Voluntary Cleanup Report Cross Manufacturing, Inc. Lewis, Kansas December 17, 2015 ECEIVED DEC 18 2015 BUREAU OF **ENVIRONMENTAL REMEDIATION**

Voluntary Cleanup Report Cross Manufacturing, Inc. – Lewis, Kansas

December 17, 2015

Client

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1 Introduction

WSP USA, Corp. (WSP) has prepared this Voluntary Cleanup Report (VCR) for the Cross Manufacturing Inc. (Cross) facility in Lewis, Kansas (the "Site"). This VCR was requested by the Kansas Department of Health and Environment (KDHE) in a letter dated November 6, 2015 (KDHE 2015c), along with their approval of WSP's *Voluntary Cleanup Monitoring Report* dated October 28, 2015 (WSP 2015c). This VCR summarizes the completion of the *Voluntary Cleanup Plan* (WSP 2014) submitted by WSP to the KDHE on April 11, 2014 and approved on June 10, 2014 (KDHE 2014). All work at the Site was conducted under the Voluntary Cleanup and Property Redevelopment Program (VCPRP) and in accordance with the Voluntary Agreement (12VCP0006) between Cross and the KDHE. This VCR was prepared in general accordance with the VCPRP Manual dated June 30, 2011 (KDHE 2011).

1.1 Property Information

The Site is located at 100 James H Cross Blvd, in Lewis, Kansas¹. Lewis is located in Edwards County, in west-central Kansas (Figure 1 – Site Location Map). According to 2010 census data, the population of Lewis is less than 500 people². The population density for Edwards County is 4.9 persons per square mile.

The City of Lewis has no zoning requirements. For reporting purposes, the Site is considered "business/industrial/manufacturing" by the city (Terracon 2012c). The Site is surrounded by residential properties to the south and west, by Burlington Northern and Santa Fe railroad to the north, and by agricultural lands to the east. The property is mostly flat. A low, tree-lined berm is present at the southeastern corner of the Site. The berm marks the northern edge of an intermittent creek/drainage feature that runs southwest-northeast.

Cross manufactures hydraulic components at the Site. Past operations at the plant included chrome-plating. Figure 2 includes a schematic of the plant and its operational areas. The property was used for agricultural land in the early 1900s, while industrial operations have been ongoing at the Site since 1954. Chrome plating reportedly began in 1963 (Terracon 2012c).

1.2 Voluntary Cleanup Timeline

In 1980, Cross decommissioned parts of the chrome plating area now referred to as the former chromium plating area (FCPA, Terracon 2012a). The FCPA consisted of a concrete chrome plating line (concrete pit), plating tanks and rectifiers, three storage tanks, and associated piping/equipment. The three tanks were located within their own concrete secondary containment pit. The tanks were emptied and left in place, and are now referred to collectively as the historic plating area (HPA). The tanks formerly held chrome plating solution, rinse, and secondary rinse fluids. The chrome plating solution tank had a capacity of approximately 1,900 gallons and the two rinse tanks were approximately 1,000 gallons each³.

In late 2011, the plating line was decommissioned by removing the plating baths, tanks, rectifiers, equipment, and piping (Terracon, 2012a). This area is now referred to as the decommissioned plating line (DPL)⁴. A voluntary cleanup (VC) was completed at the site between 2012 and 2015. A timeline of important dates and submittals relative to the VC is shown below:

January 19, 2012:

Terracon conducted a Limited Site Investigation (LSI) near the (DPL). Soil samples contained hexavalent chromium above the KDHE/Bureau of

⁴ The DPL is 59.5-feet long by 6-feet wide by 5.75-feet deep.

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¹ The Public Land Survey site location is the SE ¼, NE ¼ of the NW ¼, Section 25, Township 24 South, Range 25 West. James H Cross Blvd is also referred to as Factory Street.

² Census data and zoning information was found at http://www.edwardscounty.org/index.htm

³ The HPA chrome plating tank was measured at 48-inch diameter by 20 feet. The rinse tanks each measured at 36-inch diameter by 20 feet.

Environmental Remediation (BER) Tier 2 Risk-Based Standards for Kansas	(RSK)
for non-residential settings (KDHE 2010)	

March 19, 2012: KDHE accepted the Site into the VCPRP (KDHE 2012).

June 12, 2012: Terracon submitted a Voluntary Cleanup Investigation (VCI) Work Plan to the

KDHE detailing soil sampling locations, groundwater monitoring well installation,

and groundwater sampling in the FCPA (Terracon 2012a).

September 12, 2012: Terracon submitted a VCI Investigation report to the KDHE detailing the results of

the VCI (Terracon 2012b). Soil samples containing hexavalent chromium above RSK values were detected in samples as deep as 30 feet below ground surface (bgs). Groundwater samples did not contain chromium above laboratory reporting

limits.

November 9, 2012: Terracon submitted a Supplemental VCI Work Plan to the KDHE detailing

additional proposed sampling locations in the FCPA (Terracon 2012c).

January 18, 2013: Terracon submitted a Supplemental VCI Report to the KDHE containing the

results of the Supplemental VCI (Terracon 2013). Deep soil samples (between 40

and 48 feet bgs) did not contain chromium above RSK values.

April 8, 2013: Cross retained Remediation Services, Inc. (RSI) and WSP to conduct the VC.

May 17, 2013: Email from KDHE to WSP establishes cleanup objectives for the site (KDHE

2013a). Section 1.3 contains the Cleanup Objectives.

June 11, 2013: WSP submitted a Supplemental VCI Work Plan to the KDHE (WSP 2013a). The

work plan includes soil sampling locations selected to aid in treatment design.

July 5, 2013: KDHE approves the Supplemental VCI Work Plan (with comments; KDHE 2013b).

October 9, 2013: WSP submitted a Supplemental VCI Report to the KDHE detailing the results of

the Supplemental VCI (WSP 2013b).

December 20, 2013: WSP submitted a Voluntary Cleanup Proposal to the KDHE evaluating remedial

alternatives (WSP 2013c). In situ chromium reduction and fixation was selected

as the preferred remedial alternative.

April 11, 2014: WSP submitted a Voluntary Cleanup Plan (VCP) detailing the proposed in situ

treatment design and performance monitoring program (WSP 2014a).

June 10, 2014: KDHE approved the VCP and associated performance monitoring schedule

(KDHE 2014).

March 5, 2015: WSP submitted a VCP Monitoring Report (WSP 2015a). The report summarized

the results of the first performance monitoring sampling, and a recommendation

for additional treatment.

March 13, 2015: KDHE approved the March 5, 2015 report (KDHE 2015a), including provisions for

additional treatment.

July 30, 2015: WSP submitted the second VCP Monitoring Report (WSP 2015b).

August 6, 2015: KDHE approved the July 30, 2015 report (KDHE 2015b).

October 28, 2015: WSP submitted the third VCP Monitoring Report (WSP 2015c).

November 6, 2015:

KDHE approved the October 28, 2015 report, and requested the completion of this Voluntary Cleanup Report (KDHE 2015c).

This VCR describes the completed *in situ* chromium reduction and fixation remedy, performance monitoring, and site restoration activities. The *in situ* chromium reduction and fixation remedy was intended to reduce the toxic, soluble, and mobile hexavalent chromium (Cr⁶⁺) species to the much less toxic and much less mobile trivalent chromium (Cr³⁺) species. The remedy was completed by delivering the reducing agent calcium polysulfide (CPS) by infiltration and direct injection.

1.3 Cleanup Objectives

The VC objective was to remediate chromium affected soils at the Site to non-residential RSK established by KDHE (Tier 2 RSK), and maintain groundwater in compliance with the RSK. The Non-Residential Tier 2 RSK for soils are shown below:

Tier 2 RSK

Chromium Oxidation State	Non-Residential (mg/kg)		
Hexavalent	111		
Trivalent	3,060,000		

Note: mg/kg = milligrams per kilogram

The Tier 2 RSK were established by KDHE to be "chemical-specific and site-specific cleanup goals for soil, groundwater, and indoor air that are protective of human health and the environment" (KDHE 2010). These values were established for the Cross project in an email dated May 17, 2013 (KDHE 2013a). Note that the trivalent chromium non-residential RSK is greater than one million parts per million and compliance with this standard is considered achieved.

As described in the VCP, remediation will be considered complete and successful if:

- the performance monitoring soil sampling hexavalent chromium concentration results are below the cleanup objective, and
- total chromium concentrations in groundwater remain below the Tier 2 RSK (0.1 milligrams per liter [mg/l]) 6 months after the final CPS application.

The performance monitoring sample results, discussed below, verify that these objectives have been achieved.



2 Documentation/Completion of Cleanup

WSP implemented the VC between October 2014 and May 2015. The VC focused on the cleanup of an area of hexavalent chromium impacted soil identified during the VCI activities. The selected cleanup approach called for the reduction and fixation of hexavalent chromium through the introduction of a reducing agent, CPS, to the subsurface. The VCP specified construction of amendment infiltration galleries and the application of CPS through both direct injection and infiltration. After an incubation period, performance monitoring samples were collected to monitor treatment performance. Based on the initial soil sampling results, a second CPS injection was performed at specific locations and depth intervals. The final performance monitoring samples verified that the soil objectives have been satisfied, and that hexavalent chromium has not leached into groundwater above standards. All work was conducted in accordance with the VCP and the Voluntary Cleanup Plan Monitoring Report. Project as-built drawings and site analytical data are presented in the attached figures and tables.

2.1 Identification of Contaminated Soil

2.1.1 VCI and Supplemental VCI

Limited Site Investigation began at the Site in 1992. Cross contracted Terracon to initiate a voluntary agreement with KDHE and resume remedial investigations in January, 2012. A series of VCI activities have been conducted at the Site since then. The investigations⁵ conducted by Terracon identified an area of chromium impacted soil beneath the DPL and portions of the HPA, extending to as deep as 38 feet bgs.

KDHE requested additional assessment of onsite groundwater, particularly to the east of the southern end of the DPL pit. WSP prepared a *Supplemental Voluntary Cleanup Investigation Work Plan*, which was approved by KDHE July 5, 2013 (KDHE 2013b). The work plan included the installation of one additional groundwater monitoring well and site-wide groundwater sampling for total and hexavalent chromium. WSP also proposed to install six soil borings beneath and to the west of the DPL pit, to improve data density and to aid in remedial planning.

WSP completed the scope of work defined in the *Supplemental Voluntary Cleanup Investigation Work Plan* in August 2013. The objectives of the Supplemental Voluntary Cleanup Investigation were achieved and reported in the *Supplemental Voluntary Cleanup Investigation Report* (WSP 2013b).

2.1.2 Contaminated Soil Volume

WSP created a three-dimensional visualization⁶ and statistical interpretation of analytical data collected by WSP and other consultants over the course of the various phases of the Voluntary Cleanup Investigation (VCI). The raw data was run through an EVS modular system to generate three-dimensional volumes for hexavalent chromium in soil. The detailed description of the model methodology to generate estimated volumes of hexavalent chromium impacted soil above Tier 2 RSK at the Site are presented in Voluntary Cleanup Plan report dated April 11, 2014 (WSP 2014).

Based on Non-Residential Tier 2 standards for total and hexavalent chromium (Section 1.2), an affected soil area of approximately 800 square feet was estimated at the Site (projected maximum footprint), with depths of at least 32 feet bgs. The total volume of affected soil was 10,198 cubic feet, with the highest concentrations restricted to the area beneath and immediately west of the DPL pit. Figures presenting the EVS-modeled two- and three-dimensional representations of the hexavalent chromium-affected soil are shown in VCP report (WSP 2014). Figure 3 shows the location of soil samples within the FCPA and the interpreted footprint of chromium-affected soil.

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⁵ Please refer to WSP's 2013 Supplemental Voluntary Cleanup Investigation Work Plan for a summary of site investigations.

⁶ The three-dimensional visualization was created using CTech Development Corporation's Environmental Visualization System (EVS) Proversion 9.8.2.

2.2 Contaminated Soil Cleanup Approach

The *in situ* reduction and fixation approach targeted soils containing hexavalent chromium at concentrations greater than the applicable Non-Residential Tier 2 RSK at the Site. Soils containing concentrations of hexavalent chromium less than the standards that underlay the affected soils were also to be treated as a precautionary measure to provide a treatment barrier to address vertical migration of hexavalent chromium.

CPS, a reductant, was selected for *in situ* reduction and fixation of hexavalent chromium to trivalent chromium. The CPS was delivered to the affected subsurface soils by infiltration and direct injection. CPS (CaS_x) reacts with oxygen (O_2) and carbon dioxide (CO_2) to form calcium thiosulfate (CaS_2O_3), hydrogen sulfide (H_2S), sulfur (S) and calcium carbonate ($CaCO_3$) as shown below:

$$CaS_x + 3/2 O_2 \rightarrow CaS_2 O_3 + (x - 2)S$$

 $CaS_x + CO_2 \rightarrow CaCO_3 + H_2S + (x - 1)S$

Hexavalent chromium is reduced to trivalent chromium by calcium thiosulfate and hydrogen sulfide. The sulfide of trivalent chromium is unstable in water or soil moisture and precipitates as chromium hydroxide (Cr(OH)₃) which is stable across a wide range of naturally occurring geochemical conditions.

$$Cr^{6+} + 3/2 CaS_2O_3 + 3/2 H_2O \rightarrow Cr^{3+} + 3/2 CaSO_4 + 3/2 S + 3H^+$$

 $Cr^{6+} + 3/2 H_2S \rightarrow Cr^{3+} + 3/2 S + 3H^+$

Hexavalent chromium may also be reduced indirectly by reaction with ferrous iron produced by interaction (reduction) of ferric iron (naturally present in soils) with calcium polysulfide.

2.2.1 CPS Bench Testing

Bench-scale testing of Site-soils was conducted to determine an appropriate dose of CPS to apply to the Site, to demonstrate stability of the resulting trivalent chromium across a wide range of potential geochemical conditions, and to demonstrate that significant off-gassing would not occur (WSP 2013c). Based on the bench test results, a dose of sulfur in the form of CPS at 15 times (15X) the stoichiometric amount of hexavalent chromium was demonstrated to be appropriate, and used as the basis of CPS demand calculations.

2.3 Soil Cleanup Program

The soil cleanup program was conducted sequentially to treat soils containing hexavalent chromium over non-residential Tier II RSK. Two rounds of treatments were necessary to achieve cleanup objectives. The first CPS treatment was performed in October 2014 and the second treatment was performed in May 2015. Both treatments included CPS application by direct injection and by infiltration through two galleries (DPL Gallery and Shallow Gallery) constructed in October 2014.

2.3.1 Amendment Storage, Mixing and Delivery (October, 2014)

The CPS was stored in polyethylene tanks, a material compatible with the reductant. CPS and potable dilution water were transferred to a separate polyethylene mixing tank for delivery preparation. CPS and potable dilution water were mixed to meet the ratios specified in the VCP for each amendment delivery type. After mixing, the diluted CPS solution (or "amendment fluid") was delivered through flexible hoses to the injection rig or galleries via a dedicated transfer pump. Please refer to Section 2.1.3.2 of WSP's VCP report (WSP 2014) for additional details on CPS storage, mixing, and delivery.

A summary of the mixing ratios for direct injection is provided in Section 2.3.2. A summary of the mixing ratios for the infiltration galleries is shown in Section 2.3.4.



2.3.2 **Direct Injection**

The locations of injection points were marked as shown in Figure 3. Before beginning intrusive work, Kansas One-Call (811) and a private utility locating service, Baker-Peterson, LLC of Cicero, Indiana were contacted to identify subsurface utilities. The locations of injection points were adjusted in the field by 1-2 feet as necessary to maintain a 3-foot minimum distance from marked subsurface utilities, structural elements, and existing monitoring wells, The amendment fluid was applied using direct-push methods with a 66-Series Geoprobe® rig and advanced through 1.5-inch outside diameter drill rods.

2.3.2.1 **CPS Application (October 2014)**

The first CPS application was conducted by Vironex Technical Services, LLC of Denver, Colorado from October 14 through 18, 2014. The amendment was mixed at a ratio of approximately 8 parts dilution water to one part CPS. A total of approximately 12,500 gallons of amendment fluid was delivered via direct injection through 24 boreholes located in the treatment zone. The amendment fluid was injected in five foot increments, from 15 to 40 feet bas. The mixing ratios for the first CPS application are shown below.

	CPS (gal)	Dilution Water (gal)	Amendment Fluid (gal) (2)	Dilution Water to CPS Ratio (gal per gal)
All injection Points:	1,370	10,748	12,120	7.8
Per Injection Point:	57	448	505	7.8
Per Injection Interval:	10	75	85	7.8

Notes:

- CPS = calcium polysulfide; gal = gallons; gal per gal = gallons per gallon.
- All volumes are rounded to reflect the accuracy of field measurement.

Table 1 contains the field-measured amendment fluid volume on a point by point and per interval basis. The amendment fluid was injected starting from the bottom of the borehole (40 feet bgs) and working upward at 5-foot intervals to 15 feet bgs, using 1.5-inch drill rods equipped with expendable drive points7. Amendment fluid was injected at flow rates that varied between 0.1 to 10 gallons per minute (gpm) and at applied pressures between 110 to 200 pounds per square inch (psi). The injection pump was fitted with a valved discharge bypass (returning to the amendment mixing tank) to control applied pressure and flow.

If the amendment fluid delivery to any depth interval was not successful, the volume not delivered to that interval was added to the next delivery interval within the same boring. If delivery in the final interval was not successful, then the volume not delivered to that interval was added to the same interval at an adjacent location. Minor increases in total fluid volumes are the result of potable chase water used to clear CPS from equipment. After the amendment fluid delivery was completed at each point, the delivery point was abandoned by filling it with grout and the surface was patched to match the existing surface conditions.

CPS Application (May 2015)

Confirmation soil samples collected in January, 2015 identified residual Cr⁶⁺ in the areas near PSB-02, PSB-03, and PSB-05 (WSP 2015a). Please refer to Section 3.1.1 for discussion of the soil sampling results which were reported within the Voluntary Cleanup Plan Monitoring Report (WSP 2015a). The Voluntary Cleanup Plan Monitoring Report (WSP 2015a) also included recommendations for an additional CPS application via direct injection and infiltration.

The second CPS application was completed by Geotechnical Services, Inc. of Wichita, Kansas from May 4 through 6, 2015. The amendment was mixed at a ratio of approximately ½ part dilution water to 1 part CPS. Approximately

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Several attempts to inject through a pressure-activated horizontal injection probe failed before switching to expendable drive points.

1,500 gallons of amendment fluid was delivered via direct injection through 14 boreholes located in the treatment zone. The amendment fluid was injected in one foot increments targeting specific zones in each boring. The mixing ratios for the second CPS application are shown below.

	CPS (gal)	Dilution Water (gal)	Amendment Fluid (gal)	Dilution Water to CPS Ratio (gal per gal)
All injection Points:	830	399	1,299	0.48
Per Injection Interval:	5.7	2.7	8.4	0.48

Notes:

- 1. CPS = calcium polysulfide; gal = gallons; gal per gal = gallons per gallon.
- 2. All volumes are rounded to the nearest gallon to reflect the accuracy of field measurements.

Table 2 contains the field-measured amendment fluid volume on a point by point and per interval basis. The amendment fluid was injected starting from the bottom of the borehole (35 feet bgs) and working upward at 1-foot intervals to the shallowest depth (6 feet bgs) using 1.5 inch drill rods and a pressure activated horizontal injection probe. Amendment fluid was injected at flow rates that varied between 2 to 10 gpm and 25 psi of applied pressure. The pump was fitted with a valved discharge bypass (returning to the amendment mixing tank) to control applied pressure and flow.

If the amendment fluid delivery to any depth interval was not successful, the volume not delivered to that interval was added to the next delivery interval within the same boring. If delivery in the final interval was not successful, then the volume not delivered to that interval was added to the same interval at an adjacent location. Additional amendment fluid was applied during injection based on field observations. As a result, amendment volumes for the second infiltration gallery application were slightly less than the anticipated volume. After the amendment fluid delivery was completed at each point, the delivery point was abandoned by filling it with grout and the surface was patched to match the existing surface conditions.

2.3.3 Infiltration Gallery Construction (October 2014)

Following the completion of the first round of amendment injections, two infiltration galleries were constructed in the FCPA. An infiltration gallery was constructed in the DPL pit (DPL Gallery), and a shallow infiltration gallery was constructed immediately west of the DPL pit (Shallow Gallery). Both infiltration galleries were designed to intersect and follow the same flow paths that lead to the subsurface distribution of hexavalent chromium.

2.3.3.1 DPL Gallery Construction

An infiltration gallery was constructed in the DPL pit as follows:

- Prior to any intrusive activities, the DPL pit was shored using a vertical shoring system.
- The existing concrete floor of the DPL pit was removed, demolished, characterized, and transported offsite to a properly permitted disposal facility. Please refer to Section 4.2 for details on the waste disposal.
- The pit was backfilled with coarse stone.
- A 4-inch perforated PVC pipe was installed in the pit for delivery of the amendment fluid into the coarse stone backfill.
- A second 4-inch PVC pipe was installed within the coarse stone backfill near the surface of the gallery as a conservative measure to passively vent any unexpected vapors to the outside of the building.
- A piezometer was installed within the gallery to measure the elevation of amendment fluid in the gallery during application.
- The top of the DPL Gallery was finished with reinforced concrete to match the existing floor in the building.



2.3.3.2 Shallow Gallery Construction

The shallow gallery was constructed immediately west of the DPL pit as follows:

- The existing concrete floor was removed, demolished, characterized, and transported offsite to a properly permitted disposal facility. Please refer to Section 4.2 for details on the waste disposal.
- Shallow soil was excavated to create the space to construct the gallery.
- The excavated shallow soil was characterized and transported offsite to a properly permitted disposal facility.
 Please refer to Section 4.2 for details on the waste disposal.
- The void was backfilled with coarse stone.
- A 4-inch perforated PVC pipe was installed and used to deliver the amendment fluid into the coarse stone backfill.
- A second 4-inch PVC pipe was installed within the coarse stone backfill near the surface of the gallery as a conservative measure to passively vent any unexpected vapors to the outside of the building.
- A piezometer was installed within the gallery to measure the elevation of amendment fluid in the gallery during application.
- The top of the Shallow Gallery was finished with reinforced concrete to match the existing floor in the building.

The galleries were installed as designed. The locations of the infiltration galleries are presented in Figure 3. The *Voluntary Cleanup Plan* (WSP 2014) contains additional construction details.

2.3.4 Infiltration Gallery Amendment Application

The maximum fluid working volume of each gallery was conservatively calculated within the VCP to be one-half of the pore volume of each gallery. As such, amendment fluid applications were made to each gallery in batches. Between each batch application, fluid levels were monitored using an electronic water level indicator passed through the piezometer installed in each gallery. The fluid levels were allowed to drop between the applications of batches to prevent overflow of the galleries.

2.3.4.1 First Infiltration Gallery Application (October 2014)

The first CPS application through the infiltration galleries was completed from October 20 through 28, 2014. A total of approximately 8,758 gallons of amendment fluid comprised of 2,011 gallons of CPS and 6,747 gallons of dilution water were applied through the DPL Gallery. A total of approximately 2,685 gallons of amendment fluid comprised of 728 gallons of CPS and 1,957 gallons of dilution water were added to the Shallow Gallery. The volume of amendment fluid delivered during the first infiltration gallery application is shown on Table 3.

2.3.4.2 Second Infiltration Gallery Application (May 2015)

The second CPS application through the infiltration galleries was completed in May, 2015. A total of approximately 2,093 gallons of amendment fluid comprised of 675 gallons of CPS and 1,418 gallons of dilution water were added to the DPL Gallery. A total of approximately 360 gallons of amendment fluid comprised of 98 gallons of CPS and 262 gallons of dilution water were added to the Shallow Gallery. As stated in Section 2.3.2.2, these volumes are slightly less than anticipated based on field observations during direct injection. The volume of amendment fluid delivered during the second infiltration gallery application is shown on Table 3.

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3 Performance Monitoring

Performance monitoring was conducted to verify that the non-residential Tier 2 RSK soil cleanup objectives were achieved and to confirm that total chromium concentrations in groundwater remain below the Tier 2 RSK. Performance monitoring included:

- collection of soil samples approximately 10 weeks after the initial amendment application,
- collection of groundwater samples approximately 10 weeks after the initial amendment application.
- collection of soil samples approximately 4 weeks after the second amendment application,
- collection of groundwater samples approximately 4 weeks after the second amendment application, and
- collection of groundwater samples approximately 19 weeks after the second amendment application.

Performance monitoring activities and results are summarized below; details are provided within the voluntary cleanup plan monitoring reports (WSP 2015a, WSP 2015b, and WSP 2015c).

3.1 Confirmation Soil Sampling

Soil samples were collected from six 12-inch diameter sample access casings that were installed through the coarse infiltration gallery backfill and into the treated soil underlying the galleries. Groundwater samples were collected from the four site groundwater monitoring wells. The performance monitoring soil sample and groundwater monitoring well locations are shown on Figure 3.

Performance monitoring soil sampling results are compared to the cleanup objectives (Section 1.1.3). Groundwater sampling results are compared to RSK values (0.1 mg/l). All samples were collected in accordance with the Field Sampling Plan (FSP) and analyzed by Pace Analytical Services, Inc. of Lenexa, Kansas in accordance with the Quality Assurance Project Plan (QAPP). These plans are provided within the VCP (WSP 2014).

3.1.1 Confirmation Soil Sampling (January 2015)

Confirmation soil samples were collected to evaluate the effectiveness of treatment on January 6 and 7, 2015, approximately 10 weeks following the initial CPS application. Soil samples were collected by advancing soil borings through the six access casings into the soil below using a direct-push drill rig equipped with 2.25-inch diameter dual-tube sample tooling. The samplers were advanced through the target interval, and then withdrawn. Soil samples were collected from five discrete depth intervals within the six sample points, for a total of 30 primary soil samples. The soil samples were transferred into laboratory-supplied bottleware, and shipped to the laboratory to be analyzed for total chromium (by EPA SW-846 Method 6010) and hexavalent chromium (by EPA SW-846 Method 7196A). QA samples were collected in accordance with the QAPP.

Twenty-six of the primary samples contained hexavalent chromium concentrations less than the site cleanup objective of 111 mg/kg and four samples contained hexavalent concentrations greater than the cleanup objective. Soil from PSB-01 contained hexavalent chromium at concentrations between non-detect (ND) and 110 mg/kg. Soil from PSB-02 contained hexavalent chromium at concentrations below the site cleanup objective, except a sample collected at 30 to 31.5 feet bgs, which had a concentration of 195 mg/kg. Hexavalent chromium concentrations from 4 soil samples collected from boring PSB-03 were not detected above laboratory reporting limits. One PSB-3 sample, from 20 to 21 feet bgs, contained hexavalent chromium above the cleanup objective at a concentration of 128 mg/kg. Soil from PSB-04 contained hexavalent chromium at concentrations between ND and 32.7 mg/kg, below the cleanup objective. Soil from PSB-05 contained hexavalent chromium at concentrations between 8.6 and 314 mg/kg. The PSB-5 soil samples from two intervals, 6 to 7 feet and 20 to 21 feet bgs, contained concentrations of hexavalent chromium above the cleanup objective. Soil from PSB-06 did not contain hexavalent chromium at concentrations exceeding laboratory reporting limits or the cleanup objective.

Based on these soil sampling results, a second CPS injection event was implemented. Soil sample results are presented in Table 4.



3.1.2 Confirmation Soil Sampling (June 2015)

The second round of confirmation soil sampling was completed in June 2015, approximately one month after the second CPS application. Soil samples were collected from the locations that contained hexavalent chromium at concentrations above the site cleanup objectives during the January 2015 sampling event. Soil samples were collected from three locations and four discrete intervals that exceeded cleanup objectives during the January 2015 sampling event. Soil samples were analyzed for total chromium by EPA SW-846 Method 6010 and hexavalent chromium by EPA SW-846 Method 7196A.

Hexavalent chromium was not detected above the laboratory reporting limit in any of the samples. The final confirmation soil sampling results are presented in Table 4 and Figure 4. The table below shows a comparison of the January 2015 and June 2015 confirmation sample results.

Sample Depth (ft bgs)	Hexavalent Chromium Concentration (mg/kg)			
	January 2015	June 2015		
30 – 31.5	195	ND		
20 – 21	128	ND		
6 – 7	314	ND		
20 – 21	254	ND		
	30 – 31.5 20 – 21 6 – 7	(ft bgs) (mg/) January 2015 30 – 31.5 195 20 – 21 128 6 – 7 314		

Notes:

3.2 Groundwater Monitoring

Groundwater samples were collected before amendment application and following injection/infiltration activities to monitor for the presence of total chromium and to confirm that the treatment efforts did not leach hexavalent chromium to groundwater. The groundwater monitoring well locations are shown in Figure 3, and well construction information is shown in Table 5.

Before beginning treatment activities, WSP conducted a Supplemental Voluntary Cleanup Investigation to provide additional data to fill onsite data gaps (WSP 2013a and WSP 2013b). The previous monitoring well network (MW-01, MW-02, and MW-03) was insufficient for determining groundwater flow direction and gradient. KDHE requested an additional monitoring well east of the southern edge of the DPL pit. WSP installed MW-04 to fulfill KDHE's request.

At the beginning of each groundwater sampling event, WSP collected site-wide depth-to-groundwater measurements from each well (Table 6). Groundwater was first encountered at approximately 50 feet bgs in all wells. Groundwater flow was to the east across the FCPA, with a relatively flat gradient of approximately 0.002 ft/ft. Figure 5 shows groundwater contours presented in the most recent VCP Monitoring Report (WSP 2015b).

Before groundwater sampling, each well was purged by removing three well volumes using dedicated disposable polyethylene bailers. During purging, groundwater was analyzed for parameters including temperature, pH, conductivity, oxidation-reduction potential (ORP), and turbidity (Table 7).

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^{1.} If bgs = feet below ground surface; mg/kg = milligrams per kilogram; ND = not detected at or above adjusted reporting limits.

⁸ The hydraulic gradient was calculated using values measured between wells MW-01 and MW-02. The calculated values were 0.0025 ft/ft (August 2013), 0.0021 ft/ft (January 2015), 0.0013 ft/ft (June 2015) and 0.0015 ft/ft (September 2015).

Groundwater samples were analyzed by Pace Analytical Services, Inc. of Lenexa, Kansas for total chromium by United States Environmental Protection Agency (EPA) SW-846 Method 6010. Quality Assurance (QA) samples were collected in accordance with the QAPP.

3.2.1 Baseline Groundwater Monitoring (August 2013)

WSP conducted the baseline groundwater monitoring event in August, 2013. Of note, ORP values of approximately 160 millivolts were recorded, indicating slightly oxidizing conditions were present at the site. Samples were collected and analyzed for total and hexavalent chromium. Chromium was not detected at or above laboratory reporting limits in samples from any of the site groundwater monitoring wells

3.2.2 Groundwater Monitoring (January 2015)

The first post-injection groundwater monitoring event was performed between January 6 and 8, 2015, approximately 10 weeks after the initial CPS injection. Measured pH values were slightly higher than in August 2013, but remain within the range of neutral conditions. ORP readings were also generally slightly higher in the post-treatment samples. Chromium was not detected at or above laboratory reporting limits in samples from any of the site groundwater monitoring wells.

3.2.3 Groundwater Monitoring (June 2015)

The second post-injection groundwater monitoring event was performed on June 9, 2015, approximately one month after the second CPS application (and 32 weeks after the initial CPS injection). Measured pH values decreased to a level slightly lower than baseline conditions, but still within the range of neutral conditions. ORP readings returned to levels generally consistent with baseline values. Chromium was not detected at or above laboratory reporting limits in samples from any of the site groundwater monitoring wells.

3.2.4 Groundwater Monitoring (September 2015)

The final round of post-treatment groundwater monitoring was conducted on September 24, 2015, approximately 19 weeks after the second CPS application (and 47 weeks after the initial CPS injection). The groundwater analytical results remain consistent with those measured during pre-CPS application conditions in August 2013. Total chromium was not detected above laboratory reporting limits in samples from three of the four onsite wells. A minor detection (0.0072 mg/kg) of total chromium was measured in the sample from the upgradient well (MW-01), but is likely unrelated to the CPS injections.

3.3 Air Monitoring

During construction of the infiltration galleries, WSP installed a passive system to vent subsurface vapors to the outside of the building. Indoor air monitoring was conducted continuously during the implementation of all remediation activities. Monitoring was performed using a multi-gas meter to monitor for the production of hydrogen sulfide (H₂S) gas within the worker's breathing zone. Personnel were also equipped with personal H₂S meters during the application of amendment fluids. No H₂S gas was detected during the VC activities.

During the September performance monitoring event, additional air monitoring was conducted at the discharge vent. Tubing attached to a multi-gas meter was fed into the discharge vent. The multi-gas meter was allowed to run continuously for approximately five minutes. H₂S was not detected at the discharge vent.



4 Waste Management

Investigation derived waste (IDW) generated during the supplemental VCI and VC activities and remediation derived wastes produced during the VC activities were handled, characterized, and disposed of in accordance with solid waste and hazardous materials transportation requirements.

4.1 IDW Management

IDW included soil generated during investigation and performance monitoring sampling, and groundwater generated during performance monitoring sampling. All IDW were drummed and staged onsite in accordance with the *Supplemental Voluntary Cleanup Investigation Work Plan* (WSP 2013) and the *Voluntary Cleanup Plan* (WSP 2014). Composite samples were collected and analyzed by Pace Analytical of Lenexa, Kansas for waste characterization by the following methods:

- toxicity characteristic leaching procedure (TCLP) for metals by SW6010 and SW6020A,
- TCLP for mercury by method SW7470 and SW7470A, and
- pH by method SM45500-H+B and SW9045D.

Based on the results of the analysis (Appendix A), KDHE authorized the disposal of the IDW as non-hazardous waste under Special Waste Disposal Authorization number 14-1439. In November 2014, a total of 1.02 tons of soil IDW was transported by Northend Disposal of Dodge City, Kansas, and disposed of as non-hazardous waste at Ford County Landfill, of Dodge City, Kansas. One drum of IDW soil and one drum of IDW groundwater remain staged onsite pending shipment to the disposal facility. KDHE has authorized disposal of these wastes as non-hazardous waste under Special Waste Disposal Authorization number 15-1622 for soil and 15-1618 for groundwater (Appendix A) at the Waste Connections (WC), Plumb Thicket facility in Harper, Kansas. Copies of non-hazardous waste manifests for these wastes will be sent to KDHE under a separate cover following disposal activities.

4.2 Remediation Derived Waste Management

Waste generated during the construction of the infiltration galleries was stockpiled during work. The wastes were separated into two stockpiles:

- Concrete material from the DPL pit and the shallow gallery
- Soil material from beneath the shallow gallery

All concrete material was treated as hazardous waste based on generator knowledge. A total of 20.98 tons of concrete waste was transported by Action Resources Inc., and disposed as hazardous waste at Clean Harbors' Lone Mountain LLC, of Waynoka, Oklahoma (Appendix A). A signed copy of the waste manifest will be retained for a minimum of 3 years according to 40 CFR 761.209(a).

A composite sample was collected from the soil stockpile and analyzed by ALS Environmental of Houston, Texas, for hazardous characteristics, including:

- toxicity characteristic leaching procedure (TCLP) for volatiles by method SW1311/8260B,
- TCLP for semi-volatiles by method SW1311/8270,
- TCLP for metals by method SW6020A,
- TCLP for mercury by method SW7470A,
- pH by method SW9045D.
- reactive cyanide by method SW7.3.3.2,
- reactive sulfide by method SW7.3.4.2, and
- flashpoint

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Based on the results of the analysis, KDHE authorized the disposal of the soil waste as non-hazardous waste under Special Waste Disposal Authorization Number 14-1438 (Appendix A). A total of 27.64 tons of soil waste was transported by Northend Disposal of Dodge City Kansas, and disposed of as non-hazardous waste at Ford County Landfill, of Dodge City, Kansas.

Appendix A includes waste characterization analysis, waste profiles, waste manifests, and landfill weight tickets for the remediation derived waste.



5 Summary and Conclusions

WSP performed the scope of work defined in the VCP and Voluntary Cleanup Plan Monitoring Report that included construction of the amendment infiltration galleries and the application of CPS through both direct injection and the infiltration galleries. The objective of the VC was to remediate hexavalent chromium affected soils at the Site to non-residential RSK and confirm that total chromium concentrations in groundwater remain below the Tier 2 RSK for 6 months after the final CPS application. All work was conducted in accordance with the Voluntary Cleanup Plan and the March 2015 Voluntary Cleanup Plan Monitoring Report.

Following initial remedial amendment application performed in October, 2014, confirmation soil samples collected in January, 2015 identified the presence of residual hexavalent chromium at concentrations greater than the Tier 2 RSK of 111 mg/kg in discrete areas. These residual hexavalent chromium affected soils were targeted during a second CPS treatment performed in May, 2015. The CPS was allowed to incubate for a period of approximately 1 month before sampling following the second application.

Based on the results of post-remedial sampling, WSP confirmed that:

- Remediation of chromium affected soil in the FCPA was effective at reducing hexavalent chromium concentrations to less than the Non-Residential Tier 2 RSK.
- Total chromium concentrations in groundwater remain below the RSK, confirming that hexavalent chromium was not leached into onsite groundwater during treatment of overlying soils.

Cross has satisfied the Tier 2 non-residential chromium cleanup objectives established for the Site. Activities to place Environmental Use Controls (EUC) on the property to restrict future land use to non-residential are underway and an Application for Environmental Use Control has been submitted to KDHE. The EUC application and associated submittals are also provided in Appendix B.

