector: KEN HANNON
Affiliation: ESP
Collect Date: 1/27/2010 11:18:00AM
Sample Comment: 53 SUIS

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.39	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	2.8	04	%	4,083	Infrared Drying

Sample: AB14445

Customer #: 1000395

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 214
Collector: KEN HANNON
Affiliation: ESP
Collect Date: 1/27/2010 12:10:00PM
Sample Comment: 23 SUIS

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.24	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	1.4	04	%	4,083	Infrared Drying

Sample: AB14446

Customer #: 1000396

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 214
Collector: KEN HANNON
Affiliation: ESP
Collect Date: 1/27/2010 11:18:00AM
Sample Comment: DUIS

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.36	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	2.7	04	%	4,083	Infrared Drying

Sample: AB14447
Customer #: 1000397

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: 82 SUIS

Site: Tannery Sludge Farm Fields
Sample Reference ID: 215
Affiliation: ESP
Collect Date: 1/27/2010 11:10:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.73	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	2.5	04	%	4,083	Infrared Drying

Sample: AB14448
Customer #: 1000398

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: 110 SUIS

Site: Tannery Sludge Farm Fields
Sample Reference ID: 215
Affiliation: ESP
Collect Date: 1/27/2010 10:46:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.05	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	2.8	04	%	4,083	Infrared Drying

Sample: AB14449
Customer #: 1000399

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: DUIS

Site: Tannery Sludge Farm Fields
Sample Reference ID: 215
Affiliation: ESP
Collect Date: 1/27/2010 10:46:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.73	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	2.6	04	%	4,083	Infrared Drying

Sample: AB14450
Customer #: 1000400

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: 32 SUIS

Site: Tannery Sludge Farm Fields
Sample Reference ID: 216
Affiliation: ESP
Collect Date: 1/26/2010 3:40:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.14	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	1.7	04	%	4,083	Infrared Drying

Sample: AB14451

Customer #: 1000401

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: 16 SUIS

Site: Tannery Sludge Farm Fields
Sample Reference ID: 216
Affiliation: ESP
Collect Date: 1/26/2010 4:03:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.58	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	3.2	04	%	4,083	Infrared Drying

Sample: AB14453

Customer #: 1000403

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: 22 SUIS

Site: Tannery Sludge Farm Fields
Sample Reference ID: 217
Affiliation: ESP
Collect Date: 1/26/2010 1:21:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.55	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	3.1	04	%	4,083	Infrared Drying

Sample: AB14454

Customer #: 1000404

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: 50 SUIS

Site: Tannery Sludge Farm Fields
Sample Reference ID: 217
Affiliation: ESP
Collect Date: 1/26/2010 11:47:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.82	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	1.5	04	%	4,083	Infrared Drying

Sample: AB14455

Customer #: 1000405

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: DUIS

Site: Tannery Sludge Farm Fields
Sample Reference ID: 217
Affiliation: ESP
Collect Date: 1/26/2010 12:45:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.16	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	2.2	04	%	4,083	Infrared Drying

Sample: AB14456

Customer #: 1000406

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: 102 SUIS

Site: Tannery Sludge Farm Fields
Sample Reference ID: 218
Affiliation: ESP
Collect Date: 1/26/2010 10:55:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.19	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	1.5	04	%	4,083	Infrared Drying

Sample: AB14457

Customer #: 1000407

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: 87 SUIS

Site: Tannery Sludge Farm Fields
Sample Reference ID: 218
Affiliation: ESP
Collect Date: 1/26/2010 9:40:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.81	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	1.4	04	%	4,083	Infrared Drying

Sample: AB14459

Customer #: 1000409

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: 42 SUIS

Site: Tannery Sludge Farm Fields
Sample Reference ID: 219
Affiliation: ESP
Collect Date: 1/26/2010 12:55:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.04	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	1.0	04	%	4,083	Infrared Drying

Sample: AB14460

Customer #: 1000410

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: 15 SUIS

Site: Tannery Sludge Farm Fields
Sample Reference ID: 219
Affiliation: ESP
Collect Date: 1/26/2010 9:00:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.29	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	0.7	04	%	4,083	Infrared Drying

Sample: AB14462

Customer #: 1000412

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: 164 SUIS

Site: Tannery Sludge Farm Fields
Sample Reference ID: 221
Affiliation: ESP
Collect Date: 1/25/2010 5:04:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	2.45	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	2.1	04	%	4,083	Infrared Drying

Sample: AB14463

Customer #: 1000413

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: 109 SUIS

Site: Tannery Sludge Farm Fields
Sample Reference ID: 221
Affiliation: ESP
Collect Date: 1/25/2010 5:30:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.49	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	2.1	04	%	4,083	Infrared Drying

Sample: AB14465

Customer #: 1000415

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: 10 SUIS

Site: Tannery Sludge Farm Fields
Sample Reference ID: 222
Affiliation: ESP
Collect Date: 1/25/2010 5:10:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	2.52	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	0.5	04	%	4,083	Infrared Drying

Sample: AB14466

Customer #: 1000416

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: 27 SUIS

Site: Tannery Sludge Farm Fields
Sample Reference ID: 222
Affiliation: ESP
Collect Date: 1/25/2010 5:30:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	2.52	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	0.4	04	%	4,083	Infrared Drying

Sample: AB14468

Customer #: 1000418

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 224
Collector: KEN HANNON
Affiliation: ESP
Collect Date: 1/27/2010 9:40:00AM
Sample Comment: 19 SUIS

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.17	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	0.5	04	%	4,083	Infrared Drying

Sample: AB14469

Customer #: 1000419

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 224
Collector: KEN HANNON
Affiliation: ESP
Collect Date: 1/27/2010 9:00:00AM
Sample Comment: 23 SUIS

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.30	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	0.9	04	%	4,083	Infrared Drying

Sample: AB14470

Customer #: 1000420

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 224
Collector: KEN HANNON
Affiliation: ESP
Collect Date: 1/27/2010 9:20:00AM
Sample Comment: 74 SUIS

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.87	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	1.8	04	%	4,083	Infrared Drying

Sample: AB14472

Customer #: 1000422

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 223
Collector: KEN HANNON
Affiliation: ESP
Collect Date: 1/26/2010 12:10:00PM
Sample Comment: 4 SUIS

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.23	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	1.1	04	%	4,083	Infrared Drying

Sample: AB14473

Customer #: 1000423

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: 28 SUIS

Site: Tannery Sludge Farm Fields
Sample Reference ID: 223
Affiliation: ESP
Collect Date: 1/26/2010 12:40:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.28	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	2.2	04	%	4,083	Infrared Drying

Sample: AB14474

Customer #: 1000424

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: DUIS
Sample container broken in transit to contract lab. Sample not analyzed.

Site: Tannery Sludge Farm Fields
Sample Reference ID: 223
Affiliation: ESP
Collect Date: 1/26/2010 12:10:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Sample Cancelled	Sample Cancelled	N/A				NA

Sample: AB14475

Customer #: 1000425

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: 60 SUIS

Site: Tannery Sludge Farm Fields
Sample Reference ID: 225
Affiliation: ESP
Collect Date: 1/26/2010 10:50:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.52	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	0.4	04	%	4,083	Infrared Drying

Sample: AB14476

Customer #: 1000426

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: 8 SUIS

Site: Tannery Sludge Farm Fields
Sample Reference ID: 225
Affiliation: ESP
Collect Date: 1/26/2010 11:20:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	2.27	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	0.6	04	%	4,083	Infrared Drying

Sample: AB14477
Customer #: 1000427
Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 225
Collector: KEN HANNON
Affiliation: ESP
Collect Date: 1/26/2010 10:20:00AM
Sample Comment: DUIS

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.48	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	0.7	04	%	4,083	Infrared Drying

Sample: AB14478
Customer #: 1000429
Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 223
Collector: KEN HANNON
Affiliation: ESP
Collect Date: 1/26/2010 1:22:00PM
Sample Comment: 44 SUIS

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Aluminum	23500000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Iron	28700000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Manganese	854000		ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Molybdenum	986		ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Vanadium	51300		ug/kg	3,886	SW 846 6010B
Hexavalent Chromium	Hexavalent Chromium	0.47	04	mg/Kg	3,996	Contract Lab Dep
Oxidation Reduction Potential	Oxidation Reduction Potential	415		mV	3,991	Contract Lab Dep
Percent Moisture	Percent Moisture	2.82		%	3,422	Infrared Drying
pH	pH	7.42		pH Units	3,992	Contract Lab Dep
Total Organic Carbon	Total Organic Carbon	2.9		%	3,993	Contract Lab Dep

Sample: AB14479
Customer #: 1000430
Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 225
Collector: KEN HANNON
Affiliation: ESP
Collect Date: 1/26/2010 10:20:00AM
Sample Comment: 32 SUIS

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Aluminum	10800000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Iron	14600000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Manganese	433000		ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Molybdenum	409	05	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Vanadium	31000		ug/kg	3,886	SW 846 6010B
Hexavalent Chromium	Hexavalent Chromium	1.36	04	mg/Kg	3,996	Contract Lab Dep

Sample: AB14479

Customer #: 1000430

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: 32 SUIS

Site: Tannery Sludge Farm Fields
Sample Reference ID: 225
Affiliation: ESP

Collect Date: 1/26/2010 10:20:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Oxidation Reduction Potential	Oxidation Reduction Potential	397		mV	3,991	Contract Lab Dep
Percent Moisture	Percent Moisture	1.61		%	3,422	Infrared Drying
pH	pH	7.66		pH Units	3,992	Contract Lab Dep
Total Organic Carbon	Total Organic Carbon	1.3		%	3,993	Contract Lab Dep

The analysis of this sample was performed in accordance with procedures approved or recognized by the U.S Environmental Protection Agency.

Ch. Boldt

Chris Boldt, Laboratory Manager
Environmental Services Program
Field Services Division

Qualifier Descriptions

01 Improper collection method
02 Improper preservation
03 Exceeded holding time
04 Analyzed by Contract Laboratory
05 Estimated value, detected below PQL
06 Estimated value, QC data outside limits
07 Estimated value, analyte outside calibration range
08 Analyte present in blank at > 1/2 reported value
09 Sample was diluted during analysis
10 Laboratory error
11 Estimated value, matrix interference
12 Insufficient quantity
13 Estimated value, true result is >= reported value
14 Estimated value, non-homogeneous sample
15 No Result - Failed Quality Controls Requirements
16 Not analyzed - related analyte not detected
17 Results in dry weight
18 Sample pH is outside the acceptable range
19 Estimated value
20 Not analyzed - Instrument failure
21 No result - spectral interference
22 pH was performed at the Laboratory
23 Contract Lab specific qualifier - see sample comments
24 No result - matrix interference
ND Not detected at reported value

Missouri Department of Natural Resources
Environmental Services Program

Order ID 100203001 **Program, Contact:** HWP Julieann Warren

Report Date: 02/19/2010 **LDPR/JobCode:** FEPA8 / NJ10TSFF

Sample: AB14350
Customer #: 1000361

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 218
Collector: PAM HACKLER
Affiliation: ESP
Collect Date: 1/26/2010 10:57:00AM
Sample Comment: SU 102.02. Expedited 48 hour turnaround.

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.71	04	mg/Kg		Contract Lab Dep
Percent Moisture	Percent Moisture	0.7	04	%		Infrared Drying

Sample: AB14351
Customer #: 1000362

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 218
Collector: PAM HACKLER
Affiliation: ESP
Collect Date: 1/26/2010 9:46:00AM
Sample Comment: SU 87.04. Expedited 48 hour turnaround.

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.00	04	mg/Kg		Contract Lab Dep
Percent Moisture	Percent Moisture	0.9	04	%		Infrared Drying

Sample: AB14352
Customer #: 1000363

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 202
Collector: PAM HACKLER
Affiliation: ESP
Collect Date: 1/26/2010 12:00:00PM
Sample Comment: SU 59.09. Expedited 48 hour turnaround.

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.76	04	mg/Kg		Contract Lab Dep
Percent Moisture	Percent Moisture	2.7	04	%		Infrared Drying

Sample: AB14353
Customer #: 1000364

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 202
Collector: PAM HACKLER
Affiliation: ESP
Collect Date: 1/26/2010 11:50:00AM
Sample Comment: SU 59.07. Expedited 48 hour turnaround.

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	4.88	04	mg/Kg		Contract Lab Dep
Percent Moisture	Percent Moisture	3.1	04	%		Infrared Drying

Sample: AB14354
Customer #: 1000365

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 202
Collector: PAM HACKLER
Affiliation: ESP
Collect Date: 1/26/2010 1:10:00PM
Sample Comment: SU 79.03. Expedited 48 hour turnaround.

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	2.08	04	mg/Kg		Contract Lab Dep
Percent Moisture	Percent Moisture	0.5	04	%		Infrared Drying

Sample: AB14355
Customer #: 1000366

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 218
Collector: PAM HACKLER
Affiliation: ESP
Collect Date: 1/26/2010 1:30:00PM
Sample Comment: SU 146.08. Expedited 48 hour turnaround.

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.59	04	mg/Kg		Contract Lab Dep
Percent Moisture	Percent Moisture	12.5	04	%		Infrared Drying

The analysis of this sample was performed in accordance with procedures approved or recognized by the U.S Environmental Protection Agency.