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WSP 2013b. Supplemental Voluntary Cleanup Investigation Report. October 9, 2013.

WSP 2013c. Voluntary Cleanup Proposal. December 20, 2013.

WSP 2014. Voluntary Cleanup Plan. April 11, 2014.

WSP 2015a. Voluntary Cleanup Plan Monitoring Report. March 5, 2015.

WSP 2015b. Voluntary Cleanup Plan Monitoring Report. July 30, 2015.

WSP 2015c. Voluntary Cleanup Plan Monitoring Report. October 28, 2015.



Acronym List

BER Bureau of Environmental Remediation

bgs below ground surface

CaCO₃ calcium carbonate

CaS₂O₃ calcium thiosulfate

CO₂ carbon dioxide

CPS calcium polysulfide

Cr3+ trivalent chromium

Cr⁶⁺ hexavalent chromium

Cr(OH)₃ chromium hydroxide

DPL decommissioned plating line

EPA Environmental Protection Agency

FCPA former chromium plating area

FSP Field Sampling Plan

gpm gallons per minute

H₂S hydrogen sulfide

HPA historic plating area

KDHE Kansas Department of Health and Environment

KGS Kansas Geological Survey

LSI Limited Site Investigation

mg/kg milligrams per kilogram

ND not detected

O₂ oxygen

ORP oxidation-reduction potential

PSI pounds per square inch

QA Quality Assurance

QAPP Quality Assurance Project Plan

RSI Remediation Services, Inc.

RSK Risk-based Standards for Kansas

VC Voluntary Cleanup

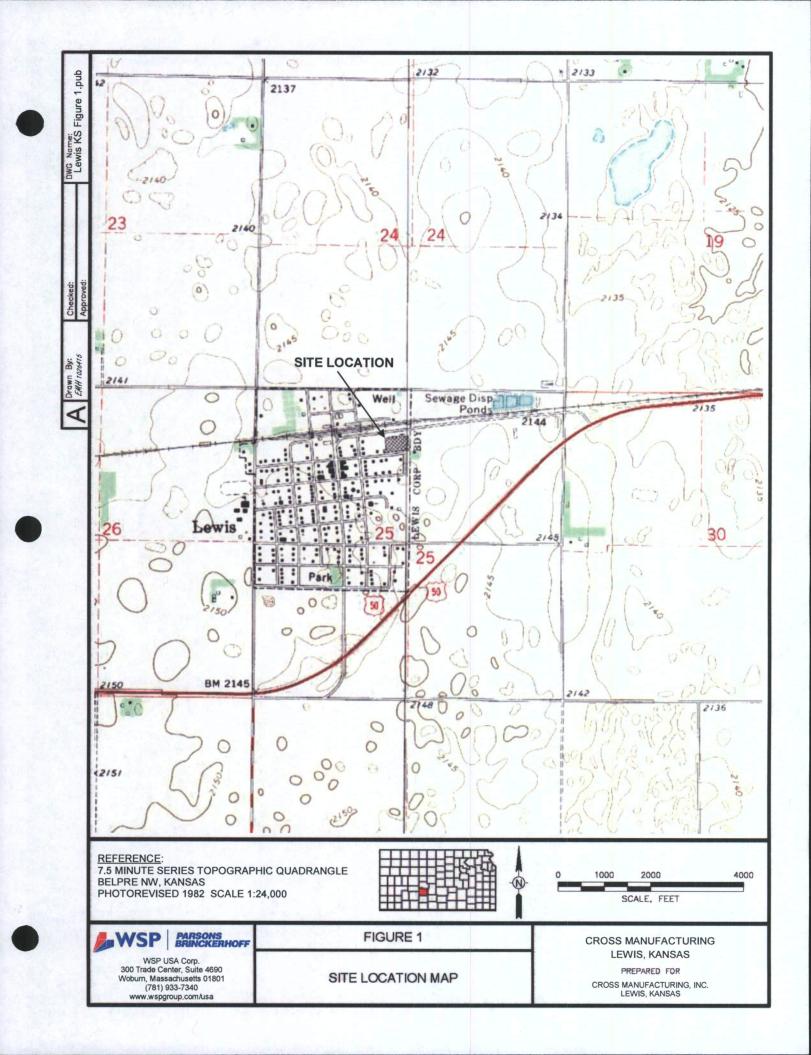
VCP Voluntary Cleanup Plan

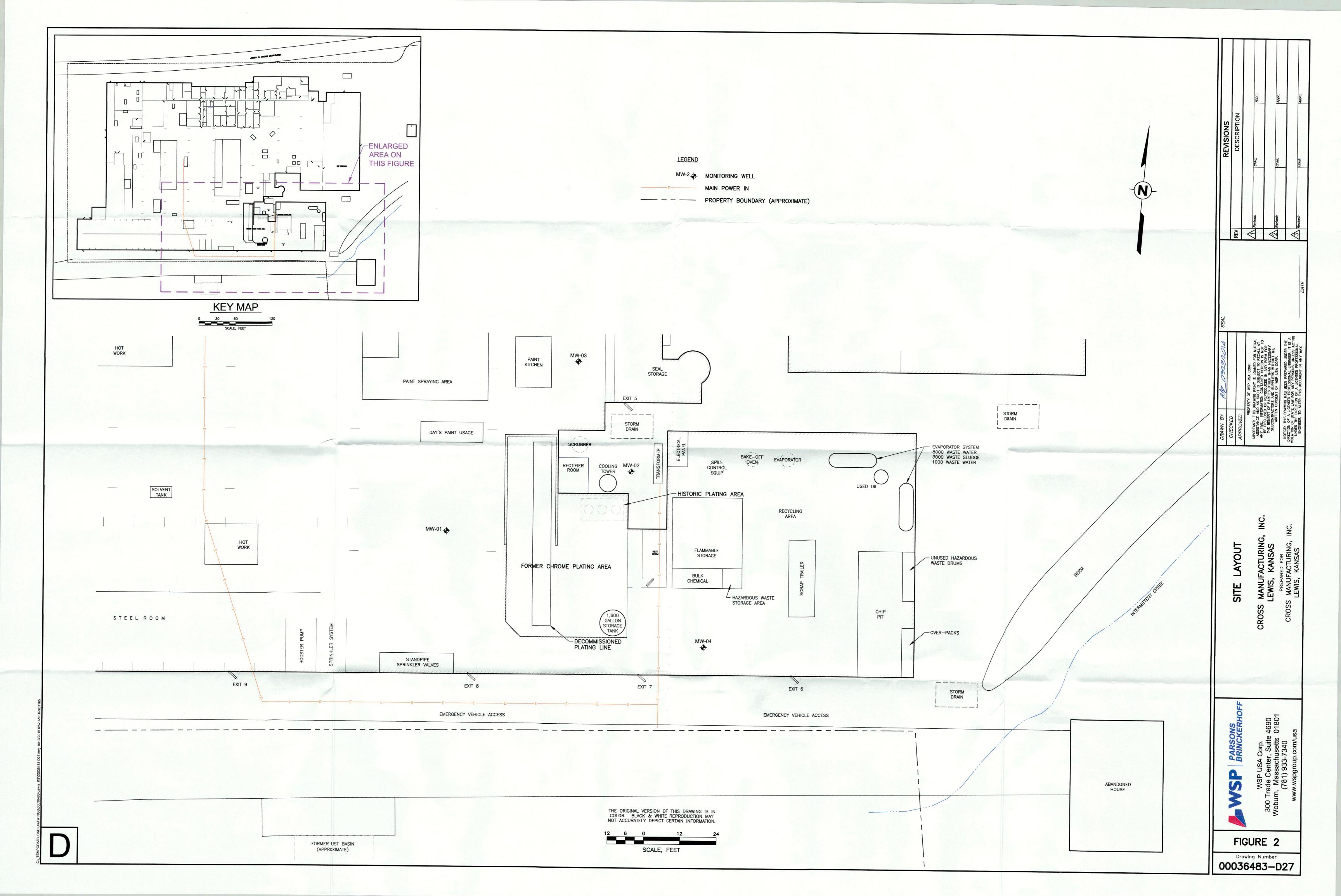
VCR Voluntary Cleanup Report

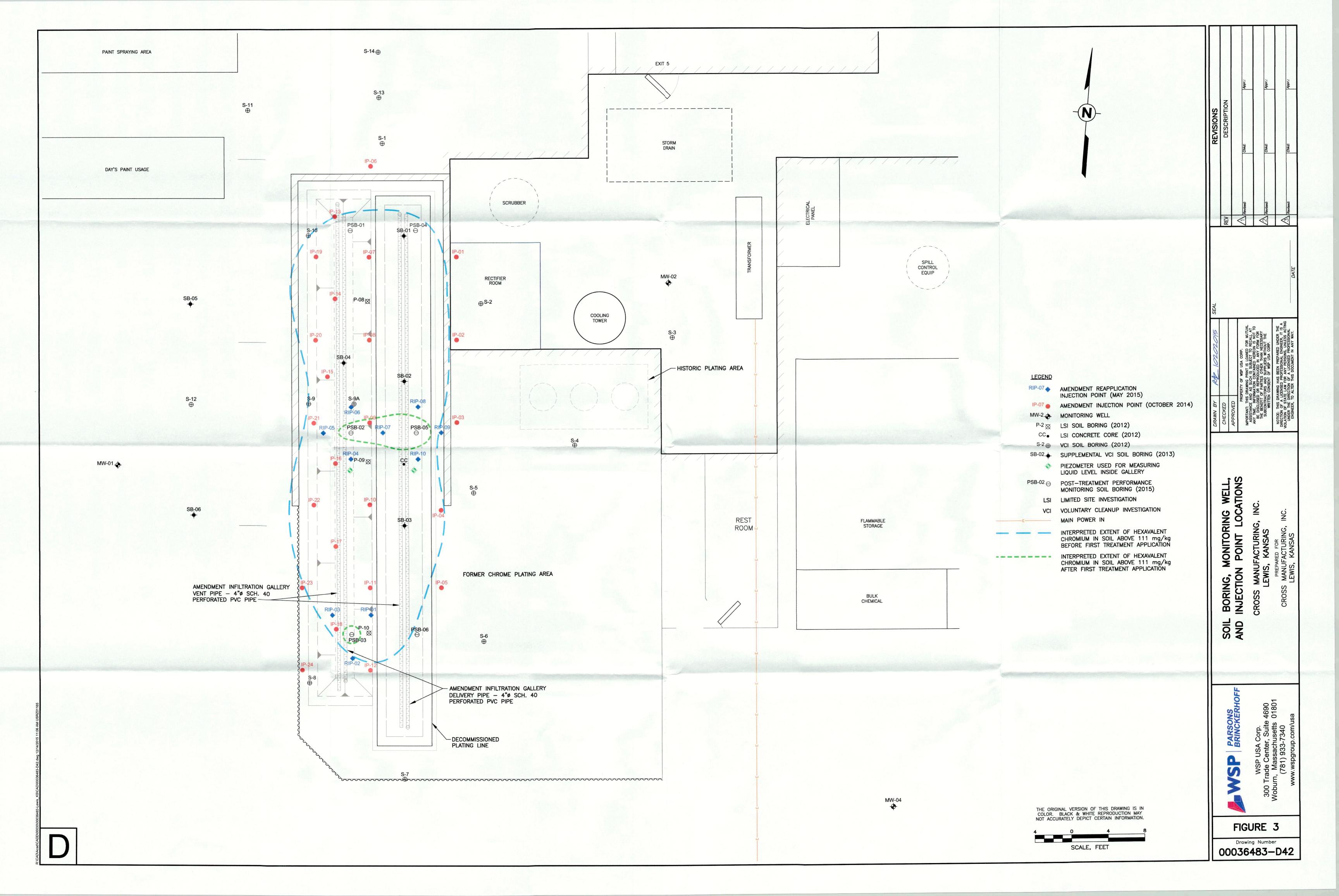
VCPRP Voluntary Cleanup and Property Redevelopment Program

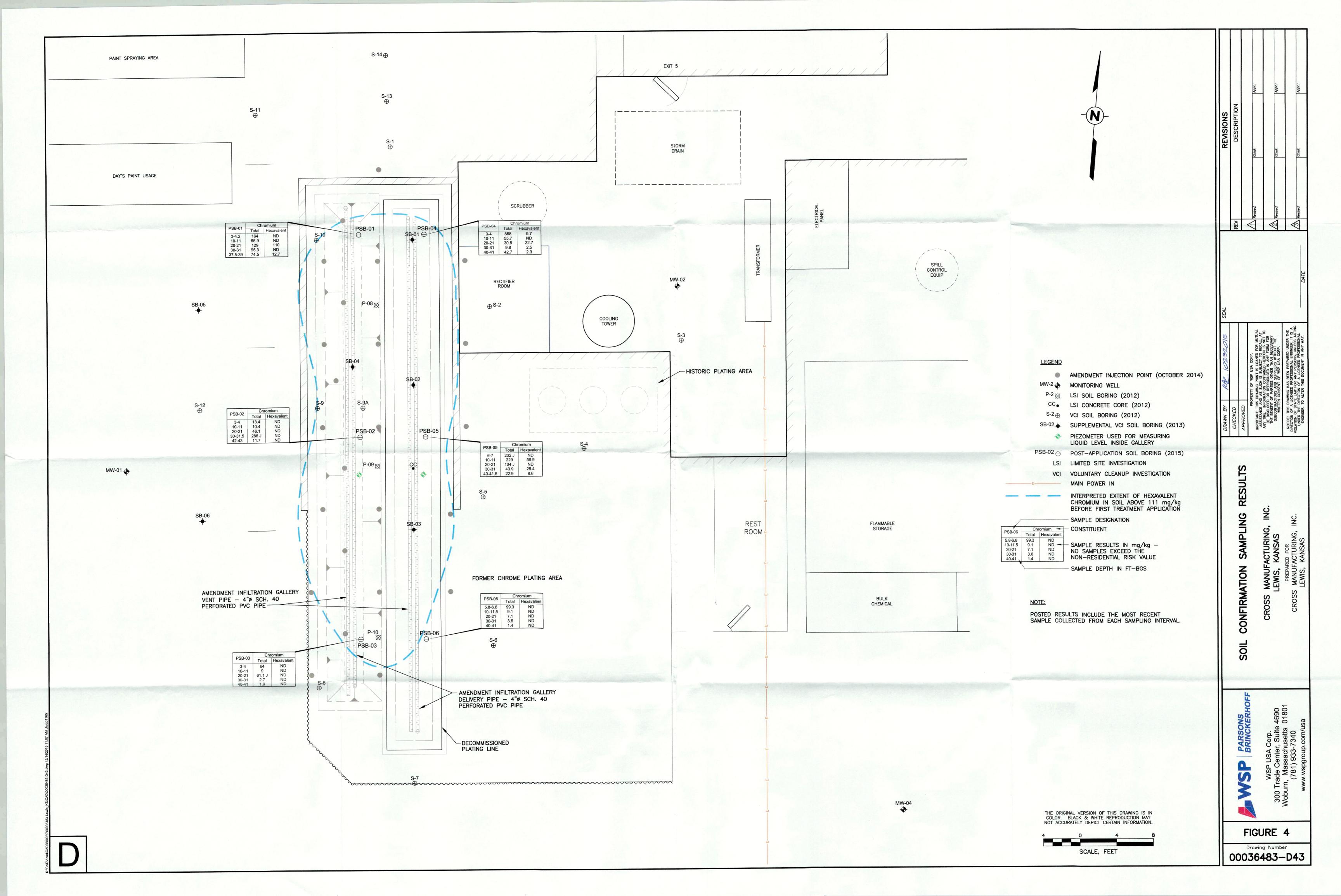
WSP USA, Corp.

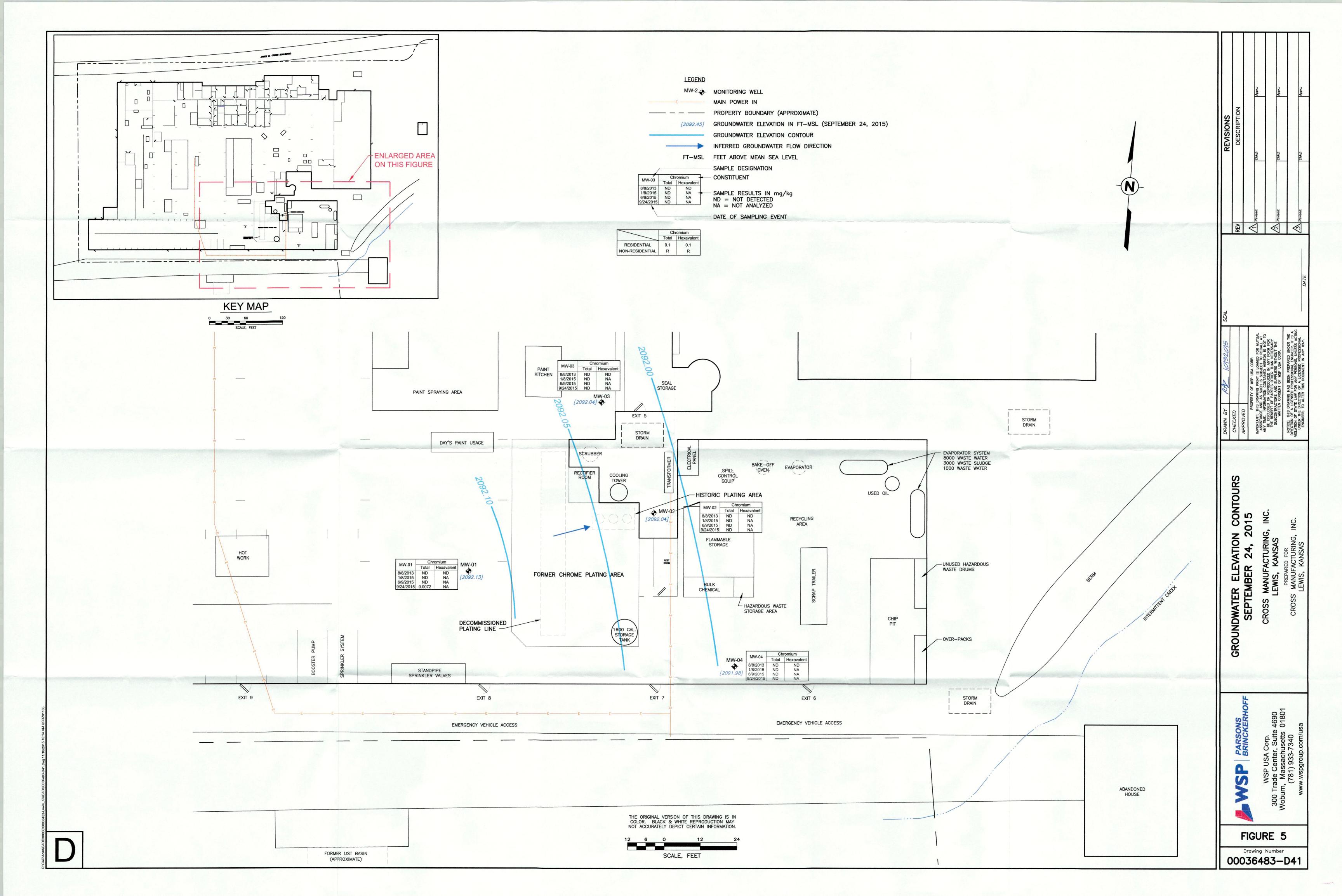
Figures











Tables

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Table 1

CPS Amendment Delivery Details Cross Manufacturing Inc. Lewis, Kansas

Amendment	Target Volume	Total Target		Amendment Injection Depth Interval (ft bgs)						
Injection Point	Per Interval	Volume	15	20	25	30	35	40	Volume	
								10		
	ation Volume (gal)						1			
IP-01	84.17	505	115	50	84	84	84	84	501	
IP-02	84.17	505	84	84	84	84	84	84	505	
IP-03	84.17	505	84	84	84	84	84	84	505	
IP-04	84.17	505	84	84	84	84	84	84	505	
IP-05	84.17	505	84	84	84	84	84	84	505	
IP-06	84.17	505	84	84	84	84	84	84	505	
IP-07	84.17	505	84	84	84	84	84	84	505	
IP-08	84.17	505	84	84	84	84	84	168	588	
IP-09	84.17	505	84	84	84	84	84	84	505	
IP-10	84.17	505	84	84	84	84	84	84	505	
IP-11	84.17	505	84	84	84	84	84	168	588	
IP-12	84.17	505	84	84	84	84	84	84	505	
IP-13	84.17	505	34	84	84	84	84	84	454	
IP-14	84.17	505	84	84	120	149	84	84	605	
IP-15	84.17	505	84	84	84	84	84	0	420	
IP-16	84.17	505	184	84	84	84	84	84	604	
IP-17	84.17	505	84	84	84	84	168	0	505	
IP-18	84.17	505	84	84	84	84	204	0	540	
IP-19	84.17	505	134	84	84	84	84	84	554	
IP-20	84.17	505	84	84	84	84	84	168	588	
IP-21	84.17	505	84	84	84	84	84	84	505	
IP-22	84.17	505	84	84	84	84	84	84	505	
IP-23	84.17	505	84	84	84	84	168	0	505	
IP-24	84.17	505	84	84	84	84	84	84	505	
	tal Target Volume:	12,120					Total Applie		12,512	

- ft bgs = feet below ground surface; gal = gallons.
- Amendment fluid was mixed at a ratio of 10 gallons of calcium polysulfide to 75 gallons of dilution water.
- Gray highlighted cells indicate that the amendment application exceeded the target application volume; yellow highlighted cells indicate that the target volume was not achieved.
- Applied volumes are rounded to the nearest gallon to reflect the accuracy of field measurement.

Table 2

CPS Reapplication Amendment Delivery Details Cross Manufacturing Inc. Lewis, Kansas

		Amendment Injection Point									
Amendment Delivery Interval (ft bgs)	Target Volume Per Interval (gal)	RIP-01 Amendme	RIP-02	RIP-03	RIP-04	RIP-05	RIP-06	RIP-07	RIP-08	RIP-09	RIP-10
6	8.4	Amendine		on volume	(gai)			8.4	8.4	8.4	8.4
7	8.4	-				-		8.4	8.4	8.4	8.4
8	8.4					-		8.4	8.4	8.4	8.4
9	8.4	-	-			-		8.4	8.4	8.4	8.4
10	8.4		-	-		-		8.4	8.4	8.4	8.4
11	8.4	-				-		8.4	8.4	8.4	8.4
12	8.4	-				-		8.4	8.4	8.4	8.4
13	8.4					-		8.4	8.4	8.4	8.4
14	8.4					-		8.4	8.4	8.4	8.4
15	8.4	8.4	8.4	8.4		-		8.4	2	8.4	8.4
16	8.4	8.4	8.4	8.4		-		8.4	1	8.4	8.4
17	8.4	8.4	8.4	8.4				8.4	22.2	8.4	8.4
18	8.4	8.4	8.4	8.4		-		8.4		8.4	8.4
19		25.2	8.4	25.2				8.4		8.4	8.4
20	8.4 8.4	25.2	8.4	25.2						8.4	8.4
21		25.2	8.4	25.2				8.4	22.6		
	8.4							8.4	33.6	8.4	8.4
22 23	8.4	25.2	8.4	25.2				8.4	8.4	8.4	8.4
	8.4	8.4	8.4	8.4				8.4	8.4	8.4	8.4
24 25	8.4	8.4	8.4	8.4	0.4			8.4	8.4	8.4	8.4
	8.4				8.4	8.4	8.4	8.4			
26	8.4	-	/		8.4	8.4	8.4	8.4			
27	8.4	-	-	-	8.4	8.4	8.4	8.4			
28	8.4	-		-	8.4	8.4	8.4	8.4			
29	8.4			-	8.4	25.2	25.2	8.4			
30	8.4	-			8.4	25.2	25.2	8.4			
31	8.4	-	-		8.4	25.2	25.2	8.4			
32	8.4	-			8.4	25.2	25.2	8.4			
33	8.4	-			8.4	25.2	25.2	8.4			
34	8.4				8.4	8.4	8.4	16.8			
Subtotal:		151.2	84	151.2	84	168	168	252	159.6	159.6	159.6
Total Target Volume:	243.6							Tota	Application	n Volume:	1,537

- · ft bgs = feet below ground surface; gal = gallons.
- · Amendment was mixed at a ratio of 5.7 gallons of calcium polysulfide to 2.7 gallons of dilution water.
- Gray highlighted cells indicate that the amendment application exceeded the target application volume; yellow highlighted cells indicate that the target volume was not achieved.

Table 3

Infiltration Gallery Amendment Delivery Details Cross Manufacturing Inc. Lewis, Kansas

Infiltration Gallery	Dilution Water to CPS Ratio (gal per gal)	Target Volume (gal)	Applied Volume (gal)
October 2014 Gallery	Application	1	
DPL Gallery	3.4	8,758	8,758
Shallow Gallery	2.7	2,685	2,685
Subtotal:	•••	11,443	11,443
May 2015 Gallery Ap	plication		*****
DPL Gallery	2.1	2,300	2,093
Shallow Gallery	2.7	500	360
Subtotal:		2,800	2,453
	Tota	Application Volume:	13,896

[•] gal = gallons; gal per gal = gallons per gallon.

Table 4

Performance Monitoring Soil Sampling Results - Chromium Cross Mnaufacturing, Inc. Lewis, Kansas

Sample ID:	RSK	/ALUES	PSB-01					
Sample Depth (ft): Sample Date:	Residential	Non-Residential	3-4.2 01/06/15	10-11 01/06/15	20-21 01/06/15	30-31 01/06/15	37.5-39 01/06/15	
Metals (mg/kg) Chromium (total)	33.6	111	164	65.9	129	95.3	74.5	
Chromium (III) Chromium (VI)	117,000 33.6	3,060,000 111	164 11.5 U	65.9 2.2 U	19 110	95.3 2.1 U	61.8 12.7	
CRVI Percentage			0 %	. 0 %	85 %	0 %	17 %	

Sample ID:	RSK	RSK VALUES		PSB-02							
Sample Depth (ft):	j		3-4	10-11	20-21	DUPLICATE	30-31.5	30-31.5	42-43		
Sample Date:	Residential	Non-Residential	01/06/15	01/06/15	01/06/15	01/06/15	01/06/15	06/09/15	01/06/15		
Metals (mg/kg)							-				
Chromium (total)	33.6	111	13.4	10.4	46.1	9.5	316 J	286 J	11.7		
Chromium (III)	117,000	3,060,000	13.4	10.4	46.1	ND	121	286	11,7		
Chromium (VI)	33.6	111	2.4 U	10.9 U	2.1 U	11.2	195	2.1 U	2 L		
CRVI Percentage			0 %	0 %	0 %	100 %	62 %	0 %	. 0 9		

Sample ID:	RSK \	/ALUES	PSB-03								
Sample Depth (ft):			3-4	10-11	20-21	20-21	30-31	40-41			
Sample Date:	Residential	Non-Residential	01/06/15	01/06/15	01/06/15	06/09/15	01/06/15	01/06/15			
Metals (mg/kg)	,										
Chromium (total)	33:6	111	64	9	183	61 . 1J-	2:7	1.9			
Chromium (III)	117,000	3,060,000	64	.9	55	61.1	2.7	1.9			
Chromium (VI)	33.6	111	2.3 U	2.2 U	128	2.1 U	2 U	2,1 U			
CRVI Percentage	,	0 %	0 %	70 %	• 0%	0 %	0 %				

Sample ID:	RSK	PSB-04							
Sample Depth (ft): Sample Date:	Residential	Non-Residential	6-7 01/07/15	10-11.2 01/07/15	20-21 01/07/15	30-31 01/07/15	40-41 01/07/15		
Metals (mg/kg)	٠.								
Chromium (total)	33.6	111	858	55.7	30.8	9.8	42.7		
Chromium (III)	117,000	3,060,000	848.3	、 55.7	ND	7.3	40.4		
Chromium (VI)	33.6	111	9.7	2.2 UJ	32.7	2.5	2.3		
CRVI Percentage		_ `	1 %	0 %	100 %	26 %	5 %		

Table 4

Performance Monitoring Soil Sampling Results - Chromium Cross Mnaufacturing, Inc. Lewis. Kansas

Sample ID:	RSK \	PSB-05								
Sample Depth (ft):			6-7	6-7	10-11	20-21	20-21	30-31	40-41.5	
Sample Date:	Residential	Non-Residential	01/07/15	06/09/15	01/07/15	01/07/15	06/09/15	01/07/15	01/07/15	
					22 7 332 7 3					
Metals (mg/kg)		-								
Chromium (total)	33.6	111	648	232 J	229	259	104 J	43.9	22.9	
Chromium (III)	117,000	3,060,000	334	232	172.1	5	104	18.5	14.3	
Chromium (VI)	33.6	111	314	4.6 U	56.9	254	4.3 U*	25.4	8.6	
CRVI Percentage			48 %	0 %	25 %	98 %	0 %	58 %	38 %	

Sample ID:	RSK '	VALUES	PSB-06								
Sample Depth (ft):			5.8-6.8	10-11.5	20-21	DUPLICATE	30-31	40-41			
Sample Date:	Residential	Non-Residential	01/06/15	01/06/15	01/06/15	01/06/15	01/06/15	01/06/15			
Metals (mg/kg)											
Chromium (total)	33.6	111	99.3	9.1	7.1	3.2	3.6	1.4			
Chromium (III)	117,000	3,060,000	99.3	9.1	7.1	3.2	3.6	1.4			
Chromium (VI)	33.6	111	5.1 U	2.2 UJ	2.1 U	4.2 U	2.1 U	2 U			
CRVI Percentage			0 %	0 %	0 %	0 %	0 %	0 %			

Notes:

- Values in bold exceed the residential RSK values. Values in bold and shaded exceed both the residential and non-residential RSK values.
 RSK values based on KDHE Tier 2 Risk-based Summary Table and KDHE e-mail correspondence.
- •ft = feet: J = estimated result: mg/kg = milligrams per kilogram.
- ND = not detected, RSK = Risk-based Standards, U = not detected.
- Values for trivalent chromium (Chromium III) were calculated by subtracting results for hexavalent chromium (Chromium VI) from results for total chromium. In cases where hexavalent chromium is reported as not detected, all chromium is shown as trivalent chromium. In cases where hexavalent chromium result is greater than the reported result for total chromium, trivalent chromium is shown as not detected:
- The non-detect result from the PSB-05/20-21 sample collected in June 2015 was qualified with an "R" (rejected) during data validation, based on a review of the Matrix Spike (MS) and Matrix Spike Duplicate (MSD) analysis performed on the sample. During the MS/MSD procedure, a known quantity of chromium (VI) was introduced to replicates of the sample (i.e., the MS and MSD), and the spiked replicates were analyzed with the non-spiked samples. Hexavalent chromium was not detected in the MS or MSD above laboratory reporting limits. As a result, the percent chromium (VI) recovery relative to the amount of chromium (VI) spiked was below the acceptable range and per data validation protocol the data was flagged as rejected.

The recovery from the matrix was likely due to reduction of the chromium (VI) spike to chromium (III), which is not detectable by the chromium (VI) analytical method, by residual calcium polysulfide within the matrix of the soil sample. Other QA/QC data, such as Lab Control Sample analysis, demonstrate that the laboratory's instruments were performing within acceptable quality assurance/quality control parameters. As such, the results area considered accurate and are suitable for use.

Table 5

Monitoring Well Construction Cross Manufacturing, Inc. Lewis, Kansas

Well ID	Installation Company	Installation Date	Well Location X	Well Location	Ground Elevation (ft AMSL)	TOC Elevation (ft AMSL)	Total Depth	Screened Int	erval Elevation (ft AMSL)	Well Diameter
150A/ O4		0/46/2042	1005012.04	4776407.40	2440.52	2442.00	F4.40	2000.00	2000.00	
MW-01	Terracon	8/16/2012	1095813.91	1776497.12	2143.52	2143.02	54.10	2098.92	- 2088.92	1 1
MW-02	Terracon	8/16/2012	1095872.75	1776521.29	2143.48	2142.99	54.20	2098.79	- 2088.79	1 1
MW-03	Terracon	8/16/2012	1095852.47	1776556.02	2143.59	2143.26	54.05	2099.21	- 2089.21	1 1
MW-04	WSP	8/7/2013	1095901.37	1776466.14	2143.64	2143.32	55.28	2098.04	- 2088.04	. 2

- AMSL = above mean sea level; ft = feet; in = inches; TOC = Top of PVC well casing.
 All measurements recorded to nearest 0.01 foot. All wells were surveyed August 7, 2013 by Garber Surveying Service relative to the NAD83 Kansas State Plane Datum.

Table 6

Groundwater Elevation Results Cross Manufacturing, Inc. Lewis, Kansas

Well ID:	: MW-01				MW-02		MW-03			MW-04		
	TOC Elevation	DTW	GW Elevation									
	(ft AMSL)	(ft)	(ft AMSL)									
Date							i l			1		
8/8/2013	2143.02	49.16	2093.86	2142.99	49.28	2093.71	2143.26	49.51	2093.75	2143.32	49.58	2093.74
1/6/2015	2143.02	50.46	2092.56	2142.99	50.56	2092.43	2143.26	50.81	2092.45	2143.32	50.89	2092.43
6/9/2015	2143.02	50.51	2092.51	2142.99	50.56	2092.43	2143.26	50.84	2092.42	2143.32	50.93	2092.39
9/24/2015	2143.02	50.89	2092.13	2142.99	50.95	2092.04	2143.26	51.22	2092.04	2143.32	51.34	2091.98

- AMSL = above mean sea level; DTW = depth to water; ft = feet; TOC = Top of PVC well casing.
 All measurements recorded to nearest 0.01 foot. All wells were surveyed August 7, 2013 by Garber Surveying Service.
- The January 2015 water levels at MW-02, MW-03, and MW-04 were measured on January 7.

Table 7 Groundwater Purge Results Cross Manufacturing, Inc. Lewis, Kansas

Well:	DTW	DTB	Calculated Well	Well Volume	Turbidity	TDS	ORP	рН	Cond.	Temperature
Sample Date:	(ft)	(ft)	Volume (gal)	(gal)	(NTU) .	(ppm)	(mV)	(s.u.)	(µS/cm)	(,C)
MW-01			,							
	1			1	3,000	559.4	195	7.34	796.2	19.10
August 8, 2013	49.16	54.10	0.20	2	160.1	560.5	173	7.34	800.1	18.50
	1			3	12.7	578.8	163	7.34	822.2	19.00
				1	>1,000	-	143	7.71	587.0	19.04
January 6, 2015	50.46	53.15	0.11	2	>1,000	-	234	7.74	583.0	19.08
	-			3	>1,000	-	290	7.78	578.0	18.53
				1	>1,000	706.1	235	7.04	719.9	19.80
June 9, 2015	50.51	53.15	0.11	2	>1,000	486.6	234	7.04	713.9	18.80
			ì	3	>1,000	489.3	234	7.01	715.2	18.60
				1	>1,000	507.3	198	7.74	722.4	18.50
September 24, 2015	50.89	53.15	0.09	2	>1,000	505.6	202	7.66	721.8	18.20
				3	>1,000	505.3	210	7.71	718.7	17.90
MW-02										
	I .			1	3,000	1078.0	198	8.52	1494.0	19.60
August 8, 2013	49.28	54.20	0.20	2	1,540	509.1	154	6.79	727.5	18.40
				3	79	701.1	152	7.07	700.8	18.00
				1	>1,000	-	202	8.16	886.0	15.42
January 7, 2015	50.56	54.25	0.15	2	>1,000	-	158	8.05	925.0	16.06
				3	>1,000	-	164	7.93	971.0	15.68
				1	>1,000	837.4	-61	7,55	1187.0	20.50
June 9, 2015	50.56	54.25	0.15	2	>1,000	761.3	-64	6.75	1083.0	19.20
				3	>1,000	738.3	-64	6.71	1066.0`	19.60
				1	>1,000	856.1	-40	7.57 .	1190.0	19.10
September 24, 2015	50.95	53.15	- 0.09	2	>1,000	852.6	-15	7.19	1181.0	19.40
				3 .	>1,000	850.2	-46	7.24	1187;0	18:60
MW-03				•					l	
				1	2,539	550.7	209	7.70	795.5	19.00
August 8, 2013	49.51	54.05	0.19	2	3,000	537.5	185	7.11	0.008	18.90
******				3	81	516.5	170	7.18	744.3	18.20
				1	>1,000	-	352	7.87	645.0	18.56
January 8, 2015	50.81	54.10	0.13	2	>1,000	-	212	7.92	634.0	18.14
				3	>1,000	-	239	7.82	637.0	18.02
				1	>1,000	578.3	182	6.82	839.1	20.90
June 9, 2015	50.84	54.10	0.13	2	>1,000	551.3	178	7.17	801.6	19.40
	,			3	>1,000	551,7	185	7.09	803.8	19.90
				1	15	574.1	198	7,38	812.6	19.90
September 24, 2015	51.22	53.15	80.0	2	>1,000	541,4 .	177	7.45	769.3	19.30
	1			3	>1,000	540.7	174	7,44	761.8	19.30

Table 7

Groundwater Purge Results Cross Manufacturing, Inc. Lewis, Kansas

Well:	DTW	DTB	Calculated Well	Well Volume	Turbidity	TDS	ORP	pН	Cond.	Temperature
Sample Date:	(ft)	(ft)	Volume (gal)	(9=)		(ppm)	(mV)	(s.u.)	(µS/cm)	(.c)
MW-04	<u> </u>		1947						 	+
				1	12.1	554.1	165	7.53	790.4	18.30
August 8, 2013	49.58	55.28	0.93	2	12.6	555.7	169	7.35	787.1	17.70
				3	8.1	555.1	169	7.27	788.4	17.30
				1	>1,000	-	254	7.84	583.0	16.97
January 7, 2015	50.89	55.30	0.72	2	963	-	357	7.89	589.0	16.82
	1			3	1,000	-	261	7.87	582.0	17.04
				1	>1,000	520.5	221	7.31 ⁻	703.3	21.40
June 9, 2015	50.93	55.30	0.71	2	614	537.6	221	7.30	757.6	19.60
		`		3	521	543.1	221	7.31	788.8	18.70
		_		1	22	527.2	227	8.43	748.3	18.20
September 24, 2015	51.34	53.15	0.30	2	>1,000	531.5	233	8.40	754.1	17.60
			i	3	>1,000	530.8	235	8.40	752.8	17.30

Notes:

[•] ft = feet; gall = gallons; NTU = nephelometric turbidity unit; ppm = parts per million; mV = millivolts; s.u. = standard unit; µS/cm = microSiemens per centimeter; *C = degrees Celsius.
• The MW-03 water level was recorded on January 7, 2015; sample purging and collecting was performed on January 8, 2015.

Appendix A – Waste Management

Bureau of Waste Management Curtis State Office Building 1000 SW Jackson, Suite 320 Topeka, KS 66612-1366



phone: 785-296-1600 fax: 785-296-8909 email: bwmweb@kdheks.gov www.kdheks.gov/waste

Robert Moser, MD, Secretary.

Department of Health & Environment

Sam Brownback, Governor

November 6, 2014

Mr. Raymond Law Cross Manufacturing, Inc. 100 James H. Cross Blvd. Lewis. KS 67562

RE: Special Waste Disposal Authorization Number 14-1439

THIS AUTHORIZATION EXPIRES May 6, 2015.

Dear Mr. Law:

We have considered your request for disposal of five (5) tons of IDW soil from Cross Manufacturing, Inc., 100 James H. Cross Blvd., Lewis, KS. (Analysis provided)

Based solely on the analysis provided, the waste is not a characteristic hazardous waste with respect to the constituents tested. As stated in K.A.R.28-31-261, it is the responsibility of the generator to determine whether or not a waste is a hazardous waste by either knowledge of process or by proper testing by a K.D.H.E. certified lab. If there are questions as to the status of this waste, the department suggests the facility contact the Kansas Department of Health and Environment at telephone 620-225-0596. If Cross Manufacturing, Inc. is confident the material for disposal is not a hazardous waste for any characteristic or listed constituent not included in the testing, the following applies.

Approval is given to dispose of this waste at the Ford County landfill, operating under Kansas Permit 0718, provided the following conditions are met:

- Approval to deliver the waste must be obtained from the landfill operator prior to transporting the waste to the landfill. The final decision on whether to accept or reject the waste rests with the landfill operator. Please contact Sevena Koehn, Office Manager, telephone 620-225-5288, to obtain approval. If the landfill operator refuses to accept this waste, you should contact us to determine alternate disposal options.
- 2. The waste must be transported separately to the landfill and be identified to the operator upon delivery.
- 3. Kansas Administrative Regulation 28-29-108(r) (12) and (13) requires solid waste disposal facilities to maintain a log of commercial or industrial wastes received such as sludges, barreled wastes, and special wastes. The log must indicate the source and quantity of waste and the disposal location thereof. The special waste authorization number should be used as identification when entering the shipment into the log.

- 4. This approval is valid for disposal of the waste described and in the amount shown above. If additional shipments are required, you must contact us to receive another disposal authorization.
- Operating standards as defined by K.A.R. 28-29-108(k) prohibit the disposal of liquid waste. "Liquid waste" means any waste material that is determined to contain "free liquids" as defined by method 9095A, revision 1, paint filter liquids test, as described in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Pub. No. SW-846 dated December 1996. For purposes of this disposal authorization, all waste for disposal must be able to pass the "paint filter test".
- 6. Any change in the process producing this waste, any, change in the materials used in producing this waste or any other change to this waste stream requires that a new Special Waste Disposal Authorization be obtained prior to disposal.

If you have any questions, feel free to contact me at 785-296-0681.

Sincerely,

Tony Guy

Environmental Scientist

Special Waste Coordinator

KDHE/Bureau of Waste Management

ABG

C Sevena Koehn e-file .

Requester phone: 620-338-6066

Special Waste Disposal Request

Kansas Department of Health and Environment

Bureau of Waste Management
Waste Reduction, Compliance and Enforcement Section
1000 SW Jackson, Suite 320, Topeka, Kansas 66612-1366

You may FAX this form to: 785-296-8909 or 785-296-8721

Please type or clearly print - See page 2 for instru	uctions		······································
I. REQUESTER INFORMATION (This is	s where the Disposal Au	horization letter will be	sent.)
Name: Cross Manufacturing, Inc.	ي معالم شد معارب با		en e
Address: 100 James H Cross Boulevard			
City: Lewis	State: Kansas	Zip Code: 675	52
Contact Person: Raymond Law	Teleph	one Number: 620-324-55	525
E-Mail Address, if applicable: raymond.law@cre	ossmfg.com	ax Number: 620-324-573	7
II. POINT/LOCATION OF GENERATION IN	FORMATION (only if diffe	rent from the information	in Section I above)
Name:			
Address:			
City:	State:	Zip Code:	
Contact Person:	Teleph	one Number:	
Process Producing Waste: Investigative Derive Physical Characteristics of Waste: Dark black s Quantity for Disposal: 5 tons (Please Se Frequency (Select One): One Time Oweek Laboratory Analyses Attached: Yes O No	soil, no odor elect One) O Lbs.	ets (MSDS) Attached: O	, /
Renewal of Previous Authorization: Previous A	Authorization No:	Date Issue	d:
IV. DISPOSAL INFORMATION			
Landfill Proposed for Disposal: Ford County Lar	ndfill 13049 110 Road	Dodge City, Kansas 67	801
Solid Waste Transfer Station Proposed:			
V. CERTIFICATION			
I hereby certify that I am a d uly authorized representations the following items are true: 1. The waste identified for disposal is not a haccomparation analysis provided are from are representative of the waste identified for accomparation provided in any attached processed in the materials and authorization indicated above, and the info	nazardous waste as defined be a Kansas Department of He for disposal, rofile, re-certification, or other processes that generate the	y K.A.R. 28-31-261. alth and Environment (KDI document completed by the waste have not change	HE) certified laboratory and e authorized representative
Taining Tais-	Raymond Law - EH & S (Corporate Coordinator	11/05/2014
Signature	Printed Name		Date /

Form sw600-specialwaste.pdf





August 22, 2013

Dave Carstons WSP Environment & Energy 300 Trade Center, Suite 4690 Woburn, MA 01801

RE: Project: CROSS MANUFACTURING ,

Pace Project No.: 60150682

Dear Dave Carstons:

Enclosed are the analytical results for sample(s) received by the laboratory on August 08, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Slui Bosinstangle

Sherri Rosenstangle

sherri.rosenstangle@pacelabs.com Project Manager

Enclosures





CERTIFICATIONS

Project:

CROSS MANUFACTURING

Pace Project No.:

60150682

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219
WY STR Certification #: 2456.01
Arkansas Certification #: 13-012-0
Illinois Certification #: 003097
lowa Certification #: 118
Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055 Nevada Certification #: KS000212008A Oklahoma Certification #: 9205/9935 Texas Certification #: T104704407-13-4 Utah Certification|#: KS000212013-3 Illinois Certification #: 003097

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project:

CROSS MANUFACTURING

Pace Project No.:

60150682

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60150682001	WC080713-WT	Water	08/07/13 08:00	08/08/13 22:50
60150682002	WC080713-SL	Solid	08/07/13 08:00	08/08/13 22:50

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SAMPLE ANALYTE COUNT

Project:

CROSS MANUFACTURING

Pace Project No.:

60150682

Lab ID Sample ID Method Analysts Rep	orte
60150682001 WC080713-WT EPA 6010 JGP	
EPA 7470 TJT	
SM 4500-H+B JML	•
60150682002 WC080713-SL EPA 6010 JGP	•
EPA 7470 TJT	
EPA 9045 DJR	•

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ANALYTICAL RESULTS

Project:

CROSS MANUFACTURING

Pace Project No.: 60150682

Sample: WC080713-WT	Lab ID: 6015068200	1 Collecte	d: 08/07/1	3 08:00	Received: 08/	08/13 22:50 Ma	atrix: Wațer	
Parameters	Results Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, TCLP	Analytical Method: EPA	\ 6010 Prepa	ration Meth	od: EPA	A 3010			
	Leachate Method/Date	: EPA 1311; 0	8/20/13 00:	00				
Arsenic	ND mg/L	0.50	5	1	08/20/13 14:00	08/21/13 10:15	7440-38-2	
Barium	ND mg/L	2.5	100	1	08/20/13 14:00	08/21/13 10:15	7440-39-3	
Cadmium	ND mg/L	0.050	1	1	08/20/13 14:00	08/21/13 10:15	7440-43-9	
Chromium	ND mg/L	0.10	5	1	08/20/13 14:00	08/21/13 10:15	7440-47-3	
Lead	ND mg/L	0.50	5	1	08/20/13 14:00	08/21/13 10:15	7439-92-1	
Selenium	ND mg/L	0.50	1	1	08/20/13 14:00	08/21/13 10:15	7782-49-2	
Silver	ND mg/L	0.10	5	1	08/20/13 14:00	08/21/13 10:15	7440-22-4	
7470 Mercury, TCLP	Analytical Method: EPA	17470 Prepa	ration Meth	od: EPA	A 74 70			
•	Leachate Method/Date	: EPA 1311; 0	8/20/13 00:	00				
Mercury	ND mg/L	0.0020	.2	1	08/21/13 12:15	08/21/13 15:48	7439-97-6	
4500H+ pH, Electrometric	Analytical Method: SM	4500-H+B						
pH at 25 Degrees C	7.4 Std. Units	0.10		1		08/09/13 15:00		Н6

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project:

CROSS MANUFACTURING

Pace Project No.:

60150682

Sample: WC080713-SL	Lab ID:	60150682002	Collected	: 08/07/13	3 08:00	Received: 08/	08/13 22:50 Ma	trix: Solid	
Results reported on a "dry-we	ight" basis	•							
Parameters	Results	Units	Report , Limit	Reg: Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, TCLP	Analytical N	Method: EPA 6	010 Prepara	ation Meth	od: EP	A 3010			
	Leachate N	fethod/Date: E	PA 1311; 08	/20/13 00:	00				
Arsenic	ND mg	g/L	0.50	5	1	08/20/13 14:00	08/21/13 10:18	7440-38-2	
Barium	ND mg	g/L	2.5	100	1	08/20/13 14:00	08/21/13 10:18	7440-39-3	
Cadmium	ND mg	g/L	0.050	1	1	08/20/13 14:00	08/21/13 10:18	7440-43-9	
Chromium	ND mg	g/L	0.10	. 5	1	08/20/13 14:00	08/21/13 10:18	7440-47-3	
Lead	ND mg	g/L	0.50	5	1	08/20/13 14:00	08/21/13 10:18	7439-92-1	
Selenium	ND mg	g/L	0.50	1	1	08/20/13 14:00	08/21/13 10:18	7782-49-2	
Silver	ND m	g/L	0.10	5	1	08/20/13 14:00	08/21/13 10:18	7440-22-4	
7470 Mercury, TCLP	Analytical N	Method: EPA 7	470 Prepara	ation Meth	od: EP	A 7470			
	Leachate N	fethod/Date: E	PA 1311; 08	/20/13 00:	00				
Mercury	ND mg	g/L	0.0020	.2	1	08/21/13 12:15	08/21/13 15:50	7439-97-6	
9045 pH Soil	Analytical N	Method: EPA 9	045					•	
pH at 25 Degrees C	6.9 St	d. Units	0.10	-	1		08/20/13 13:50		•



QUALITY CONTROL DATA

Project:

CROSS MANUFACTURING

Pace Project No.:

60150682

QC Batch:

MERP/7622

Analysis Method:

EPA 7470

QC Batch Method:

EPA 7470 60150682001, 60150682002 Analysis Description:

7470 Mercury TCLP

Associated Lab Samples:

METHOD BLANK: 1239337

Matrix: Water

Associated Lab Samples:

60150682001, 60150682002

Units

Units

Blank Result Reporting Limit

Analyzed

Qualifiers

Mercury

mg/L

ND

0.0020 08/21/13 15:43

LABORATORY CONTROL SAMPLE: 1239338

Parameter

Parameter

Parameter

Spike Conc.

LCS % Rec

% Rec Limits

Qualifiers

Mercury

mg/L

.005

0.0049

1239340

97

80-120

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:

1239339

ΝĎ

LCS

Result

MSD

Spike

MS MSD Result

Result

MS % Rec

10

MSD

% Rec

Max RPD RPD

Qual

Mercury

mg/L

60151175001 Units Result

MS Spike Conc.

Conc. .015

.015

.0016J .0014J

% Rec

Limits 75-125

20 M1



QUALITY CONTROL DATA

Project:

Arsenic

Barium

Lead

Silver

Cadmium

Chromium

Selenium

CROSS MANUFACTURING

Pace Project No.

60150682

QC Batch:

MPRP/23906

Analysis Method:

EPA 6010

QC Batch Method:

EPA 3010

Analysis Description:

6010 MET TCLP

Associated Lab Samples:

60150682001, 60150682002

METHOD BLANK: 1238819

Matrix: Water

Associated Lab Samples:

Parameter

60150682001, 60150682002

mg/L

mg/L

mg/L

mg/L

mg/L

mg/L

mg/L

Units

Blank Result	Reporting Limit	Analyzed	Qualifiers
 ND	0.50	08/21/13 10:11	
ND	2.5	08/21/13 10:11	
ND	0.050	08/21/13 10:11	
ND	0.10	08/21/13 10:11	
ND	0.50	08/21/13 10:11	
, ND	0.50	08/21/13 10:11	
ND	0.10	08/21/13 10:11	

LABORATORY CONTROL SAM	1PLE: 1238820	S.				
Parameter	Units	Spike Conc.	LCS Result	LCS Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	1	0.94	94	80-120	
Barium	mg/L	1	0,99	99	80-120	
Cadmium	mg/L	(1	0.96	96	80-120	
Chromium	mg/L	1 ′	0.99	99	80-120	
Lead	mg/L	. 1	1.0	100	80-120	
Selenium	mg/L	1	0.93	93	80-120	
Silver	mg/L	∴5	0.48	96	80-120	

MATRIX SPIKE & MATRIX S	SPIKE DUPLICAT	E: 12388	21		1238822							
•	60	151175001	MS Spike	MSD Spike	MS	MSD	MS	MSD	% Rec		Max	,
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Arsenic	mg/L	ND	10	10	10.2	10.1	101	100	75-125	1	20	
Barium	mg/L	9.5	. 10	10	21.1	20:8	116	113	75-125	1	20	
Cadmium	mg/L	ND	10	10	10,2	/ 10.1	101	101	75-125	1	20	
Chromium	mg/L	ND	10	10	9.9	9.8	98	98	75-125	0	20	
Lead	mg/L '	ND	10	10	9,3	9.2	93	92	75-125	0	20	
Selenium	mg/L	ND	10	` 10	9.7	9.7	97	97	75-125	0	20	
Silver	mg/L	ND	5	5	5.3	5.2	105	104	75-125	1	20	



QUALITY CONTROL DATA

Project:

CROSS MANUFACTURING

Pace Project No.:

QC Batch Method:

60150682

QC Batch:

WET/42809

SM 4500-H+B

Analysis Method:

SM 4500-H+B

Analysis Description:

4500H+B pH

Associated Lab Samples: 60150682001

SAMPLE DUPLICATE: 1234046

Parameter

Units

60150688001 Result

Dup Result

RPD

Max RPD

Qualifiers

pH at 25 Degrees C

Std. Units

10.1

10.0

5 H6

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project:

CROSS MANUFACTURING

Pace Project No.:

60150682

QC Batch: QC Batch Method: WET/42970 EPA 9045

Analysis Method:

Result

EPA 9045

Analysis Description:

9045 pH

Associated Lab Samples:

60150682002

SAMPLE DUPLICATE: 1238942

60150905001

Dup Result Max

RPD

Qualifiers

Parameter

Units

7.0

RPD

pH at 25 Degrees C

Std. Units

7.0

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project:

CROSS MANUFACTURING

Pace Project No.:

60150682

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

Date: 08/22/2013 09:58 AM

H6 Analysis initiated outside of the 15 minute EPA recommended holding time.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.





QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project:

CROSS MANUFACTURING

Pace Project No.a

60150682

Lab ID	Sample ID		QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60150682001	WC080713-WT		EPA 3010	MPRP/23906	EPA 6010	ICP/18719
60150682002	WC080713-SL		EPA 3010	MPRP/23906	EPA 6010	ICP/18719
60150682001	WC080713-WT		EPA 7470	MERP/7622	EPA 7470	MERC/7579
60150682002	WC080713-SL		EPA 7470	MERP/7622	EPA 7470	MERC/7579
60150682001	WC080713-WT	,	SM 4500-H+B	WET/42809		
60150682002	WC080713-SL		EPA 9045	WET/42970		



Sample Condition Upon Receipt



Client Name: WSP Env. J Ener	34				Optional
Courier: Fed Ex □ UPS □ USPS □ Client □	Commerc	cial 🗆 Pa	ce 🗆 Other 🖂	EXP	Proj Due Date:
Tracking #:	Pace Shipp	oing Label U	sed? Yes 🗆 N	o Z	Proj Name:
Custody Seal on Cooler/Box Present: Yes No	o □ Seal	ls intact: Y	es 🗗 No 🗆		
Packing Material: Bubble Wrap □ Bubble B	ags 🗷	Foam (☐ None ☐	Other [1
Thermometer Used: T-112 / T-194	Type of Ice:			les received	on ice, cooling process has begun,
Cooler Temperature: 1-3		(circle	,	Date and init	isle of person exemining
Temperature should be above freezing to 6°C		· · · · · · · · · · · · · · · · · · ·		contents:	Ø11/\square \square \square \square \qquare \qqqq \qqqqq \qqqq \qqq \qqqq \qqq \qqqq \qqq \qqqq \qqq \qqqq \qqq \qqqq \qqq \qqqq \qqq \qqqq
Chain of Custody present:	Yes []No □N/A	1.	····	
Chain of Custody filled out:	√ElYes □	No □N/A	2,		
Chain of Custody relinquished:	□Yes □	ONO □N/A	3.		
Sampler name & signature on COC:	Yes 🗆	JNo DNA	4.		
Samples arrived within holding time:		ONO □N/A	5.		
Short Hold Time analyses (<72hr):	∫ Wes □	JNo □N/A	6. ph		
Rush Turn Around Time requested:	□Yes Æ	BNO □N/A	7.		
Sufficient volume:	Yes [Jno. □n/a	8		
Correct containers used:	√√Yes □	JNo □N/A		THE BEET OF TWO	4
Pace containers used:	DY6s C	No □N/A	9.		
Containers intact:	□ ØYes □	JNo □N/A	10.		
Unpreserved 5035A soils frozen w/in 48hrs?	□ Yes 〔	INO EINIA	1.1		A FEET OF THE GENERAL CONTROL OF THE SECOND SEC
Filtered volume received for dissolved tests?	□Yes □	JNO EN/A	12.		
Sample labels match COC:	يا . آوه البيلم	ING INA	grand seeks	×1	days shops say to
Includes date/time/ID/analyses Matrix:	ut 6	ای	13.	commission of the second	er i kan ar
All containers needing preservation have been checked.	□Yes □	DNO PN/A			/
All containers needing preservation are found to be in compliance with EPA recommendation.	□Yes □	JNo J M/A	14.		
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	□Yes □] H G	Initial when completed		ot # of added
Trip Blank present:	□Yes □	JNO □MA	Completed	iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii	escivative
]. Pace Trip Blank lot # (if purchased):		- · ·	15		
Headspace in VOA vials (>6mm):	□Yes [DNo DN/A			
			16		
Project sampled in USDA Regulated Area:	□Yes [3 √0. □N/A		1.6	
	COC to Clien	11? (Y)/	N Field Data		Y ((N)
Person Contacted:	Date/Time:				
Comments/ Resolution	···				
	يغلها والمتابات والمتابات والمتابات والمتابات		Tyte to a reina - Maran - anahatan ana anananan	· · · · · · · · · · · · · · · · · · ·	The company of the section of the se
					
Project Manager Review:			Date 5.4	10	



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

Section Require	i A d Client Information:	Section B Required Pa		rmation:	\$				Section Invoice									- * • .			,		Pa	ge:		of \	
Compan	www. WSP Environment & Energy	Report To:	Dave C	arstens	-				Attentio	on:	Acc	ounts	Paya	ble				L									
Address:	300 Trade Center, Suite 4690	Сору То:	Matt Bu	rns					Compa	ny Nar	ne: '	WSP	Envir	onme	nt & I	Energy		RE	GULY	TOR	Y AGE	NCY		Learne	1.		
	Woburn, MA 01801				F 47 37	errys, errors,		3.4	Addres	55,	-			* - 'ş				F NPDES F GROUND WATER F DRINKING WATER									
Email To	dave.carstens@wspgroup.com	Purchase Or	rder No		The desired in the same of the first	· · · · · · · · · · · · · · · · · · ·			Paus O Referen		-							7-	UST		T R	CRA			r (OTHER	***************************************
Phone:	(781) 933-7340 Fax: (781) 933-7369	Project Nam	e: Cr	oss Manuf	acturing,	Inc			Pace Pr Manage	raject	She	rri Ro	sensi	angle)			Si	te Loc	ation							
Request	ed Due Date/TAT: STANDARD	Project Núm	iber; 00	036483/03		- 			Pac P		698	6.1		1 12					- S7	ATE.		KS		- 1/			
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	Section D Valid Matrix C Required Client Information MATRIX	CODE	to teft) OMP)		COLLI	ECTED				<u> </u>		ervat	ives		TN /A												
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ITEM #			MATRIX	DATE	TIME.	, DATE /	JIME.	SAMPLE	#OF C	Unpres	HNO3	NaOH NaOH	Na ₂ S ₂	Other		TCLP											o./ Lab I.D.
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NH Concrete

with 3

FORD COUNTY LANDFILL

100 Gunsmake Dodge City, KS 67801 (620) 225-5288

DRIVER COPY RECEIPT DOCUMENT NUMBER 43222277

		·			Hauler:			
000680		THEND D OX 428	ISPOSAL		000880	NORTHEND D PO BOX 428	ISPOSAL	•
	DOD	GE CITY	KS 67801			DODGE CITY	KS 67801	
DAIO	Enir	y Time	Operator	Batt Time	Operator	Gross Weight	Tare Wolgnt	hear in the said
11/10/2014		:00 le 01		07:16 Scale 01		(36200 LB) Scale 01	(34160 LB) Scale 01	(2040 LB)
Vehicle No.		/Po	Prate	DOGIO OT		(18.10'T) Transaction Type	(17.08 T)	(1.02 T)
NE416 Quantity	Rolloff wc	COND-SOIL	Orien	ription/Origin		บ _{กปร}	Unit Prica	Normal.
·		FORD COU ALL ORIGIN	20	D31	R	TON: 100,00%		i
eraby partify that the RIVER NAME RINT:	Infomiation	on this form t	e tree to the heat of my k	gNATUREI	Ol		Document Total	·

No More Boxes in Lewis Remediation Services Lewis

Pleas	e print or type (Form designed for use on elite	s (12 pitch) typewriter)				<i>.</i>			
	NON-HAZARDOUS WASTE MANIFEST	1. Generator's US EPA	1			Manifest Document No.	10m-001	2. Pa of	
7		Cross Messiliadu							
* 1		100 James H. Cro							
\searrow	, ·	Lewis, ES 67552	(620) 324-5525						
	4. Generator's Phone ()								
M	5. Transpirterij Const Dispresal Service	83	6. US EPA ID Number			A. State Trans	porter's ID 630	<u> </u>	71
7				}		B. Transporter	1 Phone	photo (P.19)	t sets
12	7. Transporter 2 Company Name		8. US EPA ID Number			C. State Trans	poner's ID		
				1		D. Transporte	2 Phone 🎉	-	
1 1	Designated Facility Name and Site Address Ford County Leadill		 US EPA ID Number 	T		E. State Facili	ys ID		-1
		. PC.L. STO ZMOAS					18.	. **:	. " ,
	13049 110 Road - Dodge	Chy, as 6/801			ė.	F. Facility's Pt	ione 620 23.5	5288	
M	11. WASTE DESCRIPTION			Ī	C	ontainers	13. Total	26	14. Unit
	,				No.	Туре	Quantity		Wt./Vol.
177	^a Non-Hazardous Soil Fron	n Investigative D	edved Waste		ł	RO		1-2	Tons
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N	G. Additional Descriptions for Materials Listed Ab	ove				H. Handling C	odes for Wastes Listed	Above	
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	15. Special Handling Instructions and Additional I								
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	 GENERATOR'S CERTIFICATION: I hereby of in proper condition for transport. The material 	certify that the contents of thi s described on this manifest	s shipment are fully and accurately de are not subject to federal hazardous	escribed waste re	and are ir gulátions.	all respects			
	On behalf of Cross Maxu			V		,	!		
				<u> </u>	,			L	ate
	Printed/Typed Name	1 - 1:	Signature.	1.7	~	Thur		441.	lay Year
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F	17. Transporter 1. Acknowledgement of Receipt	of Materials		- N.		<u></u>			ate /
TRANSPORTER	Printed(Typed Name	· Come Ja	Y Ita Signature	, January	(1)	Ale .		Month E	Pay Year
0	18. Transporter 2 Acknowledgement of Receipting	of Materials)	1				Di	ate
[발	Printed/Typed Name		Signature	7		1		Month D	Day Year
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F	19. Discrepancy Indication Space		1					_	
A									
C							3-		
	20. Facility Owner or Operator: Certification of re-	ceipt of the waste materials of	overed by this manifest, except as no	1					
-								D	ate
Ť	Printed/Typed Name		Signature					Month D	Day Year
IY	(1	ł					ŀ

NON-HAZARDOUS WASTE MANIFEST

NON-HAZARDOUS WAS

lle for 200



Bureau of Waste Management Curtis State Office Building 1000 SW Jackson, Suite 320 Topeka, KS 66612-1366



Phone: 785-296-1600 Fax: 785-296-8909 bwmweb@kdheks.gov www.kdheks.gov/waste

Susan Mosier, MD, Secretary

Department of Health & Environment

Sam Brownback, Governor

November 20, 2015

Mr. Butch Holum Remediation Services, Inc. Box 587 Independence, KS 67301

RE: Special Waste Disposal Authorization Number 15-1622

THIS AUTHORIZATION EXPIRES May 20, 2016.

Dear Mr. Holum:

We have considered your request for disposal of one (1) drum of IDW soil from Cross Manufacturing, 100 James H. Cross Blvd., Lewis, KS. (Analysis provided)

Based solely on the analysis provided, the waste is not a characteristic hazardous waste with respect to the constituents tested. As stated in K.A.R.28-31-261, it is the responsibility of the generator to determine whether or not a waste is a hazardous waste by either knowledge of process or by proper testing by a K.D.H.E. certified lab. If there are questions as to the status of this waste, the department suggests the facility contact the Kansas Department of Health and Environment at telephone 316-337-6020. If Remediation Services, Inc. is confident the material for disposal is not a hazardous waste for any characteristic or listed constituent not included in the testing, the following applies.

Approval is given to dispose of this waste at the Plumb Thicket landfill, operating under Kansas Permit 0842, provided the following conditions are met:

- 1. Approval to deliver the waste must be obtained from the landfill operator prior to transporting the waste to the landfill. The final decision on whether to accept or reject the waste rests with the landfill operator. Please contact Shad Pletcher, Site Manager, telephone 620-896-2229, to obtain approval. If the landfill operator refuses to accept this waste, you should contact us to determine alternate disposal options.
- , 2. The waste must be transported separately to the landfill and be identified to the operator upon delivery.
- 3. Kansas Administrative Regulation 28-29-108(r) (12) and (13) requires solid waste disposal facilities to maintain a log of commercial or industrial wastes received such as sludges, barreled wastes, and special wastes. The log must indicate the source and quantity of waste and the disposal location thereof. The special waste authorization number should be used as identification when entering the shipment into the log.

- 4. This approval is valid for disposal of the waste described and in the amount shown above. If additional shipments are required, you must contact us to receive another disposal authorization.
- 5. Operating standards as defined by K.A.R. 28-29-108(k) prohibit the disposal of liquid waste. "Liquid waste" means any waste material that is determined to contain "free liquids" as defined by method 9095A, revision 1, paint filter liquids test, as described in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Pub. No. SW-846 dated December 1996. For purposes of this disposal authorization, all waste for disposal must be able to pass the "paint filter test".
- 6. Any change in the process producing this waste, any change in the materials used in producing this waste or any other change to this waste stream requires that a new Special Waste Disposal Authorization be obtained prior to disposal.

If you have any questions, feel free to contact me at 785-296-0681.

Sincerely,

Tony Guy

Environmental Scientist Special Waste Coordinator

KDHE/Bureau of Waste Management

ABG

C Shad Pletcher e-file

Requester phone: 316-331-1200

SPECIAL WASTE APPROVAL (This Page for OFFICE USE ONLY)

FOR OFFICE USE ONLY

APPROVAL NUMBER: PT15172

EXPIRATION DATE: 05/20/2016

APPROVED BY: AWS

	ANCE SUPERVISOR DECISION
38933 7	nufacturing (remediation services); 15-1622; lab
2. Name: Aaron W Smith	3. Date: 12/01/2015
4. Signature: Aaron W Smith	5. Phone: (303) 867-5513
	NDLING PROCEDURES
	nental Compliance Supervisor and the Facility Manager.
	Bioremediation Other:
Review and approval of waste is based upon a submitted documentation from following conditions. Failure to comply may result in rejection of the wastes.	•
A. Customer/Generator shall receive a copy of this sheet upon approval B. Loads may be randomly inspected upon receipt at the landfill to ensure	
 C. This material must be properly contained, bagged, or covered prior to 	and during shipment and disposal.
 D. The customer must contact the respective landfill to schedule the was by the facility management. 	ste shipment 24 hours prior to delivery or alternative arrangements agreed upon
The conditions marked below apply to this waste stream.	
APPROVAL CONDITION(S):	
☐ BLANKET APPROVAL: The manifest accompanying each load of waste sha	all denote the specific waste generation address/location(s) for that load
l	- ',' ',
from the original approval date. SPECIFIC CONDITION:	eceipt of additional analyses, this approval may be extended up to three (3) years
WASTE CONDITION(S):	
ABSORBENT MATERIALS: Absorbent material (pads, booms, diapers, soci handling. Wastes that would not pass a paint filter test must be solidified pri	
ASBESTOS CONTAINING MATERIAL (ACM): Friable Non-Friable	
CARE UNLOADING: Maintain integrity of container/packaging.	
FREE LIQUIDS/SLUDGE: Free liquids are prohibited from landfill disposal. test prior to placement at active face.	Wastes containing free liquids must be solidified and able to pass a paint filter
OTHER:	
LANDFILL SPECIAL HANDLING PROCEDURES:	
DISPOSAL LOCATION RESTRICTION: Dispose at least feet from e	dge of slope or boundary.
DUST: Materials may become airborne. Use appropriate control measures to	to prevent the material from becoming airborne.
IRRITANT DUST: Materials may be dusty and are likely to cause irritation to to prevent airborne dust and/or employee exposure. See MSDS for addition	skin and/or eyes. Use appropriate dust control measures and PPE as needed al information.
HOT: Potential Hot Load. Isolate from combustible materials.	SDS for proper handling procedures:
ODOR: Bury immediately upon arrival. ADDITIONAL HANDLING INS	TRUCTIONS:
SLUDGE: Potential traction issue on work face.	
SPECIAL BURIAL REQUIREMENTS: Immediately cover waste	Dirt prior to compaction.
SURVEY REQUIREMENT: Materials must be surveyed in or indicated on a	grid.

Special Waste Disposal Request
Kansas Department of Health and Environment
Bureau of Waste Management
Waste Reduction, Compliance and Enforcement Section 1000 SW Jackson, Suite 320, Topeka, Kansas 66612-1366

Tou may FAX uns form to. 765- 296-65	709 DF 785-296-8721
Please type or clearly print - See page 2 for instructions	
I. REQUESTER INFORMATION (This is where the Disposal Ad	uthorization letter will be sent.)
Name: Remediation Services, Inc.	
Address: P.O. Box 587	
City: Independence State: Kansas	Zip Code: 67301
Contact Person: Butch Holum Telep	hone Number: (620) 331-1200
•	Fax Number:(620) 331-6216
II. POINT/LOCATION OF GENERATION INFORMATION (only if diff	ferent from the information in Section I above)
Name: Cross Manufacturing, Inc.	
Address: 100 James Cross Boulevard	
City: Lewis State: Kansas	Zip Code: 67552
Contact Person: Raymond Law Telep	hone Number: (620) 324-5525
III. WASTE INFORMATION - Use back of form if additional space is r	required
Waste Description: Non hazardous contaminated soil	
Process Producing Waste: IDW	
Physical Characteristics of Waste: Black	
Quantity for Disposal: 1 (Please Select One) O Lbs. O To	ns OCubic Yards OContainers/Drums OBags
Frequency (Select One): One Time OWeek OMonth OYear	
Laboratory Analyses Attached: Yes O No Material Safety Data Sh	neets (MSDS) Attached: O Yes
Renewal of Previous Authorization: Previous Authorization No: N/A	Date Issued: N/A
IV. DISPOSAL INFORMATION	
Landfill Proposed for Disposal: Plumb Thicket Landfill 440 NE 150th Ro	bad Harper, Kansas 67058
Solid Waste Transfer Station Proposed: N/A	
V. CERTIFICATION	
 hereby certify that I am a d uly authorized representative of the generator in knowledge, the following items are true: The waste identified for disposal is not a hazardous waste as defined All analytical analyses provided are from a Kansas Department of the are representative of the waste identified for disposal. All information provided in any attached profile, re-certification, or oth accurately characterizes the waste. If this is a renewal, the materials and processes that generate authorization indicated above, and the information previously provided 	the waste have not changed since the last disposal to KDHE is still valid.
Taymond Law - EH&S	Corporate Coordinator Sovember 13, 20
Signature Printed Name	Date



November 05, 2014

Grant Sherwwood Remediation Services, Inc 2735 South 10th Street Independence, KS 67301 10450 Stancliff Rd. Suite 210 Houston, TX 77099 T: +1 281 530 5656 F: +1 281 530 5887 www.alsglobal.com

Work Order: **HS14101239**

Laboratory Results for: Cross Manufacturing

Dear Grant,

ALS Environmental received 1 sample(s) on Oct 29, 2014 for the analysis presented in the following report.

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

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

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

Sincerely,

Generated By: Jumoke.Lawal Bernadette A. Fini

Project Manager

ALS Group US	A, Corp		-		Date: 05	-Nov-14
Client: Project: Work Order:	Remediation Services, Inc Cross Manufacturing HS14101239				SAMPLE SUM	MARY
Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS14101239-01	21332-Soil-01	Soil		28-Oct-2014 08:00	29-Oct-2014 09:17	

ALS Group USA, Corp

Date:

CASE NARRATIVE

05-Nov-14

Client:

Remediation Services, Inc.

Project:

Cross Manufacturing

Work Order:

HS14101239

Work Order Comments

Sample received outside method holding time for pH. pH is an immediate test. Sample results are flagged with an "H" qualifier.
 The temperature at the time of pH is reported. Please note that all pH results are already normalized to a temperature of 25 °C.

• The analyses for Reactive Cyanide, Reactive Sulfide and Flashpoint were subcontracted to ALS Environmental in Holland, MI.