Ch- Boldt

Chris Boldt, Laboratory Manager
Environmental Services Program
Field Services Division

Qualifier Descriptions

01 Improper collection method
02 Improper preservation
03 Exceeded holding time
04 Analyzed by Contract Laboratory
05 Estimated value, detected below PQL
06 Estimated value, QC data outside limits
07 Estimated value, analyte outside calibration range
08 Analyte present in blank at > 1/2 reported value
09 Sample was diluted during analysis
10 Laboratory error
11 Estimated value, matrix interference
12 Insufficient quantity
13 Estimated value, true result is >= reported value
14 Estimated value, non-homogeneous sample
15 No Result - Failed Quality Controls Requirements
16 Not analyzed - related analyte not detected
17 Results in dry weight
18 Sample pH is outside the acceptable range
19 Estimated value
20 Not analyzed - Instrument failure
21 No result - spectral interference
22 pH was performed at the Laboratory
ND Not detected at reported value
23 Contract Lab specific qualifier - see sample comments

100203001

Missouri Department of Natural Resources
Environmental Services Program

Order ID 100202002 **Program, Contact:** HWP Julieann Warren

Report Date: 03/09/2010 **LDPR/JobCode:** FEPA8 / NJ10TSFF

Sample: AB14289
Customer #: 1000300

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 319
Collector: SEAN COUNIHAN
Affiliation: ESP
Collect Date: 1/27/2010 2:35:00PM
Sample Comment: Y1. Run lab Dup on this sample.

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	< 0.014	ND, 04	mg/Kg	3,936	Contract Lab Dep
Percent Moisture	Percent Moisture	2.6	04	%	3,946	Infrared Drying

Sample: AB14290
Customer #: 1000301

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 319
Collector: SEAN COUNIHAN
Affiliation: ESP
Collect Date: 1/27/2010 2:40:00PM
Sample Comment: Y2

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.022	04, 05	mg/Kg	3,936	Contract Lab Dep
Percent Moisture	Percent Moisture	0.4	04	%	3,946	Infrared Drying

Sample: AB14291
Customer #: 1000302

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 319
Collector: SEAN COUNIHAN
Affiliation: ESP
Collect Date: 1/27/2010 2:49:00PM
Sample Comment: Y3

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.019	04, 05	mg/Kg	3,936	Contract Lab Dep
Percent Moisture	Percent Moisture	4.0	04	%	3,946	Infrared Drying

Sample: AB14292

Customer #: 1000303

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 319
Collector: SEAN COUNIHAN
Affiliation: ESP
Collect Date: 1/27/2010 2:57:00PM
Sample Comment: Y4

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.069	04	mg/Kg	3,936	Contract Lab Dep
Percent Moisture	Percent Moisture	11.6	04	%	3,946	Infrared Drying

Sample: AB14293

Customer #: 1000304

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 319
Collector: SEAN COUNIHAN
Affiliation: ESP
Collect Date: 1/27/2010 12:00:00AM
Sample Comment: DUIS. Run lab Dup on this sample.

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	< 0.014	ND, 04	mg/Kg	3,936	Contract Lab Dep
Percent Moisture	Percent Moisture	3.7	04	%	3,946	Infrared Drying

Sample: AB14294

Customer #: 1000305

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 305
Collector: SEAN COUNIHAN
Affiliation: ESP
Collect Date: 1/27/2010 10:26:00AM
Sample Comment: Y1

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.063	04	mg/Kg	3,936	Contract Lab Dep
Percent Moisture	Percent Moisture	0.6	04	%	3,946	Infrared Drying

Sample: AB14295

Customer #: 1000306

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 305
Collector: SEAN COUNIHAN
Affiliation: ESP
Collect Date: 1/27/2010 10:37:00AM
Sample Comment: Y2

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.16	04	mg/Kg	3,936	Contract Lab Dep
Percent Moisture	Percent Moisture	0.5	04	%	3,946	Infrared Drying

Sample: AB14296
Customer #: 1000307

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 305
Collector: SEAN COUNIHAN
Affiliation: ESP
Collect Date: 1/27/2010 10:46:00AM
Sample Comment: Y3

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.061	04	mg/Kg	3,936	Contract Lab Dep
Percent Moisture	Percent Moisture	0.4	04	%	3,946	Infrared Drying

Sample: AB14297
Customer #: 1000308

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 305
Collector: SEAN COUNIHAN
Affiliation: ESP
Collect Date: 1/27/2010 12:00:00AM
Sample Comment: DUIS

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.066	04	mg/Kg	3,936	Contract Lab Dep
Percent Moisture	Percent Moisture	0.3	04	%	3,946	Infrared Drying

Sample: AB14298
Customer #: 1000309

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 320
Collector: SEAN COUNIHAN
Affiliation: ESP
Collect Date: 1/26/2010 11:50:00AM
Sample Comment: Y1

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.32	04	mg/Kg	3,936	Contract Lab Dep
Percent Moisture	Percent Moisture	2.3	04	%	3,946	Infrared Drying

Sample: AB14299
Customer #: 1000310

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 320
Collector: SEAN COUNIHAN
Affiliation: ESP
Collect Date: 1/26/2010 12:02:00PM
Sample Comment: Y2

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.035	04	mg/Kg	3,937	Contract Lab Dep
Percent Moisture	Percent Moisture	1.2	04	%	3,947	Infrared Drying

Sample: AB14300

Customer #: 1000311

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 320
Collector: SEAN COUNIHAN
Affiliation: ESP
Collect Date: 1/26/2010 11:22:00AM
Sample Comment: Y3

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.025	04	mg/Kg	3,937	Contract Lab Dep
Percent Moisture	Percent Moisture	0.6	04	%	3,947	Infrared Drying

Sample: AB14301

Customer #: 1000312

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 320
Collector: SEAN COUNIHAN
Affiliation: ESP
Collect Date: 1/26/2010 11:34:00AM
Sample Comment: Y4

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.29	04	mg/Kg	3,937	Contract Lab Dep
Percent Moisture	Percent Moisture	0.8	04	%	3,947	Infrared Drying

Sample: AB14302

Customer #: 1000313

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 320
Collector: SEAN COUNIHAN
Affiliation: ESP
Collect Date: 1/26/2010 12:00:00AM
Sample Comment: DUIS

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.11	04	mg/Kg	3,937	Contract Lab Dep
Percent Moisture	Percent Moisture	1.4	04	%	3,947	Infrared Drying

Sample: AB14303

Customer #: 1000314

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 325
Collector: SEAN COUNIHAN
Affiliation: ESP
Collect Date: 1/26/2010 9:30:00AM
Sample Comment: Y1

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.11	04	mg/Kg	3,937	Contract Lab Dep
Percent Moisture	Percent Moisture	4.8	04	%	3,947	Infrared Drying

Sample: AB14304
Customer #: 1000315

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 325
Collector: SEAN COUNIHAN
Affiliation: ESP
Collect Date: 1/26/2010 9:10:00AM
Sample Comment: Y2. Run lab Dup on this sample.

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.053	04	mg/Kg	3,937	Contract Lab Dep
Percent Moisture	Percent Moisture	4.5	04	%	3,947	Infrared Drying

Sample: AB14305
Customer #: 1000316

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 325
Collector: PAM HACKLER
Affiliation: ESP
Collect Date: 1/26/2010 9:00:00AM
Sample Comment: Y3

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.069	04	mg/Kg	3,937	Contract Lab Dep
Percent Moisture	Percent Moisture	6.3	04	%	3,947	Infrared Drying

Sample: AB14306
Customer #: 1000317

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 325
Collector: PAM HACKLER
Affiliation: ESP
Collect Date: 1/26/2010 9:20:00AM
Sample Comment: Y4

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.052	04	mg/Kg	3,937	Contract Lab Dep
Percent Moisture	Percent Moisture	4.9	04	%	3,947	Infrared Drying

Sample: AB14307
Customer #: 1000318

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 325
Collector: PAM HACKLER
Affiliation: ESP
Collect Date: 1/26/2010 12:00:00AM
Sample Comment: DUIS

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.068	04	mg/Kg	3,937	Contract Lab Dep
Percent Moisture	Percent Moisture	4.9	04	%	3,947	Infrared Drying

Sample: AB14308
Customer #: 1000319

Facility ID:
County: (Multiple)
Collector: PAM HACKLER
Sample Comment: Y1

Site: Tannery Sludge Farm Fields
Sample Reference ID: 326
Affiliation: ESP
Collect Date: 1/26/2010 9:40:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.12	04	mg/Kg	3,937	Contract Lab Dep
Percent Moisture	Percent Moisture	3.4	04	%	3,947	Infrared Drying

Sample: AB14309
Customer #: 1000320

Facility ID:
County: (Multiple)
Collector: PAM HACKLER
Sample Comment: Y2

Site: Tannery Sludge Farm Fields
Sample Reference ID: 326
Affiliation: ESP
Collect Date: 1/26/2010 9:50:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.098	04	mg/Kg	3,938	Contract Lab Dep
Percent Moisture	Percent Moisture	3.1	04	%	3,948	Infrared Drying

Sample: AB14310
Customer #: 1000321

Facility ID:
County: (Multiple)
Collector: PAM HACKLER
Sample Comment: Y3. Run lab Dup on this sample.

Site: Tannery Sludge Farm Fields
Sample Reference ID: 326
Affiliation: ESP
Collect Date: 1/26/2010 10:00:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.21	04	mg/Kg	3,938	Contract Lab Dep
Percent Moisture	Percent Moisture	1.8	04	%	3,948	Infrared Drying

Sample: AB14311
Customer #: 1000322

Facility ID:
County: (Multiple)
Collector: PAM HACKLER
Sample Comment: Y4

Site: Tannery Sludge Farm Fields
Sample Reference ID: 326
Affiliation: ESP
Collect Date: 1/26/2010 10:10:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.28	04	mg/Kg	3,938	Contract Lab Dep
Percent Moisture	Percent Moisture	6.1	04	%	3,948	Infrared Drying

Sample: AB14312
Customer #: 1000323

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 326
Collector: PAM HACKLER
Affiliation: ESP
Collect Date: 1/26/2010 12:00:00AM
Sample Comment: DUIS

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.22	04	mg/Kg	3,938	Contract Lab Dep
Percent Moisture	Percent Moisture	3.6	04	%	3,948	Infrared Drying

Sample: AB14313
Customer #: 1000324

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 312
Collector: PAM HACKLER
Affiliation: ESP
Collect Date: 1/27/2010 8:20:00AM
Sample Comment: Y1

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.081	04	mg/Kg	3,938	Contract Lab Dep
Percent Moisture	Percent Moisture	1.9	04	%	3,948	Infrared Drying

Sample: AB14314
Customer #: 1000325

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 312
Collector: PAM HACKLER
Affiliation: ESP
Collect Date: 1/27/2010 8:35:00AM
Sample Comment: Y2

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.094	04	mg/Kg	3,938	Contract Lab Dep
Percent Moisture	Percent Moisture	2.1	04	%	3,948	Infrared Drying

Sample: AB14315
Customer #: 1000326

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 312
Collector: PAM HACKLER
Affiliation: ESP
Collect Date: 1/27/2010 8:50:00AM
Sample Comment: Y3

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.086	04	mg/Kg	3,938	Contract Lab Dep
Percent Moisture	Percent Moisture	5.4	04	%	3,948	Infrared Drying

Sample: AB14316

Customer #: 1000327

Facility ID:
County: (Multiple)
Collector: PAM HACKLER
Sample Comment: DUIS

Site: Tannery Sludge Farm Fields
Sample Reference ID: 312
Affiliation: ESP
Collect Date: 1/27/2010 12:00:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.078	04	mg/Kg	3,938	Contract Lab Dep
Percent Moisture	Percent Moisture	2.9	04	%	3,948	Infrared Drying

Sample: AB14317

Customer #: 1000328

Facility ID:
County: (Multiple)
Collector: PAM HACKLER
Sample Comment: Y1

Site: Tannery Sludge Farm Fields
Sample Reference ID: 313
Affiliation: ESP
Collect Date: 1/26/2010 3:25:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.48	04	mg/Kg	3,938	Contract Lab Dep
Percent Moisture	Percent Moisture	5.1	04	%	3,948	Infrared Drying

Sample: AB14318

Customer #: 1000329

Facility ID:
County: (Multiple)
Collector: PAM HACKLER
Sample Comment: Y2. Run lab Dup on this sample.

Site: Tannery Sludge Farm Fields
Sample Reference ID: 313
Affiliation: ESP
Collect Date: 1/26/2010 3:30:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.12	04	mg/Kg	3,938	Contract Lab Dep
Percent Moisture	Percent Moisture	3.3	04	%	3,948	Infrared Drying

Sample: AB14319

Customer #: 1000330

Facility ID:
County: (Multiple)
Collector: PAM HACKLER
Sample Comment: Y3

Site: Tannery Sludge Farm Fields
Sample Reference ID: 313
Affiliation: ESP
Collect Date: 1/26/2010 3:35:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.76	04	mg/Kg	3,939	Contract Lab Dep
Percent Moisture	Percent Moisture	3.9	04	%	3,949	Infrared Drying

Sample: AB14320
Customer #: 1000331

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 313
Collector: PAM HACKLER
Affiliation: ESP
Collect Date: 1/26/2010 3:45:00PM
Sample Comment: Y4

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.20	04	mg/Kg	3,939	Contract Lab Dep
Percent Moisture	Percent Moisture	5.8	04	%	3,949	Infrared Drying

Sample: AB14321
Customer #: 1000333

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 313
Collector: SEAN COUNIHAN
Affiliation: ESP
Collect Date: 1/26/2010 12:00:00AM
Sample Comment: DUIS. Run lab Dup on this sample.