GCMS Semivolatiles by Method SW1311/8270

Batch ID: 87509

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

GCMS Volatiles by Method SW1311/8260B

Batch ID: R244064

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

Metals by Method SW7470

Batch ID: 87521

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

Metals by Method SW1311/6020

Batch ID: 87502a

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

WetChemistry by Method SW9045B

Batch ID: R244116

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

Client:

Remediation Services, Inc

Project:

Cross Manufacturing

Sample ID:

21332-Soil-01

Collection Date:

28-Oct-2014 08:00

ANALYTICAL REPORT

WorkOrder:HS14101239 Lab ID:HS14101239-01

Matrix:Soil

ANALYSES	RESULT	QUAL		ORT	UNITS	DILUTION FACTOR	DATE ANALYZED
TCLP VOLATILES	ti i i tarakirilar bara	ethod:SW1311/8260B.	Leache:SW131.1/	30-Oct-2014	Prep:SW1311./	30-Oct-2014	Analyst: PC
1,1-Dichloroethene	ND			100	ug/L	20	31-Oct-2014 21:16
1,2-Dichloroethane	ND			100	ug/L	20	31-Oct-2014 21:16
1,4-Dichlorobenzene	ND	,		100	ug/L	20	31-Oct-2014 21:16
2-Butanone	ND			200	ug/L	20	31-Oct-2014 21:16
Benzene	ND	¥ 10		100	ug/L	20	31-Oct-2014 21:16
Carbon tetrachloride	ND			100	ug/L	20	31-Oct-2014 21:16
Chlorobenzene	ND			100	ug/L	20	31-Oct-2014 21:16
Chloroform	ND	and the second s		100	ug/L	20	31-Oct-2014 21:16
Tetrachloroethene	ND			100	ug/L	20	31-Oct-2014 21:16
Trichloroethene	ND			100	ug/L	20 "	31-Oct-2014 21:16
Vinyl chloride	ND			40	ug/L	20	31-Oct-2014 21:16
Surr: 1,2-Dichloroethane-d4	94.4		7	0-125	%REC	20	31-Oct-2014 21:16
Surr: 4-Bromofluorobenzene	104		7.	2-125	%REC	20	31-Oct-2014 21:16
Surr: Dibromofluoromethane	98.1	gen marchini marini di propositipo a fili deteralgativa del industria	7	1-125	%REC	20	31-Oct-2014 21:16
Surr: Toluene-d8	105		7.	5-125	%REC	20	31-Oct-2014 21:16
TCLP SEMIVOLATILES	i susili se N	lethod:SW1311/8270	Leache:SW1311./	30-Oct-2014	Prep:SW3510 /	31-Oct-2014	Analyst: GEY
2,4,5-Trichlorophenol	ND	an Koop one to a Section & c	and the second of the second	5.0	ug/L	1	31-Oct-2014 19:10
2,4,6-Trichlorophenol	ND	e it deen vangelen vange it om de de pe trock omselvingen open tie gen troppet in o	am dis nessan, i defedict is by ay mildely	5.0	ug/L	1 ;	31-Oct-2014 19:10
2,4-Dinitrotoluene	ND			5.0	ug/L	1 .	31-Oct-2014 19:10
Cresols, Total	ND			15	ug/L	1	31-Oct-2014 19:10
Hexachlorobenzene	ND			5.0	ug/L	1	31-Oct-2014 19:10
Hexachlorobutadiene	ND		· · · · · · · · · · · · · · · · · · ·	5.0	ug/L	1	31-Oct-2014 19:10
Hexachloroethane	ND			5.0	ug/L	1	31-Oct-2014 19:10
Nitrobenzene	ND			5.0	ug/L	1	31-Oct-2014 19:10
Pentachlorophenol	ND			5.0	ug/L	1	31-Oct-2014 19:10
Pyridine	"·ÑD			5.0	ug/L	1	31-Oct-2014 19:10
Surr: 2,4,6-Tribromophenol	57.4		Э	9-153	%REC	1	31-Oct-2014 19:10
Surr: 2-Fluorobiphenyl	61.9	souther a man to be a special source of the	. One contract the standard part	0-147	%REC	j	31-Oct-2014 19:10
Surr: 2-Fluorophenol	60.9			1-110	%REC	1	31-Oct-2014 19:10
Surr: 4-Terphenyl-d14	77.6	The section of the se		9-141	%REC	1	31-Oct-2014 19:10
Surr: Nitrobenzene-d5	63.8	(7-140	%REC	1	31-Oct-2014 19:10
Carr. Tell Obertzene-do	65.0			1	%REC	1	31-Oct-2014 19:10

05-Nov-14

Client:

Remediation Services, Inc.

Project:

Cross Manufacturing

Sample ID:

21332-Soil-01

Collection Date:

28-Oct-2014 08:00

ANALYTICAL REPORT

WorkOrder:HS14101239 Lab ID:HS14101239-01

Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TCLP METALS BY SW6020	DA M	ethod:SW1311/6020	' Leache: SW1311 / 30-Oct-2014	arte Ranio I		Analyst: RPM
Antimony	ND	A SERVICE CONTRACTOR SERVICES	0.0500	mg/L	1	03-Nov-2014 · 15:30
Arsenic	ND		0.0500	mg/L	1	03-Nov-2014 15:30
Barium	0.728		0.200	mg/L	1	03-Nov-2014 15:30
Beryllium	ND	. 1	0.0200	mg/L	110	03-Nov-2014 15:30
Cadmium	, ND		0.0500	mg/L	ď.	03-Nov-2014 15:30
Chromium	0.400	e e e e e e	0.0500	mg/L	4 7	03-Nov-2014 15:30
Lead	3.17		0.0500	mg/L	. 1)	03-Nov-2014 '15:30
Nickel	ND	ر د مدينون دهد هميند د اند مدينون دهد د اند. د	0.0500	mg/L	1	03-Nov-2014 15:30
Selenium	ND	,	0.0500	mg/L	4 .	03-Nov-2014 15:30
Silver	ND		0.0500	mg/L	1	03-Nov-2014 15:30
TCLP MERCURY BY SW74	70A	Method:SW7470	Leache SW1311 / 30-Oct-2014	Prep:SW7470	/ 31-Oct-2014	Analyst: OFO
Mercury	ND		0.000200	mg/L	1	31-Oct-2014 16:44
PH SOIL BY SW9045D	Salah	Method:SW9045B		4 (2.3) (1.5)	The second second	Analyst: JHD
pH	9.75	H	0.100	pH Units	1.47 (1886) (1886) 1.4	03-Nov-2014 14:30
Temp Deg C @pH	22.2	H	O CONTRACTOR OF THE CONTRACTOR	°C	1.	03-Nov-2014 14:30
REACTIVE CYANIDE		Method:SW7.3.3.2		a angenta.	138 W. F. W.	Analyst: JML
Reactive Cyanide	ND		100	mg/Kg	1 :1:32 1.25 N	04-Nov-2014 16:00
REACTIVE SULFIDE	THE THE THE	Method:SW7.3.4.2			in a second section of the section o	د دمد دی کانگار استامه شاید برای ایک اید یک
Reactive Sulfide	ND	Method: 341.3.4.2	100			Analyst: JML
SUBCONTRACT ANALYSI			TOU TO A STANK SEE TO A CASSACT.	mg/Kg	STATISTICS OF	04-Nov-2014 16:00
FLASHPOINT		Method:NA		7 、一般的人		Analyst: JML
Subcontract Analysis	See Attached	the transfer of the Market of the Con-	and the state of t	Comment of the commen	1	05-Nov-2014 09:03

05-Nov-14

Client:

Remediation.Services, Inc

Cross Manufacturing

Project: WorkOrder:

HS14101239

DATES REPORT

WorkOrder:	HS14101239	•				
Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 8750	2a Test Name	: TCLP METALS BY SW	6020A	Matrix:	Soll	- 4
HS14101239-01	21332-Soil-01	28 Oct 2014 08:00	30 Oct 2014 16:00	31 Oct 2014 12:34	03 Nov 2014 15:30	3 %
Batch ID 8750	9 Test Name	: TCLP SEMIVOLATILES	S	Matrix:	Soll	
HS14101239-01	21332-Soil-01	28 Oct 2014 08:00	30 Oct 2014 17:42	31 Oct 2014 14:19	31 Oct 2014 19:10	t.
Batch ID 8752	1 Test Name	: TCLP MERCURY BY S	W7470A	Matrix: !	Soll	
HS14101239-01	21332-Soil-01	28 Oct 2014 08:00	30 Oct 2014 15:53	31 Oct 2014 11:05	31 Oct 2014 16:44	1
Batch ID R244	064 Test Name	: TCLP VOLATILES		Matrix:	Soil	
HS14101239-01	21332-Soil-01	28 Oct 2014 08:00	30 Oct 2014 19:21	30 Oct 2014 19:21	31 Oct 2014 21:16	20
Batch ID R244	116 Test Name	: PH SOIL BY SW9045D		Matrix:	Soil	
HS14101239-01	21332-Soil-01	28 Oct 2014 08:00	and the second seco	tin – valende is steelend die deelend van de verscheiden, valende verscheide steelende steelende sie de versch	03 Nov 2014 14:30	1
Batch ID R244	229 Test Name	: REACTIVE SULFIDE,		Matrix	Soil	7
HS14101239-01	21332-Soil-01	28 Oct 2014 08:00	er Britan i september in den franktigt star innaktion in de bestelle en en de september en	na interpolation (in a comprehensive proportion of the comprehensive file	05 Nov 2014 09:03	1
HS14101239-01	21332-Soil-01	28 Oct 2014 08:00			05 Nov 2014 09:03	1
HS14101239-01	21332-Soil-01	28 Oct 2014 08:00			05 Nov 2014 09:03	4.
HS14101239-01	21332-Soil-01	28 Oct 2014 08:00			04 Nov 2014 16:00	ń
HS14101239-01	21332-Soil-01	28 Oct 2014 08:00		•	04 Nov 2014 16:00	ą.
HS14101239-01	21332-Soil-01	28 Oct 2014 08:00			04 Nov 2014 16:00	1
HS14101239-01	21332-Soil-01	28 Oct 2014 08:00	,		04 Nov 2014 16:00	Á
HS14101239-01	21332-Soil-01	28 Oct 2014 08:00		•	04 Nov 2014 16:00	'n
HS14101239-01	21332-Soil-01	28 Oct 2014 08:00			04 Nov 2014 16:00	ধ

05-Nov-14

Client:

Remediation Services, Inc

WorkOrder:

HS14101239

Project:

Cross Manufacturing

Batch ID: 87502	a		Instrument	ICPMS05		Metho	od: SW131	1/6020		
MBLK	Sample ID:	MBLKT1-87502		Units	mg/L	Ana	alysis Date:	03-Nov-2014	14:34	
Client ID:		•	Run (D: ICP)	MS05_244100	SeqNo:	3075276	PrepDate:	31-Oct-2014	DF:	1
Analyte	managa at a	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value		RPD imit Qual
Antimony		ND	0.0500			,				
Arsenic		ND	0.0500			<u> </u>	-1.00 intra			
Barium		ND	0.200							
Beryllium	***************************************	ND	0.0200)	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	The second secon	<u> </u>		
Cadmium		ND	0.0500							
Chromium		ND	0.0500	ATTEMPTED BY AND ASSESSMEN	manage in the state					
Lead		ND	0.0500	1		• *				
Nickel		ŇD	0.0500	was now was a company to the final tracks for the final	4. 1440 (1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.				To the Edge of the	
Selenium	,	, ND	0.0500				4			
Silver		ND	0.0500	4 1 5 9 5 5 5 5 5 5 5					*	, , , , , , , , , , , , , , , , , , ,
MBLK	Sample ID:	MBLK-87502		Units:	mg/L	Ana	alysis Date:	03-Nov-2014	14:37	
Client ID:			Run ID: ICPN	MS05_244100	SeqNo:	3075277	PrepDate:	31-Oct-2014	DF:	1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value		RPD imit Qual
Antimony		ND	0.00500	<i>j</i>	······································	•				
Arsenic	/ 14,40,10,-21,//240,25//240,25/ /4 4,	ND	0.00500	*	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	*****				
Barium		ND	0.0200			-				
Beryllium		ND	0.00200	***************************************	1	2021-1-227	<u> </u>	5 V	37, 1.5	
Cadmium		ND	0.00500						(
Chromium		ND	0.00500		Constitution of the Consti	or injustice and a recommendation of the	i ja karang pagkang pagkang ang di makan managana makana na asasa			-,->-,-,-
Lead		ND	0.00500	(3)						
Nickel	ila da interior et	ND	0.00500	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Marie a seta taka dana sa		Andrew State Control	····		APRIL TENEDO
Selenium		ND	0.00500	-						
Silver	141.4× min 4×11.	ND	0.00500		- y		~~~~~~~~	WP+7+		\$ 17 - 17 18 - 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

Client:

Remediation Services, Inc

WorkOrder:

HS14101239

Project:

Cross Manufacturing

Analyte Result PQL SPK Val SPK Ref Value %REC Limit RPD Ref Value %RPD Ref Value	Batch ID: 875	602a		Instrument:	ICPMS05			Metho	od: SW131	1/6020		la La del ca Maria
Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RED Ref Value	LCS	Sample ID:	MLCS-87502	• • • • • • • • • • • • • • • • • • • •	Units:	mg/L		Ana	alysis Date:	03-Nov-2014	14:40	,
Analyte Result PQL SPK Val Value %REC Limit Value %RPD te Antimony 0.04977 0.00500 0.05 0 99.5 80 - 120	Client ID:			Run ID: ICPM	S05_244100	Seq	No: 3	075278	PrepDate:	31-Oct-2014	DF: 1	
Arsenic 0.04833 0.00500 0.05 0 96.7 80 - 120 Barium 0.04779 0.0200 0.05 0 95.6 80 - 120 Beryllium 0.04972 0.00200 0.05 0 99.4 80 - 120 Cadmium 0.04931 0.00500 0.05 0 98.6 80 - 120 Chromium 0.04863 0.00500 0.05 0 97.6 80 - 120 Lead 0.04878 0.00500 0.05 0 97.6 80 - 120 Nickel 0.05053 0.00500 0.05 0 93.9 80 - 120 Selenium 0.04697 0.00500 0.05 0 93.9 80 - 120 MS Sample ID: HS14101234-01MS Units: mg/L Analysis Date: 0.3Nov-2014 14:58 Client ID: Result PQL SPK Val Sec No: 3075285 PrepDate: 31-0ct-2014 DF: Analyte Result PQL SPK Val Sec No: 3075285	Analyte		Result	PQL	SPK Val			%REC			RF %RPD Lir	PD nit Qual
Barium 0.04779 0.0200 0.05 0 95.6 80 - 120 Beryllium 0.04972 0.00200 0.05 0 99.4 80 - 120 Cadmium 0.04931 0.00500 0.05 0 98.6 80 - 120 Chromitim 0.04863 0.00500 0.05 0 97.6 80 - 120 Lead 0.04878 0.00500 0.05 0 97.6 80 - 120 Nickel 0.05053 0.00500 0.05 0 97.6 80 - 120 Selenium 0.04697 0.00500 0.05 0 93.9 80 - 120 Silver 0.05027 0.00500 0.05 0 93.9 80 - 120 MS Sample ID HS14101234-01MS Units mg/L Analyse PrepDate: 31-0ct-2014 DF: 3244100 Analyte Result PQL SPK Val SPK Val REC Control Limit RPD Ref Value	Antimony	_	0.04977	0.00500	0.05		0	99.5	80 - 120		•	
Beryllium	Arsenic		0.04833	0.00500	0.05		0	96.7	80 - 120			
Cadmium 0.04931 0.09500 0.05 0 98.6 80 - 120 Chromitim 0.04863 0.00500 0.05 0 97.3 80 - 120 Lead 0.04878 0.00500 0.05 0 97.6 80 - 120 Nickel 0.05053 0.00500 0.05 0 93.9 80 - 120 Selenium 0.04697 0.00500 0.05 0 93.9 80 - 120 Silver 0.05027 0.00500 0.05 0 93.9 80 - 120 MS Sample ID: HS14101234-01MS Units: mg/L Analysis Date: 03-Nov-2014 14:58 Client ID: Run ID: ICPMS05_244100 Seq No: 3075285 PrepDate: 31-Oct-2014 DF: Analyte Result PQL SPK Ref Control RPD Ref E PR Arisenic 0.4818 0.0500 0.5 0 97.7 80 - 120 Barium 0.5984 0	Barium		0.04779	0.0200	0.05		0	95.6	80 - 120			
Chromitim 0.04863 0.00500 0.05 0 97.3 80 - 120 Lead 0.04878 0.00500 0.05 0 97.6 80 - 120 Nickel 0.05053 0.00500 0.05 0 101 80 - 120 Selenium 0.04697 0.0500 0.05 0 93.9 80 - 120 Silver 0.05027 0.05000 0.05 0 93.9 80 - 120 MS Sample ID: HS14101234-01MS Units: mg/L Analysis Date: 03-Nov-2014 14:58 Client ID: Run ID: ICPMS05_244100 Seq No: 3075285 PrepDate: 31-Oct-2014 DF: Analyte Result PQL SPK Val SPK Ref Value %REC Control RPD Ref PR PR Arsenic 0.4818 0.0500 0.5 0 97.7 80 - 120 Beryllium 0.5281 0.0200 0.5 0 106 80 - 120 Cadmium 0	Beryllium	······································	0.04972	0.00200	0.05		0	99.4	80 - 120		~	·
Lead	Cadmium		0.04931	0.00500	0.05		0	98.6	80 - 120			
Nickel 0.05053 0.00500 0.05 0 101 80 - 120	Chromium	······································	0.04863	0.00500	0.05		0	97.3	80 - 120			•••••
Selenium 0.04697 0.00500 0.05 0 93.9 80 - 120 Silver 0.05027 0.00500 0.05 0 101 80 - 120 MS Sample ID: HS14101234-01MS Units: mg/L Analysis Date: 03-Nov-2014 14:58 Client ID: Run ID: ICPMS05_244100 Seq No: 3075285 PrepDate: 31-Oct-2014 DF: Analyte Result PQL SPK Val Value %REC Control Limit RPD Ref Value %RPD Ref Value %REC Control Limit Value %RPD Ref Value %REC Control Limit Value %RPD Ref Value %REC Control Value %RPD Ref Value %RED Limit Value %RPD Ref Value %RPD Ref Value %RED Limit Value %RPD Ref Value %RED Limit Value %RPD Ref Value %RED Limit Value %RED Limit Value MRef Lamate	Lead		0.04878	0.00500	0.05		0	97.6	80 - 120	•		
Silver 0.05027 0.00500 0.05 0 101 80 - 120 MS Sample ID: HS14101234-01MS Units: mg/L Analysis Date: 03-Nov-2014 14:58 Client ID: Run ID: ICPMS05_244100 Seq No: 3075285 PrepDate: 31-Oct-2014 DF: Analyte Result PQL SPK Val SPK Ref Value RPD Ref PRD Ref RPD Ref Report <	Nickel		0.05053	0.00500	0.05		0	101	80 - 120			
MS Sample ID: HS14101234-01MS Units: mg/L Analysis Date: 03-Nov-2014 14:58 Client ID: Run ID: ICPMS05_244100 Seq No: 3075285 PrepDate: 31-Oct-2014 DF: SPK Ref Value Control Value RPD Ref Value	Selenium		0.04697	0.00500	0.05		0	93.9	80 - 120			
Client ID: Run ID: ICPMS05_244100 Seq No: 3075285 PrepDate: 31-Oct-2014 DF: Analyte Result PQL SPK Val SPK Ref Value Control RPD Ref Value Result PRD Ref Value Result Result Result PQL SPK Value SPK Ref Value Control RPD Ref Ref Value Result Result PRD Ref Value Result Result PRD Ref Value Result Result PRD Ref Value Result Result PRD Ref Value Result Resul	Silver	A	0.05027	0.00500	0.05	,)	0	101	80 - 120			
Analyte Result PQL SPK Val Value %REC Limit Value %RPD E Limit Value %	MS	Sample ID:	. HS14101234-01	VIS	Units:	mg/L		Ana	alysis Date:	03-Nov-2014	14:58	
Analyte Result PQL SPK Val Value %REC Limit Value %RPD L Antimony 0.4885 0.0500 0.5 0 97.7 80 - 120 Arsenic 0.4818 0.0500 0.5 0 96.4 80 - 120 Barium 0.5984 0.200 0.5 0.1207 95.5 80 - 120 Beryllium 0.5281 0.0200 0.5 0 106 80 - 120 Cadmium 0.4902 0.0500 0.5 0 98.0 80 - 120 Chromium 0.4664 0.0500 0.5 0 93.3 80 - 120 Lead 0.4906 0.0500 0.5 0 98.1 80 - 120 Nickel 0.507 0.0500 0.5 0.0119 99.0 80 - 120 Selenium 0.4957 0.0500 0.5 0 99.1 80 - 120	Client ID:			Run ID: ICPM:	S05_244100	Seq	No: 3	075285	PrepDate:	31-Oct-2014	DF: 1	
Arsenic 0.4818 0.0500 0.5 0 96.4 80 - 120 Barium 0.5984 0.200 0.5 0.1207 95.5 80 - 120 Beryllium 0.5281 0.0200 0.5 0 106 80 - 120 Cadmium 0.4902 0.0500 0.5 0 98.0 80 - 120 Chromium 0.4664 0.0500 0.5 0 93.3 80 - 120 Lead 0.4906 0.0500 0.5 0 98.1 80 - 120 Nickel 0.507 0.0500 0.5 0.0119 99.0 80 - 120 Selenium 0.4957 0.0500 0.5 0 99.1 80 - 120	Analyte		Result	PQL	SPK Val			%REC			RF %RPD Lir	
Barium 0.5984 -0.200 0.5 0.1207 95.5 80 - 120 Beryllium 0.5281 0.0200 0.5 0 106 80 - 120 Cadmium 0.4902 0.0500 0.5 0 98.0 80 - 120 Chromium 0.4664 0.0500 0.5 0 93.3 80 - 120 Lead 0.4906 0.0500 0.5 0 98.1 80 - 120 Nickel 0.507 0.0500 0.5 0.0119 99.0 80 - 120 Selenium 0.4957 0.0500 0.5 0 99.1 80 - 120	Antimony	·	0.4885	0.0500	0.5	,	0	97.7	80 - 120			
Beryllium 0.5281 0.0200 0.5 0 106 80 - 120 Cadmium 0.4902 0.0500 0.5 0 98.0 80 - 120 Chromium 0.4664 0.0500 0.5 0 93.3 80 - 120 Lead 0.4906 0.0500 0.5 0 98.1 80 - 120 Nickel 0.507 0.0500 0.5 0.0119 99.0 80 - 120 Selenium 0.4957 0.0500 0.5 0 99.1 80 - 120	Arsenic	•	0.4818	0.0500	0.5		0	96.4	80 - 120			·············
Cadmium 0.4902 0.0500 0.5 0 98.0 80 - 120 Chromium 0.4664 0.0500 0.5 0 93.3 80 - 120 Lead 0.4906 0.0500 0.5 0 98.1 80 - 120 Nickel 0.507 0.0500 0.5 0.0119 99.0 80 - 120 Selenium 0.4957 0.0500 0.5 0 99.1 80 - 120	Barium	ر	0.5984	∽ 0.200	0.5	.0.1	207	95.5	80 - 120			
Chromium 0.4664 0.0500 0.5 0 93.3 80 - 120 Lead 0.4906 0.0500 0.5 0 98.1 80 - 120 Nickel 0.507 0.0500 0.5 0.0119 99.0 80 - 120 Selenium 0.4957 0.0500 0.5 0 99.1 80 - 120	Beryllium		0.5281	0.0200	0.5		0	106	80 - 120	and the second second	:	
Lead 0.4906 0.0500 0.5 0 98.1 80 - 120 Nickel 0.507 0.0500 0.5 0.0119 99.0 80 - 120 Selenium 0.4957 0.0500 0.5 0 99.1 80 - 120	Cadmium		0.4902	0.0500	0.5		0	98.0	80 - 120			
Nickel 0.507 0.0500 0.5 0.0119 99.0 80 - 120 Selenium 0.4957 0.0500 0.5 0 99.1 80 - 120	Chromium	. 1	0.4664	0.0500	0.5		0	93.3	80 - 120			
Selenium 0.4957 0.0500 0.5 0 99.1 80 - 120	Lead		0.4906	0.0500	0.5		0	98.1	` 80 - 120			7
Selenium 0.4957 0.0500 0.5 0 99.1 80 - 120	Nickel	**************************************	0.507	0.0500	0.5	0.0	119	99.0				
	Selenium		0.4957	0.0500	0.5		0	99.1	80 - 120			
	Silver	***************************************	0.4829	0.0500			0	96.6	80 - 120		 	

05-Nov-14

Client:

Remediation Services, Inc.

WorkOrder:

HS14101239

Project:

Cross Manufacturing

Batch ID: 87	502a	İ	nstrument:	ICPMS05			od: SW131	1/6020		
MSD	Sample ID:	HS14101234-01MS	D	Units:	mg/L	Ana	alysis Date:	03-Nov-2014	15:01	
Client ID:		Ru	n ID: ICPMS	S05_244100	SeqNo: 3	3075286	PrepDate:	31-Oct-2014	DF: 1	<i>-</i>
			•		SPK Ref		Control	RPD Ref		PD `
Analyte ———————		Result	PQL	SPK Val	Value	%REC	Limit	Value	%RPD Li	mit Qua
Antimony		0.4984	0.0500	0.5	0	99.7	80 - 120	0.4885	2	20
Arsenic		0.4942	0.0500	0.5	0	98.8	80 - 120	0.4818	2.53	20
Barium		0.5986	0.200	0.5	0,1207	95.6	80 - 120	0.5984	0.0251	20
Beryllium	***************************************	0.5051	0.0200	0.5	. 0	101	80 - 120	0.5281	4.45	20
Cadmium		0.4866	0.0500	0.5	0	97.3	80 - 120	0.4902	0.735	20
Chromium		0.4929	0.0500	0.5	0	98.6	80 - 120	0.4664	5.53	20
Lead		0.494	0.0500 ⁽⁾	0.5	0	98.8	80 - 120	0.4906	0.687	20
Nickel		0.4977	0.0500	0.5	0.0119	97.2	80 - 120	0.507	1.85	20
Selenium		0.4988	0.0500	0.5	^J 0	99.8	80 - 120	<i>-</i> 0.4957	0.619	20
Silver		0.471	0.0500	0.5	. 0	94.2	80 - 120	0.4829	2.51	20
DUP	Sample ID:	HS14101234-01DU	P	Units:	mg/L	Ana	alysis Date:	03-Nov-2014	14:47	
Client ID:	•	Ru	n ID: ICPMS	S05_244100	SeqNo: 3	3075281	PrepDate:	31-Oct-2014	DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	R %RPD Li	PD mit Qua
Antimony		ND	0.0500					0.00142	0	25
Arsenic		ND	0.0500	<u> </u>				0.0041	- 0	25
Barium	,	ND	0.200					0.1207	. 0	25
Beryllium		ND	0.0200			-		-0.00005	0	25
Cadmium		ND	0.0500	•				0.00023	, O	25
Chromium	· · · · · · · · · · · · · · · · · · ·	ND	0.0500		<u> </u>			-0.00013	0	25
Lead		ND	0.0500					0.00302	0	25
Nickel		ND	0.0500	· · · · · · · · · · · · · · · · · ·				0.0119	0	25
Selenium		ND	0.0500					0.00376	0	25
Silver		ND	0.0500	· · · · · · · · · · · · · · · · · · ·				0.00022	0	25

05-Nov-14

Client:

Remediation Services, Inc.

WorkOrder:

HS14101239

Project:

Cross Manufacturing

PDS	Sample ID:	HS14101234-01BS		Units:	mg/L	Ana	lysis Date:	03-Nov-2014	15:03
Client ID:	•	Rı	in ID: ICPMS	S05 244100	SegNo	: 3075287	PrepDate:	31-Oct-2014	DF: 1
Analyte		Result	PQL	SPK Val	SPK Re Value	ef %REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qu
Antimony		1.011	0.0500	1		0 101	_. 75 - 125		/
Arsenic		1.015	0.0500	1		0 101	75 - 125		
Barium		1.121	0.200	. 1	0.120	7 _. 100	75 - 125		
Beryllium		1.006	0.0200	1		0 101	75 - 125		· · · · · · · · · · · · · · · · · · ·
Cadmium		1.003	0.0500	1		D 100	75 - 125		
Chromium	· · · · · · · · · · · · · · · · · · ·	1.001	0.0500	1	1 1	0 100	75 - 125		· · · · · · · · · · · · · · · · · · ·
Lead		1.021	0.0500	ì	1.	0 102	75 - 125		
Nickel	1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-	1.027	0.0500	1	0.011	9 101	75 - 125		
Selenium		` 1.036	0.0500	Ť· ′		0 104	75 - 125		
Silver		0.9445	0.0500	1		0 94.5	75 - 125		
SD	Sample ID:	HS14101234-01 DI	L SX	Units:	mg/L	Ana	alysis Date:	03-Nov-2014	14:55
Client ID:		Ru	ın ID: ICPMS	S05 <u>_</u> 244100	SeqNo	3075284	PrepDate:	31-Oct-2014	DF: 5
Analyte		Result	PQL	SPK Val	SPK Re Value	f %REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qu
								0.00142	0 10
Antimony		ND	0.250		-				
		ND ND	0.250 0.250	- Na. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.				0.0041	0 10
Arsenic								0.0041 0.1207	0 10
Arsenic Barium		ND	0.250			······································	· · · · · · · · · · · · · · · · · · ·		
Arsenic Barium Beryllium		ND 0.1208	0.250 1.00	· · · · · · · · · · · · · · · · · · ·			·······	0.1207	0 10 0 10
Arsenic Barium Beryllium Cadmium		ND 0.1208 - ND	0.250 1.00 0.100					0.1207 -0.00005	0 10 0 10
Arsenic Barium Beryllium Cadmium Chromium		ND 0.1208 ND ND	0.250 1.00 0.100 0.250					0.1207 -0.00005 0.00023	0 10 0 10 0 10
Arsenic Barium Beryllium Cadmium Chromium Lead		ND 0.1208 - ND ND	0.250 1.00 0.100 0.250	L. L. L. L. L. L. L. L. L. L. L. L. L. L				0.1207 -0.00005 0.00023 -0.00013	0 10 0 10 0 10 0 10 0 10
Antimony Arsenic Barium Beryllium Cadmium Chromium Lead Nickel Selenium		ND 0.1208 - ND ND ND ND	0.250 1.00 0.100 0.250 0.250	1				0.1207 -0.00005 0.00023 -0.00013 0.00302	0 10 0 10 0 10 0 10 0 10 0 10

05-Nov-14

Client:

Remediation Services, Inc.

WorkOrder:

HS14101239

Project:

Cross Manufacturing

QC BATCH REPORT

Batch ID:	87521	In	strument:	HG03		Metho	od: SW747	0	
MBLK	Sample ID:	GBLKW4-103114			mg/L			31-Oct-2014	
Client ID:		, Rui	n ID: HG03	_243930	\ SeqNo: 3	072879	PrepDate:	31-Oct-2014	DF:1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Mercury		ND	0.000200						
MBLK	Sample ID:	GBLKT1-103014		Units:	mg/L	Ana	lysis Date:	31-Oct-2014	16:51
Client ID:		Rui	n ID: HG03	_243930	SeqNo: 3	072885	PrepDate:	31-Oct-2014	DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit		RPD %RPD Limit Qual
Mercury		ND	0.000200						
LCS	Sample ID:	GLCSW4-103114		Units:	mg/L	Ana	alysis Date:	31-Oct-2014	16:42
Client ID:	·	Rur	n ID: HG03		SegNo: 3		•	31-Oct-2014	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit		RPD %RPD Limit Qual
Mercury		0.00517	0.000200	0.005	0	103	80 - 120		
MS	Sample ID:	HS14101239-01MS		Units:	mg/L	Ana	ilysis Date:	31-Oct-2014	16:48
Client ID:	21332-Soil-01	. Rur	n ID: HG03	_243930	SeqNo: 3	072883	PrepDate:	31-Oct-2014	DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Mercury		0.0051	0.000200	0.005	-0.000007	102	75 - 125		
MSD	Sample ID:	HS14101239-01MSI)	¹ Units:	mg/L	Ana	lysis Date:	31-Oct-2014	16:49
Client ID:	21332-Soil-01	Rur	n ID: HG03	_243930	SeqNo: 3	072884	PrepDate:	31-Oct-2014	DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Mercury		0.00512	0.000200	0.005	-0.000007	103	75 - 125	0.0051	0.391 20
DUP	Sample ID:	HS14101239-01DUF	•	Units:	mg/L	Ana	llysis Date:	31-Oct-2014	16:46
Client ID:	21332-Soil-01	Rur	nID: HG03		_	072882	•	31-Oct-2014	
Analyte 1		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit		RPD %RPD Limit Qual
Mercury		ND	0.000200					-0.000007	0 20

The following samples were analyzed in this batch: [IS14101239-01

Date:

05-Nov-14

Client:

Remediation Services, Inc

WorkOrder:

HS14101239

Project:

Cross Manufacturing

Batch ID: 87509			Instrument:	SV-5				Metho	d: SW131	1/8270	and the state of t
MBLK S	ample ID:	MBLK-87509			Units	ug/L		Ana	alysis Date:	31-Oct-2014	16:34
Client ID:		F	Run ID: SV-5	_244048		Seq	No: 3	074319	PrepDate:	31-Oct-2014	DF: 1
: Analyte		Result	PQL	SPK	Val	SPK 'Val		%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qua
2,4,5-Trichlorophenol		ND	5.0	_							
2,4,6-Trichlorophenol		ND	5.0				<u> </u>	 			1 2422
2,4-Dinitrotoluene		ND	5.0								•
Cresols, Total		ND	15								· · · · · · · · · · · · · · · · · · ·
Hexachlorobenzene		ND	5.0			•					
Hexachlorobutadiene		ND	5.0				 	·····		······································	
Hexachloroethane	1	ND	5.0								
Nitrobenzene	· · · · · · · · · · · · · · · · · · ·	ND	5.0			````````					
Pentachlorophenol		ND	5.0			••					
Pyridine		ND	5.0				ĺ				
Surr: 2,4,6-Tribromopi	henol	65.99	5.0		100		0	66.0	39 - 153		
Surr: 2-Fluorobipheny	<i>i</i>	65.81	5.0		100		o	65.8	40 - 147	1.2	
Surr: 2-Fluorophenol		61.21	5.0		100		0	61.2	21 - 110		
Surr: 4-Terphenyl-d14		72.26	5.0		100 .		0	72.3	39 - 141	•	
Surr: Nitrobenzene-d5	i	62.44	5.0		100		0	62.4	37 - 140		
Surr: Phenol-d6		64.05	5.0		100		0	64.0	11 - 110		

05-Nov-14

Client:

Project:

Remediation Services, Inc

WorkOrder:

HS14101239

Cross Manufacturing

LCS Sample ID:	LCS-87509			Units:	ug/L	Ana	lysis Date:	31-Oct-2014	17:41
Client ID:		Run ID:	SV-5_	244048	SeqNo: 3	074320	PrepDate:	31-Oct-2014	DF: 1
Analyte	Result		PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qua
2,4,5-Trichlorophenol	70.68		5.0	100	0	70.7	55 - 120		
2,4,6-Trichlorophenol	71.88		5,0	100	Ó	71.9	55 - 120		
2,4-Dinitrotoluene	37.28		5.0	50	0	74.6	55 - 125		-
Cresols, Total	192.3		15	250	0	76.9	40 - 120		
Hexachlorobenzene	39.31		5.0	50	Ö	78.6	55 - 120		
Hexachlorobutadiene	37.54		5.0	50	0	75.1	55 - 120	^	
Hexachloroethane	34.5		5,0	50	0	69.0	55 - 120		•
Nitrobenzene	32.55	*******	5:0	50	0	65.1	55 - 120	<u> </u>	***************************************
Pentachlorophenol	76.53		5.0	, 100	0	76.5	50 - 135		•
Pyridine	25.11		5.0	50	0	50.2	30 - 120	1 No. 10 V	
Surr: 2,4,6-Tribromophenol	76.19		5.0	100	0	76.2	39 - 153		
Surr: 2-Fluorobiphenyl	70.02		5.0	100	0	70.0	40 - 147		
Surr: 2-Fluorophenol	73.61 ⁽		5.0	100	0	73.6	20 - 110		
Surr: 4-Terphenyl-d14	75.47		5.0	100	0	75.5	39 - 141		·····
Surr: Nitrobenzene-d5	64.79		5.0	100	0	64.8	37 - 140		
Surr: Phenol-d6	71.85		5.0	100	0	71.9	11 - 110	-7	. 4

05-Nov-14

Client:

Remediation Services, Inc.

WorkOrder:

HS14101239

Project:

Cross Manufacturing

Batch ID: 87509	ins	trument:	SV-5			Metho	d: SW131	1/8270		
LCSD Sample ID:	LCSD-87509		Units:	ug/L		Ana	lysis Date:	31-Oct-2014	18:03	
Client ID:	Run	IĎ: SV-5 _	244048	Seq	No: 3	074321	PrepDate:	31-Oct-2014	DF: 1	
Analyte	Result	PQL	SPK Val	SPK Val		%REC	Control Limit	RPD Ref Value	R %RPD Li	PD mit Qual
2,4,5-Trichlorophenol	71.23	5.0	100		0	71.2	55 - 120	70.68	0.771	25
2,4,6-Trichlorophenol	70.42	5.0	100		0	70.4	55 - 120	71.88	2.06	25
2,4-Dinitrotoluene	37.11	5,0	50		0	74.2	55 - 125	37.28	0.445	25
Cresols, Total	186.1	15	250		0	74.5	40 - 120	192.3	3.25	25
Hexachlorobenzene	38.79	5.0	50		0	77.6	55 - 120	39.31	1.33	25
Hexachlorobutadiene	35.51	5.0	50		0	71.0	55 - 120	37.54	5.57	25 ·
Hexachloroethane	33.33	5.0	50		0	66.7	55 - 120	34.5	3.45	25
Nitrobenzene	32.93	5.0	50		0	65.9	55 - 120	32.55	1.15	25
Pentachlorophenol	75.8	5.0	100		0	75.8	50 - 135	76.53	0.956	25
Pyridine	25.27	5.0	50		0	50.5	30 - 120	25.11	0.627	25
Surr: 2,4,6-Tribromophenol	. 73.66	5.0	100		0	73.7 [\]	39 - 153	76.19	3.38	25
Surr: 2-Fluorobiphenyl	68.72	5.0	100		0	68.7	40 - 147	70.02	1.87	25
Surr: 2-Fluorophenol	, 72.96	5,0	100 ·		0	73.0	21 - 110	73.61	0.881	25
Surr: 4-Terphenyl-d14	73.84	5.0	100		0	73.8	39 - 141	75.47	2.19	25
Surr: Nitrobenzene-d5	62.48	5. <u>0</u>	100		o	62.5	37 - 140	64.79	3.64	25
Surr: Phenol-d6	70.39	5.0	100		0	70.4	11 - 110	71.85	2.06	25

05-Nov-14

Client:

Remediation Services, Inc.

WorkOrder:

HS14101239

Project:

Cross Manufacturing

QC BATCH REPORT

MS Sample II	D: HS14101152-01MS		Units:	ug/L	Ana	ılysis Date:	31-Oct-2014	18:48
Client ID:	Run ID:	SV-5_	244048	SeqNo: 3	074323	PrepDate:	31-Oct-2014	DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qu
2,4,5-Trichlorophenol	76.22	5.0	100	0	76.2	55 - 120		
2,4,6-Trichlorophenol	76.4	5.0	100	0	76.4	55 - 120		
2,4-Dinitrotoluene	37.92	5.0	50	0	75.8	55 - 125		
Cresols, Total	192	15	250	0	76.8	40 - 120	**************************************	
Hexachlorobenzene	37.81	5.0	50	0	75.6	55 - 120		
Hexachlorobutadiene	ý 34.62	5.0	50	0	69.2	55 - 120		
Hexachloroethane	34.78	5.0	50	. 0	69.6	55 - 120		
Nitrobenzene	34.37	5.0	50	0	68.7	55 - 120		
Pentachlorophenol	79.97	5.0	100	0	80.0	50 - 135		:
Pyridine	26.22	5.0	50	. 0	52.4	30 - 120	***************************************	
Surr: 2,4,6-Tribromophenol	73.17	5.0	100	O	73.2	39 - 153		
Surr: 2-Fluorobiphenyl	73.77	5.0	100	0	73.8	40 - 147	······································	
Surr: 2-Fluorophenol	59.53	5.0	100	0	<i>5</i> 9.5	21 - 110		
Surr: 4-Terphenyl-d14	69.6	5.0	100	0	69.6	39 - 141	iiii	
Surr: Nitrobenzene-d5	66.59	5.0	100	0	66.6	37 - 140		
Surr: Phenol-d6	65.41	5.0	100	0	65.4	11 - 110	- and and a second	

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

Client:

Remediation Services, Inc.

WorkOrder:

HS14101239

Project:

Cross Manufacturing

MBLK Sam	ple ID:	VBLKW-141031		Units:	ug/L		Ana	alysis Date:	31-Oct-2014	17:34
Client ID:		Run ID	VOA6	_244064	Sec	No: 30	074615	PrepDate:		DF: 1
Analyte ,		Result	PQL	SPK Val	SPK Val	1	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qua
1,1-Dichloroethene		ND _	5.0		TO SEE SEE SEE			e service service pro-	en en en en en en en en en en en en en e	
1,2-Dichloroethane		ND	5.0			1			. A Gray Salation	e angles en la company en en la company en en en en en en en en en en en en en
1,4-Dichlorobenzene		· ND	5.0							•
2-Butanone	e de la magazina de la composição de la composição de la composição de la composição de la composição de la co	ND	10		***************************************	<u> </u>	***************************************	<u> </u>	***************************************	,
Benzene		ND	5.0	,						
Carbon tetrachloride	··· • • • • • • • • • • • • • • • • • •	ND	5,0	1 1/2/					***************************************	
Chlorobenzene		NĎ	5.0						,	•
Chloroform		ND	5,0	inamini in in ana serie di internesse		<u> </u>				
Tetrachloroethene		ND	5.0							
Trichloroethene		ND	5.0							
Vinyl chloride		ND	2.0							
Surr: 1,2-Dichloroethane-	d4	49.44	5.0	50		0	98.9	70 - 125		
Surr: 4-Bromofluorobenze	en e	49.07	5.0	. 50		0	98.1	72 _: 4 - 125		
Sum: Dibromofluoromethe	ane	49.52	5.0	50	C 117 1 120000	0	99.0	71.2 - 125	The second secon	
Surr: Toluene-d8		51.23	5.0	50		0.	102	75 - 125		

05-Nov-14

Client:

Remediation Services, Inc

WorkOrder:

HS14101239

Project:

Cross Manufacturing

MBLK Sample ID:	MBLKV1-141030		Units	: ug/L	An	alysis Date:	31-Oct-2014	19:39	
Client ID:		Run ID: VOA	5_244064	SeqNo:	3074619	PrepDate:		DF:	20
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value		RPD Limit Qua
1,1-Dichloroethene	ND	100			······································				
1,2-Dichloroethane	ND	100		······································	***************************************		,	******	
1,4-Dichlorobenzene	ND	100					•		
2-Butanone	, ND	200	•					*************************************	*************************************
Benzene	ND	100	,						
Carbon tetrachloride	ND	100			11				
Chlorobenzene	ND	100					(
Chloroform	ND	100		1					TETT W
Tetrachloroethene	ND	100	×						•
Trichloroethene	ND	100	Asia, a dirii.		alian da la companya da Ny INSEE dia mampiasa mpiasa	 			74.22.7
Vinyl chloride	ND	40						,	
Surr: 1,2-Dichloroethane-d4	963.6	100	1000	o	96.4	70 - 125	******************		
Surr: 4-Bromofluorobenzene	963 <u>.</u> 5	100	1000	0	96. <u>4</u>	72.4 - 125			*
Surr: Dibromofluoromethane	961.8	100	1000	0	96.2	71.2 - 125			
Sum: Toluene-d8	1023	100	1000	0	102	75 - 125			

05-Nov-14

Client:

Remediation Services, Inc.

WorkOrder:

HS14101239

Project:

Cross Manufacturing

LCS Sa	ample ID:	VLCSW-141031		Units:	ug/L		Ana	lysis Date:	31-Oct-2014	16:22
Client ID:		Run II	D: VOA6	_244064	Seq	No: 3	074614	PrepDate:		DF: 1 🔍
Analyte		Result	PQL	SPK Val	SPK _, Val		%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qu
1,1-Dichloroethene		55.6	5.0	50		0	111	73 - 124		
1,2-Dichloroethane		50.48	5.0	50		0	101	76 - 120		
1,4-Dichlorobenzene		53.3	5,0	50		o	107	70 - 130		
2-Butanone	•	110.7	10	100		0	111	70 - 130	·····	
Benzene		50.13	5.0	50		0	100	70 - 128		
Carbon tetrachloride		51.07	5.0	50		0	102	70 - 130		
Chlorobenzene		50.4	5.0	50		0	101	72 - 127		
Chloroform		55.66	5:0	50	, c () ,	0	111	70 - 130		
Tetrachloroethene		49.99	5,0	50		Ö	100.0	70 - 130		
Trichloroethene		49.64	5.0	50		0	99.3	72 - 129		
Vinyl chloride		52.52	2.0	50		0	105	70 - 130		
Surr: 1,2-Dichloroetha	ne-d4	50.87	5.0	50		0	102	70 - 125		
Surr: 4-Bromofluorobe	nzene	50.81	5.0	50		0	102	72 - 125		
Surr: Dibromofluorome	ethane	50.64	5.0	50		0	101	71 - 125	***************************************	
Surr: Toluene-d8		49.59	5.0	50		0	99.2	75 - 125		

05-Nov-14

Client:

Remediation Services, Inc

WorkOrder:

HS14101239

Project:

Cross Manufacturing

MS Sample ID:	HS14101248-04MS		Units:	ug/L	A'na	ilysis Date:	31-Oct-2014	18:27
Client ID:	Run II	D: VOA6	_244064	SeqNo: 3	074617	PrepDate:		DF: 5
Analyte	Result	PQL .	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qua
1,1-Dichloroethene	257.4	25	250	0	103	73 - 124	**	1 10 10 10 10 10 10 10 10 10 10 10 10 10
1,2-Dichloroethane	259.4	25	250	0	104	76 - 120		
1,4-Dichlorobenzene	265.3	25	250	0	106	70 - 130		j
2-Butanone	471	50	500	0	94.2	70 - 130	······································	3.3.
Benzene	252.9	25	250	Ö	101	70 - 128		<u>-</u>
Carbon tetrachloride	2 52.2	25	250	0	101	70 - 130	y 60 60 y 60 g 7 1 y 7 1 1 1	
Chlorobenzene	252.9	25	250	0	101	72 - 127		
Chloroform	272.4	25	250	0	109	70 - 130	and the second second	
Tetrachloroethene	518.3	25	250	271.5	98.7	70 - 130		
Trichloroethene	286.9	25	250	41.17	98.3	72 - 129		
Vinyl chloride	202.3	10	250	, 0	80.9	70 - 130		
Sun: 1,2-Dichloroethane-d4	241.7	25	250	0	96.7	70 - 125	***	
Surr: 4-Bromofluorobenzene	256.1	25	250	0	102	72 - 125		
Surr: Dibromofluoromethane	246	25	250	<u>o</u>	98.4	71 - 125		· · · · · · · · · · · · · · · · · · ·
Surr: Toluene-d8	249.7	25	250	0	99.9	75 - 125		

05-Nov-14

Client:

Remediation Services, Inc.

WorkOrder:

HS14101239

Project:

Cross Manufacturing

QC BATCH REPORT

MSD Sample ID:	HS14101248-04MSD		Units:	ug/L		Ana	ılysis Date:	31-Oct-2014	18:51	
Client ID:	Run	ID: VOA6	_244064	Seq	No: 3	074618	PrepDate:		DF: 5	5
Analyte	Result	PQL	SPK Val	SPK I Valu		%REC	Control Limit	RPD Ref Value	R %RPD Li	PD imit Qua
1,1-Dichloroethene	265.4	. 25	250		0	106	73 - 124	257.4	3.07	20
1,2-Dichloroethane	263	. 25	250	İ	0	105	76 - 120	259.4	1.39	20
1,4-Dichlorobenzene	278.6	25	250		0	111	70 - 130	265.3	4.87	20
2-Butanone	530.6	50	500		0	106	70 - 130	471	11.9	20
Benzene	259.5	25	250		0	104	70 - 128	252.9	2.56	20
Carbon tetrachloride	264	25	250		0	106	70 - 130	252.2	4.56	20
Chlorobenzene	259.9	25	250	, [0	104	72 - 127	252.9	2.74	20
Chloroform	279	25	250		0	112	70 - 130	272.4	2.38	20
Tetrachloroethene	518.4	25	250	27	1.5	98.8	70 - 130	518.3	0.0307	20
Trichloroethene	295.4	25	250	41	.17	102	72 - 129	286.9	2.93	20
/inyl chloride	212	10	250		0	84.8	70 - 130	202.3 ز	4.71	20
Surr: 1,2-Dichloroethane-d4	241.2	25	250	-	0.	96.5	70 - 125	241.7	0,185	20
Surr: 4-Bromofluorobenzene	255.7	25	250		0	102	72 - 125	256.1	0.148	20
Surr: Dibromofluoromethane	243.9	25	250	<u> </u>	0	97.6	71 - 125	246	0.861	20
Surr: Toluene-d8	247:7	25	250	1	0	99.1	75 - 125	249.7	0.795	20

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

05-Nov-14

Client:

Remediation Services, Inc

WorkOrder:

HS14101239

QC BATCH REPORT

Project:

Cross Manufacturing

LCS	Sample ID:	LCS-244116		Units:	pH Units	Ana	lysis Date: 0	3-Nov-2014	14:30
Client ID:		Run	ID: WetCh	nem_HS_24411	16 SeqNo: 3	075574	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qua
ρḤ	,	6.02	0.100	6	0	100	97 - 103		
DUP -	Sample ID:	HS14101107-01DUP		Units:	pH Units	Ana	ılysis Date: 0	3-Nov-2014	14:30
DUP Client ID:	Sample ID:			Ųnits: hem_ HS_2441 1	•		llysis Date: 0 PrepDate:`	3-Nov-2014	3 14:30 DF: 1
	Sample ID:			,)	•			RPD Ref Value	
Client ID:	Sample ID:	Rur	ID: WetCl	hem_HS_2441 ⁻	16 SeqNo: 3 SPK Ref	075575	PrepDate:` Control	RPD Ref	DF: 1 RPD %RPD Limit Qua

Date:

05-Nov-14

Client:

U

Remediation Services, Inc

Project:

Cross Manufacturing

WorkOrder:

HS14101239

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
**************************************	Value exceeds Regulatory Limit
a	Not accredited
В	Analyte detected in the associated Method Blank above the Reporting Limit
E .	Value above quantitation range
Н	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND ·	Not Detected at the Reporting Limit
0	Sample amount is > 4 times amount spiked
Ρ ,	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits

Analyzed but not detected above the MDL/SDL

Acronym	Description.
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate

MBLK Method Blank
MDL Method Detection Limit
MQL Method Quantitation Limit

MS Matrix Spike

MSD Matrix Spike Duplicate

PDS Post Digestion Spike

PQL Practical Quantitaion Limit

SD Serial Dilution

SDL Sample Detection Limit

TRRP Texas Risk Reduction Program

Unit Reported Description

µg/L Micrograms per Liter

Date

pH Units

CERTIFICATIONS, ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	ÄR - 2014	27-Mar-2015
California	2919	31-Jul-2015
Dept of Defense	L2231 Rev 3-20-2014	22-Dec-2015
Illinois /	003403	09-May-2015
Kansas	E-10352 8/15/2013-2014	30-Nov-2014
Kentucky	KY 2014-2015	30-Apr-2015
Louisiana	03087 2014/2015	30-Jun-2015
North Carolina	624 - 2014	31-Dec-2014
North Dakota	R-193 2025	30-Apr-2015
Oklahoma	2014-128	31-Aug-2015
Texas	T104704231-14-14	30-Apr-2015

Date:

05-Nov-14

Client:

Remediation Services, Inc.

Project:

Cross Manufacturing

Work Order:

HS14101239

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS14101239-01	21332-Soil-01	Login	10/29/2014 5:07:12 PM	RPG	11D
HS14101239-01	21332-Soil-01	Login	10/29/2014 5:07:12 PM	RPG	11D
HS14101239-01	21 332-Soil-01	Login	10/29/2014 5:07:12 PM	RPG	11D
HS14101239-01	21332-Soil-01	Login	10/29/2014 5:07:12 PM	RPG	11D
HS14101239-01	21332-Soil-01	Login	10/29/2014 5:07:12 PM	RPG	Sub

05-Nov-14

Sample	Receipt	Checklist
--------	---------	-----------

Client	Name:
CHELL	INGILIC.

RSI - DIRECT

Work Order:

HS14101239

Date/Time Received:

29-Oct-2014 09:17

Received by:

<u>DES</u>

		···				
Checklist completed by:	Raegen Giga eSignature	29-Oct-2014 Date	Reviewed by:	Bernadette A eSignature	. Fini	30-Oct-2014 Date
Matrices: so	il .		Carrier name:	<u>FedEx</u>		
Custody seals intact on s Chain of custody present Chain of custody signed Chain of custody agrees Samples in proper conta Sample containers intact Sufficient sample volume All samples received with	shipping container/cooler? sample bottles? t? when relinquished and rece with sample labels? iner/bottle? t? e for indicated test?	eived?	Yes V Yes V Yes V Yes V Yes V Yes V Yes V Yes V Yes V Yes V	NO NO NO NO NO NO NO NO NO NO NO NO NO N	Not Present Not Present Not Present	
Temperature(s)/Thermor Cooler(s)/Kit(s):			2.1c/2.1c c/u 23742			IR 1
Date/Time sample(s) ser Water - VOA vials have a Water - pH acceptable up	zero headspace?	·	10/29/2014 17:15 Yes	No No	VOA vials subi	niited
pH adjusted? pH adjusted by:			Yes	No 🔲	N/A 📝	
Login Notes:				en in de la companya de la companya de la companya de la companya de la companya de la companya de la companya	en en en en en en en en en en en en en e	
Client Contacted:		Date Contacted:		Person Contac	cted:	•
Contacted By: 0		Regarding:				
Corrective Action:						
Lan		a e e emin e e escret e e e		······································	· · · · · · · · · · · · · · · · · · ·	



Cincinnati, OH +1 513 733 5336 Evereit, WA +1 425 356 2600

Fort Collins, CO +1 970 490 151 1 Holland, MI +1 616 399 6070

Chain of Custody Form of

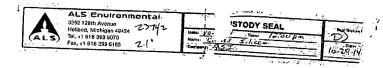
Page

HS14101239

COC ID: Environmental 109530 ALS Project Manager: Customer Information **Project Information** Purchase Order Project Name Cross Manufacturing TCLP VOC (1311/8260) Work Order Project Number Cross Manufacturing TCLP SVOC (1311/8270) Company Name Remediation Services, Inc Bill To Company Remediation Services, Inc. TCLP Metals (1311/7470) - RCRA 8 Send Report To Dan Roth Invoice Attn PCBs (UEB3) 2735 South 10th Street 2735 South 10th Street Address RCI - Reactive Cyanide, Reactive Sulfide Address RCI - pH, Ignitability City/State/Zip Independence City/State/Zip Independence Phone Phone (620) 331-1200 (620) 331-6216 e-Mail Address droth@rsi-ks.com e-Mail Address Sample Description Matrix 21332 - Soil-01 c 5001 10-28 7 10 Other SWK Days 2 WICDOW . 24 Hour Longod by (Laboratory) OC Package: (Chack One Box Below) Level 2 Std OC
Level 3 Std OC/Row da
Level 4 SW846/CLP 23742 TRRP Chil.ist Preservative Key: 1-HCI 2-HNO₃ 3-H,50, 4-NnOH 5-N6₂S₂O₃, 6-NaHSO, Ophineop

Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
 Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the density of the Chain of Cosmily by a legal document. All information must be completed according.

Copyright 2011 by ALS Environmental.



Fed (2007) 19215 8035 6168 7921

WED - 29 OCT 10:30A PRIORITY OVERNIGHT

77099 IX-US IAH AB SGRA



05-Nov-2014

Bernadette Fini ALS Environmental 10450 Stancliff Rd Suite 210 Houston, TX 77099

Re: **HS14101239**

Dear Bernadette.

Work Order: 14101786

ALS Environmental received 1 sample on 30-Oct-2014 09:30 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

Sample results are compliant with NELAP standard requirements and QC results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 10.

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

Sincerely,

Electronically approved by: Chad Whelton

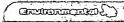
Chad Whelton

Chad Whelton Project Manager

Certificate No: MN 532786

Report of Laboratory Analysis

ADDRESS 3352 138th Avenue Holland Michigan 43424-9263 | PHONE (616) 399-6070 | FAX (516) 399-6185 ALS GROUP USA, CORP. Part of the ALS Laboratory Group. A Campbell Brothers Limited Company



Date: 05-Nov-14

Client:

ALS Environmental

Project:

HS14101239

Work Order:

14101786

Work Order Sample Summary

<u>Lab Samp ID</u> Client Sample ID 14101786-01 HS14101239-01

<u>Matrix</u>

Soil

Tag Number 21332-Soil-01 10/28/2014 08:00 10/30/2014 09:30

Client:

ALS Environmental

Project:

HS14101239

WorkOrder:

14101786

QUALIFIERS, ACRONYMS, UNITS

Qualifier	<u>Description</u>
*	Value exceeds Regulatory Limit
. a	Not accredited
В	Analyte detected in the associated Method Blank above the Reporting Uimit
Е	Value above quantitation range
Н	Analyzed outside of Holding Time
, J	Analyte is present at an estimated concentration between the MDL and Report Limit
n ND	Not offered for accreditation Not Detected at the Reporting Limit
ΝD Ο ,	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
· S	Spike Recovery outside laboratory control limits
U .	Analyzed but not detected above the MDL
Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
· LCSD	Laboratory Control Sample Duplicate
1.OD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD.	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference .
TDL	Target Detection Limit
TNTC	Too Numerous To Count
Α	APHA Standard Methods
D	ASTM
Е	EPA
sw	SW-846 Update III
Units Reported	Description
°F	Degrees Fahrenheit
mg/Kg	Milligrams per Kilogram

Client:

ALS Environmental

Project:

HS14101239

Sample ID:

HS14101239-01

Collection Date: 10/28/2014 08:00 AM

Date: 05-Nov-14

Work Order: 14101786

Lab ID: 14101786-01

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE, REACTIVE			SW7.3	3.2		Analyst: AXL
Cyanide, Reactive	ND		100	mg/Kg	i	11/4/2014 04:00 PM
FLASHPOINT, OPEN-CUP			D92			Analyst: MB
Flashpoint, Open-cup	>200			್ರ℃೯	ব্	11/4/2014 09:00 AM
SULFIDE, REACTIVE	•		SW7.3.	4.2		Analyst: AXL
Sulfide, Reactive	ND		100	mg/Kg	ä	11/4/2014 04:00 PM

See Qualifiers page for a list of qualifiers and their definitions. Note:

Client:

ALS Environmental

Work Order: Project: 14101786 HS14101239 **QC BATCH REPORT**

Date: 05-Nov-14

Batch ID: R151788 Instrument ID WETCHEM Method: SW7.3.4.2 MBLK Sample ID: MB-R151788-R151788 Units: mg/Kg Analysis Date: 11/4/2014 04:00 PM Client ID: SeqNo: 3017208 Run ID: WETCHEM_141104H Prep Date: DF: 1 SPK Ref RPD Control RPD Ref Limit Value Limit Value Analyte SPK Val %REC Result **PQL** %RPD Qual ND Sulfide, Reactive 100 LCS Sample ID: LCS-R151788-R151788 Units: mg/Kg Analysis Date: 11/4/2014 04:00 PM Client ID: Run ID: WETCHEM_141104H SeqNo: 3017209 Prep Date: DF: 1 SPK Ref Control RPD Ref RPD Limit Analyte Value Limit Value Result PQL SPK Val %REC %RPD Qual 1776 Sulfide, Reactive 100 2149 0 82.6 60-120 0 The following samples were analyzed in this batch: 14101786-01A

Client:

ALS Environmental

Work Order:

14101786

Project:

HS14101239

Batch ID: R151789 Instrument ID WETCHEM Method: SW7.3.3.2 MBLK Analysis Date: 11/4/2014 04:00 PM Sample ID: MBLK-R151789-R151789 Units: mg/Kg Client ID: Run ID: WETCHEM_141104I SeqNo: 3017213 Prep Date: DF: 1 RPD SPK Ref Control RPD Ref Value Limit Value Limit Analyte Result SPK Val %REC %RPD ND Cyanide, Reactive 100 LCS Sample ID: LCS-R151789-R151789 Analysis Date: 11/4/2014 04:00 PM Units: mg/Kg Client ID: Run ID: WETCHEM_1411041 SeqNo. 3017214 Prep Date: SPK Ref RPD Ref Control Value Limit Limit PQL SPK Val %REC Value %RPD Qual Analyte Result Cyanide, Reactive 124.8 100 99.8 75-125 Analysis Date: 11/4/2014 04:00 PM Sample ID: 14101786-01A MS Units: mg/Kg Client ID: HS14101239-01 Run ID: WETCHEM_141104I SeqNo: 3017217 Prep Date: DF: 1 SPK Ref Control RPD Ref **RPD** Value Value Limit Limit Analyte Result PQL SPK Val %REC %RPD 248.1 Cyanide, Reactive 100 0 50-150 250 99.2 MSD Sample ID: 14101786-01A MSD Units: mg/Kg Analysis Date: 11/4/2014 04:00 PM Run ID: WETCHEM_141104I SeqNo: 3017218 Prep Date: Client ID: HS14101239-01 DF: 1 SPK Ref RPD Control RPD Ref Value Value Limit Limit Analyte SPK Val %REC %RPD Result **PQL** Qual 248.1 Cyanide, Reactive 100 250 50-150 248.1 0 99.2 35 14101786-The following samples were analyzed in this batch: 01A

Client:

ALS Environmental

Work Order:

14101786

Project:

HS14101239

Batch ID: R151802	Instrument ID WETCHEM		Metho	d: D92		-					
LCS	Sample ID: LCS-R151802-R15180	2			Ur	its: °F		Anal	ysis Date: 1	1/4/2014 0	9:00 AM
Client ID:	Run ID:	WETCH	HEM_14110	4N	Seq	No: 301	7495	Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value		%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Flashpoint, Open-cup	80	0	81		0 .	98.8	97-103		0		

The following samples were analyzed in this batch:

14101786-01A

ALS Enui	C	HAIN OF CUS		JUKD	29 Oct 2014
ALS Laboratory G 3352 128th Ave. Holland, MI 4942		Phone 6163996070 Fax 6163996185		C	Due date 05 NOV 14
243 C/3745 C	lustomer information		Project/informatio	n - 91 (
PO		Project Name	HS14101239		
Company Name	ALS Houston	Company Nan	16 ALS Houston	1	
 	· · · · · · · · · · · · · · · · · · ·	Inv Attn	Accounts Payal	ble	•
Address	10450 Stancilff Rd, Ste	210 Address	10450 Stanctiff	Rd, Sie 210	•
•	Houston, TX 77099		Houslan, TX 7	7099	
Phone	281-530-5656	Phone	281-530-5656		igs.
Emalit	Bernadette,finl@alsglob	al.com Email2	Assessment	and the second	***
Lab ID	Client Samp ID	Collection Date	Matrix	Analysis Requested	
HS14101239-01	21332-Soil-01	28-Oct-14 08:00 am	Soil	RCN_S	and the same
			en en en en en en en en en en en en en e	RS_S	and the second of the second o
	***	A CONTRACTOR OF THE CONTRACTOR	eri a antestina	SUB_FLASHPOINT	
<u> </u>	l'				
	1			•	. (
Comments	Please analyze for the abx jumoke.lawal@alagiobal.c	ove. Send report to Bernado om	ette,fini@elaglobal.com	.cc	0
Relinquished by:	Date/Time:	Received by:	Date/Time:	Cooler IDs:	Report QC Level
-R Gige	10/29/14 1.	% ; ∞			.]
		(1) 3	1 10/30/14	030	

3.81

SUITE 210 TK 277099
HOUSTON TK 277099
TO JOE RIBAR
ALS ENVIRONMENTAL
3352 128TH AVE. BILL SENDER THU - 30 OCT 10:30A PRIORITY OVERNIGHT 5813 7990 9207 NA HLMA 49424. MI-US GRR Pg 36 of 37

Sample Receipt Checklist

Client Name:	ALS - HOUSTON				Date/Time	Received:	30-Oct-14	1 09:30	
Work Order:	14101786				Received b	y:	<u>DS</u>		
Checklist comp	oleted by Diane Shaw esignature	30	Doct-14		Reviewed by:	Chad VO	leton		30-Oct-14
Matrices: Carrier name:	Soil FedEx	· · · · · · · · · · · · · · · · · · ·	24.0		,	obiginatore			July
Shipping conta	iner/cooler in good condition?		Yes	•	No 🗔	Not Prese	ent 🔲		
Custody seals	intact on shipping container/cool	er?	Yes	V	No 🗔	Not Prese	ent 🗆		
Custody seals	intact on sample bottles?	(Yes		No 🗀	Not Prese	ent 🗹		
Chain of custoo	dy present?		Yes	Y	No 🗆				
Chain of custoo	dy signed when relinquished and	received?	Yes	~	No 🗔				
Chain of custoo	dy agrees with sample labels?		Yes	V	No 🗔	. (,
Samples in pro	per container/bottle?		Yes	V	No 🗔				
Sample contain	ners intact?		Yes	<u>~</u>	No 🗌	•			
Sufficient samp	ele volume for indicated test?		Yes	\mathbf{Z}	No 🗔				
	eived within holding time?		Yes	V	No 🗌				•
Container/Tem	p Blank temperature in compliane	ce?		V	No 🗔				
Sample(s) rece Temperature(s)	vived on ice?)/Thermometer(s):		Yes	Y	No 🗀	······································		v o	
Cooler(s)/Kit(s)					- 1 mg (mg/mg/mg/mg/mg/mg/mg/mg/mg/mg/mg/mg/mg/m	and the second			
Date/Time sam	ple(s) sent to storage:		10/30/	2014	4:40:41 PM	n angelengige generalis ng pandan an angeleng safang angel Managang angelengige ng pandan an angeleng safang angeleng angel	Arginer (Arkino Internitor II del matematica)		
Water - VOA vi	als have zero headspace?		Yes	U	No 🛄	No VOA vials	submitted	Ø	
Water - pH acc	eptable upon receipt?		Yes		No 🗌	N/A 🗹			
pH adjusted? pH adjusted by	:		Yes		No 🗆	N/A 🗸		· I	•
Login Notes:									
			-	· · · · · · ·	and and and and	e some some seems to the		-	معور مكتمعه شكمك دمشته بمعدد
		and the same of th			Armed Street, Street,	s administration of the second		diego man delette white	The second seconds of the seconds
			,		***				
						,			
Client Contacte	d:	Date Contacted:			Person	Contacted:			
Contacted By:	•	Regarding:							
Comments:		հում հուվում անձնեն հուկունա հումակավումնականը դուվակականը։	*****		r ar iller seleri aşışılışıyını altı danı diği haş i	and the second region of a philosophic constitution			
	har	****			or a source of the second section of the second	and the companion of th			
CorrectiveAction	п:	······································		*********	· · · · · · · · · · · · · · · · · · ·				
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Pg 37 of 37

Plumb Thicket Landfill 440 NE 150th Road Harper, KS 67058 PH: 620.896.2229 FX: 620.896.2294



FOR OFFICE USE ONLY

APPROVAL NUMBER:

EXPIRATION DATE:

APPROVED BY:

SPECIAL WASTE APPLICATION

Information utilized for completion of this form must originate from an authorized representative of the generator of the waste material.

The information on this form must	be COMPLETELY FILLED OUT, TYPE WRITTE		ORIZED REPRESENTATIVE.					
A. PROFILE INFORMATION 1. Initial Recertification, list prior approval number(s):								
	<u> </u>							
2. Have there been any changes to the	e composition of, or process generating this dysis may be required even if no change to p	waste stream that would alter the chara process or composition.)	clenstics of the waste stream?					
B. GENERATOR INFORMA	TION	C. CUSTOMER/BILLING I	FORMATION					
Generator Name: Cross Manufact	uring, Inc.	1. Billing Name: Remediation Service	es, Inc.					
2. Address: 100 James Cross Boulev	ard	2. Address: P.O. 8ox 587						
City: Lewis	County: Edwards	City: Independence	County: Montgomery					
State: Kansas	Zip: 67552	State: Kansas	Zip: 67301					
3. Site Location (if different):		3. Contact Name: Butch Holum						
4. Contact Name: Raymond Law		4. Phone Number: (620) 331-1200	5. Fax Number: (620) 331-6216					
5. Phone Number: (620) 324-5525	6. Fax Number: (620) 324-5737	6. Email Address: bholum@rsi-ks.c	om					
7. Email Address: raymond.law@cros	ssmfg.com	7. Is there a service agreement on file	? YES INO					
8. State Facility ID # (if applicable):		B. Agent / Consultant:						
9. State Waste Code (if applicable):		9. Letter of Authorization: YES [] NO					
D. TRANSPORTER/SHIPPI	NG INFORMATION	E. WASTE STREAM INFO	RMATION					
1, Name: TBD		1. Common Name of Material or Was	te Stream:					
2. Street Address:		Non hazardous contaminated soil						
City: State:	Zip;	2. Detailed Description of Process or How Generated (Atlant additional sheet if condent):						
3. Phone Number:	4. Fax Number:	1DW						
5. Contact Name:	-	3. Physical State at 70°F: Solid Semi-Solid Studge						
6. EPA or State Transporter ID #:		Liquid Powder Other						
7. Designated Landfill(s):		4. Free Liquids: 🔳 NO 🗌 YES % Liquids:						
8. Packaging: Bulk Solids B	ulk Liquids 🔳 Drums 🔲 Roll-Off	5. Color: Black 6. pH Range: 9.75						
Dump Truck Tank Truck		7. Odor: None Mild Significant Describe:						
9, Estimated Volume: 1		8. Flash Point: NA						
Tons Cubic Yards 🔳 Dr	ums Gations Other:	9. Reactive: NO YES with:						
10. Shipping Frequency: per:		10. State Required Information (if app	icable):					
	F. NON-HAZARDOUS	DETERMINATION						
1. Attached Document(s) (check all that	rt apply): Not Applicable Process I	Knowledge I MSDS I Certified	Analytical Report					
2. If Process Knowledge, provide detail		· .						
	lata derived from testing a representative sa of Sample: Composite Grab	imple in accordance with 40 CFR 261 at Analysis Provided: ALS - HS1410	d/or other applicable laws? 1239-01					
4. If Exempt Waste, check applicable if Qil & Gas E&P Waste – 40 CFR	tem below: UST Corrective Action – 40 261.4(b)(5) RCRA-Empty Containen							
	G. GENERATOR CERTIF	ICATION STATEMENT:						
I hereby certify that all information conteined herein is true and correct, and the material described is properly identified, classified, packaged, labeled, and prepared as indicated. I certify this waste is not hazardous or dangerous as defined by the U.S. EPA, or the state or province of origin. It certify this waste does not contain any regulated radioactive materials, that all known and suspected hazards have been disclosed, and that the waste is not a regulated hazardous waste by government or local authority, and does not contain PCB's regulated by TSCA or any other regulatory authority. I certify that all samples used for this analysis are representative of the materials described herein. I understand that all wastes may undergo inspection upon amival at the designated facility and may be refused if the delivered material does not conform to the description herein. Notification will be provided immediately if there is a change in the composition of, or process generating this waste stream, prior to offering the waste for shipment or management.								
Raymond Law - EH&S Corporate Coordina Authorized Representative Nameritie		Cross Manufacturing, Inc						
Laymond free		A GULIN (S	y 13, 2015					



November 05, 2014

Grant Sherwwood Remediation Services, Inc 2735 South 10th Street Independence, KS 67301 10450 Stancliff Rd. Suite 210 Houston, TX 77099 T: +1 281 530 5656 F: +1 281 530 5887 www.alsglobal.com

Work Order: HS14101239

Laboratory Results for: Cross Manufacturing

Dear Grant,

ALS Environmental received 1 sample(s) on Oct 29, 2014 for the analysis presented in the following report.

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

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

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

Sincerely.

Generated By: Jumoke.Lawal

Bernadette A. Fini

Project Manager

Date:

05-Nov-14

Client:

Remediation Services, Inc.

Project:

Cross Manufacturing

Work Order:

HS14101239

SAMPLE SUMMARY

Lab Samp ID

Client Sample ID

Matrix

Soil

TagNo

Collection Date

Date Received

Hold

HS14101239-01

21332-Soil-01 (

28-Oct-2014 08:00

29-Oct-2014 09:17

Date:

CASE NARRATIVE

05-Nov-14

Client:

Remediation Services, Inc.

Project:

Cross Manufacturing

Work Order:

HS14101239

Work Order Comments

• Sample received outside method holding time for pH. pH is an immediate test. Sample results are flagged with an "H" qualifier.

The temperature at the time of pH is reported. Please note that all pH results are already normalized to a temperature of 25 °C.

• The analyses for Reactive Cyanide, Reactive Sulfide and Flashpoint were subcontracted to ALS Environmental in Holland, MI.

GCMS Semivolatiles by Method SW1311/8270

Batch ID: 87509

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

GCMS Volatiles by Method SW1311/8260B

Batch ID: R244064

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

Metals by Method SW7470

Batch ID: 87521

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

Metals by Method SW1311/6020

Batch ID: 87502a

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

WetChemistry by Method SW9045B

Batch ID: R244116

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

Client:

Remediation Services, Inc.