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.18	04	mg/Kg	3,939	Contract Lab Dep
Percent Moisture	Percent Moisture	4.4	04	%	3,949	Infrared Drying

Sample: AB14322
Customer #: 1000334

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 301
Collector: SEAN COUNIHAN
Affiliation: ESP
Collect Date: 1/27/2010 2:35:00PM
Sample Comment: Y1

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.059	04	mg/Kg	3,939	Contract Lab Dep
Percent Moisture	Percent Moisture	1.4	04	%	3,949	Infrared Drying

Sample: AB14323
Customer #: 1000335

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 301
Collector: SEAN COUNIHAN
Affiliation: ESP
Collect Date: 1/27/2010 2:40:00PM
Sample Comment: Y2

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.11	04	mg/Kg	3,939	Contract Lab Dep
Percent Moisture	Percent Moisture	10.3	04	%	3,949	Infrared Drying

Sample: AB14324
Customer #: 1000336

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 301
Collector: SEAN COUNIHAN
Affiliation: ESP
Collect Date: 1/27/2010 2:49:00PM
Sample Comment: Y3

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.076	04	mg/Kg	3,939	Contract Lab Dep
Percent Moisture	Percent Moisture	6.8	04	%	3,949	Infrared Drying

Sample: AB14325
Customer #: 1000337

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 301
Collector: SEAN COUNIHAN
Affiliation: ESP
Collect Date: 1/27/2010 2:57:00PM
Sample Comment: Y4

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.076	04	mg/Kg	3,939	Contract Lab Dep
Percent Moisture	Percent Moisture	6.5	04	%	3,949	Infrared Drying

Sample: AB14326
Customer #: 1000338

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 301
Collector: SEAN COUNIHAN
Affiliation: ESP
Collect Date: 1/27/2010 12:00:00AM
Sample Comment: DUIS. Run lab Dup on this sample.

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.071	04	mg/Kg	3,939	Contract Lab Dep
Percent Moisture	Percent Moisture	5.7	04	%	3,949	Infrared Drying

Sample: AB14327
Customer #: 1000339

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 304
Collector: SEAN COUNIHAN
Affiliation: ESP
Collect Date: 1/27/2010 2:30:00PM
Sample Comment: Y1

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.057	04	mg/Kg	3,939	Contract Lab Dep
Percent Moisture	Percent Moisture	2.0	04	%	3,949	Infrared Drying

Sample: AB14328

Customer #: 1000340

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 304
Collector: SEAN COUNIHAN
Affiliation: ESP
Collect Date: 1/27/2010 2:34:00PM
Sample Comment: Y1, duplicate #1

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.054	04	mg/Kg	3,939	Contract Lab Dep
Percent Moisture	Percent Moisture	2.3	04	%	3,949	Infrared Drying

Sample: AB14329

Customer #: 1000341

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 304
Collector: KEN HANNON
Affiliation: ESP
Collect Date: 1/27/2010 2:38:00PM
Sample Comment: Y1, duplicate #2

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.11	04	mg/Kg	3,940	Contract Lab Dep
Percent Moisture	Percent Moisture	3.2	04	%	3,950	Infrared Drying

Sample: AB14330

Customer #: 1000342

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 304
Collector: KEN HANNON
Affiliation: ESP
Collect Date: 1/27/2010 2:40:00PM
Sample Comment: Y2

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.061	04	mg/Kg	3,940	Contract Lab Dep
Percent Moisture	Percent Moisture	1.8	04	%	3,950	Infrared Drying

Sample: AB14331

Customer #: 1000343

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 304
Collector: KEN HANNON
Affiliation: ESP
Collect Date: 1/27/2010 2:50:00PM
Sample Comment: Y3

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.16	04	mg/Kg	3,940	Contract Lab Dep
Percent Moisture	Percent Moisture	0.9	04	%	3,950	Infrared Drying

Sample: AB14332

Customer #: 1000344

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: Y4

Site: Tannery Sludge Farm Fields
Sample Reference ID: 304
Affiliation: ESP
Collect Date: 1/27/2010 3:00:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.12	04	mg/Kg	3,940	Contract Lab Dep
Percent Moisture	Percent Moisture	6.6	04	%	3,950	Infrared Drying

Sample: AB14333

Customer #: 1000345

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: DUIS. Run lab Dup on this sample.

Site: Tannery Sludge Farm Fields
Sample Reference ID: 304
Affiliation: ESP
Collect Date: 1/27/2010 12:00:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.087	04	mg/Kg	3,940	Contract Lab Dep
Percent Moisture	Percent Moisture	2.4	04	%	3,950	Infrared Drying

Sample: AB14334

Customer #: 1000346

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: Y1

Site: Tannery Sludge Farm Fields
Sample Reference ID: 303
Affiliation: ESP
Collect Date: 1/27/2010 3:00:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.049	04	mg/Kg	3,940	Contract Lab Dep
Percent Moisture	Percent Moisture	4.9	04	%	3,950	Infrared Drying

Sample: AB14335

Customer #: 1000347

Facility ID:
County: (Multiple)
Collector: KEN HANNON
Sample Comment: Y2

Site: Tannery Sludge Farm Fields
Sample Reference ID: 303
Affiliation: ESP
Collect Date: 1/27/2010 3:10:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.042	04	mg/Kg	3,940	Contract Lab Dep
Percent Moisture	Percent Moisture	3.4	04	%	3,950	Infrared Drying

Sample: AB14336

Customer #: 1000348

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 303
Collector: KEN HANNON
Affiliation: ESP
Collect Date: 1/27/2010 3:20:00PM
Sample Comment: Y3

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.058	04	mg/Kg	3,940	Contract Lab Dep
Percent Moisture	Percent Moisture	4.9	04	%	3,950	Infrared Drying

Sample: AB14337

Customer #: 1000349

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 303
Collector: PAM HACKLER
Affiliation: ESP
Collect Date: 1/27/2010 3:30:00PM
Sample Comment: Y4

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.036	04	mg/Kg	3,940	Contract Lab Dep
Percent Moisture	Percent Moisture	2.9	04	%	3,950	Infrared Drying

Sample: AB14338

Customer #: 1000350

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 303
Collector: PAM HACKLER
Affiliation: ESP
Collect Date: 1/27/2010 12:00:00AM
Sample Comment: DUIS

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.054	04	mg/Kg	3,940	Contract Lab Dep
Percent Moisture	Percent Moisture	3.9	04	%	3,950	Infrared Drying

Sample: AB14339

Customer #: 1000351

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 306
Collector: PAM HACKLER
Affiliation: ESP
Collect Date: 1/27/2010 12:54:00PM
Sample Comment: Y1

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.14	04	mg/Kg	3,941	Contract Lab Dep
Percent Moisture	Percent Moisture	1.1	04	%	3,951	Infrared Drying

Sample: AB14340
Customer #: 1000352

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 306
Collector: PAM HACKLER
Affiliation: ESP
Collect Date: 1/27/2010 1:02:00PM
Sample Comment: Y2

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.21	04	mg/Kg	3,941	Contract Lab Dep
Percent Moisture	Percent Moisture	0.9	04	%	3,951	Infrared Drying

Sample: AB14341
Customer #: 1000353

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 306
Collector: SEAN COUNIHAN
Affiliation: ESP
Collect Date: 1/27/2010 1:10:00PM
Sample Comment: Y3

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.22	04	mg/Kg	3,941	Contract Lab Dep
Percent Moisture	Percent Moisture	5.8	04	%	3,951	Infrared Drying

Sample: AB14342
Customer #: 1000354

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 306
Collector: SEAN COUNIHAN
Affiliation: ESP
Collect Date: 1/27/2010 12:00:00AM
Sample Comment: DUIS

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.19	04	mg/Kg	3,941	Contract Lab Dep
Percent Moisture	Percent Moisture	2.5	04	%	3,951	Infrared Drying

Sample: AB14343
Customer #: 1000355

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 302
Collector: SEAN COUNIHAN
Affiliation: ESP
Collect Date: 1/26/2010 4:10:00PM
Sample Comment: Y1

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.098	04	mg/Kg	3,941	Contract Lab Dep
Percent Moisture	Percent Moisture	1.6	04	%	3,951	Infrared Drying

Sample: AB14344
Customer #: 1000356

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 302
Collector: SEAN COUNIHAN
Affiliation: ESP
Collect Date: 1/26/2010 4:15:00PM
Sample Comment: Y2

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.12	04	mg/Kg	3,941	Contract Lab Dep
Percent Moisture	Percent Moisture	6.0	04	%	3,951	Infrared Drying

Sample: AB14345
Customer #: 1000357

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 302
Collector: SEAN COUNIHAN
Affiliation: ESP
Collect Date: 1/26/2010 4:25:00PM
Sample Comment: Y3. Run lab Dup on this sample.

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.10	04	mg/Kg	3,941	Contract Lab Dep
Percent Moisture	Percent Moisture	1.2	04	%	3,951	Infrared Drying

Sample: AB14346
Customer #: 1000358

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 302
Collector: SEAN COUNIHAN
Affiliation: ESP
Collect Date: 1/26/2010 4:47:00PM
Sample Comment: Y3, duplicate #2

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.057	04	mg/Kg	3,941	Contract Lab Dep
Percent Moisture	Percent Moisture	1.1	04	%	3,951	Infrared Drying

Sample: AB14347
Customer #: 1000359

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 302
Collector: SEAN COUNIHAN
Affiliation: ESP
Collect Date: 1/26/2010 4:50:00PM
Sample Comment: Y3, duplicate #2

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.093	04	mg/Kg	3,941	Contract Lab Dep
Percent Moisture	Percent Moisture	2.2	04	%	3,951	Infrared Drying

Sample: AB14348

Customer #: 1000360

Facility ID:
County: (Multiple)
Site: Tannery Sludge Farm Fields
Sample Reference ID: 302
Collector: SEAN COUNIHAN
Affiliation: ESP
Collect Date: 1/26/2010 12:00:00AM
Sample Comment: DUIS

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.12	04	mg/Kg	3,941	Contract Lab Dep
Percent Moisture	Percent Moisture	2.8	04	%	3,951	Infrared Drying

The analysis of this sample was performed in accordance with procedures approved or recognized by the U.S Environmental Protection Agency.

Chris Boldt

Chris Boldt, Laboratory Manager
Environmental Services Program
Field Services Division

Qualifier Descriptions

01 Improper collection method
02 Improper preservation
03 Exceeded holding time
04 Analyzed by Contract Laboratory
05 Estimated value, detected below PQL
06 Estimated value, QC data outside limits
07 Estimated value, analyte outside calibration range
08 Analyte present in blank at > 1/2 reported value
09 Sample was diluted during analysis
10 Laboratory error
11 Estimated value, matrix interference
12 Insufficient quantity
13 Estimated value, true result is >= reported value
14 Estimated value, non-homogeneous sample
15 No Result - Failed Quality Controls Requirements
16 Not analyzed - related analyte not detected
17 Results in dry weight
18 Sample pH is outside the acceptable range
19 Estimated value
20 Not analyzed - Instrument failure
21 No result - spectral interference
22 pH was performed at the Laboratory
ND Not detected at reported value
23 Contract Lab specific qualifier - see sample comments

100202002

Addendum

Missouri Department of Natural Resources
Environmental Services Program

Addendum

Reason: Field results added per Michael Stroh

Order ID 100129004 **Program, Contact:** HWP Julieann Warren

Report Date: 02/17/2010 **LDPR/JobCode:** FEPA8 / NJ10TSFF

Sample: AB14142

Customer #: 1000501

Facility ID:
County: Buchanan
Site: Tannery Sludge Farm Fields
Sample Reference ID: Parcel 3383
Collector: SEAN COUNIHAN **Affiliation:** ESP **Collect Date:** 1/26/2010 4:27:00PM
Sample Comment: Sample from well head Loc. 102. Applied Speciation bottle #B02367.

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6020 Metals-Total Recoverable	Chromium	<0.25	ND	ug/L	3,310	SW 846 6020
Field pH	Field pH	6.82		pH Units		EPA 150.1
Field Specific Conductivity	Field Specific Conductivity	483 uS/cm				SM 2510
Field Temperature	Field Temperature	12.7 C				EPA 170.1
Hexavalent Chromium by Contract Lab	Hexavalent Chromium by Contract Lab	0.269	04	ug/L	3,234	Contract Lab Dep

The analysis of this sample was performed in accordance with procedures approved or recognized by the U.S Environmental Protection Agency.

Chris Boldt

Chris Boldt, Laboratory Manager
Environmental Services Program
Field Services Division

Qualifier Descriptions

01 Improper collection method
02 Improper preservation
03 Exceeded holding time
04 Analyzed by Contract Laboratory
05 Estimated value, detected below PQL
06 Estimated value, QC data outside limits
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08 Analyte present in blank at > 1/2 reported value
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10 Laboratory error
11 Estimated value, matrix interference
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13 Estimated value, true result is >= reported value
14 Estimated value, non-homogeneous sample
15 No Result - Failed Quality Controls Requirements
16 Not analyzed - related analyte not detected
17 Results in dry weight
18 Sample pH is outside the acceptable range
19 Estimated value
20 Not analyzed - Instrument failure
21 No result - spectral interference
22 pH was performed at the Laboratory
ND Not detected at reported value
23 Contract Lab specific qualifier - see sample comments

Missouri Department of Natural Resources
Environmental Services Program

Order ID 100129004 **Program, Contact:** HWP Julieann Warren

Report Date: 02/17/2010 **LDPR/JobCode:** FEPA8 / NJ10TSFF

Sample: AB14142
Customer #: 1000501

Facility ID:
County: Buchanan
Site: Tannery Sludge Farm Fields
Sample Reference ID: Parcel 3383
Collector: SEAN COUNIHAN
Affiliation: ESP
Collect Date: 1/26/2010 4:27:00PM
Sample Comment: Sample from well head Loc. 102. Applied Speciation bottle #B02367.

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6020 Metals-Total Recoverable	Chromium	<0.25	ND	ug/L	3,310	SW 846 6020
Hexavalent Chromium by Contract Lab	Hexavalent Chromium by Contract Lab	0.269	04	ug/L	3,234	Contract Lab Dep

Sample: AB14143
Customer #: 1000502

Facility ID:
County: Buchanan
Site: Tannery Sludge Farm Fields
Sample Reference ID: Parcel 3383
Collector: SEAN COUNIHAN
Affiliation: ESP
Collect Date: 1/26/2010 4:35:00PM
Sample Comment: Field blank. Applied Speciation bottle #B02363.

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6020 Metals-Total Recoverable	Chromium	<0.25	ND	ug/L	3,310	SW 846 6020
Hexavalent Chromium by Contract Lab	Hexavalent Chromium by Contract Lab	<0.022	ND, 04	ug/L	3,234	Contract Lab Dep

Sample: AB14144
Customer #: 1000503

Facility ID:
County: Buchanan
Site: Tannery Sludge Farm Fields
Sample Reference ID: Parcel 3383
Collector: SEAN COUNIHAN
Affiliation: ESP
Collect Date: 1/26/2010 12:00:00AM
Sample Comment: Duplicate. Applied Speciation bottle #B02391.

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6020 Metals-Total Recoverable	Chromium	<0.25	ND	ug/L	3,310	SW 846 6020
Hexavalent Chromium by Contract Lab	Hexavalent Chromium by Contract Lab	0.263	04	ug/L	3,234	Contract Lab Dep

The analysis of this sample was performed in accordance with procedures approved or recognized by the U.S Environmental Protection Agency.

Chris Boldt, Laboratory Manager
Environmental Services Program
Field Services Division

Qualifier Descriptions

01 Improper collection method
02 Improper preservation
03 Exceeded holding time
04 Analyzed by Contract Laboratory
05 Estimated value, detected below PQL
06 Estimated value, QC data outside limits
07 Estimated value, analyte outside calibration range
08 Analyte present in blank at > 1/2 reported value
09 Sample was diluted during analysis
10 Laboratory error
11 Estimated value, matrix interference
12 Insufficient quantity
13 Estimated value, true result is >= reported value
14 Estimated value, non-homogeneous sample
15 No Result - Failed Quality Controls Requirements
16 Not analyzed - related analyte not detected
17 Results in dry weight
18 Sample pH is outside the acceptable range
19 Estimated value
20 Not analyzed - Instrument failure
21 No result - spectral interference
22 pH was performed at the Laboratory
ND Not detected at reported value
23 Contract Lab specific qualifier - see sample comments

100129004

APPENDIX B

Field Notes

Tannery Sludge Farm Fields Site
Andrew, Buchanan, Clinton and DeKalb Counties, MO

Tannery Sludge Farm Fields

[illegible] Cunningham
Hilary Lakefield
Val Wilder

Cloudy 16°F Wind Chill
light Flurries

17:04
Parcel 4480 Loc id 221 - All terraced land
SU 164
Sloping + low lying areas High Variability

17:35
Parcell 4487 Loc. id 221
SU. 150
Picked for uniformity

1730
Parcel 4482 Loc. ID 221
SU 109
Picked Because filled in Drainage Swale.
took pictures 4 total.

1/26/10 Tannery Sludge Farm Fields
0944 21° Wind chill 90 @ 10 of 15 mph partly cloudy.
Parcel 18970 Residential Yard
Loc 319
Y1 @ 1001, Y2 @ 1013
Y3 @ 1010 Y4 1025

Parcel 18970 Loc ID 219
SU 15 because the corner was where sludge was piled before spreading. Resident said they were very good @ evenly spreading sludge. - corn field

Parcel 18971 Loc 320
Residential Yard
Y1 @ 1150 Y2 @ 1200
Y3 @ 1120 Y4 @ 1134

Parcel 18970 Loc ID 219
SU 55 was chosen because it is a flat area that is at bottom of two slopes
started @ 1220 Soybean Field

SU 47 chosen because realtively flat w/ little terrace
Started @ 1257

Parcel 3833 Loc id 207
SU 79 Started @ 1415
Sludge was dumped near this plot.

1/26/10 Tannery Sludge Farm Field

Parcel # ~~3383~~ Loc id 202

Su. 59 @ 1318

Chosen for High Variability sloped, terraced along a fence

Parcel 3383

Parcel # ~~3633~~ Loc. 202

Su 29 @ 1541

Chosen because low variability uniformity

Parcel 3383 Loc ~~202~~ smc 102

Ground Water Samples

PH meter @ 7pH reads 7.06

@ 4pH reads 4.1

Conductivity @ 1413us reads 1420 us

ORP meter @ 200mV reads 226

Hydrant on @ 1620

First measurement @ 1623

Temp 11.3°C

pH = ~~x~~smc 6.80

Cond 504 us

ORP = 192 mV

Second measurement @ 1626

Temp 12.7°C ORP 177 mV

pH 6.82

Cond. 483

Sample taken @ 1627

Sample # 1000501

Applied speciation Bottle # B02367

Field Blank taken 1635

Sample # 1000502

Applied speciation Bottle # B02363

Duplicate taken Sample # 1000503

Applied speciation bottle # B02391

1/27/10 Tannery Sludge Farm Fields

Mostly Cloudy 27°F Winds ENE @ 5-10

Parcel 6632 Loc id 305 Residential yard

y1 @ 1026 y2 @ 1037 y3 @ 1046

Parcel 6632 Loc id 205

SU 71 picked because highly variable, where sludge was dumped.

Parcel 6632 Loc id 205

SU 34 chosen for low variability solid corn field, on slight slope

Started @ 1100

Parcel 6632 Loc ID 205
SU 96 chosen because pasture land
uniform variability.
Started @ 12/10

Parcel unknown at this time
Daughters Residence of 6632 11444 State E.
is Downwind from Where Agency MO
Sludge was stock piled & also Applied to bean
field - (behind house).
On property of 6632 & were granted
permission
Loc ID 306
y1 @ 1254 y2 @ 1302
y3 @ 1310

Parcel 3627 Loc ID 301
Residential yard only
Farm is a background not needed at this time
y1 @ 1455 y2 @ 1440 y3 @ 1449
y4 @ 1457

Jan 25 2010
Pam Hackler, Shelly Jackson
Ben Frissell, Michael, Paul

Loc ID 209 = Du
Parcel ID 9949
Grid 138 = Su half corn, ½ fallow pasture
1330 Hrs

144 Su
Val, Hillary, Paul
no turns, uniform, slight slope
red rusty material
109 Su
Michael, Pam, Shelly
low area in cornfield
lots of organic matter

camera x15 # B3
Su 138 photo 1 = Bags
photo 2↑
photo 3 - cornfield soil
4 - pasture soil

Loc ID 222 Pam, Ken, Ben
Parcel 4482
1658 hours

Su 41
Low level, terraced

Su 10
Tree, turn around point, low level

Su 27
high ground, least variable

1-26-2010
Parcel 4859
Loc ID 225 Field
325 yard & 326

Su 32
Pam, Ben, Shelly
split between corn and bean fields

SU 60
turning point in corner of field

SU 8
Homogenous, all in corn

Parcel 1676
Loc ID 223

SU 44 - As renumbered
Northwest~~west~~east corner
very variable, corn, hay, fallow, edge trees

SU 28
mostly homogenous, corn

SU 4
Low land, corn, drainage

Parcel 6488
Loc ID Yard 313, Field 213

SU 9
1600 h, terraced, fairly homogenous, although close to reported storage area

SU 15
gently sloping, hay/pasture homogenous

SU 44
Varied, hay/pasture and row crop and turn in row crop field

1-27-2010
Pam, Ben, Shelly

Parcel 5180
Loc ID 312 - Residence
0800 h

Parcel 5180
LOC 212

SU 53
Terraced, hay field (or fallow)
0910 h
sludge accumulates

SU 16
hilly, hay field, dirt road bisects
0945

86 SU
hilltop, homogenous
1015 h

Parcel 8940
LOC 214

SU 53
heterogeneous, half of plot had
sludge applied, ½ did not

SU 23
Sloping, homogenous
not terraced

SU ~~37~~ 25
Low drainage area,
sludge applied

Parcel 2191
LOC ID 303 Yard

LOC ID 203
SU 27
~~corner of field~~, turns
not row crop
edge of tree
next to corner of fence row
↑ one over

Prime Tanning Farm Fields Date: 1/26/10
FEPAB/NJ10TSFF

20° clear
Breezy

Parcel: 21671
Loc: 218
SU: 87
SU chosen due to soy Bean field, low lying area next to Road

SU: 146
SU chosen due to pasture, uinform upland portion

SU: 102
SU chosen due to include buffered area in low and upland area, cow pasture

Parcel 1671: Loc ID: 217
SU 50: chosen as uniform upland, pasture grassy

SU ~~87~~ 103 ms: chosen as heterogeneous due to nearby buffered creeks, low lying areas and uplands. Heavily used by cows

Prime Tanning FF (cont) 1-26-10

Parcel 1671
LOC ID 218 MS
SU: ~~22~~ Chosen due to both uplands and low areas + because it is adjacent to a resid on trial yard.

Parcel: 2247
LOC ID: 216
SU# 16: upland soybean field uniform

SU# 32: adjacent to gate that looks most likely to be where sludge was brought in. Soybean field

SU# 50: near field boundary next to treeline incl. buffered area, non-buffed, upland and low areas pasture land

Stopped for DAY

1-27-10 Prime Tanning Farmfields
25° cloudy, slight wind

Parcel 2241
LOC ID 224
SU 23: Uniform upland in middle of field. Corn/soy

SU 74: U-shaped turnaround near treeline and small pond. Incl. buffered area. Corn/soy

SU 19: Area adjacent to road incl. the main gate where sludge was likely to have been brought in
camera B5 exp# 7, 8

Parcel 2517
LOC ID 215
SU: 110 Area adj. to road incl. access gate. Visible signs of sludge near gate @ surface. Pasture
Camera B5 exp #9, 10
SU 82: uniform area in middle of field. Pasture, dense grass, visible layer of sludge ~½" down - reddish.

Tannery Sludge Farm field (cont.)

1-27-10

Parcel 2517
Loc ID 215
SU: 55 Area near treeline and lake low elevation. Turnaround area. Visible sludge layer in a portion of SU, but not in buffered area. Camera BS exp. #11

Parcel 2517
Loc ID 204
SU: 99 Owner indicated this was an area where sludge was stockpiled. Near barn and gate, just SE of house.

SU: 42 Upland uniform area on slight N. slope. Dense grass pasture.

SU: 23 Area near treeline, gate and hay Round storage. Probably incl. buffered + non-buffered portions.

Camera BS exp. # 12-17

Parcel 2517
Loc. ID 304 Res. YARD
4 yard units. Collected triplicate IS in y1
Camera BS exp. #18
MS

~~END OF DAY~~

1-27-10 (cont)

Parcel 2517 MS
Loc ID ~~304~~ 203
SU 18: uniform east sloping pasture no visible sludge, SU abuts edge of small pond.

END

APPLIED SPECIATION
AND CONSULTING, LLC

18804 Northcreek Parkway Bothell, WA, 98011
Tel: (425) 483-3300 Fax: (425) 483-9818
www.appliedspeciation.com

March 8, 2010

Michael Stroh
Missouri Department of Natural Resources / Hazardous Waste Program
P.O. Box 176
Jefferson City, MO 65102
(573) 522-9902

Dear Mr. Stroh,

Attached is the report associated with sixty-five (65) soil samples submitted for hexavalent chromium quantitation and conventionals (TOC, percent moisture, pH, and ORP) analyses on February 11, 2010. The samples were received on February 12, 2010 in sealed containers at ambient temperature. The submitted samples were extracted using EPA Method 3060A and then analyzed for hexavalent chromium via ion chromatography inductively coupled plasma dynamic reaction cell mass spectrometry (IC-ICP-DRC-MS). All conventionals analyses were performed using established methods as described in this report. Any analytical issues associated with the analysis are addressed in the following report.

If you have any questions, please feel free to contact me at your convenience.

Sincerely,

Ben Wozniak

Ben Wozniak
Project Manager
Applied Speciation and Consulting, LLC

Applied Speciation and Consulting, LLC

Report Prepared for:

Michael Stroh
Missouri Department of Natural Resources / Hazardous Waste Program
P.O. Box 176
Jefferson City, MO 65102

March 8, 2010

1. Sample Reception

Sixty-five (65) soil samples were submitted in wide-mouth glass jars (not provided by Applied Speciation and Consulting) for hexavalent chromium quantitation and conventionals (TOC, percent moisture, pH, and ORP) analyses on February 11, 2010. The samples were received in acceptable condition on February 12, 2010 in sealed containers at ambient temperature.

In accordance with approved EPA methodology, Applied Speciation and Consulting (ASC) recommends that all soils submitted for hexavalent chromium analysis remain at a temperature of ≤6°C prior to preparation and analysis.

All samples were received in a laminar flow clean hood void of trace metals contamination and ultra-violet radiation. Upon reception, all samples were designated discrete sample identifiers and then stored in a secure, monitored refrigerator (maintained at a temperature of ≤4^{o}C) until all preparatory and analytical procedures could be performed. Splits of each sample requesting TOC analysis were distributed to Amtest Inc.

It must be noted that the glass jar containing the sample identified as AB14474 shattered during transit to ASC. Consequently, no sample results could be provided for this particular sample. The client was contacted regarding this issue and instructed ASC to analyze the sample identified as AB14464 in place of the compromised sample.