Project:

Cross Manufacturing

Sample ID:

21332-Soil-01

Collection Date:

28-Oct-2014 08:00

ANALYTICAL REPORT

WorkOrder:HS14101239 Lab ID:HS14101239-01

Matrix:Soil

ANALYSES	RESULT QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TCLP VOLATILES	Method:SW1311/8260B	Leache:SW1311/30-Oct-2014	Prep:SW1311	/ 30-Oct-2014	Analyst: PC
1,1-Dichloroethene	ND	100	ug/L	20	31-Oct-2014 21:16
1,2-Dichloroethane	ND	100	ug/L	20	31-Oct-2014 21:16
1,4-Dichlorobenzene	ND	100	ug/L	20	31-Oct-2014 21:16
2-Butanone	ND	200	ug/L	20	31-Oct-2014 21:16
Benzene	ND	100	ug/L	20	31-Oct-2014 21:16
Carbon tetrachloride	ND	100	ug/L	20	31-Oct-2014 21:16
Chlorobenzene	ND	100	ug/L	20	31-Oct-2014 21:16
Chloroform	ND	100	ug/L	20	31-Oct-2014 21:16
Tetrachloroethene	. ND <i>ι</i>	100	ug/L	20	31-Oct-2014 21:16
Trichloroethene	ND	100	ug/L	20	31-Oct-2014 21:16
Vinyl chloride	ND	. 40	ug/L	20	31-Oct-2014 21:16
Surr: 1,2-Dichloroethane-d4	94.4	70-125	%REC	20	31-Oct-2014 21:16
Surr: 4-Bromofluorobenzene	104	72-12 5	%REC	20	31-Oct-2014 21:16
Surr: Dibromofluoromethane	98.1	71-125	%REC	20	31-Oct-2014 21:16
Surr: Toluene-d8	105	7 5 -125	%REC	20	31-Oct-2014 21:16
TCLP SEMIVOLATILES	Method:SW1311/8270	Leache: SW131/1/30-Oct-2014	Prep:SW3510	/31-Oct-2014	Analyst: GEY
2,4,5-Trichlorophenol	ND	5.0	ug/L	1	31-Oct-2014 19:10
2,4,6-Trichlorophenol	ND	5.0	ug/L	1	31-Oct-2014 19:10
2,4-Dinitrotoluene	ND	5.0	ug/L	1	31-Oct-2014 19:10
Cresols, Total	ŇĎ	15	ug/L	1	31-Oct-2014 19:10
Hexachlorobenzene	ND	5.0	ug/L	1	31-Oct-2014 19:10
Hexachlorobutadiene	ND "	5.0	ug/L	1	31-Oct-2014 19:10
Hexachloroethane	ND	5.0	ug/L	1	31-Oct-2014 19:10
Nitrobenzene	ND	5.0	ug/L	1	31-Oct-2014 19:10
Pentachlorophenol	ND	5.0	ug/L	1	31-Oct-2014 19:10
Pyridine	ND	5.0	ug/L	1	31-Oct-2014 19:10
Surr: 2,4,6-Tribromophenol	57,4	39-153	%REC	1	31-Oct-2014 19:10
Surr: 2-Fluorobiphenyl	61.9	40-147	%REC	1	31-Oct-2014 19:10
Surr: 2-Fluorophenol	60.9	21-110	%REC	1	31-Oct-2014 19:10
Surr: 4-Terphenyl-d14	77.6	39-141	%REC	1	31-Oct-2014 19:10
Surr: Nitrobenzene-d5	63.8	37-140	%REC	1	31-Oct-2014 19:10
Surr: Phenol-d6	65.0	11-110	%REC	1	31-Oct-2014 19:10

Lab ID:HS14101239-01

05-Nov-14

Client:

Remediation Services, Inc

Project:

Cross Manufacturing

Sample ID:

21332-Soil-01

Collection Date:

28-Oct-2014 08:00

ANALYTICAL REPORT

WorkOrder:HS14101239

Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TCLP METALS BY SW6020)A	ethod:SW1311/60	20 Leache:SW1311 / 30-Oct-2014		A	Analyst: RPM
Antimony	ND		0.0500	mg/L	1	03-Nov-2014 15:30
Arsenic	ND		0.0500	mg/L	il.	03-Nov-2014 15:30
Barium	0.728		0.200	mg/L	3	03-Nov-2014 15:30
Beryllium	ND		0.0200	mg/L	î.	03-Nov-2014 15:30
Cadmium	ND		0.0500	mg/L	ű.	03-Nov-2014 15:30
Chromium	0.400		0.0500	mg/L		03-Nov-2014 15:30
Lead	3.17	•	0.0500	mg/L	40	03-Nov-2014 15:30
Nickel	ND	· · · · · · · · · · · · · · · · · · ·	0.0500	mg/L	1	03-Nov-2014 15:30
Selenium	ND	(0.0500	mg/L	4 1.,	03-Nov-2014 15:30
Silver	ND	a contraction of a solution	0.0500	mg/L	1	03-Nov-2014 15:30
TCLP MERCURY BY SW74	70A	Method:SW7470	Leache: SW1311 / 30-Oct-2014	Prep SW7470	/31-Oct-2014	Ańalyst⊹ OFO
Mercury	ND	A THE SECTION AND A STREET OF SHIPSER	0.000200	mg/L		31-Oct-2014 16:44
PH SOIL BY SW9045D		Method:SW9045E		ana a Toola	(Carlotter	Änalyst: JHD
pH	9.75	H	0.100	pH Units	1	03-Nov-2014 14:30
Temp Deg C @pH	22.2	Η	in the design and the second s	°C	1	03-Nov-2014 14:30
REACTIVE CYANIDE	gara, gara yang	Method:SW7.3.3.2		er Terk	A SAMON	Analyst: JML
Reactive Cyanide	ND	inoriod:041.5.3.5	100 - 100	mg/Kg	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	04-Nov-2014 16:00
والمعرضين والتوايرة مدراه أنعا المعموم ومعلى	and the second of the second of the second of	Mark a d. 6107 9. 41		mg//g		لوروستادوم ازا المتعاملة الأطارية العومونودي
REACTIVE SULFIDE	والمسرود ويها أأوأ أأوا أأوا أواف أوارا أوارا	Method:SW7.3.4.2		المعتبين وأنبار	and the same of the same	Analyst: JML
Reactive Sulfide	ND		100	mg/Kg	1 1 14日と709年を9数	04-Nov-2014 16:00
SUBCONTRACT ANALYSI FLASHPOINT	> •	Method:NA		7.7x 1		Analyst. JML
Subcontract Analysis	See Attached	er en en en en en en en en en en en en en	n na ali ni ne ne melani di amesa e ne na melani anteriori della e di amesa e dalla e di amesa e della e di am	a filter of a	1	05-Nov-2014 09:03

05-Nov-14

Remediation Services, Inc.

Client: Project: WorkOrder:	Cross Manufactu HS14101239	•			DATES R	EPORT
Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 87502	2a Test Name	: TCLP METALS BY SW	6020A	Matrix:	Soll	To the second
HS14101239-01	21332-Soil-01	28 Oct 2014 08:00	30 Oct 2014 16:00	31 Oct 2014 12:34	03 Nov 2014 15:30	10
Batch ID 87509	Test Name	: TCLP SEMIVOLATILES		Matrix:	Soil	A. Alle
HS14101239-01	21332-Soil-01	28 Oct 2014 08:00	30 Oct 2014 17:4		31 Oct 2014 19:10	1,
Batch ID 87521	Test Name	: TCLP MERCURY BY S	W7470A	Matrix:	Soil	
HS14101239-01		28 Oct 2014 08:00		31 Oct 2014 11:05	31 Oct 2014 16:44	1;
Batch ID R244	064 Test Name	TCLP VOLATILES	A to the part of t	Mátrix:	Soil	
HS14101239-01	21332-Soil-01		30 Oct 2014 19:2		31 Oct 2014 21:16	20
Batch ID R244	116 Test Name	: PH SOIL BY SW9045D		Matrix:	Soil	
HS14101239-01	21332-Soil-01	28 Oct 2014 08:00	And the second of the second o	to the state of the second state of the stat	03 Nov 2014 14:30	end to the second secon
Batch ID R244	229 Test Name	:. REACTIVE SULFIDE	manage same grown	Matrix:	Soil	
HS14101239-01	21332-Soil-01	28 Oct 2014 08:00			05 Nov 2014 09:03	1
HS14101239-01	21332-Soil-01	28 Oct 2014 08:00			. 05 Nov 2014 09:03	1
HS14101239-01	21332-Soil-01	28 Oct 2014 08:00			05 Nov 2014 09:03	4
HS14101239-01	21332-Soil-01	28 Oct 2014 08:00			04 Nov 2014 16:00	a i
HS14101239-01	21332-Soil-01	28 Oct 2014 08:00			04 Nov 2014 16:00	à
HS14101239-01	21332-Soil-01	28 Oct 2014 08:00			04 Nov 2014 16:00	11
HS14101239-01	21332-Soil-01	28 Oct 2014 08:00			04 Nov 2014 16:00	1
HS14101239-01	21332-Soil-01	28 Oct 2014 08:00			04 Nov 2014 16:00	1
HS14101239-01	21332-Soil-01	28 Oct 2014 08:00			04 Nov 2014 16:00	্ৰ

05-Nov-14

Client:

Silver

Remediation Services, Inc.

WorkOrder:

HS14101239

QC BATCH REPORT

Project:	Cro	ss Manufacturing	•	1					
Batch ID: 87502a			strument:	ICPMS05	State of the state	Metho	d: SW131	1/6020	
MBLK	Sample ID:	MBLKT1-87502		Units:	mg/L	Ana	llysis Date:	03-Nov-2014	114:34
Client ID:		Rui	n ID: ICPMS	05_244100	SeqNo: 3	075276	PrepDate:	31-Oct-2014	DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Antimony		, ND	0.0500				,		
Arsenic		ND	0.0500	•	*				····
Barium		ND	0.200						
Beryllium	*****************	ND	0.0200	<u> </u>	**************************************	The second second	36, 16, 1, 12, 12, 12, 12, 12, 12, 12, 12, 12,		<u> </u>
Cadmium		ND	0.0500						
Chromium		ND	0.0500	-,				*	
Lead		ND	0.0500						4
Nickel	*****	ND	0.0500	and the fact that a second		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	***************************************		Super State
Selenium		ND	0.0500						
Silver		ND	0.0500						
MBLK	Sample ID:	MBLK-87502		Units:	mg/L	Ana	lysis Date:	03-Nov-2014	14:37
Client ID:		Rur	ID: ICPMS	05_244100	SeqNo: 3	075277	PrepDate:	31-Oct-2014	DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Antimony		ND 1	0.00500		•				
Arsenic		ND	0.00500	· · · · · · · · · · · · · · · · · · ·		***************************************	•		re received and a second and a second and a second and a second a
Barium		ND	0.0200						
Beryllium		ND	0.00200		· · · · · · · · · · · · · · · · · · ·	<u> </u>	······································	······································	·
Cadmium		ND	0.00500						
Chromium		ND	0.00500	*****************************		and the second of the second of	and the second section of	<u> </u>	
Lead		ND	0.00500						·
Nickel		ND	0.00500			The state of the s)	; , ·	
Selenium		ND	0.00500						

ND

0.00500

Date: / 05-Nov-14

Client:

Remediation Services, Inc.

WorkOrder:

HS14101239

Project:

Cross Manufacturing

Batch ID:	87502a		Instrument:	ICPMS05			Metho	d: SW131	1/6020	
LCS	Sample ID:	MLCS-87502		Units:	mg/L		Ana	lysis Date:	03-Nov-2014	14:40
Client ID:		-	Run ID: ICPN	IS05_244100	Seq	No: 3	075278	PrepDate:	31-Oct-2014	DF: 1
Analyte		Result	, PQL	SPK Val	SPK Vai		%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Antimony		0.04977	0.00500	0.05		0	99.5	80 - 120		. , .
Arsenic	······································	0.04833	0.00500	0.05	3,	0	96.7	80 - 120		
Barium		0.04779	0.0200	0.05		0	95.6	80 - 120		
Beryllium	`	0.04972	0.00200	0.05		0	99.4	80 - 120		
Cadmium		0.04931	0.00500	0.05		0	98.6	80 - 120		
Chromium		0.04863	0.00500	0.05		0	97.3	80 - 120	· · · · · · · · · · · · · · · · · · ·	
Lead		0.04878	0.00500	0.05	•	0	97.6	80 - 120		
Nickel		0.05053	0.00500	0.05		0	101	80 - 120		tali, ga ga ga a a a a a a a a a a a a a a a
Selenium		0.04697	0.00500	0.05		0	93.9	80 - 120		
Silver		0.05027	0.00500	0.05		0	101	80 - 120		
MS	Sample ID:	HS14101234-011	MS	Units:	mg/L		Ana	lysis Date:	03-Nov-2014	14:58
Client ID:			Run ID: ICPN	IS05_244100		1	075285	PrepDate:	31-Oct-2014	DF: 1
Analyte		Result	PQL	SPK Val	SPK Val		%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Antimony		0.4885	0.0500	0.5		0	97.7	80 - 120		
Arsenic	······································	0.4818	0.0500	0.5		0	96.4	80 - 120		
Barium		0.5984	0.200	0.5	0.1	207	95.5	80 - 120		
Beryllium	1.0.5	0.5281	0.0200	0.5		0	106	80 - 120	<u> </u>	
Cadmium		0.4902	0.0500	0.5		0	98.0	80 - 120		
Chromium		0.4664	0.0500	0.5		0	93.3	80 - 120		
Lead		0.4906	0.0500	0.5		0	98.4	80 - 120		
Nickel		0.507	0.0500	0.5	0.0	119	99.0	80 - 120		· · · · · · · · · · · · · · · · · · ·
Selenium		0.4957	0.0500	0.5		0	99.1	80 - 120		
Silver		0.4829	0.0500	0.5		0	96.6	80 - 120		

05-Nov-14

Client:

Remediation Services, Inc.

WorkOrder:

HS14101239

Project:

Cross Manufacturing

Batch ID: 87	502a	, K.	Instrument:	ICPMS05		1000	d: SW131	1/6020	
MSD	Sample ID:	HS14101234-01M	ISD	Units!	mg/L	Ana	ilysis Date:	03-Nov-2014	•15:01
Client ID:		, • F	Run ID; ICPM:	S05_244100	SeqNo: 3	075286	PrepDate:	31-Oct-2014	DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qua
Antimony		0.4984	0.0500	0.5	0	99.7	80 - 120	0.4885	2 20
Arsenic	· · · · · · · · · · · · · · · · · · ·	0.4942	0.0500	0.5	0	98.8	80 - 120	0.4818	2.53 20
Barium	***	0.5986	0.200	0.5	0.1207	95.6	80 - 120	0.5984	0.0251 20
Beryllium		0.5051	0.0200	0.5	0	101	80 - 120	0.5281	4.45 20
Cadmium		0.4866	0.0500	0,5	0	97.3	80 - 120	0.4902	0.735 20
Chromium	,	0.4929	0.0500	. 0.5	0	98.6	80 - 120	0.4664	5.53 20
Lead		0.494	0.0500	0.5	0	98.8	80 - 120	0.4906	0.687 20
Nickel		0.4977	0.0500	0,5	0.0119	97.2	80 - 120	0.507	1.85 20
Selenium		0.4988	0.0500	0.5	0	99.8	80 - 120	0.4957	0.619 20
Silver.		0.471	0.0500	0.5	0	94.2	80 - 120	0.4829	2.51 20
DUP	Sample ID:	HS14101234-01D	HS14101234-01DUP		Units: mg/L		Analysis Date: 03-Nov-2014		
Client ID:	, ,	F	Nun ID: ICPM		SeqNo: 3			31-Oct-2014	DF: 1
Client ID; Analyte		Result	Run ID: ICPM		_				
				S05_244100	SeqNo: 3	%REC	PrepDate: Control	31-Oct-2014 RPD Ref	DF: 1 RPD
Analyte		Result	PQL	S05_244100	SeqNo: 3	%REC	PrepDate: Control	31-Oct-2014 RPD Ref Value	DF: 1 RPD %RPD Limit Qua
Analyte Antimony		Result	PQL .0.0500	S05_244100	SeqNo: 3	%REC	PrepDate: Control	31-Oct-2014 RPD Ref Value 0.00142	DF: 1 RPD %RPD Limit Qua
Analyte Antimony Arsenic		Result ND ND	0.0500 0.0500	S05_244100	SeqNo: 3	%REC	PrepDate: Control	31-Oct-2014 RPD Ref Value 0.00142 0.0041	DF: 1 RPD %RPD Limit Qua 0 25 0 25
Analyte Antimony Arsenic Barium Beryllium		Result ND ND ND	0.0500 0.0500 0.200	S05_244100	SeqNo: 3	%REC	PrepDate: Control	31-Oct-2014 RPD Ref Value 0.00142 0.0041 0.1207	DF: 1 RPD %RPD Limit Qua 0 25 0 25 0 25
Analyte Antimony Arsenic Barium		Result ND ND ND ND	0.0500 0.0500 0.200 0.0200	S05_244100	SeqNo: 3	%REC	PrepDate: Control	31-Oct-2014 RPD Ref Value 0.00142 0.0041 0.1207 -0.00005	DF: 1 RPD WRPD Limit Qua 0 25 0 25 0 25 0 25
Analyte Antimony Arsenic Barium Beryllium Cadmium Chromium		Result ND ND ND ND ND ND	0.0500 0.0500 0.200 0.0200 0.0500	S05_244100	SeqNo: 3	%REC	PrepDate: Control	31-Oct-2014 RPD Ref Value 0.00142 0.0041 0.1207 -0.00005 0.00023	DF: 1 RPD RPD Limit Qua 0 25 0 25 0 25 0 25 0 25 0 25
Analyte Antimony Arsenic Barium Beryllium Cadmium		Result ND ND ND ND ND ND ND	0.0500 0.0500 0.200 0.0200 0.0500	S05_244100	SeqNo: 3	%REC	PrepDate: Control	31-Oct-2014 RPD Ref Value 0.00142 0.0041 0.1207 -0.00005 0.00023 -0.00013	DF: 1 RPD WRPD Limit Qua 0 25 0 25 0 25 0 25 0 25 0 25 0 25
Analyte Antimony Arsenic Barium Beryllium Cadmium Chromium		Result ND ND ND ND ND ND ND ND ND N	PQL 0.0500 0.0500 0.200 0.0200 0.0500 0.0500	S05_244100	SeqNo: 3	%REC	PrepDate: Control	31-Oct-2014 RPD Ref Value 0.00142 0.0041 0.1207 -0.00005 0.00023 -0.00013 0.00302	DF: 1 RPD WRPD Limit Qua 0 25 0 25 0 25 0 25 0 25 0 25 0 25 0 2

Client:

Remediation Services, Inc.

WorkOrder:

HS14101239

Project:

Cross Manufacturing

PDS i	Sample ID:	HS14101234-01E	S	Units	mg/L	ĺ	Ana	alysis Date:	03-Nov-2014	15:03	
Client ID:		F	Run ID: ICPN	IS05_244100	Seq	No: 3	075287	PrepDate:	31-Oct-2014	DF	:1
Analyte		Result	PQL	SPK Val	SPK Val		%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qua
Antimony		1,011	0.0500	1		0	101	75 - 125		-,	
Arsenic		1.015	0.0500	1		0	101	75 - 125			
Barium		1.121	0.200	.1	0.1	207	100	75 - 125			
Beryllium		1.006	0.0200	1		0	101	75 - 125	4		
Cadmium		1.003	0.0500	1		0	100	75 - 125			
Chromium	1222	1.001	0.0500	1		0	100	75 - 125	· · · · · · · · · · · · · · · · · · ·		
Lead		1.021	0.0500	1.		0	102	75 - 125			
Nickel		1.027	0.0500	, 1	0.0	119	101	75 - 125			
Selenium		1.036	0.0500	Ť		0	104	75 - 125	4 .	1	
								<u> </u>			
Silver		0.9445	0.0500	1.		0	94.5	75 - 125			
The second secon	Sample ID:	1		, v 18 v 19	ma/l	0	y y No. No.		03-Nov-2014	14.55	
SD	Sample ID:	HS14101234-01 [DIL SX	Units	: mg/L	1>	Ana	alysis Date:	03-Nov-2014		5
SD Client ID:	Sample ID:	HS14101234-01 [Units	-	No: 3	Ana	alysis Date:	03-Nov-2014 31-Oct-2014 RPD Ref Value	DF	RPD
SD Client ID: Analyte	Sample ID:	HS14101234-01 [DIL SX Run ID: ICPN	Units:	Seq SPK	No: 3	Ana 075284	alysis Date: PrepDate: Control	31-Oct-2014 RPD Ref	DF %RPD	RPD
SD Client ID: Analyte Antimony	Sample ID:	HS14101234-01 [F Result	DIL SX Run ID: ICPN PQL	Units:	Seq SPK	No: 3	Ana 075284	alysis Date: PrepDate: Control	31-Oct-2014 RPD Ref Value	DF %RPD	RPD Limit Qua
SD Client ID: Analyte Antimony Arsenic	Sample ID:	HS14101234-01 [F Result	DIL SX Run ID: ICPN PQL 0.250	Units:	Seq SPK	No: 3	Ana 075284	alysis Date: PrepDate: Control	31-Oct-2014 RPD Ref Value 0.00142	DF %RPD	RPD Limit Qua
SD Client ID: Analyte Antimony Arsenic Barium	Sample ID:	HS14101234-01 [F Result ND	PQL 0.250	Units:	Seq SPK	No: 3	Ana 075284	alysis Date: PrepDate: Control	31-Oct-2014 RPD Ref Value 0.00142 0.0041	DF %RPD	RPD Limit Qua 0 10 0 10
SD Client ID: Analyte Antimony Arsenic Barium Beryllium	Sample ID:	HS14101234-01 [FResult ND ND 0.1208	PQL 0.250 0.000 1.00	Units:	Seq SPK	No: 3	Ana 075284	alysis Date: PrepDate: Control	31-Oct-2014 RPD Ref Value 0.00142 0.0041 0.1207	DF %RPD	RPD Limit Qua 0 10 0 10 0 10
SD Client ID: Analyte Antimony Arsenic Barium Beryllium Cadmium	Sample ID:	Result ND ND 0.1208	PQL 0.250 0.250 1.00	Units:	Seq SPK	No: 3	Ana 075284	alysis Date: PrepDate: Control	31-Oct-2014 RPD Ref Value 0.00142 0.0041 0.1207 -0.00005	DF %RPD	RPD Limit Qua 0 10 0 10 0 10
SD Client ID: Analyte Antimony Arsenic Barium Beryllium Cadmium	Sample ID:	Result ND ND 0.1208 ND ND	PQL 0.250 0.100 0.250 0.250	Units:	Seq SPK	No: 3	Ana 075284	alysis Date: PrepDate: Control	31-Oct-2014 RPD Ref Value 0.00142 0.0041 0.1207 -0.00005 0.00023	DF %RPD	RPD Limit Qua 0 10 0 10 0 10 0 10
SD Client ID: Analyte Antimony Arsenic Barium Beryllium Cadmium Chromium	Sample ID:	HS14101234-01 [F	PQL 0.250 0.100 0.250 0.250 0.250 0.250	Units:	Seq SPK	No: 3	Ana 075284	alysis Date: PrepDate: Control	31-Oct-2014 RPD Ref Value 0.00142 0.0041 0.1207 -0.00005 0.00023	DF %RPD	RPD Limit Qua 0 10 0 10 0 10 0 10 0 10 0 10
Silver SD Client ID: Analyte Antimony Arsenic Barium Beryllium Cadmium Chromium Lead Nickel Selenium	Sample ID:	Result ND ND 0.1208 ND ND ND ND ND ND ND ND ND N	PQL 0.250 0.250 1.00 0.250 0.250 0.250 0.250 0.250 0.250	Units:	Seq SPK	No: 3	Ana 075284	alysis Date: PrepDate: Control	31-Oct-2014 RPD Ref Value 0.00142 0.0041 0.1207 -0.00005 0.00023 -0.00013 0.00302	%RPD	RPD Limit Qua 0 10 0 10 0 10 0 10 0 10 0 10

Client:

Remediation Services, Inc

WorkOrder:

HS14101239

Project: Cross Manufacturing

QC BATCH REPORT

2.1	2		T. 1983	*
Ba	tch	IĎ:	87521	

Instrument:

HG03

Method: SW7470

	MBLK	Sample ID:	GBLKW4-103114		Units:	mg/L	Ana	ılysis Date:	31-Oct-2014	16:41
	Client ID:	·	Run ID:	HG03	_243930	SeqNo: 3		•	31-Oct-2014	
The same of the last	Analyte	Ċ	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	್ರ RPD Ref Value	RPD %RPD Limit Qual

Mercury

ND 0.000200

MBLK	Sample ID:	GBLKT1-103014		Units:	mg/L	Ana	lysis Date:	31-Oct-2014	16:51
Client ID:		Run ID:	HG03	_243930	SeqNo: 30	72885	PrepDate:	31-Oct-2014	DF: 1
Analyte	. den gr. ne	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit		RPD %RPD Limit Qual

Mercury ND 0.000200

LCS	Sample ID:	GLCSW4-103114		Units:	mg/L	Ana	alysis Date:	31-Oct-2014	16:42
Client ID:		Run	ID: HG0 3	3_243930	SeqNo: 3	3072880	PrepDate:	31-Oct-2014	DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	, Control Limit	RPD Ref Value	RPD %RPD Limit Qual
									

Welculy 0.00317 0.000200 0.003 0 103 00-120	Mercury	0.00517	0.000200	0.005	0	103	80 - 120
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MS	Sample ID:	HS14101239-01MS		Units:	mg/L	Ana	lysis Date:	31-Oct-2014	16:48
Client ID:	21332-Soil-01	Run ID:	HG03	_243930	SeqNo: 3	3072883	PrepDate:	31-Oct-2014	DF: 1
Analyte	·	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit		. RPD %RPD Limit Qual

Mercury 0.0051 0.000200	0.005	-0.000007	102	75 - 125	
-------------------------	-------	-----------	-----	----------	--

					mg/L		iysis Date. 3	31-Oct-2014	10:49
Client ID: 21332-Sc	oil-01	Run ID:	HG03_2	243930	SeqNo: 3	072884	PrepDate: 3	1-Oct-2014	DF: 1
Analyte	Re	sult	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual

Mercury	0.00512	0.000200	0.005	-0.000007	103	75 - 125	0.0051	0.391	20
									

DUP .	Sample ID:	HS14101239-01	DUP	Units:	mg/L	Ana	lysis Date:	31-Oct-2014	16:46
Client ID:	21332-Soil-01		Run (D; HC	G03_243930	SeqNo: 3	072882	PrepDate:	31-Oct-2014	DF: 1
Analyte		Result	PQ	L SPK Val	SPK Ref Value	%REC	Control Limit		RPD %RPD Limit Qual

Mercury	ND 0.000200	-0.000007	0 20

The following samples were analyzed in this batch: [HS14101239-01

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

Date:

05-Nov-14

Client:

Remediation Services, Inc

WorkOrder:

HS14101239

Project:

Cross Manufacturing

Batch ID: 87509			Instrum	ent:	SV-5			Metho	d: SW131	1/8270	or the second of
MBLK	Sample ID:	MBLK-87509			Units:	ug/L		Ana	ılysis Date:	31-Oct-2014	16:34
Client ID:			Run ID:	SV-5	_244048	Seq	No: 3	107431 9	PrepDate:	31-Oct-2014	DF: 1
Analyte		Result	í	PQL	SPK Val	SPK Val		%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
2,4,5-Trichloropheno)l	ND		5.0							Control of the contro
2,4,6-Trichloropheno		ND		5.0		ng Ang		to to	······································	A ^(t)	See the Control of th
2,4-Dinitrotoluene		ND		5.0						,	,
Cresols, Total		ND		15	······································						
Hexachlorobenzene		ND	•	5.0	`						
Hexachlorobutadiene	9	ND		5.0							
Hexachloroethane		ND		5.0							*
Nitrobenzene		ND.		5.0		/					<u></u>
Pentachlorophenol		ND		5.0							
Pyridine	y to y decign	ND		5.0							
Surr: 2,4,6-Tribromo	phenol	65.99		5 .0	100		0	66.0	39 - 153		
Surr: 2-Fluorobipher	yl	65.81	71,710	5.0	100		0	65.8	40 - 147	. W. M.	
Surr: 2-Fluoropheno	1	61.21		5.0	100		0	61.2	21 - 110		
Surr: 4-Terphenyl-d1	14	72.26	**********	5.0	100		0	72.3	39 - 141		
Surr: Nitrobenzene-d	15	62.44		5.0	100		0	62.4	37 - 140		
Surr: Phenol-d6		64.05		5.0	100		O,	64.0	11 - 110		

05-Nov-14

Client:

Remediation Services, Inc.

WorkOrder:

HS14101239

Project:

Cross Manufacturing

LCS Sample ID:	LCS-87509	`	Units:	ug/L	Ana	alysis Date: 3	31-Oct-2014	17:41
Client ID:		Run ID: SV-5_	244048	SeqNo: 3	074320	PrepDate: 3	31-Oct-2014	DF: 1
Analyte .	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	, RPD %RPD Limit Qua
2,4,5-Trichlorophenol	70.68	5.0	100	0	70.7	55 - 120		
2,4,6-Trichlorophenol	71.88	5,0	100	<u>O</u>	71.9	55 - 120	·····	
2,4-Dinitrotoluene	37.28	5.0	50	0	74.6	55 - 125		
Cresols, Total	192.3	15	250	0	76.9	40 - 120	And the second	<u> </u>
Hexachlorobenzene	39.31	5.0	50	Ô	78.6	55 - 120		
Hexachlorobutadiene	37.54	5:0	50	0	75.1	55 - 120		
Hexachloroethane	34.5	5,0	50	0	69.0	55 - 120		
Nitrobenzene	32.55	5:0	50	0	65.1	55 - 120		
Pentachlorophenol	76.53	5.0	100	0	76.5	50 - 135		
Pyridine	25.11	5.0	50	0	50.2	30 - 120		
Surr: 2,4,6-Tribromophenol	76.19	5.0	100	0	76.2	39 - 153		
Surr: 2-Fluorobiphenyl	70.02	5.0	100	0	70.0	40 - 147	······································	
Surr: 2-Fluorophenol	73.61	5.0	100	0	73.6	20 - 110		
Suit: 4-Terphenyl-d14	75.47	5.0	100	0	75.5	39 - 141		•
Surr: Nitrobenzene-d5	64.79	5.0	100	0	64.8	37 - 140		
Surr: Phenol-d6	71.85	5.0	100	. 0	71.9	11 - 110	<u> </u>	

05-Nov-14

Client:

Remediation Services, Inc.

WorkOrder:

HS14101239

Project:

Cross Manufacturing

Batch ID: 87509	lns	trument:	SV-5	#*; .		Metho	d: SW1311	/8270	
LCSD Sample ID:	LCSD-87509		Units	ug/L		Ana	alysis Date:	31-Oct-2014	18:03
Client ID:	Run	ID: SV-5_	244048	Sec	No: 3	074321	PrepDate:	31-Oct-2014	DF: 1
Analyte	Result	PQL	SPK Val	SPK Va	Ref lue	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qu
2,4,5-Trichlorophenol	71.23	5.0	100		0	71.2	55 - 120	70.68	0.771 25
2,4,6-Trichlorophenol	70.42	5.0	100		0	70.4	55 - 120	71.88	2.06 25
2,4-Dinitrotoluene	37.11	5,0	50		0	74.2	55 - 125	37.28	0.445 25
Cresols, Total	186.1	15	250		0	74.5	40 - 120	192.3	3.25 25
Hexachlorobenzene	38.79	5.0	50	,	0	77.6	55 - 120	39.31	1.33 25
Hexachlorobutadiene	35.51	5.0	50		0	71.0	55 - 120	37.54	5.57 25
Hexachloroethane	33.33	5.0	50		0	66.7	55 - 120	34.5	3.45 25
Nitrobenzene	32.93	5.0	50		0	65.9	55 - 120	32.55	1.15 25
Pentachlorophenol	75.8	5.0	100		0	75.8	50 - 135	76.53	0.956 25
Pyridine	25.27	5.0	50		0	50.5	30 - 120	25.11	0.627 25
Surr: 2,4,6-Tribromophenol	73.66	5.0	100		0	73.7	39 - 153	76.19	3.38 25
Surr: 2-Fluorobiphenyl	68.72	5.0	100	, , , , , , , , , , , , , , , , , , , 	0	68.7	40 - 147	70.02	1.87 25
Surr: 2-Fluorophenol	72.96	5,0	100		0	73.0	21 - 110	73.61	0.881 25
Surr: 4-Terphenyl-d14	73.84	5.0	100		0	73.8	39 - 141	75.47	2.19 25
Surr: Nitrobenzene-d5	62.48	5 <u>.</u> 0	100		0	62.5	37 - 140	64.79	3.64 25
Surr: Phenol-d6	70,39	5.0	100		0	70.4	11 - 110	71.85	2.06 25

05-Nov-14

Client:

Remediation Services, Inc.

WorkOrder:

HS14101239

Project:

Cross Manufacturing

QC BATCH REPORT

MS Sa	mple ID:	HS14101152-01MS		Units:	ug/L	Ana	alysis Date:	31-Oct-2014	18:48
Client ID:		Run ID:	SV-5_	244048	SeqNo: 3	074323	PrepDate:	31-Oct-2014	DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	, RPD Ref Value	RPD %RPD Limit Qua
2,4,5-Trichlorophenol		76.22	5.0	100	0	76.2	55 - 120		
2,4,6-Trichlorophenol		76.4	5.0	100	0	76.4	55 - 120		***
2,4-Dinitrotoluene		37.92	5.0	50	0	75.8	55 - 125		
Cresols, Total		192	15	250	0	76.8	40 - 120		
Hexachlorobenzene		37.81	5.0	50	0	75.6	55 - 120		•
Hexachlorobutadiene	***************************************	34.62	5.0	50	0	69.2	55 - 120		······································
Hexachloroethane		34.78	5.0	50	0.	69.6	55 - 120	•	
Nitrobenzene		34.37	5.0	50	0	68.7	55 - 120		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Pentachlorophenol		79.97	5.0	100	0	80.0	50 - 135		
Pyridine		26.22	5.0	50	0	52.4	30 - 120		
Surt: 2,4,6-Tribromophe	enol	73.17	5.0	100	0	73.2	39 - 153		•
Surr: 2-Fluorobiphenyl	and the ball of	73.77	5.0	100	. 0	73.8	40 - 147	- 1,543 *	
Surr: 2-Fluorophenol		59.53	5.0	100	. 0	59.5	21 - 110		
Surr: 4-Terphenyl-d14		69.6	5.0	100	0	69.6	39 - 141	-	
Surr: Nitrobenzene-d5		66.59	5.0	100	0	66.6	37 - 140		
Surr: Phenol-d6	 	65.41	5.0	100	0	65.4	11 - 110	A	***

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

Date:

05-Nov-14

Client:

Remediation Services, Inc

WorkOrder:

HS14101239

Project:

Cross Manufacturing

MBLK Sample ID: V	BLKW-141031		Units:	ug/L		Ana	alysis Date:	31-Oct-2014	17:34	
Client ID:	Run	ID: VOA6	_244064	Seq	No: 30	74615	PrepDate:		DF	:1
Analyte	Result	PQL	SPK Val	SPK Valu		%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qua
1,1-Dichloroethene	ND	5.0				* . · · · ·		grade in the same of		Grade .
1,2-Dichloroethane	ND	5:0							• • • •	
1,4-Dichlorobenzene	N D	5.0								
2-Butanone	ND	10	·····				·		· · · · · · · · · · · · · · · · · · ·	
Benzene	ND	5.0								
Carbon tetrachloride	ND	5.0	******							
Chlorobenzene	ND	5.0								
Chloroform	ND	5.0	·····	İ					<u> </u>	
Tetrachloroethene	ND	5.0	,							
Trichloroethene	ND -	5.0	1311-1	1			, , , , , , , , , , , , , , , , , , , 			
Vinyl chloride	ND	2.0			ļ _					
Surr: 1,2-Dichloroethane-d4	49.44	5.0	50		0	98.9	70 - 125			** ** ** *
Surr: 4-Bromofluorobenzene	49.07	5,0	50		0	98.1	72.4 - 125			
Surr: Dibromofluoromethane	49.52	5.0	50	* 1 * 1 * 2 *	.0	99.0	71.2 - 125			* - *
Surr: Toluene-d8	51.23	5.0	50		0	102	75 - 125			

05-Nov-14

Client:

Remediation Services, Inc

WorkOrder:

HS14101239

Project:

Cross Manufacturing

MBLK Sam	ple ID: MBLKV1-1	41030		. Units:	ug/L	Ana	alysis Date:	31-Oct-2014	19:39
Client ID:		Run II	D: VOA6	_244064	SeqNo: 3	3074619	PrepDate:		DF: 20
Analyte	Re	esult	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qua
1,1-Dichloroethene	en en en en en en en en en en en en en e	ND	100						
1,2-Dichloroethane		ND	100		a i 1,7 (1,7) 7 (1 1 1 1 1 1		 	7	
1,4-Dichlorobenzene		ND	100						_
2-Butanone		ND	200		···				···
Benzene		ND	100						
Carbon tetrachloride		ND	100		COLUMN TO SERVICE SERVICES				
Chlorobenzene		ND	100				•		
Chloroform		ND	100		\\	15. 550	**********************	 	1995 1
Tetrachloroethene		ND	100						
Trichloroethene		ND	100		- Marine Committee of the Committee of t			***************************************	
Vinyl chloride		ND	40						
Surr: 1,2-Dichloroethane-	d4 9	963.6	100	1000	0	96.4	70 - 125		
Surr: 4-Bromofluorobenz	ene S	963,5	100	1000	0	96.4	72.4 - 125		
Surr: Dibromofluorometh	ane S	961.8	100	1000	. 0	96.2	71.2 - 125	· · · · · · · · · · · · · · · · · · ·	
Surr: Toluene-d8		1023	100	1000	0	102	75 - 125		

05-Nov-14

Client:

Remediation Services, Inc.

WorkOrder:

HS14101239

Project:

Cross Manufacturing

Batch ID: R244064	Instru	ment:	VOA6			Metho	d: SW131	1/8260B	
LCS Sample ID:	VLCSW-141031		Units:	ug/L	,	. Ana	alysis Date:	31-Oct-2014 16:22	
Client ID:	, Run ID:	VOA	_244064	Seq	No: 3	074614	PrepDate:	DF: 1	
Analyte	Result	PQL.	SPK Val	SPK Val		%REC	Control Limit	RPD Ref RPD Value %RPD Limit	Qual
1,1-Dichloroethene	55.6	5.0	50		0	111	73 - 124		************
1,2-Dichloroethane	50.48	5.0	50	· · · · · · · · · · · · · · · · · · ·	0	101	76 - 120		
1,4-Dichlorobenzene	53.3	5.0	50		0	107	70 - 130		
2-Butanone	110.7	10	100		0	111	70 - 130		
Benzene	50.13	5.0	50		0	100	70 - 128		
Carbon tetrachloride	51.07	5.0	50		0	102	70 - 130		
Chlorobenzene	50.4	5.0	.50		0	101	72 - 127		
Chloroform	55.66	5.0	50		0	111	70 - 130		eray or
Tetrachloroethene	49.99	5.0	50		Õ	100.0	70 - 130		
Trichloroethene	49.64	5.0	50		0	99.3	72 - 129		. च्यु
Vinyl chloride	52.52	2.0	50		0	105	70 - 130		
Surr: 1,2-Dichloroethane-d4	50.87	5.0	50	***************************************	0	102	70 - 125	1	
Surr. 4-Bromofluorobenzene	50.81	5.0	50 ·		0	102	72 - 125		
Surr: Dibromofluoromethane	50.64	5.0	50		0	101	71 - 125	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	*********
Surr: Toluene-d8	49.59	5.0	50		0	99.2	75 - 125		

- Date:

05-Nov-14

Client:

Remediation Services, Inc.