2. Sample Preparation

All sample preparation is performed in laminar flow clean hoods known to be free from trace metals contamination. All applied water for dilutions and sample preservatives are monitored for contamination to account for any biases associated with the sample results.

Hexavalent Chromium Quantification by IC-ICP-DRC-MS Prior to analysis, all samples were extracted using EPA Method 3060A on either February 17th (Batches

C1 and C2) or February 18th (Batches C3 and C4). In summary, each sample was first spread into a thin layer onto a clean surface and a known mass of each sample was then weighed into a polypropylene centrifuge tube by taking approximately fifteen random subsamples of the original sample. A buffered alkaline extraction solution, $MgCl_2$, and a phosphate buffer solution were then applied to each sample. All vials were then heated at 90-95°C in a sonicating bath for a minimum of one (1) hour. The resulting extracts were cooled, filtered, and injected directly into sealed autosampler vials prior to analysis for hexavalent chromium.

pH and ORP Analyses Prior to the analyses, all samples submitted for pH and ORP measurements were prepared in accordance with EPA Method 9045D on February 23, 2010. In summary, a known mass of each sample was placed into a polypropylene centrifuge tube and an equivalent mass of reagent water was also added. The resulting suspensions were shaken for five (5) minutes, after which each was briefly centrifuged and filtered (0.45µm) into a new centrifuge vial. Each sample extract was then analyzed for pH and ORP as described herein.

3. Sample Analysis

All sample analysis is preceded by a minimum of a five-point calibration curve spanning the entire concentration range of interest. Calibration curves are performed at the beginning of each analytical day. All calibration curves, associated with each species of interest, are standardized by linear regression resulting in a response factor. All sample results are **instrument blank corrected** to account for any operational biases associated with the analytical platform. All hexavalent chromium sample results have also been **dry-weight corrected** using the measured total solids (percent moisture) values.

Prior to sample analysis, all calibration curves are verified using second source standards which are identified as initial calibration verification standards (ICV).

Ongoing instrument performance is identified by the analysis of continuing calibration verification standards (CCV) and continuing calibration blanks (CCB) at a minimal interval of every ten analytical runs.

Hexavalent Chromium Quantitation by IC-ICP-DRC-MS All sample extracts for hexavalent chromium quantitation were analyzed via a modified version of EPA Method 7199 employing ion chromatography inductively coupled plasma dynamic reaction cell mass spectrometry (IC-ICP-DRC-MS). Aliquots of each sample are injected onto an anion exchange column and mobilized by an alkaline (pH > 7) gradient. The eluting chromium species are then introduced into a radio frequency (RF) plasma where energy-transfer processes cause desolvation, atomization, and ionization. The ions are extracted from the plasma through a differentially-pumped vacuum interface and travel through a pressurized chamber (DRC) containing a specific reactive gas which preferentially reacts with interfering ions of the same target mass to charge (m/z) ratios. A solid-state detector detects ions transmitted

through the mass analyzer, on the basis of their mass-to-charge ratio (m/z), and the resulting current is processed by a data handling system.

The retention time for hexavalent chromium is compared to known standards for species identification.

Total Solids (Percent Moisture) Analysis Approximately 1-2 grams of each sample was placed into a pre-weighed pan, and the combined mass of the sample and pan was recorded. All samples were then placed into a convection oven maintained at a temperature of 65-70°C. After drying for a minimum of eight (8) hours, all samples were briefly cooled and reweighed. The total solids percentage of each sample was calculated by dividing the weight of the dried sample by the weight of the original sample. All samples were prepared for total solids on either February 25, 2010 (Batches S1-S4) or on March 1, 2010 (Batch S5)

pH Analysis All sample extracts for pH measurement were analyzed in accordance with EPA Method 9045D on February 23, 2010.

ORP Analysis All sample extracts for ORP measurement were analyzed in accordance with ASTM D 1498-93 on February 23, 2010. All measured ORP values were corrected for the reference electrode in accordance with the guidance provided in EPA Method 3060A.

TOC Analysis All samples submitted for TOC measurements were analyzed via EPA Method 9060 on either February 23, 2010 (Batch T1) or on March 2, 2010 (Batch T2).

4. Analytical Issues

Although the overall analyses went well, significant issues were encountered during the applied hexavalent chromium extraction procedure, as described below:

The RPD associated with the matrix duplicate (MD) performed on the sample identified as AB14426 was above the established control limit of 25% for Batch C2 (25.8%). The concentrations of hexavalent chromium in the parent sample and MD are both significantly greater than ten times the reporting limit (RL). Consequently, all samples associated with this batch were re-extracted and the RPD associated with the MD performed on AB14426 was still elevated (20.3%). Since the re-extraction and re-analysis did not take place until after the method-specified holding time of thirty (30) days had expired, the original results associated with Batch C2 have been reported despite the elevated MD RPD. The fact that the MD RPD for AB14426 was still elevated upon re-extraction suggests this sample matrix may be heterogeneous.

Hexavalent Chromium Quantitation - Laboratory Control Samples Three laboratory control samples were extracted with each batch of samples to identify the extraction efficiency and capacity of the extraction procedure to induce conversion of trivalent

chromium to hexavalent chromium. The laboratory control samples spiked with an aqueous hexavalent chromium and a solid $PbCrO_4$ standard produced acceptable recoveries for each batch (ranging from 95.3% to 111.1%), indicating that the applied method effectively extracts and stabilizes the hexavalent chromium species. The third laboratory control sample spiked with an aqueous trivalent chromium standard solution resulted in a hexavalent chromium recovery of less than 1.0% for each of the sample batches. The quantity of hexavalent chromium detected in these laboratory control samples is near that present in the associated preparation blanks, which is attributed to trace levels of hexavalent chromium in the reagents used for the extraction procedure. The low recoveries for the trivalent chromium spikes demonstrate that the extraction procedure, under ideal conditions, induces minimal conversion of trivalent to hexavalent chromium.

Hexavalent Chromium Quantitation – Matrix Spike / Matrix Spike Duplicates (MS/MSDs) Similar to the laboratory control samples, three discrete sets of matrix spikes were extracted with each batch to identify the interaction of the sample matrix with trivalent and hexavalent chromium. The performance of the matrix spikes can assist in identifying chemical interferences associated with the sample matrix and the applied extraction procedure.

Hexavalent Chromium Quantitation – Cr(III) MS/MSDs The hexavalent chromium recoveries associated with each aqueous trivalent chromium MS and MSD were less than 3%. These low trivalent chromium matrix spike recoveries confirm that the extraction procedure induces minimal oxidation of trivalent chromium to hexavalent chromium in the spiked sample matrices.

The RPD associated with the MSD performed for each of the four sample batches was above the established control limit of 25% (484.7%, 153.8%, 98.7%, and 45.3% respectively). These elevated RPDs are attributable to the fact that a minimal amount of the trivalent chromium spikes was converted to hexavalent chromium during the applied extraction procedure, as expected, resulting in hexavalent chromium concentrations that represented an increase in Cr(VI) less than the ambient sample concentration. Since greater variability is expected as spike concentrations approach the ambient sample concentrations, the elevated RPDs are identified as an inherent limitation of any quantitative method and do not impact the validity of the reported results.

Hexavalent Chromium Quantitation – Aqueous Cr(VI) and Solid $PbCrO_4$ MS/MSDs For Batches C1-C3, the hexavalent chromium recoveries associated with the aqueous Cr(VI) matrix spikes were all less than 2.0%. The recoveries associated with the insoluble Cr(VI) matrix spikes for each of these batches were also biased low (ranging from 63.0-76.7%). As previously mentioned, the recoveries of both the aqueous and insoluble hexavalent chromium LCS were acceptable for each of these batches, demonstrating that the applied procedure both extracts and stabilizes Cr(VI) in solution. Since the low bias observed for these soluble and insoluble Cr(VI) matrix spikes may therefore be attributed to interference from the spiked sample matrices, no

further corrective action was deemed necessary. These MS/MSD results suggest that the spiked sample matrix associated with each of these sample batches strongly favor reduction of hexavalent chromium. For Batch C1 this is further supported by the measured pH and ORP values obtained for the sample identified as AB14407, which indicate a reductive sample matrix, as well as the high TOC value (4.5%) for this sample.

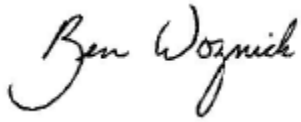
The RPDs associated with the aqueous Cr(VI) MS/MSD sets performed for Batches C1-C3 were above the established control limit of 25% (342.7%, 872.8%, and 206.4%, respectively). As previously mentioned, the spiked sample matrix for each of these batches exhibited strongly reducing conditions (spike recoveries less than 2.0%), resulting in Cr(VI) concentrations for the MS and MSD that were less than twice the ambient sample concentrations. Since greater variability is expected as spike concentrations approach the ambient sample concentrations, the elevated RPDs are identified as an inherent limitation of any quantitative method and do not impact the validity of the reported results.

The hexavalent chromium recoveries associated with the matrix spikes performed on the sample identified as AB14475 for Batch C4 were within acceptance limits for both the aqueous and insoluble hexavalent chromium matrix spikes. These acceptable recoveries suggest that the applied method effectively extracts and stabilizes hexavalent chromium in this particular sample matrix.

The estimated method detection limit (eMDL) for hexavalent chromium for each batch of solids is generated using the standard deviation of the associated preparation blanks, in accordance with Applied Speciation and Consulting's SOP.

If you have any questions or concerns regarding this report, please feel free to contact me.

Sincerely,



Ben Wozniak
Project Manager
Applied Speciation and Consulting, LLC

Hexavalent Cr & Conventionals Results for the Missouri Department of Natural Resources
Contact: Michael Stroh

Date: March 8, 2010
Report Generated by: Ben Wozniak
Applied Speciation and Consulting, LLC

Sample Results

Sample ID	Batch Identifiers	Date & Time Analyzed for Cr(VI)*	Cr(VI) in mg/kg (dw)	% Solids	TOC in %	ORP (mV)**	pH
AB14404	C1, S1, T1	2/17/2010 22:09	0.607	96.1	4.4	449	6.28
AB14405	C1, S1, T1	2/17/2010 22:15	0.418	96.4	4.1	433	6.85
AB14406	C1, S1, T1	2/17/2010 22:22	0.666	96.5	4.9	465	7.86
AB14407	C1, S1, T1	2/17/2010 22:40	1.05	93.8	4.5	477	5.90
AB14408	C1, S1, T1	2/17/2010 23:30	0.657	99.2	0.81	351	7.87
AB14409	C1, S1, T2	2/17/2010 23:37	0.225	98.5	0.47	352	7.87
AB14410	C1, S1, T1	2/17/2010 23:55	0.605	96.3	4.5	469	6.61
AB14411	C1, S1, T1	2/18/2010 0:08	0.833	96.2	5.5	407	6.62
AB14412	C1, S1, T1	2/18/2010 0:20	1.61	96.3	5.4	487	6.78
AB14413	C1, S1, T2	2/18/2010 11:08	0.069	98.7	4.4	420	6.45
AB14414	C1, S1, T2	2/18/2010 0:45	0.692	96.9	5.1	422	6.81
AB14415	C1, S1, T2	2/18/2010 0:52	0.793	97.5	6.4	468	5.91
AB14416	C1, S1, T2	2/18/2010 1:17	1.83	91.8	6.3	444	7.59
AB14417	C1, S1, T2	2/18/2010 1:23	1.11	97.1	1.3	475	6.34
AB14418	C1, S1, T2	2/18/2010 1:29	3.40	97.9	2.1	434	7.25
AB14419	C1, S1, T2	2/18/2010 1:35	3.29	98.3	2.2	422	7.38
AB14420	C1, S1, T1	2/18/2010 1:42	0.269	94.5	NR	NR	NR
AB14421	C1, S1, T1	2/18/2010 1:48	1.13	98.2	NR	NR	NR
AB14423	C1, S1, T1	2/18/2010 10:55	0.386	95.7	NR	NR	NR
AB14424	C1, S1, T1	2/18/2010 11:01	0.278	98.2	NR	NR	NR

dw = dry weight

* Times reported in CST

** ORP measurements corrected for reference electrode as specified in EPA Method 3060A

NR = Not requested

U = Sample concentration is less than the estimated Method Detection Limit (eMDL)

J = Sample concentration is between the eMDL and the Reporting Limit (RL)

Hexavalent Cr & Conventionals Results for the Missouri Department of Natural Resources
Contact: Michael Stroh

Date: March 8, 2010
Report Generated by: Ben Wozniak
Applied Speciation and Consulting, LLC

Sample Results

Sample ID	Batch Identifiers	Date & Time Analyzed for Cr(VI)*	Cr(VI) in mg/kg (dw)	% Solids	TOC in %	ORP (mV)**	pH
AB14426	C2, S2	2/18/2010 12:10	0.406	97.7	NR	NR	NR
AB14427	C2, S2	2/18/2010 13:13	0.462	97.0	NR	NR	NR
AB14429	C2, S2	2/18/2010 13:19	1.27	98.8	NR	NR	NR
AB14430	C2, S2	2/18/2010 13:25	0.624	98.8	NR	NR	NR
AB14431	C2, S2	2/18/2010 13:31	0.626	97.5	NR	NR	NR
AB14432	C2, S2	2/18/2010 13:38	0.694	99.2	NR	NR	NR
AB14433	C2, S5	2/18/2010 13:56	1.56	98.8	NR	NR	NR
AB14435	C2, S2	2/18/2010 14:03	0.242	98.6	NR	NR	NR
AB14436	C2, S2	2/18/2010 14:09	0.803	98.6	NR	NR	NR
AB14438	C2, S2	2/18/2010 14:15	0.468	97.2	NR	NR	NR
AB14439	C2, S2	2/18/2010 14:21	1.10	98.0	NR	NR	NR
AB14440	C2, S2	2/18/2010 14:28	0.490	97.0	NR	NR	NR
AB14441	C2, S2	2/18/2010 14:34	1.54	98.4	NR	NR	NR
AB14442	C2, S2	2/18/2010 15:11	0.760	96.8	NR	NR	NR
AB14443	C2, S2	2/18/2010 15:18	0.703	96.8	NR	NR	NR
AB14444	C2, S2	2/18/2010 15:24	0.387	97.2	NR	NR	NR
AB14445	C2, S2	2/18/2010 15:30	0.240	98.6	NR	NR	NR
AB14446	C2, S2	2/18/2010 15:36	0.359	97.3	NR	NR	NR
AB14447	C2, S2	2/18/2010 15:43	0.728	97.5	NR	NR	NR
AB14448	C2, S2	2/18/2010 15:49	1.05	97.2	NR	NR	NR

dw = dry weight

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Sample Results

Sample ID	Batch Identifiers	Date & Time Analyzed for Cr(VI)*	Cr(VI) in mg/kg (dw)	% Solids	TOC in %	ORP (mV)**	pH
AB14449	C3, S3	2/22/2010 15:45	1.73	97.4	NR	NR	NR
AB14450	C3, S3	2/22/2010 16:47	1.14	98.3	NR	NR	NR
AB14451	C3, S3	2/22/2010 16:53	1.58	96.8	NR	NR	NR
AB14453	C3, S3	2/22/2010 17:31	1.55	96.9	NR	NR	NR
AB14454	C3, S3	2/22/2010 17:37	0.821	98.5	NR	NR	NR
AB14455	C3, S3	2/22/2010 17:43	1.16	97.8	NR	NR	NR
AB14456	C3, S3	2/22/2010 17:50	1.19	98.5	NR	NR	NR
AB14457	C3, S3	2/22/2010 17:56	0.812	98.6	NR	NR	NR
AB14459	C3, S3	2/22/2010 18:02	1.04	99.0	NR	NR	NR
AB14460	C3, S3	2/22/2010 18:08	1.29	99.3	NR	NR	NR
AB14462	C3, S3	2/22/2010 18:15	2.45	97.9	NR	NR	NR
AB14463	C3, S3	2/22/2010 18:21	0.487	97.9	NR	NR	NR
AB14464	C3, S3	2/22/2010 19:23	1.64	98.2	NR	NR	NR
AB14465	C3, S3	2/22/2010 18:27	2.52	99.5	NR	NR	NR
AB14466	C3, S3	2/22/2010 18:46	2.52	99.6	NR	NR	NR
AB14468	C3, S3	2/22/2010 18:52	0.166	99.5	NR	NR	NR
AB14469	C3, S3	2/22/2010 18:58	0.296	99.1	NR	NR	NR
AB14470	C3, S3	2/22/2010 19:05	0.872	98.2	NR	NR	NR
AB14472	C3, S3	2/22/2010 19:11	0.234	98.9	NR	NR	NR
AB14473	C3, S3	2/22/2010 19:17	0.279	97.8	NR	NR	NR

dw = dry weight

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NR = Not requested

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Hexavalent Cr & Conventionals Results for the Missouri Department of Natural Resources
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Date: March 8, 2010
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Sample Results

Sample ID	Batch Identifiers	Date & Time Analyzed for Cr(VI)*	Cr(VI) in mg/kg (dw)	% Solids	TOC in %	ORP (mV)**	pH
AB14475	C4, S4	2/22/2010 20:26	0.518	99.6	NR	NR	NR
AB14476	C4, S4	2/22/2010 21:28	2.27	99.4	NR	NR	NR
AB14477	C4, S4	2/22/2010 21:35	1.48	99.3	NR	NR	NR
AB14478	C4, S4, T2	2/22/2010 21:41	0.474	98.9	2.9	415	7.42
AB14479	C4, S4, T2	2/22/2010 21:47	1.36	99.6	1.3	397	7.66

dw = dry weight
* Times reported in CST
** ORP measurements corrected for reference electrode as specified in EPA Method 3060A
NR = Not requested
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Hexavalent Cr & Conventionals Results for the Missouri Department of Natural Resources
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Quality Control Summary - Preparation Blank Summary

Analyte	Units	Batch	PBS1	PBS2	PBS3	PBS4	Mean	StdDev	eMDL	RL
TOC	%	T1	< 0.05	-	-	-	-	-	-	0.05
TOC	%	T2	< 0.05	-	-	-	-	-	-	0.05
Cr(VI)	mg/kg (dw)	C1	0.020	0.021	0.022	0.025	0.022	0.002	0.006	0.025
Cr(VI)	mg/kg (dw)	C2	0.021	0.017	0.016	0.014	0.017	0.003	0.008	0.025
Cr(VI)	mg/kg (dw)	C3	0.021	0.021	0.022	0.023	0.022	0.001	0.002	0.025
Cr(VI)	mg/kg (dw)	C4	0.031	0.024	0.021	0.019	0.024	0.005	0.015	0.025

eMDL = Estimated Method Detection Limit
RL = Reporting Limit

Hexavalent Cr & Conventionals Results for the Missouri Department of Natural Resources
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Quality Control Summary - Laboratory Control Samples

Analyte	Units	Batch	LCS	True Value	Result	Recovery
TOC	%	T1	LCS	1.3	1.3	100
TOC	%	T2	LCS	1.3	1.4	108
Cr(III)	mg/kg (dw)	C1	LCS	5.000	0.019	0.4
Cr(VI)	mg/kg (dw)	C1	LCS	5.000	5.557	111.1
$PbCrO_4$	mg/kg (dw)	C1	LCS	6692	7332	109.6
Cr(III)	mg/kg (dw)	C2	LCS	5.000	0.021	0.4
Cr(VI)	mg/kg (dw)	C2	LCS	5.000	4.986	99.7
$PbCrO_4$	mg/kg (dw)	C2	LCS	6628	6317	95.3
Cr(III)	mg/kg (dw)	C3	LCS	5.000	0.027	0.5
Cr(VI)	mg/kg (dw)	C3	LCS	5.000	5.474	109.5
$PbCrO_4$	mg/kg (dw)	C3	LCS	6789	7005	103.2
Cr(III)	mg/kg (dw)	C4	LCS	5.000	0.033	0.7
Cr(VI)	mg/kg (dw)	C4	LCS	5.000	5.445	108.9
$PbCrO_4$	mg/kg (dw)	C4	LCS	6049	6343	104.9

Hexavalent Cr & Conventionals Results for the Missouri Department of Natural Resources
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Quality Control Summary - Matrix Duplicate

Analyte	Units	Batch	Sample ID	Rep 1	Rep 2	Mean	RPD
TOC	%	T1	AB14410	4.5	4.3	4.4	4.5
TOC	%	T2	AB14419	2.2	2.2	2.2	0.0
% Solids	%	S1	AB14404	96.05	96.10	96.08	0.1
% Solids	%	S2	AB14426	97.67	97.75	97.71	0.1
% Solids	%	S3	AB14449	97.45	97.55	97.50	0.1
% Solids	%	S4	AB14475	99.55	99.51	99.53	0.0
% Solids	%	S5	AB14433	98.82	98.82	98.82	0.0
Cr(VI)	mg/kg (dw)	C1	AB14407	1.051	0.942	0.997	11.0
Cr(VI)	mg/kg (dw)	C1	AB14410	0.605	0.750	0.677	21.4
Cr(VI)	mg/kg (dw)	C1	AB14411	0.833	0.788	0.811	5.6
Cr(VI)	mg/kg (dw)	C1	AB14412	1.613	1.620	1.617	0.4
Cr(VI)	mg/kg (dw)	C1	AB14413	0.069	0.080	0.075	15.0
Cr(VI)	mg/kg (dw)	C1	AB14415	0.793	0.775	0.784	2.3
Cr(VI)	mg/kg (dw)	C2	AB14426	0.406	0.526	0.466	25.8*
Cr(VI)	mg/kg (dw)	C3	AB14449	1.729	1.408	1.568	20.5
Cr(VI)	mg/kg (dw)	C4	AB14475	0.518	0.434	0.476	17.6

NC = Value was not calculated due to one or more concentrations below the eMDL

* The RPD is above the established control limit of 25%; please see narrative.

Hexavalent Cr & Conventionals Results for the Missouri Department of Natural Resources
Contact: Michael Stroh

Date: March 8, 2010
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Applied Speciation and Consulting, LLC

Quality Control Summary - Matrix Spike/ Matrix Spike Duplicate

Analyte	Units	Batch	Sample ID	Spike Conc	MS Result	Recovery	Spike Conc	MSD Result	Recovery	RPD
Cr(III)	mg/kg (dw)	C1	AB14407	5.247	1.078	1.5	5.253	0.963	-0.6	484.7**
Cr(VI)	mg/kg (dw)	C1	AB14407	5.310	0.758	-4.5*	5.319	1.060	1.2*	342.7**
$PbCrO_4$	mg/kg (dw)	C1	AB14407	7770	5962	76.7	7752	5644	72.8*	5.3
Cr(III)	mg/kg (dw)	C2	AB14426	5.052	0.464	0.0	5.150	0.451	-0.3	153.8**
Cr(VI)	mg/kg (dw)	C2	AB14426	5.064	0.427	-0.8*	5.068	0.528	1.2*	872.8**
$PbCrO_4$	mg/kg (dw)	C2	AB14426	6915	4630	66.9*	6961	4666	67.0*	0.1
Cr(III)	mg/kg (dw)	C3	AB14449	4.909	1.709	2.9	4.971	1.617	1.0	98.7**
Cr(VI)	mg/kg (dw)	C3	AB14449	5.151	1.153	-8.1*	5.133	1.575	0.1*	206.4**
$PbCrO_4$	mg/kg (dw)	C3	AB14449	5866	3694	63.0*	6003	3832	63.8*	1.3
Cr(III)	mg/kg (dw)	C4	AB14475	4.934	0.503	0.6	4.996	0.520	0.9	45.3**
Cr(VI)	mg/kg (dw)	C4	AB14475	4.838	5.336	100.5	4.953	5.520	101.8	1.4
$PbCrO_4$	mg/kg (dw)	C4	AB14475	6088	6104	100.3	6391	6436	100.7	0.4

* The recovery is below the established control limit of 75%; please see narrative.

** The RPD is above the established control limit of 25%; please see narrative.

NC = Value was not calculated due to one or more concentrations below the eMDL

Hexavalent Cr Results for the Missouri Department of Natural Resources
Contact: Michael Stroh

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Applied Speciation and Consulting, LLC

Quality Control Summary - Historical Calibration Standards

Cr(VI) True Value	Cr(VI) Measured Result	Percent Recovery
0.050	0.079	158.8
0.050	0.072	143.1
0.050	0.082	163.6
0.050	0.073	146.2
0.500	0.550	110.0
5.000	5.174	103.5
50.00	49.98	100.0
0.050	0.057	114.7
0.050	0.056	112.0
0.050	0.060	120.6
0.050	0.064	127.8
0.500	0.499	99.7
5.000	5.055	101.1
25.00	24.98	99.9
0.050	0.047	93.7
0.050	0.050	100.9
0.050	0.041	81.4
0.050	0.043	85.8
0.500	0.484	96.7
5.000	4.891	97.8
25.00	23.51	94.0

All results are reported in µg/L

Hexavalent Cr Results for the Missouri Department of Natural Resources
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Report Generated by: Ben Wozniak
Applied Speciation and Consulting, LLC

Quality Control Summary - Historical CCV Standards

Cr(VI) True Value	Cr(VI) Measured Result	Percent Recovery
5.000	5.585	111.7
5.000	5.470	109.4
5.000	5.353	107.1
5.000	5.516	110.3
5.000	5.358	107.2
5.000	5.072	101.4
5.000	4.978	99.6
5.000	4.932	98.6
5.000	4.861	97.2
5.000	4.888	97.8
5.000	4.882	97.6
5.000	4.815	96.3
5.000	5.348	107.0
5.000	5.274	105.5
5.000	5.229	104.6
5.000	5.338	106.8
5.000	5.418	108.4
5.000	5.485	109.7
5.000	5.444	108.9
5.000	5.437	108.7

CCV = Continuing Calibration Verification

All results are reported in µg/L

Hexavalent Cr Results for the Missouri Department of Natural Resources
Contact: Michael Stroh

Date: March 8, 2010
Report Generated by: Ben Wozniak
Applied Speciation and Consulting, LLC

Quality Control Summary - Historical Second Source Standards

Cr(VI) True Value	Cr(VI) Measured Result	Percent Recovery
4.000	3.795	94.9
200.0	218.7	109.4
202.0	214.0	105.9
10.00	12.09	120.9
5.000	5.495	109.9
5.000	5.107	102.1
100.0	95.38	95.4
5.000	4.932	98.6
5.000	4.706	94.1
20.00	20.30	101.5
5.000	5.029	100.6
100.0	107.2	107.2
5.000	5.369	107.4
5.000	5.557	111.1
5.000	4.986	99.7
5.000	5.474	109.5
5.000	5.445	108.9
5.000	4.546	90.9

Second source standard = Cr(VI) Blank Spike (from 3060A Extraction)
All results are reported in mg/kg

Hexavalent Cr Results for the Missouri Department of Natural Resources
Contact: Michael Stroh

Date: March 8, 2010
Report Generated by: Ben Wozniak
Applied Speciation and Consulting, LLC