WorkOrder:

HS14101239

Project:

Cross Manufacturing

MS Sample ID	HS14101248-04MS		Units:	ug/L	Ana	alysis Date:	31-Oct-2014 1	8:27
Client ID:	Run I	D: VOA6	_244064	SeqNo: 3	074617	PrépDate:		DF: 5
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qua
1,1-Dichloroethene	257.4	25	250	0	103	73 - 124		
1,2-Dichloroethane	259.4	25	250	0	104	76 - 120		i garanta de la constanta de
1,4-Dichlorobenzene	265.3	25	250	0	106	70 - 130		
2-Bútanone	471.,	50	500	0	94.2	70 - 130		
Benzene	252.9	25	250	Õ	101	70 - 128		
Carbon tetrachloride	252.2	25	250	0	. 101	70 - 130		The second secon
Chlorobenzene	252.9	25	250	0	101	72 - 127	no historia A	Ì
Chloroform	272.4 \	25 -	250	0	109	70 - 130	A Section of the Control of the Cont	
Tetrachloroethene	518.3	25	250	271.5	98.7	70 - 130		•
Trichloroethene	286.9	25	250	41.17	98.3	72 - 129		
Vinyl chloride	202.3	- 10	250	. 0	80.9	70 - 130	•	
Surr: 1,2-Dichloroethane-d4 \	241.7	25	250	0	96.7	70 - 125	ar de la dande de la se algun monte da missa	-
Surr: 4-Bromofluorobenzene	256.1	25	250	0	102	72 - 125		
Surr: Dibromofluoromethane	246	25	250	ó	98.4	71 - 125		<u> </u>
Surr: Toluene-d8	249.7	25	250	0	99.9	75 - 125		

05-Nov-14

Client:

Remediation Services, Inc.

WorkOrder:

HS14101239 .

Project:

Cross Manufacturing

QC BATCH REPORT

MSD · Sa	mple ID:	HS14101248-04MSD		Units:	ug/L	1	Ana	alysis Date:	31-Oct-2014	18:51	
Client ID:		Run ID:	VOA6	_244064	Sec	No: 3	074618	PrepDate:		DF: 8	5
Analyte		Result	PQL	SPK Val	SPK Val	1	%REC	Control Limit	RPD Ref Value	R %RPD Li	PD imit Qua
1,1-Dichloroethene		265.4	25	250		0	106	73 - 124	257.4	3.07	20
1,2-Dichloroethane		263	25	250		D	105	76 - 120	259.4	1.39	20
1,4-Dichlorobenzene	•	278.6	25	250	′	0	111	70 - 130	265.3	. 4.87	20
2-Butanone	· ·············	530.6	50	500		0	106	70 - 130	471	11.9	20
Benzene		259.5	25	250		0	104	70 - 128	252.9	2.56	20
Carbon tetrachloride		264	25	250		0	106	70 - 130	252.2	4.56	20
Chlorobenzene		259.9	25	250		0	104	72 - 127	252.9	2.74	20 -
Chloroform		279	25	250		0	112	70 - 130	272.4	2.38	20
Tetrachloroethene		518.4	25	250	2	71.5	98.8	70 - 130	518.3	0.0307	20
Trichloroethene		295.4	25	250	4	1.17	102	72 - 129	286.9	2.93	20
Vinyl chloride		212	10	250		0	84.8	70 - 130	202.3	4.71	20
Surr: 1,2-Dichloroethan	e-d4	241.2	25	250		0	96.5	70 - 125	241.7	0.185	20
Surr: 4-Bromofluoroben	zene	255.7	25	250		0	102	72 - 125	256.1	0.148	20
Surr: Dibromofluoromet	hane	243.9	25	250		0	97.6	71 - 125	246	0.861	20
Surr: Toluene-d8		. 247/7	25	250		0	99.1	75 - 125	249.7	0.795	20

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

The following samples were anayzed in this batch: [HS14101239-01

05-Nov-14

Client:

Remediation Services, Inc

WorkOrder:

HS14101239

QC BATCH REPORT

Project:

Cross Manufacturing

LCS	Sample ID:	LCS-244116		Units:	pH Units	Ana	lysis Date:	03-Nov-2014	14:30
Client ID:		Rur	ID: WetCl	nem_HS_2441	16 SeqNo: 3	075574	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qua
pН		6.02	0.100	6	0	100	97 - 103		
DUP	Sample ID:	HS14101107-01DUF	,	Units:	pH Units	Ana	llysis Date:	03-Nov-2014	l 14:30
Client ID:		Rur	ID: WetCl	hem_HS_2441	16 SeqNo: 3	075575	PrepDate:		DF: 1 ′
Analyte	· · ·	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qua
рН		6.87	0.100					6.82	0.73 10
Temp Deg C @pH	4	22.4	0					22.4	0

• Date:

Limit

05-Nov-14

Client:

Remediation Services, Inc

Project:

Cross Manufacturing

WorkOrder:

HS14101239

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description /
•	Value exceeds Regulatory Limit
a	Not accredited
В	Analyte detected in the associated Method Blank above the Reporting
€ .	Value above quantitation range
н	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
М	Manually integrated, see raw data for justification
n .	Not offered for accreditation
ND	Not Detected at the Reporting Limit
0	Sample amount is > 4 times amount spiked
Р	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description.
AUIUIT	DOSCHIPTION

DCS	Detectability Check Study

DUP

Method Duplicate

LCS

Laboratory Control Sample

LCSD

Laboratory Control Sample Duplicate

MBLK

Method Blank

MDL

Method Detection Limit

MQL

Method Quantitation Limit

MS

Matrix Spike

MSD .

Matrix Spike Duplicate

PDS

Post Digestion Spike

PQL SD Practical Quantitaion Limit

30

Serial Dilution

SDL

Sample Detection Limit

TRRP

Texas Risk Reduction Program

Unit Reported Description

μg/L

Micrograms per Liter

Date

pH Units

CERTIFICATIONS, ACCREDITATIONS & LICENSES

Agency	Number	Expire Date	
Arkansas	ÄR - 2014	27-Mar-2015	
California	2919	31-Jul-2015	
Dept of Defense	L2231 Rev 3-20-2014	22-Dec-2015	-
Illinois	003403	09-May-2015	
Kansas	E-10352 8/15/2013-2014	30-Nov-2014	
Kentucky	KY 2014-2015	30-Apr-2015	
Louisiana	03087 2014/2015	30-Jun-2015	
North Carolina	624 - 2014	31-Dec-2014	
North Dakota	R-193 2025	30-Apr-2015	
Oklahoma	2014-128	31-Aug-2015	
Texas	T104704231-14-14	30-Apr-2015	

Date:

05-Nov-14

Client:

Remediation Services, Inc

Project:

Cross Manufacturing

Work Order:

HS14101239

SAMPLE TRACKING

		No. 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		i i		
Lab Samp ID	Client Sample ID	Action	Date	1	Person	New Location
HS14101239-01	21332-Soil-01	Login ·	10/29/201	4 5:07:12 PM	RPG	11D
HS14101239-01	21332-Soil-01	Login	10/29/201	4 5:07:12 PM	RPG	11D
HS14101239-01	21332-Soil-01	Login	10/29/201	4 5:07:12 PM	RPG	11D
HS14101239-01	21332-Soil-01	Login	10/29/201	4 5:07:12 PM	RPG	11D
HS14101239-01	21332-Soil-01	Login	10/29/201	4 5:07:12 PM	RPG	Sub

05-Nov-14

Sample	Receipt	Checklist
--------	---------	-----------

Client	Name
Chert	, , ,

RSI - DIRECT

Work Order:

HS14101239

Date/Time Received:

29-Oct-2014 09:17

Received by:

DES

·					
Checklist completed	by: Raegen Giga eSignature	29-Oct-2014 Date	Reviewed by:	Bernadette A. Fini eSignature	30-Oct-2014 Date
Matrices:	<u>soil</u>		Carrier name:	<u>FedEx</u>	
Custody seals intact Custody seals intact Chain of custody prec Chain of custody sign Chain of custody agre Samples in proper co Sample containers in Sufficient sample voli All samples received Container/Temp Blan	sent? ned when relinquished and receives with sample labels? intainer/bottle? tact? ume for indicated test? within holding time? ik temperature in compliance?	ved?	Yes V Yes V Yes V Yes V Yes V Yes V Yes V Yes V Yes V Yes V Yes V	No Not Preser No Not Preser No Not Preser No Not Preser No No No No No No No No No No No No No N	
Temperature(s)/There	mometer(s):		2.1c/2.1c c/u		IR 1
Cooler(s)/Kit(s): Date/Time sample(s) Water - VOA vials ha	ve zero headspace?		23742 10/29/2014 17:15 Yes.	No VOA vials sc	ibmitted 🔽
Water - pH acceptabl pH adjusted?	e upon receipt?		Yes T	No N/A N/A	-
pH adjusted by:	•	*.	Les []	No [] N/A 🗸	· · · · · · · · · · · · · · · · · · ·
Login Notes:	, ,	•	L.:		,
Client Contacted:		Date Contacted:		Person Contacted:	
Contacted By:	0 F	Regarding:			
Comments:					
		* * * * * * * * * * * * * * * * * * *		*****	



Cincinnati, OH +1 513 733 5336 Everett, WA +1 425 356 2600

Holland, MI +1 616 399 6070

Chain of Custody Form Page ___ol __

HS14101239

Remediation Services, Inc

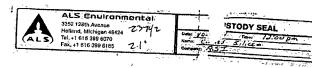
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Purchase Order				Project	t Name	1				_					is mitskts	ran ITBIK	EIGHI H	i mini			eli ieri
Work Order				-		·	s Manufact				Α	TOLP	/OC (1	311/82	(60)						
Company Name	Remediation Service			Project I	de martin statement a		s Manufact		***************		в	TCLP	VOC (1311/6	1270)			1	250		
Send Report To	Dan Roth	es, iiic		Bill To Co	отрапу	Rem	ediation Se	rvices, Inc			С	TCLP	fetals (1311/	470) -	RCRA	0			*****	
				Invoi	ce Attn							PUBSI							<u>ئۇنىيە ئىنى</u>		
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City/State/Zip	Independence			City/St	ate/Zin	1-4-	·		***************************************	_		RCI - pl	i, Ignita	ability	تېمدادن د.						·
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Fax	(620) 331-6216				Fax	(620)	331-1200		 	<u></u> '	H.	<u> </u>	~	·							-
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Committee Warm 11	-HCI 2-HNO ₃	3-H,SO, 4-N	HOu	نستنب ويستنش	بين در بنديد		7-Other			1.			1 1 1 1 1			Levels: Levels:			Ŭ TR	ISIS CONE	el 4

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3. The Chalm'n Gustady is a legal document. All information must be completed accurately.

Copyright 2011 by ALS Environmental.

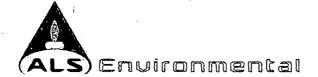
Pg 26 of 37



Fed 35. 8035 6168 7921

WED - 29 OCT 10:30A PRIORITY OVERNIGHT

AB SGRA



05-Nov-2014

Bernadette Fini ALS Environmental 10450 Stancliff Rd Suite 210 Houston, TX 77099

Re: **HS14101239**

Dear Bernadette,

ALS Environmental received 1 sample on 30-Oct-2014 09:30 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

Sample results are compliant with NELAP standard requirements and QC results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 10.

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

Sincerely,

Electronically approved by: Ched Whelton

Chad Whelton

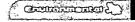
Chad Whelton Project Manager

Work Order: 14101786

Certificate No: MN 532786

Report of Laboratory Analysis

ADDRESS 3352 128th Avenue Holland, Michigan 43424-9263 | PHONE | 515) 399-6070 | FAX (516) 399-6185 ALS GROUP USA, CORP, Part of the ALS Laboratory Group, A Campbell Brothers Limited Company



Date: 05-Nov-14

Client:

ALS Environmental

Project: Work Order: HS14101239 14101786 **Work Order Sample Summary**

Lab Samp ID Client Sample ID

14101786-01 HS14101239-01

<u>Matrix</u> Soil Tag Number 21332-Soil-01 10/28/2014 08:00 10/30/2014 09:30

Date: 05-Nov-14

Client:

ALS Environmental

Project:

HS14101239

WorkOrder:

14101786

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited ,
В	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
Н.	Analyzed outside of Holding Time
J	Analyte is present at an estimated concentration between the MDL and Report Limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
0	Sample amount is > 4 times amount spiked
P R	Dual Column results percent difference > 40%
S	RPD above laboratory control limit Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
Acronym	Description
DUP	
	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
Α	APHA Standard Methods
D	ASTM
E	EPA
sw	SW-846 Update III
Units Reported	Description
°F	Degrees Fahrenheit
mg/Kg	Milligrams per Kilogram

Client:

ALS Environmental

Project:

HS14101239

Sample ID:

HS14101239-01

Collection Date: 10/28/2014 08:00 AM

Date: 05-Nov-14

Work Order: 14101786

Lab ID: 14101786-01

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE, REACTIVE			SW7.3.	3.2		Analyst: AXL
Cyanide, Reactive	ND		100	mg/Kg	Ť	11/4/2014 04:00 PM
FLASHPOINT, OPEN-CUP	`		D92			Analyst: MB
Flashpoint, Open-cup	>200		r	°F	1	11/4/2014 09:00 AM
SULFIDE, REACTIVE			SW7.3.	4.2		Analyst: AXL
Sulfide, Reactive	ND		100	mg/Kg	' ä	11/4/2014 04:00 PM

Client:

ALS Environmental

Work Order: Project: 14101786

HS14101239

Date: 05-Nov-14

Batch ID: R151788	Instrument ID WETCHEM		Method	: SW7.3.4.2				1		
MBLK	Sample ID: MB-R151788-R15178	8		الأراب المنافعة المنا	nits: mg/	Kg	Analy	sis Date: 1	1/4/2014	04:00 PN
Client ID:	Run ID	WETCH	1EM_141104	IH Sec	No: 301	7208	Prep Date:	POR IN	DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide, Reactive	ND	100	in encionaria electrica de la company	ing a state of the		ingina an anima animanani ,	المراجعة والمعارضة والمعارضة والمعارضة والمعارضة والمعارضة	aninings, sinceressors	on one and the state of the sta	Annian thickness constants that
LCS	Sample ID: LCS-R151788-R1517	38	***************************************	الأراث	nits: mg/	Kg	Analy	sis Date: 1	1/4/2014	04:00 PN
Client ID:	Run ID	WETCH	1EM_141104	IH Sed	No: 301	7209	Prep Date:	Was S	DF: 1	
Analyte	Result	PQL.	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide, Reactive	1776	100	2149	0	82.6	60-120		0		
The following sampl	es were analyzed in this batch:	14	1101786- IA	dentific o him time de se full film prome industria en mandre se funcione dentificación de se funcione de se f E		and the company of th	and the second second second second second	one type in ship to had a	in the second second second	

Client:

ALS Environmental

Work Order:

14101786

Project:

HS14101239

Batch ID: R151789 Instrument ID WETCHEM Method: SW7.3.3.2 MBLK Sample ID: MBLK-R151789-R151789 Units: mg/Kg Analysis Date: 11/4/2014 04:00 PM Run ID: WETCHEM_141104I SeqNo: 3017213 Prep Date: // RPD Ref RPD SPK Ref Control Value Limit Limit Analyte Result SPK Val %REC %RPD Qual ND Cyanide, Reactive 100 Analysis Date: 11/4/2014 04:00 PM LCS Sample ID: LCS-R151789-R151789 SegNo. 3017214 Prep Date. Run ID: WETCHEM 1411041 DF: 1 SPK Ref RPD Ref RPD Control Limit Value Limit Value Analyte PQL SPK Val %REC %RPD Qual Result Cyanide, Reactive 124.8 100 99.8 75-125 Sample ID: 14101786-01A MS Units: mg/Kg Analysis Date: 11/4/2014 04:00 PM Client ID: HS14101239-01 Run ID: WETCHEM_141104I SeqNo: 3017217 Prep Date: DF: 1 RPD SPK Ref Control RPD Ref Value Limit Value Limit Analyte PQL SPK Val %REC %RPD

Analyte Result

Client ID: HS14101239-01

Cyanide, Reactive

Cyanide, Reactive

Run ID: WETCHEM_1411041

, 250

SPK Val

250

100

PQL

100

248.1

248.1

Sample ID: 14101786-01A MSD

Units: mg/Kg SeqNo: 3017218

%REC

99.2

99.2

50-150

Control

Limit

50-150

0

n

SPK Ref

Value

Prep Date: RPD Ref Value

248:1

0

RPD Limit %RPD

Analysis Date: 11/4/2014 04:00 PM

OC BATCH REPORT

Qual n 35

The following samples were analyzed in this batch:

14101786-01A

Client:

ALS Environmental

Work Order:

14101706

Project:

14101786

HS14101239

QC BATCH REPORT

Batch ID: R151802 Instrument ID WETCHEM Method: D92 LCS Sample ID: LCS-R151802-R151802 Units: °F Analysis Date: 11/4/2014 09:00 AM Client ID: Run ID: WETCHEM_141104N SeqNo: 3017495 Prep Date: DF: 1 RPD SPK Ref RPD Ref Control Value Limit Value Limit SPK Val Analyte Result %REC %RPD Qual Flashpoint, Open-cup 81 98.8 97-103 0

The following samples were analyzed in this batch:

14101786-01A

Û	Ci	IAIN OF CUS	STODY RE	CORD	Date	29 Oct 2014
ALS) Enuir Subconfractor	onmental	Page 1 of	1		COC (D _	1728 85 NOV 14
ALS Laboratory G 3352 128th Ave. Holland, MI 48424		Phone 6163996070 Fax 6163998185				(
	ustomer information		::::Project/Informatio	n. Karatan kanan	•	
PO		Project Name	HS14101239		•	
Company Name	ALS Houston	Company Nam	e ALS Houston	- b. A		
Age (see)	····	Inv Attn	Accounts Paya	ble		
Address	10450 Stancilif Rd, Ste 2	O Address	10450 Stanctiff	Rd, Sie 210		5
•	Houston, TX 77099		Houston, TX 7	7099		
Phone	281-530-5666	Phone	281-530-5656		4,	
Emailt	Bemadette,fini@alsgloba	.com Email2			40	
Lab ID HS14101239-01	Client Samp ID	Collection Date	Matrix Soll	Analysis Requested	e in the section of the	
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Relinquished by:	Date/Time:	Received by:	Date/Time:	Cooler ID	s: Re	port/QC Level
-R ange	10/29/14 1.8	: 60				
		().	10/30/14	r 0930		

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TO JOE SINGLIFF.

TO JOE RIBAR

ALS ENVIRONMENTAL

3352 128TH AVE. BILL GENDER HOLLAND MI 49424
(1019) 900-0017
REF: H814101179/1182/1219/1224/1239/1005/118
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REF PARALAMACH DI DECLARIDA 1910 DOLUMA DI LIVAGILLAZIO EN THU - 30 OCT 10:30A PRIORITY OVERNIGHT 5813 7990 9207 NA HLMA 49424. -us GRR

Pg 36 of 37

Sample Receipt Checklist

Client Name: AL	S - HOUSTON		,		Date/Time	Received:	30-Oct-14	1 09:30		
Work Order: <u>14</u> 1	101786				Received b	y:	<u>DS</u>			
Checklist completed	. (30-Oct-14	R	eviewed by:	Chad X	Velton		30-Óct	
Matrices: S	eSignature Soil		Date			eSignature		•	√ Date	е
-	edEx							•		
Shipping container/	cooler in good condition?	*	Yes	✓	No 🗔	Not Pres	ent 🔲			
Custody seals intac	ct on shipping container/coole	er?	Yes	Z	No 🗔	Not Pres	ent 🗆			
Custody seals intac	ct on sample bottles?	*	Yes		No 🗀	Not Pres	ent 🗹		•	
Chain of custody pr	esent?	•	Yes	Y	No 🗌					
Chain of custody sig	gned when relinquished and i	received?	Yes	✓	No 🗌					
Chain of custody ag	grees with sample labels?		Yes	V	No 🗔					
Samples in proper o	container/bottle?		Yes	V	No 🗔	• ,	•	` ,		
Sample containers	intact?		Yes	Y	No 🗌		ą		÷	
Sufficient sample vo	olume for indicated test?		Yes	✓	No 🗔		•			
All samples receive	d within holding time?		Yes		No 🗌					
Container/Temp Bla	ank temperature in compliance	e?	Yes		No 🗀					
Sample(s) received	on ice?		Yes		No 🗔					
emperature(s)/The	ermometer(s):		3.8 c		in the Park State of the State					
Cooler(s)/Kit(s):			-			en enigen y our regiments street when the enige of the	ويعمده والعابرة والأوارات المقابرة والمواقعة بالمقابعة			
Date/Time sample(s	•		10/30/20 Yes		40:41 PM	No VOA vial		- G2		
vater - VOA viais n Vater - pH acceptal	nave zero headspace?		Yes	_	No 🗆	_	s submitted	نىپ		
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3	System 1995 of a 16 M in a committee of the foreign participation makes	Land to the American American	Company States	-	-		a palkajor aju kajimananan d	. UIN	o i ago i Ui	

Bureau of Waste Management Curtis State Office Building 1000 SW Jackson, Suite 320 Topeka, KS 66612-1366



Phone: 785-296-1600 Fax: 785-296-6909 bwmweb@kdheks.gov www.kdheks.govAvaste

Susan Mosier, MD, Secretary

Department of Health & Environment

Sam Brownback, Governor

November 19, 2015

Mr. Raymond Law Cross Manufacturing, Inc. 100 James H. Cross Blvd. Lewis, KS 67552

RE: Special Waste Disposal Authorization Number 15-1618

THIS AUTHORIZATION EXPIRES April 19, 2016.

Dear Mr. Law:

We have considered your request for disposal of one (1) drum of IDW purge water from Cross Manufacturing, Inc., 100 James H. Cross Blvd., Lewis, KS. (Analysis provided)

Based solely on the analysis provided, the waste is not a characteristic hazardous waste with respect to the constituents tested. As stated in K.A.R.28-31-261, it is the responsibility of the generator to determine whether or not a waste is a hazardous waste by either knowledge of process or by proper testing by a K.D.H.E. certified lab. If there are questions as to the status of this waste, the department suggests the facility contact the Kansas Department of Health and Environment at telephone 316-337-6020. If Cross Manufacturing, Inc. is confident the material for disposal is not a hazardous waste for any characteristic or listed constituent not included in the testing, the following applies.

Approval is given to dispose of this waste at the Plumb Thicket landfill, operating under Kansas Permit 0842, provided the following conditions are met:

- 1. Approval to deliver the waste must be obtained from the landfill operator prior to transporting the waste to the landfill. The final decision on whether to accept or reject the waste rests with the landfill operator. Please contact Shad Pletcher, Site Manager, telephone 620-896-2229, to obtain approval. If the landfill operator refuses to accept this waste, you should contact us to determine alternate disposal options.
- 2. The waste must be transported separately to the landfill and be identified to the operator upon delivery.
- 3. Kansas Administrative Regulation 28-29-108(r) (12) and (13) requires solid waste disposal facilities to maintain a log of commercial or industrial wastes received such as sludges, barreled wastes, and special wastes. The log must indicate the source and quantity of waste and the disposal location thereof. The special waste authorization number should be used as identification when entering the shipment into the log.

- 4. This approval is valid for disposal of the waste described and in the amount shown above. If additional shipments are required, you must contact us to receive another disposal authorization.
- 5. This special waste may only be disposed at this subtitle D landfill that has been approved per K.A.R.28-29-2 (b) to receive non-hazardous liquid waste.
- 6. Any change in the process producing this waste, any change in the materials used in producing this waste or any other change to this waste stream requires that a new Special Waste Disposal Authorization be obtained prior to disposal.

If you have any questions, feel free to contact me at 785-296-0681.

Sincerely,

Tony Guy

Environmental Scientist
Special Waste Coordinator

KDHE/Bureau of Waste Management

ABG

C Shad Pletcher e-file

Requester phone: 620-338-6066

SPECIAL WASTE APPROVAL

(This Page for OFFICE USE ONLY)

FOR OFFICE USE ONLY

APPROVAL NUMBER: PT15174

EXPIRATION DATE: 04/19/2016

APPROVED BY:

AWS

n. ENVIKUNMENTAL COMPLI	ANCE SUPERVISUR DECISION
	Cross Manufacturing (Remediation Services); 15-1618; lab
2. Name: Aaron W Smith	3. Date: 12/01/2015
4. Signature: Aaron W Smith	5. Phone: (303) 867-5513
	NDLING PROCEDURES
	mental Compliance Supervisor and the Facility Manager.
	Bioremediation Other:
Review and approval of waste is based upon a submitted documentation from following conditions. Failure to comply may result in rejection of the wastes.	
A. Customer/Generator shall receive a copy of this sheet upon approval B. Loads may be randomly inspected upon receipt at the landfill to ensu	l and shall conform to all instructions/limitations noted herein. ure wastes conform to description on Application.
C: This material must be properly contained, bagged, or covered prior to	o and during shipment and disposal.
D. The customer must contact the respective landfill to schedule the was by the facility management.	ste shipment 24 hours prior to delivery or alternative arrangements agreed upon
3. The conditions marked below apply to this waste stream.	
APPROVAL CONDITION(S):	
BLANKET APPROVAL: The manifest accompanying each load of waste sha	all denote the specific waste generation address/location(s) for that load.
CONDITIONAL APPROVAL: This is a conditional approval/extension. Upon r from the original approval date. SPECIFIC CONDITION:	receipt of additional analyses, this approval may be extended up to three (3) years
WASTE CONDITION(S):	
ABSORBENT MATERIALS: Absorbent material (pads, booms, diapers, soch andling. Wastes that would not pass a paint filter test must be solidified pr	
ASBESTOS CONTAINING MATERIAL (ACM): Friable Non-Friable	
CARE UNLOADING: Maintain integrity of container/packaging.	
FREE LIQUIDS/SLUDGE: Free liquids are prohibited from landfill disposal. test prior to placement at active face.	Wastes containing free liquids must be solidified and able to pass a paint filter
☐ OTHER:	
LANDFILL SPECIAL HANDLING PROCEDURES:	
DISPOSAL LOCATION RESTRICTION: Dispose at least feet from 6	edge of slope or boundary.
DUST: Materials may become airborne. Use appropriate control measures	to prevent the material from becoming airborne.
IRRITANT DUST: Materials may be dusty and are likely to cause irritation to to prevent airborne dust and/or employee exposure. See MSDS for addition	o skin and/or eyes. Use appropriate dust control measures and PPE as needed nal information.
HOT: Potential Hot Load. Isolate from combustible materials.	ISDS for proper handling procedures:
ODOR: Bury immediately upon arrival. ADDITIONAL HANDLING INS	STRUCTIONS:
SLUDGE: Potential traction issue on work face.	
SPECIAL BURIAL REQUIREMENTS: Immediately cover waste MSW	Dirt prior to compaction.
SURVEY REQUIREMENT: Materials must be surveyed in or indicated on a	grid.

Special Waste Disposal Request
Kansas Department of Health and Environment
Bureau of Waste Management
Waste Reduction, Compliance and Enforcement Section 1000 SW Jackson, Suite 320, Topeka, Kansas 66612-1366

You may FAX this form to: 785-296-8909 or 785-296-8721

Please type or clearly print - See page 2 for instr	uctions			
I. REQUESTER INFORMATION (This	is where the D	isposál Au	thorization letter will be	sent.)
Name: Remediation Services, Inc.			,	
Address: P.O. Box 587				
City: Independence	State:	Kansas	Zip Code: 673	01
Contact Person: Butch Holum		Teleph	one Number: (620) 331-	
E-Mail Address, if applicable: bholum@rsi-ks,	com mos	-	Fax Number: <u>(620)</u> 331-62	116
II. POINT/LOCATION OF GENERATION II	FORMATION	(only if diffe	rent from the information	in Section I above)
Name: Cross Manufacturing, Inc.				
Address: 100 James Cross Boulevard		· ·		
City: Lewis	State:	Kansas	Zip Code: 675	52
Contact Person: Raymond Law		Teleph	one Number: (620) 324-	5525
Physical Characteristics of Waste: Clear liquid Quantity for Disposal: 1 (Please S Frequency (Select One): One Time Week Laboratory Analyses Attached: Yes No Renewal of Previous Authorization: Previous IV. DISPOSAL INFORMATION Landfill Proposed for Disposal: Plumb Thicket	OMonth OMaterial Safe	OYear ety Data She	ets (MSDS) Attached.O	Yes © No d: N/A
Solid Waste Transfer Station Proposed: N/A V. CERTIFICATION		ł.		

Form sw600-specialwaste.pdf





August 22, 2013

Dave Carstons WSP Environment & Energy 300 Trade Center, Suite 4690 Woburn, MA 01801

RE: Project: CROSS MANUFACTURING

Pace Project No.: 60150682

Dear Dave Carstons:

Enclosed are the analytical results for sample(s) received by the laboratory on August 08, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Shui Dosinstande

Sherri Rosenstangle

sherri.rosenstangle@pacelabs.com Project Manager

Enclosures





Pace Analytical Services, Inc. 9608 Loiret Blvd. Lenexa, KS 66219 (913)599-5665

CERTIFICATIONS

Project:

CROSS MANUFACTURING

Pace Project No.

60150682

Kansas Certification IDs

Ransas Certification IDs
9608 Loiret Boulevard, Lenexa, KS 66219
WY STR Certification #: 2456.01
Arkansas Certification #: 13-012-0
Illinois Certification #: 003097
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055 Nevada Certification #: KS000212008A Oklahoma Certification #: 9205/9935 Texas Certification #: T104704407-13-4 Utah Certification #: KS000212013-3 Illinois Certification #: 003097

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project:

CROSS MANUFACTURING

Pace Project No.:

60150682

Lab ID	Sample ID 01 WC080713-WT	Matrix	Date Collected	Date Received	
60150682001		Water	08/07/13 08:00	08/08/13 22:50	
60150682002	WC080713-SL	Solid	08/07/13 08:00	08/08/13 22:50	

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project:

CROSS MANUFACTURING

Pace Project No.:

60150682

Lab ID	Sample ID	Method	Analysts	Analytes Reported	
60150682001	WC080713-WT	EPA 6010	JGP	7	
		EPA 7470	TJT	1	
· •	SM 4500-H+B	JML	1		
60150682002 WC080713-SL	EPA 6010	JGP	7	_	
	EPA 7470	TJT	1	,	
		EPA 9045	DJR	1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project:

CROSS MANUFACTURING

Pace Project No.:

60150682

Sample: WC080713-WT	Lab ID: 60150682	001 Collected	d: 08/07/13	3 08:00	Received: 08/	/08/13 22:50 Ma	atrix: Water	
Parameters	Results Units	Report Limit	Reg. Limit	ΦF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, TCLP	Analytical Method: E	PA 6010 Prepa	ration Meth	od: EP	A 3010			
	Leachate Method/Da	ite: EPA 1311; 0	8/20/13 00:	00				
Arsenic	ND mg/L	0.50	5	1	08/20/13 14:00	08/21/13 10:15	7440-38-2	
Barium	ND mg/L	2.5	100	1	08/20/13 14:00	08/21/13 10:15	7440-39-3	
Cadmium	ND mg/L	0.050	1	1	08/20/13 14:00	08/21/13 10:15	7440-43-9	
Chromium	ND mg/L	0.10	5	1	08/20/13 14:00	08/21/13 10:15	7440-47-3	
Lead	ND mg/L	0.50	5	1	08/20/13 14:00	08/21/13 10:15	7439-92-1	
Selenium	ND mg/L	0.50	1	1	08/20/13 14:00	08/21/13 10:15	7782-49-2	
Silver	ND mg/L	0.10	5	1	08/20/13 14:00	08/21/13 10:15	7440-22-4	
7470 Mercury, TCLP	Analytical Method: E	PA 7470 Prepa	ration Meth	od: EP	A 7470			
	Leachate Method/Da	ite: EPA 1311; 0	8/20/13 00:	00				
Mercury	ND mg/L	0.0020	.;2	1	08/21/13 12:15	08/21/13 15:48	7439-97-6	
4500H+ pH, Electrometric	Analytical Method: S	M 4500-H+B	à	.				
pH at 25 Degrees C	7.4 Std. Units	0.10		1		08/09/13 15:00		Н6

REPORT OF LABORATORY ANALYSIS





ANALYTICAL RESULTS

Project:

CROSS MANUFACTURING

Pace Project No.:

60150682

Sample: WC080713-SL

Lab ID: 60150682002

Collected: 08/07/13 08:00 Received: 08/08/13 22:50

Results reported on a "dry-we	eight" basis						*	
Parameters	Results Unit	Report ts Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, TCLP	Analytical Method	t: EPA 6010 Prepa	ration Meth	od: EP	A 3010			
•	Leachate Method	//Date: EPA 1311; 0	8/20/13 00:	00				
Arsenic	ND mg/L	0.50	5	1;	08/20/13 14:00	08/21/13 10:18	7440-38-2	
Barium	ND mg/L	2.5	100	1	08/20/13 14:00	08/21/13 10:18	7440-39-3	
Cadmium	ND mg/L	0.050	·1	1	08/20/13 14:00	08/21/13 10:18	7440-43-9	
Chromium	ND mg/L	0.10	5	1	08/20/13 14:00	08/21/13 10:18	7440-47-3	
Lead	ND mg/L	0.50	5	1	08/20/13 14:00	08/21/13 10:18	7439-92-1	
Selenium	ND mg/L	0.50	1	1	08/20/13 14:00	08/21/13 10:18	7782-49-2	
Silver	ND mg/L	0.10	5	1	08/20/13 14:00	08/21/13 10:18	7440-22-4	
7470 Mercury, TCLP	Analytical Method	i: EPA 7470 Prepa	ration Meth	od: EP	A 7470			
	Leachate Method	/Date: EPA 1311; 0	8/20/13 00:	00				
Mercury	ND mg/L	0.0020	.2	1	08/21/13 12:15	08/21/13 15:50	7439-97-6	1.
9045 pH Soil	Analytical Method	i: EPA 9045						•
pH at 25 Degrees C	6.9 Std. Unit	s 0.10		1		08/20/13 13:50		

REPORT OF LABORATORY ANALYSIS



Pace Analytical Services, Inc. 9608 Loiret Blvd. Lenexa, KS 66219 (913)599-5665

QUALITY CONTROL DATA

QC Batch Method: EF	ERP/7622 PA 7470		Analys	is Method is Descrip		PA 7470 470 Mercun	/ TCLP					***************************************
Associated Lab Samples METHOD BLANK: 123	: 60150682001 	, 60150682002	·	fatrix: Wa	lor	1			L	- Notes		·
Associated Lab Samples		, 60150682002		iduix. Yva	ici			•				
Parameter		Units	Blank Resuli		eporting Limit	Analyz	æd	Qualifiers				
Mercury	mg	/L	· · · · · · · · · · · · · · · · · · ·	ND	0.0020	08/21/13	15:43				(
LABORATORY CONTRO	L SAMPLE: 12	39338				<u> </u>						
Parameter		Units	Spike Conc.	LCS Resu		LCS % Rec	% Red Limits		ualifiers			
Mercury	mg	/L	.005	Ô	.0049	97	80	-120	2			
MATRIX SPIKE & MATR	X SPIKE DUPLIC	ATE: 12393	39		1239340				The second second second			
, Parameter	· Units	60151175001 Result	MS Spike Conc.	MSD Spike Conc.	MS	MSD	MS	MSD % Rec	% Rec	555	Max	
				LODG	Result	Result	% Rec	V/. L3 ^ ^	Limits	RPD	RPD	Qua



QUALITY CONTROL DATA

Project:

Silver

CROSS MANUFACTURING

Pace Project No.:

60150682

QC Batch:

MPRP/23906

Analysis Method:

EPA 6010

QC Batch Method:

EPA 3010

Analysis Description:

ND

6010 MET TCLP

0.10 08/21/13 10:11

Associated Lab Samples:

60150682001, 60150682002

METHOD BLANK: 1238819

60150682001, 60150682002

mg/L

Matrix: Water

Associated Lab Samples:

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.50	08/21/13 10:11	
Barium	mg/L	ND	2.5	08/21/13 10:11	
Cadmium	mg/L	ND	0.050	08/21/13 10:11	
Chromium	mg/L	ND	0.10	08/21/13 10:11	
Lead	mg/L	ND	0.50	08/21/13 10:11	
Selenium	mg/L	ND	0.50	08/21/13 10:11	

LABORATORY CONTROL SAMPLE: 1238820

P	Parameter	- 0, 22.	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic			mg/L	1	0.94	94	80-120	
Barium	•	,-	mg/L~	1	0.99	99 .	80-120	
Cadmium			mg/L	1	0.96	96	80-120	
Chromium		•	mg/L	1	0.99	99	80-120	
ead			mg/L	1	1.0	100	80-120	
Selenium			mg/L	1	0.93	93	80-120	
Silver			mg/L	≨5 .	0.48	96	80-120	

MATRIX SPIKE & MATRIX S	PIKE DUPLICATE	12388	21		1238822			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				
			MS	MSD								
	6015	1175001	Spike	Spike	. MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Arsenic	mg/L	ND	10	10	10.2	10.1	101	100	75-125	1	20	
Barium	mg/L	9.5	10	10	21.1	20:8	116	113	75-125	1	20	
Cadmium	mg/L	ND	10	10	10,2	10.1	101	101	75-125	1	20	
Chromium	mg/L	ND	10	10	9.9	9.8	98	98	75-125	0	20	
Lead	mg/L	ND	10	10	9.3	9.2	93	92	75-125	0	20	
Selenium	mg/L	ND	10	10	9.7	9.7	97	97	75-125	0	20	
Silver	mg/L	ND	5	5	5.3	5.2	105	104	75-125	1	20	



Pace Analytical Services, Inc.