Quality Control Summary - Historical Matrix Spikes

Ambient Cr(VI) Conc.	MS Spike Conc.	MS Measured Result	MS Recovery	MSD Spike Conc.	MSD Measured Result	MSD Recovery	RPD
3.647	4.009	6.202	63.7	4.061	6.469	69.5	8.7
2.961	221.2	257.4	115.0	209.2	216.7	102.1	11.9
2.853	150.2	167.7	109.8	226.2	243.7	106.4	3.1
0.118	43.67	44.23	101.0	54.70	53.27	97.2	3.9
0.077	4.976	3.343	65.6	5.124	3.790	72.5	9.9
126.8	867.7	947.6	94.6	765.2	834.1	92.4	2.3
0.187	4.046	3.095	71.9	3.775	2.961	73.5	2.2
0.160	4.017	4.214	100.9	4.078	4.038	95.1	5.9
0.080	3.906	3.657	91.6	3.959	3.600	88.9	2.9
0.101	5.052	3.646	70.2	4.694	3.300	68.2	2.9
0.224	4.910	2.551	47.4	4.893	2.361	43.7	8.2
0.342	4.885	3.534	65.4	4.820	3.424	63.9	2.2
< 0.014 U	5.243	< 0.014 U	0.0	5.147	0.039	0.8	200.0
1.816	20.46	6.685	23.8	20.39	5.832	19.7	18.8
0.088	5.064	3.253	62.5	5.134	3.254	61.7	1.3
0.997	5.310	0.758	-4.5	5.319	1.060	1.2	342.7
0.466	5.064	0.427	-0.8	5.068	0.528	1.2	872.8
0.184	5.007	4.098	78.1	4.779	4.272	85.5	9.0
1.568	5.151	1.153	-8.1	5.133	1.575	0.1	206.4
0.476	4.838	5.336	100.5	4.953	5.520	101.8	1.4

All results are reported in mg/kg

APPLIED SPECIATION
AND CONSULTING, LLC

18804 Northcreek Parkway Bothell, WA, 98011
Tel: (425) 483-3300 Fax: (425) 483-9818
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March 4, 2010

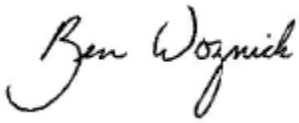
Michael Stroh
Missouri Department of Natural Resources / Hazardous Waste Program
P.O. Box 176
Jefferson City, MO 65102
(573) 522-9902

Dear Mr. Stroh,

Attached is the report associated with sixty (60) soil samples submitted for hexavalent chromium quantitation on February 3, 2010. The samples were received on February 4, 2010 in sealed coolers at 1.7°C and 2.9°C, respectively. The submitted samples were extracted using EPA Method 3060A and then analyzed for hexavalent chromium via ion chromatography inductively coupled plasma dynamic reaction cell mass spectrometry (IC-ICP-DRC-MS). Any analytical issues associated with the analysis are addressed in the following report.

If you have any questions, please feel free to contact me at your convenience.

Sincerely,



Ben Wozniak
Project Manager
Applied Speciation and Consulting, LLC

Applied Speciation and Consulting, LLC

Report Prepared for:

Michael Stroh
Missouri Department of Natural Resources / Hazardous Waste Program
P.O. Box 176
Jefferson City, MO 65102

March 4, 2010

1. Sample Reception

Sixty (60) soil samples were submitted in wide-mouth glass jars (not provided by Applied Speciation and Consulting) for hexavalent chromium quantitation on February 3, 2010. The samples were received in acceptable condition on February 4, 2010 in sealed coolers at 1.7°C and 2.9°C, respectively.

All samples were received in a laminar flow clean hood void of trace metals contamination and ultra-violet radiation. Upon reception, all samples were designated discrete sample identifiers and then stored in a secure, monitored refrigerator (maintained at a temperature of $\leq 4^{o}C$) until all preparatory and analytical procedures could be performed.

2. Sample Preparation

All sample preparation is performed in laminar flow clean hoods known to be free from trace metals contamination. All applied water for dilutions and sample preservatives are monitored for contamination to account for any biases associated with the sample results.

Hexavalent Chromium Quantification by IC-ICP-DRC-MS Prior to analysis, all samples were extracted using EPA Method 3060A on February 8th (Batch 1), February 16th (Batch 2), and February 9th (Batch 3). In summary, each sample was first spread into a thin layer onto a clean surface and a known mass of each sample was then weighed into a polypropylene centrifuge tube by taking approximately fifteen random subsamples of the original sample. A buffered alkaline extraction solution, $MgCl_2$, and a phosphate buffer solution were then applied to each sample. All vials were then heated at 90-95^{o}C in a sonicating bath for a minimum of one (1) hour. The resulting extracts were cooled, filtered, and injected directly into sealed autosampler vials prior to analysis for hexavalent chromium.

3. Sample Analysis

All sample analysis is preceded by a minimum of a five-point calibration curve spanning the entire concentration range of interest. Calibration curves are performed at the beginning of each analytical day. All calibration curves, associated with each species of interest, are standardized by linear regression resulting in a response factor. All sample results are **instrument blank corrected** to account for any operational biases associated with the analytical platform. All sample results have also been **dry-weight corrected** using the measured total solids (percent moisture) values.

Prior to sample analysis, all calibration curves are verified using second source standards which are identified as initial calibration verification standards (ICV).

Ongoing instrument performance is identified by the analysis of continuing calibration verification standards (CCV) and continuing calibration blanks (CCB) at a minimal interval of every ten analytical runs.

Hexavalent Chromium Quantitation by IC-ICP-DRC-MS All sample extracts for hexavalent chromium quantitation were analyzed via a modified version of EPA Method 7199 employing ion chromatography inductively coupled plasma dynamic reaction cell mass spectrometry (IC-ICP-DRC-MS). Aliquots of each sample are injected onto an anion exchange column and mobilized by an alkaline (pH > 7) gradient. The eluting chromium species are then introduced into a radio frequency (RF) plasma where energy-transfer processes cause desolvation, atomization, and ionization. The ions are extracted from the plasma through a differentially-pumped vacuum interface and travel through a pressurized chamber (DRC) containing a specific reactive gas which preferentially reacts with interfering ions of the same target mass to charge (m/z) ratios. A solid-state detector detects ions transmitted through the mass analyzer, on the basis of their mass-to-charge ratio (m/z), and the resulting current is processed by a data handling system.

The retention time for hexavalent chromium is compared to known standards for species identification.

Total Solids Analysis Approximately 1-2 grams of each sample was placed into a pre-weighed pan, and the combined mass of the sample and pan was recorded. All samples were then placed into a convection oven maintained at a temperature of 65-70°C. After drying for a minimum of eight (8) hours, all samples were briefly cooled and reweighed. The total solids percentage of each sample was calculated by dividing the weight of the dried sample by the weight of the original sample.

4. Analytical Issues

Although the overall analyses went well, significant issues were encountered during the applied extraction procedure, as described below:

The RPD associated with the matrix duplicate (MD) performed on the sample identified as AB14310 was above the established control limit of 25% for batch 2 (28.7%). The concentrations of hexavalent chromium in the parent sample and MD are both less than ten times the reporting limit (RL), with the absolute difference between the two values being approximately twice the RL. Since greater variability is expected as sample concentrations approach the RL, the elevated RPD is identified as an inherent limitation of any quantitative method and does not impact the validity of the reported results.

It must be noted that although the client requested an additional matrix duplicate (MD) be performed on the sample identified as AB14321, this duplicate set was mistakenly not included in the digestion batch associated with this sample, *i.e.* batch 2. Batch 2 did include three other MD sets, however, so the variability associated with the extractions and analyses are demonstrated via these MDs. By the time Applied Speciation and Consulting (ASC) was able to re-extract AB14321 with the additional MD set that was requested, the sample had exceeded the recommended holding time of thirty (30) days specified in EPA Method 3060A; rather than report data generated outside the holding time, ASC has reported the initial result obtained for this sample.

Hexavalent Chromium Quantitation - Laboratory Control Samples Three laboratory control samples were extracted with each batch of samples to identify the extraction efficiency and capacity of the extraction procedure to induce conversion of trivalent chromium to hexavalent chromium. The laboratory control samples spiked with an aqueous hexavalent chromium and a solid $PbCrO_4$ standard produced acceptable recoveries for each batch (ranging from 93.4% to 107.4%), indicating that the applied method effectively extracts and stabilizes the hexavalent chromium species. The third laboratory control sample spiked with an aqueous trivalent chromium standard solution resulted in a hexavalent chromium recovery of less than 1.0% for each of the sample batches. The quantity of hexavalent chromium detected in these laboratory control samples is near that present in the associated preparation blanks, which is attributed to trace levels of hexavalent chromium in the reagents used for the extraction procedure. The low recoveries for the trivalent chromium spikes demonstrate that the extraction procedure, under ideal conditions, induces minimal conversion of trivalent to hexavalent chromium.

Hexavalent Chromium Quantitation – Matrix Spike / Matrix Spike Duplicates (MS/MSDs) Similar to the laboratory control samples, three discrete sets of matrix spikes were extracted with each batch to identify the interaction of the sample matrix with trivalent and hexavalent chromium. The performance of the matrix spikes can assist in identifying chemical interferences associated with the sample matrix and the applied extraction procedure.

Hexavalent Chromium Quantitation – Cr(III) MS/MSDs The hexavalent chromium recoveries associated with each aqueous trivalent chromium MS and MSD were less than 3%. These low trivalent chromium matrix spike recoveries confirm that the

extraction procedure induces minimal oxidation of trivalent chromium to hexavalent chromium in the spiked sample matrices.

The RPD associated with the MSD performed for each of the three sample batches was above the established control limit of 25% (71.4%, 93.1%, and 87.3%, respectively). These elevated RPDs are attributable to the fact that a minimal amount of the trivalent chromium spikes was converted to hexavalent chromium during the applied extraction procedure, as expected, resulting in hexavalent chromium concentrations that either were either less than ten times the RL (as is the case for batch 1) or represented an increase in Cr(VI) that was less than two times the ambient sample concentration (as is the case for batches 2 and 3). Since greater variability is expected as sample concentrations approach the RL and as spike concentrations approach the ambient sample concentrations, the elevated RPDs are identified as an inherent limitation of any quantitative method and do not impact the validity of the reported results.

Hexavalent Chromium Quantitation – Aqueous Cr(VI) and Solid $PbCrO_4$ MS/MSDs
The hexavalent chromium recoveries associated with the matrix spikes performed on the sample identified as AB14310 for batch 2 were within acceptance limits for both the aqueous (78.1% and 85.5%) and insoluble (90.6% and 91.2%) hexavalent chromium matrix spikes. These acceptable recoveries suggest that the applied method effectively extracts and stabilizes hexavalent chromium in this particular sample matrix.

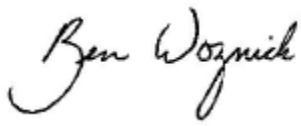
The hexavalent chromium recoveries associated with the insoluble Cr(VI) matrix spikes performed on the sample identified as AB14333 for batch 3 were within established control limits (85.0% and 81.6%), whereas the recoveries of the aqueous Cr(VI) matrix spikes performed on this sample were biased low (62.5% and 61.7%). As previously mentioned, the recoveries of both the aqueous and insoluble hexavalent chromium LCS were within acceptance limits for this batch (100.6% and 95.7%, respectively), demonstrating that the applied procedure both extracts and stabilizes Cr(VI) in solution. Since the low bias observed for these aqueous Cr(VI) matrix spikes may therefore be attributed to interference from the sample matrix, no further corrective action was deemed necessary. These MS/MSD results suggest that the matrix of AB14333 favors reduction of hexavalent chromium.

The hexavalent chromium recoveries associated with the matrix spikes performed on the sample identified as AB14289 for batch 1 were biased low for both the aqueous (0.0% and 0.8%) and the insoluble (67.4% and 68.4%) spikes. The recoveries of the aqueous and insoluble hexavalent chromium LCS were within acceptance limits for this batch (94.1% and 93.4%, respectively), again demonstrating that the method extracts and stabilizes Cr(VI) in solution. The low recoveries observed are therefore attributed to interference from the matrix of AB14289 and indicate that this sample strongly favors reduction of Cr(VI). Since all other quality control parameters associated with this batch were within control, no corrective action was deemed necessary.

The estimated method detection limit (eMDL) for hexavalent chromium for each batch of solids is generated using the standard deviation of the associated preparation blanks, in accordance with Applied Speciation and Consulting's SOP.

If you have any questions or concerns regarding this report, please feel free to contact me.

Sincerely,



Ben Wozniak
Project Manager
Applied Speciation and Consulting, LLC

Hexavalent Chromium Results for the Missouri Department of Natural Resources
Contact: Michael Stroh

Date: March 4, 2010
Report Generated by: Ben Wozniak
Applied Speciation and Consulting, LLC

Sample Results

Sample ID	Batch Identifier	Date & Time Analyzed for Cr(VI)*	Cr(VI) in mg/kg (dw)	% Solids
AB14289	1	2/8/2010 18:34	< 0.014 U	97.4
AB14290	1	2/8/2010 19:26	0.022 J	99.6
AB14291	1	2/8/2010 19:32	0.019 J	96.0
AB14292	1	2/8/2010 20:03	0.069	88.4
AB14293	1	2/8/2010 20:09	< 0.014 U	96.3
AB14294	1	2/8/2010 20:19	0.063	99.4
AB14295	1	2/8/2010 20:24	0.163	99.5
AB14296	1	2/8/2010 20:30	0.061	99.6
AB14297	1	2/8/2010 20:35	0.066	99.7
AB14298	1	2/8/2010 20:40	0.319	97.7
AB14299	1	2/8/2010 20:46	0.035	98.8
AB14300	1	2/8/2010 20:51	0.025	99.4
AB14301	1	2/8/2010 21:07	0.293	99.2
AB14302	1	2/8/2010 21:12	0.106	98.6
AB14303	1	2/8/2010 21:17	0.111	95.2
AB14304	1	2/8/2010 21:23	0.053	95.5
AB14305	1	2/8/2010 21:33	0.069	93.7
AB14306	1	2/8/2010 21:38	0.052	95.1
AB14307	1	2/8/2010 21:44	0.068	95.1
AB14308	1	2/8/2010 21:49	0.116	96.6

dw = dry weight
* Times reported in CST

Hexavalent Chromium Results for the Missouri Department of Natural Resources
Contact: Michael Stroh

Date: March 4, 2010
Report Generated by: Ben Wozniak
Applied Speciation and Consulting, LLC

Sample Results

Sample ID	Batch Identifier	Date & Time Analyzed for Cr(VI)*	Cr(VI) in mg/kg (dw)	% Solids
AB14309	2	2/17/2010 14:14	0.098	96.9
AB14310	2	2/17/2010 14:20	0.211	98.2
AB14311	2	2/17/2010 15:23	0.277	93.9
AB14312	2	2/17/2010 16:00	0.217	96.4
AB14313	2	2/17/2010 16:07	0.081	98.1
AB14314	2	2/17/2010 16:13	0.094	97.9
AB14315	2	2/17/2010 16:19	0.086	94.6
AB14316	2	2/17/2010 16:25	0.078	97.1
AB14317	2	2/17/2010 16:32	0.484	94.9
AB14318	2	2/17/2010 16:38	0.118	96.7
AB14319	2	2/17/2010 16:50	0.763	96.1
AB14320	2	2/17/2010 16:57	0.195	94.2
AB14321	2	2/17/2010 17:15	0.180	95.6
AB14322	2	2/17/2010 17:22	0.059	98.6
AB14323	2	2/17/2010 17:28	0.108	89.7
AB14324	2	2/17/2010 17:34	0.076	93.2
AB14325	2	2/17/2010 17:40	0.076	93.5
AB14326	2	2/17/2010 17:47	0.071	94.3
AB14327	2	2/17/2010 17:59	0.057	98.0
AB14328	2	2/17/2010 18:05	0.054	97.7

dw = dry weight
* Times reported in CST

Hexavalent Chromium Results for the Missouri Department of Natural Resources
Contact: Michael Stroh

Date: March 4, 2010
Report Generated by: Ben Wozniak
Applied Speciation and Consulting, LLC

Sample Results

Sample ID	Batch Identifier	Date & Time Analyzed for Cr(VI)*	Cr(VI) in mg/kg (dw)	% Solids
AB14329	3	2/9/2010 20:14	0.106	96.8
AB14330	3	2/9/2010 20:19	0.061	98.2
AB14331	3	2/9/2010 20:24	0.156	99.1
AB14332	3	2/9/2010 20:40	0.117	93.4
AB14333	3	2/9/2010 20:45	0.087	97.6
AB14334	3	2/9/2010 21:27	0.049	95.1
AB14335	3	2/9/2010 21:43	0.042	96.6
AB14336	3	2/9/2010 21:49	0.058	95.1
AB14337	3	2/9/2010 21:54	0.036	97.1
AB14338	3	2/9/2010 21:59	0.054	96.1
AB14339	3	2/9/2010 22:04	0.139	98.9
AB14340	3	2/9/2010 22:10	0.206	99.1
AB14341	3	2/9/2010 22:15	0.220	94.2
AB14342	3	2/9/2010 22:20	0.192	97.5
AB14343	3	2/9/2010 22:26	0.098	98.4
AB14344	3	2/9/2010 22:31	0.115	94.0
AB14345	3	2/9/2010 22:47	0.100	98.8
AB14346	3	2/9/2010 22:57	0.057	98.9
AB14347	3	2/9/2010 23:03	0.093	97.8
AB14348	3	2/9/2010 23:08	0.116	97.2

dw = dry weight
* Times reported in CST

Hexavalent Chromium Results for the Missouri Department of Natural Resources
Contact: Michael Stroh

Date: March 4, 2010
Report Generated by: Ben Wozniak
Applied Speciation and Consulting, LLC

Quality Control Summary - Preparation Blank Summary

Analyte	Units	Batch	PBS1	PBS2	PBS3	PBS4	Mean	StdDev	eMDL	RL
Cr(VI)	mg/kg (dw)	1	0.010	0.020	0.012	0.016	0.015	0.004	0.013	0.025
Cr(VI)	mg/kg (dw)	2	0.021	0.023	0.022	0.020	0.022	0.001	0.004	0.025
Cr(VI)	mg/kg (dw)	3	0.015	0.019	0.015	0.015	0.016	0.002	0.006	0.025

eMDL = Estimated Method Detection Limit
RL = Reporting Limit

Quality Control Summary - Laboratory Control Samples

Analyte	Units	Batch	LCS	True Value	Result	Recovery
Cr(VI)	mg/kg (dw)	1	LCS	5.000	4.706	94.1
Cr(III)	mg/kg (dw)	1	LCS	5.000	0.020	0.4
$PbCrO_4$	mg/kg (dw)	1	LCS	6886	6430	93.4
Cr(VI)	mg/kg (dw)	2	LCS	5.000	5.369	107.4
Cr(III)	mg/kg (dw)	2	LCS	5.000	0.045	0.9
$PbCrO_4$	mg/kg (dw)	2	LCS	6532	6791	104.0
Cr(VI)	mg/kg (dw)	3	LCS	5.000	5.029	100.6
Cr(III)	mg/kg (dw)	3	LCS	5.000	0.023	0.5
$PbCrO_4$	mg/kg (dw)	3	LCS	6113	5851	95.7

Hexavalent Chromium Results for the Missouri Department of Natural Resources
Contact: Michael Stroh

Date: March 4, 2010
Report Generated by: Ben Wozniak
Applied Speciation and Consulting, LLC

Quality Control Summary - Matrix Duplicate

Analyte	Units	Batch	Sample ID	Rep 1	Rep 2	Mean	RPD
% Solids	%	1	AB14289	97.38	97.55	97.46	0.2
% Solids	%	1	AB14307	95.13	95.19	95.16	0.1
Cr(VI)	mg/kg (dw)	1	AB14293	< 0.014 U	< 0.014 U	NC	NC
Cr(VI)	mg/kg (dw)	1	AB14304	0.053	0.043	0.048	20.4
Cr(VI)	mg/kg (dw)	1	AB14289	< 0.014 U	< 0.014 U	NC	NC
% Solids	%	2	AB14327	98.05	98.20	98.13	0.2
Cr(VI)	mg/kg (dw)	2	AB14318	0.118	0.144	0.131	20.2
Cr(VI)	mg/kg (dw)	2	AB14326	0.071	0.066	0.068	8.1
Cr(VI)	mg/kg (dw)	2	AB14310	0.211	0.158	0.184	28.7*
Cr(VI)	mg/kg (dw)	3	AB14345	0.100	0.081	0.090	21.6
% Solids	%	3	AB14347	97.84	97.87	97.86	0.0
Cr(VI)	mg/kg (dw)	3	AB14333	0.087	0.088	0.088	1.3

NC = Value was not calculated due to one or more concentrations below the eMDL

* The RPD is above the established control limit of 25%; please see narrative.

Hexavalent Chromium Results for the Missouri Department of Natural Resources
Contact: Michael Stroh

Date: March 4, 2010
Report Generated by: Ben Wozniak
Applied Speciation and Consulting, LLC

Quality Control Summary - Matrix Spike/ Matrix Spike Duplicate

Analyte	Units	Batch	Sample ID	Spike Conc	MS Result	Recovery	Spike Conc	MSD Result	Recovery	RPD
Cr(III)	mg/kg (dw)	1	AB14289	5.192	0.032	0.6	5.234	0.015	0.3	71.4**
Cr(VI)	mg/kg (dw)	1	AB14289	5.243	< 0.014 U	0.0*	5.147	0.039	0.8*	NC
$PbCrO_4$	mg/kg (dw)	1	AB14289	6810	4589	67.4*	7578	5181	68.4*	1.4
Cr(III)	mg/kg (dw)	2	AB14310	4.923	0.212	0.6	5.058	0.262	1.5	93.1**
Cr(VI)	mg/kg (dw)	2	AB14310	5.007	4.098	78.1	4.779	4.272	85.5	9.0
$PbCrO_4$	mg/kg (dw)	2	AB14310	6683	6058	90.6	6280	5725	91.2	0.6
Cr(III)	mg/kg (dw)	3	AB14333	5.105	0.144	1.1	5.117	0.231	2.8	87.3**
Cr(VI)	mg/kg (dw)	3	AB14333	5.064	3.253	62.5*	5.134	3.254	61.7*	1.3
$PbCrO_4$	mg/kg (dw)	3	AB14333	7865	6689	85.0	7675	6265	81.6	4.1

* The recovery is below the established control limit of 75%; please see narrative.

** The RPD is above the established control limit of 25%; please see narrative.

NC = Value was not calculated due to one or more concentrations below the eMDL

Hexavalent Chromium Results for the Missouri Department of Natural Resources
Contact: Michael Stroh

Date: March 4, 2010
Report Generated by: Ben Wozniak
Applied Speciation and Consulting, LLC

Quality Control Summary - Historical Calibration Standards

Cr(VI) True Value	Cr(VI) Measured Result	Percent Recovery
0.050	0.053	106.7
0.050	0.056	112.3
0.050	0.067	134.5
0.050	0.052	103.6
0.500	0.501	100.2
5.000	4.929	98.6
25.00	24.24	96.9
0.050	0.057	114.7
0.050	0.056	112.0
0.050	0.060	120.6
0.050	0.064	127.8
0.500	0.499	99.7
5.000	5.055	101.1
25.00	24.98	99.9
0.050	0.068	135.5
0.050	0.066	132.2
0.050	0.060	119.9
0.050	0.069	137.7
0.500	0.537	107.4
5.000	4.935	98.7
25.00	24.89	99.6

All results are reported in µg/L

Hexavalent Chromium Results for the Missouri Department of Natural Resources
Contact: Michael Stroh

Date: March 4, 2010
Report Generated by: Ben Wozniak
Applied Speciation and Consulting, LLC

Quality Control Summary - Historical CCV Standards

Cr(VI) True Value	Cr(VI) Measured Result	Percent Recovery
5.000	5.179	103.6
5.000	5.177	103.5
5.000	5.458	109.2
5.000	5.673	113.5
5.000	5.220	104.4
5.000	5.560	111.2
5.000	4.301	86.0
5.000	5.018	100.4
5.000	4.981	99.6
5.000	5.127	102.5
5.000	4.998	100.0
5.000	5.089	101.8
5.000	5.384	107.7
5.000	5.417	108.3
5.000	5.479	109.6
5.000	5.533	110.7
5.000	4.322	86.4
5.000	4.973	99.5
5.000	5.084	101.7
5.000	5.144	102.9

CCV = Continuing Calibration Verification

All results are reported in µg/L

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Quality Control Summary - Historical Second Source Standards

Cr(VI) True Value	Cr(VI) Measured Result	Percent Recovery
20.00	19.73	98.7
20.00	20.04	100.2
200.0	204.6	102.3
4.000	3.795	94.9
200.0	218.7	109.4
202.0	214.0	105.9
10.00	12.09	120.9
5.000	5.495	109.9
5.000	5.107	102.1
100.0	95.38	95.4
5.000	4.932	98.6
5.000	4.706	94.1
20.00	20.30	101.5
5.000	5.029	100.6
100.0	107.2	107.2
5.000	5.369	107.4
5.000	5.557	111.1
5.000	4.986	99.7

Second source standard = Cr(VI) Blank Spike (from 3060A Extraction)
All results are reported in mg/kg

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Quality Control Summary - Historical Matrix Spikes

Ambient Cr(VI) Conc.	MS Spike Conc.	MS Measured Result	MS Recovery	MSD Spike Conc.	MSD Measured Result	MSD Recovery	RPD
0.003	18.72	0.126	0.7	19.48	0.125	0.6	5.1
131.4	40.07	179.8	120.9	38.99	164.2	84.1	35.9
0.070	18.83	0.214	0.8	18.42	1.851	9.7	170.7
1.351	163.9	162.5	98.3	266.7	282.0	105.2	6.8
3.647	4.009	6.202	63.7	4.061	6.469	69.5	8.7
2.961	221.2	257.4	115.0	209.2	216.7	102.1	11.9
2.853	150.2	167.7	109.8	226.2	243.7	106.4	3.1
0.118	43.67	44.23	101.0	54.70	53.27	97.2	3.9
0.077	4.976	3.343	65.6	5.124	3.790	72.5	9.9
126.8	867.7	947.6	94.6	765.2	834.1	92.4	2.3
0.187	4.046	3.095	71.9	3.775	2.961	73.5	2.2
0.160	4.017	4.214	100.9	4.078	4.038	95.1	5.9
0.080	3.906	3.657	91.6	3.959	3.600	88.9	2.9
0.101	5.052	3.646	70.2	4.694	3.300	68.2	2.9
0.224	4.910	2.551	47.4	4.893	2.361	43.7	8.2
0.342	4.885	3.534	65.4	4.820	3.424	63.9	2.2
< 0.014 U	5.243	< 0.014 U	0.0	5.147	0.039	0.8	200.0
1.816	20.46	6.685	23.8	20.39	5.832	19.7	18.8
0.088	5.064	3.253	62.5	5.134	3.254	61.7	1.3
0.184	5.007	4.098	78.1	4.779	4.272	85.5	9.0

All results are reported in mg/kg