9608 Loiret Blvd. Lenexa, KS 66219 (913)599-5665

QUALITY CONTROL DATA

Project:

CROSS MANUFACTURING

Pace Project No.:

60150682

QC Batch:

WET/42809 SM 4500-H+B Analysis Method: Analysis Description: SM 4500-H+B

QC Batch Method:

Associated Lab Samples: 60150682001 4500H+B pH

SAMPLE DUPLICATE: 1234046

Parameter

60150688001 Result

Dup Result

RPD

Max (RPD

Qualifiers

pH at 25 Degrees C

Std. Units

Units

10.1

10.0

5 H6

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project:

CROSS MANUFACTURING

Pace Project No.:

60150682

QC Batch:

pH at 25 Degrees C

WET/42970

Analysis Method:

Analysis Description:

7.0

EPA 9045

QC Batch Method: EPA 9045

Associated Lab Samples: 60150682002

9045 pH

SAMPLE DUPLICATE: 1238942

60150905001 Units Parameter Result

Std. Units

Dup Result

7.0

RPD

.0

Max RPD

3

Qualifiers

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc. 9608 Loiret Blvd. Lenexa, KS 66219

(913)599-5665

QUALIFIERS

Project:

CROSS MANUFACTURING

Pace Project No.:

60150682

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

H6 Analysis initiated outside of the 15 minute EPA recommended holding time.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

REPORT OF LABORATORY ANALYSIS



Pace Analytical Services, Inc. 9608 Loiret Blvd. Lenexa, KS 66219 (913)599-5665

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project:

CROSS MANUFACTURING

Pace Project No.:

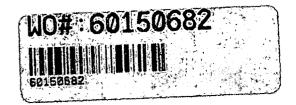
60150682

Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
WC080713-WT	EPA 3010	MPRP/23906	EPA 6010	ICP/18719
WC080713-SL	EPA 3010	MPRP/23906	EPA 6010	ICP/18719
WC080713-WT	EPA 7470	MERP/7622	EPA 7470	MERC/7579
WC080713-SL	EPA 7470	MERP/7622	EPA 7470	MERC/7579
WC080713-WT	SM 4500-H+B	WET/42809		
WC080713-SL	EPA 9045	WET/42970		~
	WC080713-WT WC080713-SL WC080713-WT WC080713-SL WC080713-WT	WC080713-WT EPA 3010 WC080713-SL EPA 3010 WC080713-WT EPA 7470 WC080713-SL EPA 7470 WC080713-WT SM 4500-H+B	WC080713-WT EPA 3010 MPRP/23906 WC080713-SL EPA 3010 MPRP/23906 WC080713-WT EPA 7470 MERP/7622 WC080713-SL EPA 7470 MERP/7622 WC080713-WT SM 4500-H+B WET/42809	WC080713-WT EPA 3010 MPRP/23906 EPA 6010 WC080713-SL EPA 3010 MPRP/23906 EPA 6010 WC080713-WT EPA 7470 MERP/7622 EPA 7470 WC080713-SL EPA 7470 MERP/7622 EPA 7470 WC080713-WT SM 4500-H+B WET/42809

REPORT OF LABORATORY ANALYSIS



Sample Condition Upon Receipt



Client Name: WSP Env. & Ener	MV					ř	Ootional
Courier: Fed Ex 🗆 UPS 🗆 USPS 🗀 Client 🗆		ercial	□ Pa	ce [│ 〗 Other Д∕	EXP	Proi Due Date:
Tracking #:						10 B	Proj Name:
Custody Seal on Cooler/Box Present: Yes N			tact: Y				i toj trano.
Packing Material: Bubble Wrap □ Bubble B			Foam (•	None □	Other	
T 448 /		e: W	<i>le</i> f Blu	ie N	 None □ Sam	ples receive	d on ice, cooling process has begun.
Cooler Temperature: 1-3	••		(circle				
Temperature should be above freezing to 6°C	· e	, ear		·		contents:	nitigle of berson exemining
Chain of Custody present:	√Yes	□No	□n/a	1.	,		Face Control of the C
Chain of Custody filled out:	√ElYes	□No	□n/a	2.			The state of the s
Chain of Custody relinquished:	Dyes	□№	□n/A	3			
Sampler name & signature on COC:	Yes	□№	□N/A	4.			
Samples arrived within holding time:	Ves	□№	□n/a	5.			
Short Hold Time analyses (<72hr):	☐ Yes	□No	□n/a	6.	ph		
Rush Turn Around Time requested:	□Yes	DNo	□N/A	7.			
Sufficient volume:	Yes	□No	□n/a	8			
Correct containers used:	√√Yes	□No	□ N/A				i i i i i i i i i i i i i i i i i i i
Pace containers used:	□xes	□No	□n/a	9.			
Containers intact:	Ç√es	□No	□n/a	10			-
Unpreserved 5035A soils frozen w/in 48hrs?	□Yes	□No	EIN/A	11.		·	
Filtered volume received for dissolved tests?	□Yes	□No	ØN/A	12.			
Sample labels match COC	Fares.	.[∐βvċ	. ⊒n₁A				
Includes date/time/ID/analyses Matrix:	ut	ای ت	با	.13.			<i>✓</i> !
All containers needing preservation have been checked.	□Yes	□No	₽Ñ/A				
All containers needing preservation are found to be in compliance with EPA recommendation.	□Yes	□No	_ N/A	14.			
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water),		□MQ		Initia	al when		Lot # of added
Phenolics Trip Blank present:	****	<i></i>		com	pleted		preservative
Pace Trip Blank lot # (if purchased):	∟Yes	□NO	□ M/A	15.		ı	
Headspace in VOA vials (>6mm);	ΠVac		DINIA	113.	<u> </u>	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·
		LINU	۸۱۹۱۸				
				16,	Ī	4	
Project sampled in USDA Regulated Area:			□ N/A		1	M.A.	
	COC to CI	ient?	\bigcirc '	N	Field Data	Required?	YIN
And the second s	Date/Time	e: _	i		1		•
Comments/ Resolution,						·	
			* *********	·	<u> </u>		and the second s
Project Manager Review:	, , , , , , , , , , , , , , , , , , , 		·/····	13-1	100	12	
Toject Wallager Neview.				Date	۱ — () -	السلسا	-



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

Section A Required Client In	Information:	Section B Required Proje	et lofar	mation:						tion C														P	age:		of	<u> </u>	
	VSP Environment & Energy	Report To: 'Da							Allen	ce Info tion:		/ccon	nts P	ayabl	e			-					ı	<u> </u>		 	<u></u>	<u> </u>	<u></u>
Address: 30	00 Trade Center, Suite 4690	Сору То: Ма	tt Bur	ns				·	Carne	A vińec	Name	W	SP Er	nviron	ment	& Er	nergy		REGI	II ATO	DRY.	AGE	NCY	,		3.			
	Voburn, MA 01801				San Angel and Angel and A	19.19.19		3	Adda										450	iPDES	2 12 1	-1 5	135.	****	A C	21	DRINKIN	G WA	ree
Email To: da	ave.carstens@wspgroup.com	Purchase Order	No.	***		<u> </u>			Para	Quote	*	b.,		1.30					Γι			RC			.,		OTHER	0 11.11	
Phone: (781) 9		Project Name:	Cro	ss Manuf	acturing	Inc.			Paco I	Project		herri	Rose	enstar	nale					Locati					— <u>F</u>	mim.	7//////	7777	
	Date/TAT: STPLIDARD	Project Number						. 13	Maria	çer ≦	*		٠.						3110	STAT	2	,	KS		E				
<u> </u>	DANDARD				ita jahan dan	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~				120	10 - 10 To - 10	986.1	et the		192		Reques	ted	Mary Mary N	ACTORNOR IN	- AAD	(CYI)	UC.	26327		4445)		<i>444.</i>	
Section Required	d Client Information MATRIX DRINKING WATER	CODE 0 0 0 2	C=COMP)		COLL	ECTED		z	Ī			reser	vative	es	N/A														
	PRODUCT SOIU/SOUID OL	WT WWW P SL OL WP	(G=GRAB C=	STA		END/GA		COLLECTION	ŖŜ						1	i a									ne (Y/N)	(01	U50	(6K)	ν
_ Sam;	AIR	si c si code	IYPE (À	LE TEMP AT	CONTAINERS	Unpreserved	7		lo	anol	Other	2000	Metals								Residual Chlorine (Y/N)	W.)()		
ITEM		MATRIX	SAMPLE	DATE .	TIME.	. DATE .	TIME	SAMPLE	#,OF	Sp	H ₂ SO ₄	HCL	NaO	Methanol	Other	E	TCLP				_				-		Project I	No./ L	
	080713~WT		10	8/1/13	0800				2	K	-	7 (4)		11		X	X	<u> </u>		14	4	-				BR24			<u> W</u>
)80713-SL	<u> </u>	<u> </u>	81713	9800				2	K	7		\perp	+	6	×	X			++	-	<u> </u>				2481	WGKY	<u>, w</u>	zen o
3	<u> </u>		+	<u> </u>	<u> </u>				 - -	 	- 1		+	+	-1.	-			+	1-1	+	+			\dashv				
4	<u>ڷڔۼڿۻۼڿڿڹڂڂڔڔۦ؞؞ڶڔ؊۫ڛۑۻڵؽڎۻۻۻۻ</u>		+						-	12		À	+	+		<u> </u>			+	++	+	+		\vdash	\dashv				
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	ADDITIONAL COMMENTS	REI	LÎNQUI	ISHED BY	AFFILIATI	ON A	DATE	**	12.00	TIME		1	A A	CCFP	TED B	Y.! AF	FILATIC	N		DATE		TIM	-	L		SAMP	LE CONDIT	TIONS	
<u> </u>	Description and a second	100 m	مستبية	USP			ध्रश	<u> </u>	121	5					4/		ace	115	1/2	4/8	_//	21	U					<u> </u>	
	and the second s				A second	41.					1	B	ارين	اسعدا	H.	1 9	LL		2	3/8	1:	25	o	<u>J.</u>	3	Ŋ.	м	L _V	
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Page 14						PRINT Nam	e of SAMP	LER:	Da	Liz	Ca	Ste	202		<u> </u>									i ome	is di	Received or tce (Y/N)	ody St		Semples Intact (Y/N)
of				•		SIGNATUR	E of SAMP	LER	3	\geq						0	ATE Sig	ned	48/1	3				١	:	Rec	Eustady Caaler	1	Sarn

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

F-ALL-Q-020rev 08, 12-Oct-2067



A. GENERAL INFORMATION

WASTE MATERIAL PROFILE SHEET

Clean Harbors Profile No. CH893139

GENERATOR EPA ID #/RE		KSD007240286	GENERA'	TOR NAME:	Cross	Manulacturing, i	nc			
GENERATOR CODE (Assig	gned by Clean Harbors)	CROSCOO	CITY	Lewis	STATE	PROVINCE KS	ZIP/POS	TAL CODE	6 7 552	
ADDRESS 190 Factory						PHONE: (316)				
CUSTOMER CODE (Assign ADDRESS 2735 South		REM0538		ER NAME: Independence	,	liation Services I PROVINCE KS		TAL CODE	67301	
755 SOUN	TOTAL STATE OF SOME	367		moependence	JOINT CA	THOUSE KS	2.11 /1 00	, , , , , , , , , , , , , , , , , , ,	0/301	
B. WASTE DESCRIPTION WASTE DESCRIPTION:	Broken concrete			- 1						
PROCESS GENERATING	WASTE: Removal of c	oncrete floor and tank pit	areas.		1					
IS THIS WASTE CONTAIN	ED IN SMALL PACKAGI	NG CONTAINED WITHIN A I	ARGER SH	IPPING CONTAINER	7 N	3				
C. PHYSICAL PROPERTIE	S (at 25C or 77F)									
PHYSICAL STATE		NUMBER OF PHASESA	AYERS	<u> </u>	l	VISCOSTTY, (H He		CO	LOR	
SOLID WITHOUT FRE POWDER	E LIQUID	1 2 3	TOP	0.00		1 - 100 (e.g. \	Vater)	Gro	vish	
MONOLITHIC SOLID		∰ BY VOLUME (Approx.) MIDD	LE 0.00		101 - 500 (e.g	, Motor Oil)	1	yiaii	
LIQUID WITH NO SOL LIQUID/SOLID MIXTUR			BOTT	OM 0.00	1.	501 - 10,000	(e.g. Mulasses)	ļ.		
% FREE LIQUID	iL.	DOOR				> 10,000				
% SETTLED SOLID % TOTAL SUSPENDE	ED SOLID	NONE	- 1	BOILING POINT °F	(PC)	MELTING POINT	°F (°C)	TOTAL ORG	ANIC	
SLUDGE	בט שבוט	MILD	1	<= 95 (<=	35)			CARBON		
GAS/AEROSOL		STRONG		95 - 100 (35-38)	< 140 (<		ਉੱ <=	1%	
		Describe:	1	101 - 129	(38-54)	140-200		1-9	3%	
	· ·	Describe.		>= 130 (>	54)	> 200 (>	33)	>=	10%	
FLASH POINT °F (°C)	рН	SPECIFIC GRAVITY		ASH	1	l e	U/L8 (MJ/kg)	* * **********************************	7.2	
< 73 (<23)	ρπ <= 2	< 0,8 (e.g. Gasoline)	 	мап			< 2,000 (<	A 61		
73 - 100 (23-38)	2,1 - 6.9	0.8-1.0 (e.g. Ethanol)		< 0.1		> 20		00 (4,6-11,6)		
101 -140 (38-60)		1.0 (e.g. Water)		0,1 - 1,0	14	Unknown		00 (4,6-71,0) 000 (11,6-23.2)		
141 -200 (60-93)	1 (. 1	1,1 - 5,0	1	ŀ				
> 200 (>93)	7.1 - 12.4 >= 12.5	1,0-1.2 (e.g. Antifreez		5.1 - 20.0		1.	> 10,000 (>23.2)		
		✓ > 1.2 (e.g. Methylene					tuai:			
		n of the waste, include any in S. Please do not use abbrevia		nts and/or debris. Ra	inges for i	ndividual componer	its are acceptal	ble. If a trade n	ame is	
CHEMICAL						MI			MAX	UOM
CHROMIUM						50.	0000000	- 200.000	0000	PPM
DEBRIS, PPE	A min a place safety against a b	র নার্যার নার্যায় নান্ত রাজ্য নান্তর		প্রতিষ্ঠান প্রতিষ্ঠিতিক স্থানি করি। প্রতিষ্ঠান প্রতিষ্ঠিতিক স্থানিক স্থানিক স্থানিক স্থানিক স্থানিক স্থানিক স্থানিক স্থানিক স্থানিক স্থানিক স্থানিক		30.	0000000	- 60.000	0000	%
Concrete						70.	0000000	95,000	0000	%
DOES THIS WASTE CON	TAIN ANY HEAVY GAUG DED HOSE >12" LONG, I	SE METAL DEBRIS OR OTH METAL WIRE >12" LONG, M	ER LARGE (DBJECTS (EX., MET	AL PLAT			?" YES	Х	NO
ff yes, describe, inc	hodina dimandana	oly tank ,10ft dia., 5 tail top	culoff alec	metal duction						
DOES THIS WASTE CON		OWDERED OR OTHER FINI		-				YES	, pr	NO
	CAL WASTE, PATHOLO	CTED ANY OF THE FOLLO SICAL WASTE, HUMAN OR						YES		NO
		ther infectious nor does it cor lect the answer below that ap		anism known to be a	threat to	human health. This	certification is	*		
The waste was nev-	er exposed to potentially	infectious material,			į			YES		NO
Chemical disinfection	on or some other form of	sterilization has been applied	to the waste	١,				YES		NO
I ACKNOWLEDGE THAT T	THIS PROFILE MEETS '	HE CLEAN HARBORS BAT	TERY PACK	AGING REQUIREME	ENTS.		٠,	YES		NO
ACKNOWLEDGE THAT	MY FRIABLE ASBESTO	S WASTE IS DOUBLE BAGG	ED AND WE	TTED,				YES		NO
		4			1					

HAZ WASTE 2 LOADS = 20.17 TONS



Clean Harbors Profile No. CH893139

E. CONSTITUENTS

If based or when appl	i knowledge, please describe in det icable, 'include the chemical or tradi	ail, the rationale applied to E-name represented by the	identify and cl	rarecterize the waste material	Please inclui	de reference to Material Safety high gonurate the wasto.	Data Sheets (MSDS)
Concret	e floor reinoval from former plat	ing room area and pit.					
Please i of your	ndicate which constituents be waste profile. Please note the	elow apply. Concentra t the total regulated m	etions must retals and o	be entered when application that the constituents section	able to assis ns require ar	st in accurate review and enswers.	expedited approval
RCRA	REGULATED METALS	REGULATORY LEVEL (mg/l)	TCLP mg/l	TOTAL	MOU	NOT APPLICABLE	
D004	ARSENIC	5,0			*	apartes E	
D005	BARIUM	100,0	• • • • • • • • • • • • • • • • • • •	ere e e e e e e e e e e e e e e e e e e	e egyptere et elek	man kirana	
D006	CADMIUM	1,0	• • • • • • • • • • • • • • • • • • • •	*****			
D007	СНЯОМІИМ	5,0	50.0000	50000.0000000	. PPM		
D008	LEAD	5.0		eerie vallene valetene vallerieuwingskrapskrapskrapskrapskrapskrapskrapskrap	entinte in terminal and		•
D009	MERCURY	0,2	• • • • • • • • • • • • • • • • • • • •	entere este este este este este este este			
D010	SELENIUM	1,0	•.• • • • • • • • • • • • • • • • • • •	**** *!* * *!*!* * * * * * * * * *			
D011	SILVER	5.0		ania e dininia a ului di a di a	7 4 1 7/1/1/17 1	and the second second	
na a angar pa	VOLATILE COMPOUNDS	. 1 July 2 State 1 Sta		OTHER CONSTITUE	NTS	MAX UOM	NOT
D018.	BENZENE	0.5			,		APPLICABLE
D019	CARBON TETRACHLORIDE	0.5		BROMINE	Yan an a see a s	and a manager of the shell also as a	
D021	CHLOROBENZENE	100.0		CHLORINE			. no monto de tra
D022	CHLOROFORM	6.0		FLUORINE			
D028	1,2-DICHLOROETHANE	0.5	en en en en en en en en en en en en en e	IODINE			***
D029	1,1-DICHLOROETHYLENE	0.7		SULFUR		a na na manasana ang atawa atawa 	
D035	METHYL ETHYL KETONE	200,0	· • = · = · • · • · • · • · • · • · • ·	POTASSIUM	rational alega.		
D039	TETRACHLOROETHYLENE	0.7	TERRETER STEEL	SODIUM	Vara da esta esta. Completa esta esta esta esta esta esta esta e		(A.
D040	TRICHLOROETHYLENE	0.5	STATE OF STA	AMMONIA	n na manakanakan na Manakanakan	TATATOTATATATATATATATATATATATATATATATAT	
D043	VINYL CHLORIDE	0.2		CYANIDE AMENABLE	Seritings in t		
- 1 1	SEMI-VOLATILE COMPOUN	DS	• • • • • • • • • • • • • • • • • • • •	CYANIDE REACTIVE			
D023	o-CRESOL	200,0	s er villagen s	CYANIDE TOTAL			
D024	m-CRESOL	200.0	dega, el ellettalle lette	SULFIDE REACTIVE	tin a animan a t	ali pratici in director di providi e con e conservato	ration recognized by the second
D025	p-CRESOL	200.0	ं का के को को को के के कि के 	нося		РСВа	***************************************
D026	CRESOL (TOTAL)	200,0	entra entre entre	Swar 2		1	
D027	1,4-DICHLOROBENZENE	7.5	era talenere e	NONE		NONE .	
D030	2,4-DINITROTOLUENE	0,13	**************************************	< 1000 PPM		< 50 PPM	•
D032	HEXACHLOROBENZEÑE	0.13	***	. ⇒= 1000 PPM		>=50 PPM	
D033	HEXACHLOROBUTADIENE	0,5			•	IF PCBS ARE PRESEN WASTE REGULATED E	
D034	HEXACHLOROETHANE	3.0	A systematics and			CFR 761?	31 13CA 40
D036	NITROBENZENE	2,0	Talifer a la rejecta rece			YES 🗇	NO
D037	PENTACHLOROPHENOL	100,0	Satisfie in the behavior				
D038	PYRIDINE	5.0	Albeig alleig als				
D041	2,4.5-TRICHLOROPHENOL	400.0	, egg e e evelg e e				
D042	2.4.6-TRICHLOROPHENOL	2,0	TOTAL TANKS	•			
	PESTICIDES AND HERBICIC	ES					
D012	ENDRIN	0.02	** * ! *				
D013	LINDANE	0.4				•	
D014	METHOXYCHLOR	10.0					
D015	TOXAPHENE	0,5				•	
0016	2,4 D	10.0	*attader*				
D017	2,4.5-TP (SILVEX)	1.0	***************				
D020	CHLORDANE	0,03	• • • • • • •				
D031	HEPTACHLOR (AND ITS EPOXIC	DE) 0.008					
	HAZARDS	HAZABUS OB BBIOD IN	CIDENTE AC	COCIATED MUTUIT MILION	COULD AFEE	OT THE MAN IT OUR WE TO	IANDI FOR
	VASTE HAVE ANY UNDISCLOSED	TINEMEDS OF FRICH IN		SOCIATED WITH IT, WHICH	COULD AFFE	CI THE WAY IT SHOULD BE I	HANDLED?
YES	NO (If yes, explain)		ſ				
	L THAT APPLY	EVE: 0.5)		
	GULATED SUBSTANCE	EXPLOSIVE		FUMING	•	OSHA REGULATE	CARCINOGENS
PULYM	ERIZABLE	RADIOACTIVE		REACTIVE MATE	DIA:	NONE OF THE ABO	THE .



Clean Harbors Profile No. CH893139

r, fi	REGULA	TORY STA	rus		
. 1	YES	NO	USEPA HAZARDOUS WASTE?	ŕ	
			D007 D008		
		\$ 20	Committee Commit	a 197 <mark>4 timber ann ina ant de</mark> ntranceura a Carrenti de Contagues propulações de la Carrenti de Carrenti de Carrenti	
	YES	A NO	DO ANY STATE WASTE CODES	APPLY?	
					
		,	Texas Waste Code	Continued to the second of the second of the second of the second of the second of the second of the second of	
	YES	₩ NO	DO ANY CANADIAN PROVINCIAL	L WASTE CODES APPLY?	
1	YES	NO	IS THIS WASTE PROHIBITED FR	IOM LAND DISPOSAL WITHOUT FURTHER TREAT	TMENT PER 40 CFR PART 268?
			LDR CATEGORY: This is	subject to LDR.	
			VARIANCE INFO:		
	ŸES	NO	IS THIS A UNIVERSAL WASTE?		
	YES	NO NO	IS THE GENERATOR OF THE WA	ASTE CLASSIFIED AS CONDITIONALLY EXEMPT	 SMALL QUANTITY GENERATOR (CESQG)?
	YES	NO	IS THIS MATERIAL GOING TO BE	E MANAGED AS A RORA EXEMPT COMMERCIAL	[PHODUCT, WHICH IS FUEL (40 CFH 261.2 (C)(2)(II))?
	YES	NO NO	DOES TREATMENT OF THIS WA	STE GENERATE A FO06 OR F019 SLUDGE?	1
	YES	O NO		CT TO THE INORGANIC METAL BEARING WASTE	PROHIBITION FOUND AT 40 CER 268 3/C)2
		68. 173			FROMBITION FOUND AT 40 CFA 200,3(0)?
	YES			DC'S IN CONCENTRATIONS >=500 PPM?	
	YES	NO	DOES THE WASTE CONTAIN GR	REATER THAN 20% OF ORGANIC CONSTITUENTS	S WITH A VAPOR PRESSURE >= "3KPA (.044 PSIA)?
	YES	V NO	DOES THIS WASTE CONTAIN AN	ORGANIC CONSTITUENT WHICH IN ITS PURE F	ORM HAS A VAPOR PRESSURE > 77 KPA (11,2 PSIA)?
	YES	NO. NO	IS THIS CERCLA REGULATED (S	SUPERFUND) WASTE ?	,
	YES	NO.	IS THE WASTE SUBJECT TO ON	E OF THE FOLLOWING NESHAP RULES?	
			Hazardous Organic NESHAP	(HON) rule (subpart G) Pharmaceut	l icals production (subpart GGG)
	YES	To' NO	IF THIS IS A US EPA HAZARDOU	IS WASTE, DOES THIS WASTE STREAM CONTAIN	N BENZENE?
		ves	NO Does the waste stream co	ome from a facility with one of the SIC codes listed u	nder benzene NESHAP or is this waste regulated under the benzene
					anulacturing, coke by-product recovery, or petroleum refinery process?
		YES	NO Is the generating source of	of this waste stream a fecility with Total Annual Benz	ene (TAB) >10 Mg/year?
		What is It	e TAB quantity for your facility?	Megagram/year (1 Mg = 2.	200 lbs)
		The basis	for this determination is: Knowledge	of the Waste Or Test Date	Knowledge Testing:
		Describe	he knowledge:		
G. DO	OT/TOG	INFORMAT			
			ION		
0017	ane pe				
		ROPER SHI	PPING NAME:	C (CHRONIUM DERRIC) O DO III	
	NA3	OPER SHI	PPING NAME: ARDOUȘ WASTE, SOLID, N.O.S	S., (CHROMIUM, DEBRIS), 9, PG III	
	NA3	OPER SHI	PPING NAME:		Y OTHER <u>Other</u>
	NA3	OPER SHI 077, HAZA PORTATION O SHIPMEN	PPING NAME: IRDOUS WASTE, SQLID, N.O.S IREQUIREMENTS IF FREQUENCY ONE TIME W	WEEKLY MONTHLY QUARTERLY YEARLY	19
	NA30 TRANSÉ IMATEC	ROPER SHI 077, HAZA PORTATION SHIPMEN	PPING NAME: IRDOUS WASTE, SOLID, N.O.S REQUIREMENTS	WEEKLY MONTHLY QUARTERLY YEARLY BULK LIQUID	BULK SOLID
EST	NA30 TRANSF TMATED	OPER SHIP 077, HAZA PORTATION O SHIPMEN CONTAINE	PPING NAME: IRDOUS WASTE, SQLID, N.O.S IREQUIREMENTS IF FREQUENCY ONE TIME WONTAINERIZED	WEEKLY MONTHLY QUARTERLY YEARLY	19
EST STO	NA30 TRANSF IMATED 0-0 DRAGE (ROPER SHI 077, HAZA PORTATION SHIPMEN	PPING NAME: IRDOUS WASTE, SQLID, N.O.S IREQUIREMENTS IF FREQUENCY ONE TIME WONTAINERIZED	WEEKLY MONTHLY QUARTERLY YEARLY BULK LIQUID	BULK SOLID
EST STO	NA3I TRANSE IMATED 0-0 DRAGE C NTAINER	OPER SHIPMEN CONTAINE CAPACITY:	PPING NAME: RDOUS WASTE, SOLID, N.O.S REQUIREMENTS FREQUENCY ONE TIME WONTAINERIZED RS/SHIPMENT	WEEKLY MONTHLY QUARTERLY YEARLY BULK LIQUID	GAL SHIPMENT UOM: TON VARD
EST STO	NA3I TRANSE IMATED 0-0 DRAGE C NTAINEE	OPER SHIPMEN CONTAINE CONTAINE CAPACITY: R TYPE:	PPING NAME: RDOUS WASTE, SQLID, N.O.S REQUIREMENTS FREQUENCY ONE TIME W ONTAINERIZED RS/SHIPMENT	WEEKLY MONTHLY QUARTERLY YEARLY BULK LIQUID	GAL SHIPMENT UOM: TON VARD
EST STO	NA30 TRANSF IMATED 0-0 DRAGE C VTAINEF CU TO	POPER SHIP O77, HAZA PORTATION O SHIPMEN CONTAINE CAPACITY: R TYPE: BBIC YARD	PPING NAME: RDOUS WASTE, SQLID, N.O.S REQUIREMENTS FREQUENCY ONE TIME W DITAINERIZED RS/SHIPMENT BOX PALLET	WEEKLY MONTHLY QUARTERLY YEARLY BULK LIQUID	GAL SHIPMENT UOM: TON VARD
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1. CH693139 15. GENERATOR S/OFFEROR'S marked and labeled/placerde Exporter, I certify that the oos I certify that the waste minimized that the continued of th	ERG# 1* 3 CERTIFICATION: Thereby ded d, and are in all respects in proper tents of this consignment conform attention statement identified in 40 C Name Import to U.S. Im	dare that the contants of this condition for consport act to the terms of the attacks FR 282.27(a),(if I am a large state of the attacks FR 282.27(b),(if I am a large state of the attack FR 282.27	ed EPA Acknowledgment of go quantity generows) or Separation Expect from U.S. Stylisher Stylisher Agent from U.S.	Pon of an Date seam	pa quantity gone survivous rig U.S. Number:	Partial Reje	If export shipm	Month Da	y Year
1. CH693139 15. GENERATOR SOFFEROR'S marked and labelet/plecards Exporter. I certify that the owntree manner of the control to the control that the waste minimized that the control that the waste minimized that the control tha	ERG# 1* 3 CERTIFICATION: Thereby ded d, and are in all respects in proper tents of this consignment conform attention statement identified in 40 C Name Import to U.S. Im	dare that the contants of this condition for consport act to the terms of the attacks FR 282.27(a),(if I am a large state of the attacks FR 282.27(b),(if I am a large state of the attack FR 282.27	ed EPA Acknowledgment of go quantity generows) or Separation Expect from U.S. Stylisher Stylisher Agent from U.S.	Pon of an Date seam	pa quantity gone survivous rig U.S. Number:	Partial Reje	If export shipm	Month Da	y 163

\mathcal{O}			
Generator (055) LM # (1893) 3 GB Manifest # (1008) 463	LONE CleanHarbors Lone Mountain Waynoka, Okla	shoma INBOUND	1
Container #	VEHICLE 56) ·1t
Haule OC Res 102	14:24	OUTBOUND	
	TARE WEIGHT	41920	16
GROSS 100%	NET WEIGHT	20160	16
TARE			
NET		1	
DIGITAL WEIGHT INDICATOR	& PRINTER		
Load No <i>562</i> 3			~
,	i 1		

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Bureau of Waste Management Curtis State Office Building 1000 SW Jackson, Suite 320 Topeka, KS 86612-1366

Robert Moser, MD, Secretary.



Department of Health & Environment

phone: 785-296-1600 fax: 785-296-8909 email: bwmweb@kdheks.gov www.kdheks.gov/waste

Sam Brownback, Governor

November 6, 2014

Mr. Raymond Law Cross Manufacturing, Inc. 100 James H. Cross Blvd. Lewis, KS 67562

RE: Special Waste Disposal Authorization Number 14-1438

THIS AUTHORIZATION EXPIRES May 6, 2015.

Dear Mr. Law:

We have considered your request for disposal of one hundred (100) tons of soil from Cross Manufacturing, 100 James H. Cross Blvd., Lewis, KS. (Analysis provided)

Based solely on the analysis provided, the waste is not a characteristic hazardous waste with respect to the constituents tested. As stated in K.A.R.28-31-261, it is the responsibility of the generator to determine whether or not a waste is a hazardous waste by either knowledge of process or by proper testing by a K.D.H.E. certified lab. If there are questions as to the status of this waste, the department suggests the facility contact the Kansas Department of Health and Environment at telephone 620-225-0596. If Cross Manufacturing, Inc. is confident the material for disposal is not a hazardous waste for any characteristic or listed constituent not included in the testing, the following applies.

Approval is given to dispose of this waste at the Ford County landfill, operating under Kansas Permit 0718, provided the following conditions are met:

- Approval to deliver the waste must be obtained from the landfill operator prior to transporting the waste to the landfill. The final decision on whether to accept or reject the waste rests with the landfill operator. Please contact Sevena Koehn, Office Manager, telephone 620-225-5288, to obtain approval. If the landfill operator refuses to accept this waste, you should contact us to determine alternate disposal options.
- 2. The waste must be transported separately to the landfill and be identified to the operator upon delivery.
- 3. Kansas Administrative Regulation 28-29-108(r) (12) and (13) requires solid waste disposal facilities to maintain a log of commercial or industrial wastes received such as sludges, barreled wastes, and special wastes. The log must indicate the source and quantity of waste and the disposal location thereof. The special waste authorization number should be used as identification when entering the shipment into the log.

- 4. This approval is valid for disposal of the waste described and in the amount shown above. If additional shipments are required, you must contact us to receive another disposal authorization.
- 5. Operating standards as defined by K.A.R. 28-29-108(k) prohibit the disposal of liquid waste. "Liquid waste" means any waste material that is determined to contain "free liquids" as defined by method 9095A, revision 1, paint filter liquids test, as described in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Pub. No. SW-846 dated December 1996. For purposes of this disposal authorization, all waste for disposal must be able to pass the "paint filter test".
- 6. Any change in the process producing this waste, any change in the materials used in producing this waste or any other change to this waste stream requires that a new Special Waste Disposal Authorization be obtained prior to disposal.

If you have any questions, feel free to contact me at 785-296-0681.

Sincerely,

Tony Guy

Environmental Scientist Special Waste Coordinator

KDHE/Bureau of Waste Management

ABG

C

Sevena Koehn

Requester phone: 620-338-6066

Special Waste Disposal Request

Kansas Department of Health and Environment

Bureau of Waste Management Waste Reduction, Compliance and Enforcement Section 1000 SW Jackson, Suite 320, Topeka, Kansas 66612-1366

You may FAX this form to: 785-296-8909 or 785-296-8721 Please type or clearly print - See page 2 for instructions REQUESTER INFORMATION (This is where the Disposal Authorization letter will be sent.) Cross Manufacturing, Inc. Address: 100 James Cross Boulevard City: Lewis Zip Code: 67552 Contact Person: Raymond Law Telephone Number: 620-324-5525 E-Mail Address, if applicable; raymond.law@crossmfg.com> Fax Number: 620-324-5737 POINT OF GENERATION INFORMATION (only if different from the information in Section I above) Address: City:_ Contact Person: Telephone Number: III. WASTE INFORMATION - Use back of form if additional space is required Waste Description: Non Hazardous Soil Process Producing Waste: Excavation of soil during installation of injection gallery. Physical Characteristics of Waste: Dark black soil, no odor Quantity for Disposal: __~100 (Please Select One) Lbs. XTons Cubic Yards Frequency (Select One): X One Time ___Week __Month Year Laboratory Analyses Attached: X Yes No Material Safety Data Sheets (MSDS) Attached: Yes XNo Renewal of Previous Authorization: Previous Authorization No: N/A IV. DISPOSAL INFORMATION Landfill Proposed for Disposal. Ford County Landfill Solid Waste Transfer Station Proposed: CERTIFICATION I hereby certify that I am aid uly authorized representative of the generator identified above. I further certify that, to the best of my knowledge, the following items are true: The waste identified for disposal is not a hazardous waste as defined by K.A.R. 28-31-261. All analytical analyses provided are from a Kansas Department of Health and Environment (KDHE) certified laboratory and are representative of the waste identified for disposal, All information provided in any attached profile, re-certification, or other document completed by the authorized representative accurately characterizes the waste. If this is a renewal, the materials and processes that generate the waste have not changed since the last disposal adjustantion indicated above, and the information previously provided to KDHE is still valid. Raymond Law, EHAS Corporate Coordinatore //

Instructions

If you have any questions about information required to complete this form, please contact the Special Waste Coordinator at 785-296-1600 or send an e-mail to: swda@kdhe.state.ks.us

- Requester Information Requester information must be provided for the individual taking responsibility for the waste disposal request. This could be the actual generator of the waste, or a contractor or consultant managing the waste for a client. KDHE will e-mail you a copy of the special waste disposal authorization letter as a portable document file (pdf) if you provide your e-mail address. If you do not provide your e-mail address, we will mail or fax you a copy of the SWDA letter. Please note that you may complete this form on-line at our website; however, you must print the form and submit a signed copy via fax or regular mail.
- II. Point of Generation Information Point of generation information must be provided for the location where the waste is generated. If this information is identical to the information provided in Section I, this section may be left blank or marked "Same".
- III. Waste Information The following information must be provided concerning the waste:

Waste description - Provide a brief description of the waste. For example, "contaminated soil", "wastewater sludge", etc.

<u>Process producing waste</u> - Provide a brief description of the process that produced the waste. For example, "grinding operation", "wastewater treatment plant", "product spill", etc.

Physical Characteristics of Waste - Provide a brief description of the physical make-up of the waste. For example, "gray sludge", or "dark solls with petroleum odor", etc.

Quantity for Disposal - Estimate the quantity of the waste for disposal in units of pounds, tons, cubic yards, containers, or bags. It is best to slightly overestimate.

<u>Frequency</u> - Indicate approximately how often the waste is to be disposed. If the request is for a one-time-only disposal, indicate "One Time" even though you may need to make more than one trip to the landfill to complete the disposal.

<u>Laboratory Analyses Attached</u> - Indicate whether laboratory analyses performed by a KDHE certified laboratory are attached. If you have questions whether analyses are required or what analyses are required, please contact the Special Weste Coordinator at 785-296-1600 or send an e-mail to: swda@ kdhe.state.ks.us.

Material Safety Data Sheet (MSDS) Attached - Indicate whether an MSDS for the waste is attached. If you are using an MSDS to support your determination that the waste is not a hazardous waste, the MSDS must be attached.

Renewal of Previous Authorization - If you wish to renew a disposal authorization issued in the prior year, you must complete this section. Be sure to review the previous information (analyses, MSDS, etc.) provided to KDHE to make sure it is still valid.

- IV. Disposal Information The following Information must be provided concerning the disposal site for the waste:
 - Landfill Proposed for Disposal Indicate the landfill where you wish to dispose the waste. You should contact the landfill for tentative approval of acceptance prior to submitting this form.
 - Solid Waste Transfer Station Proposed If the waste will be shipped through transfer station, Indicate the name of that station. If the waste will be shipped directly to a landfill, leave this line blank or indicate "NA" for not applicable.
- V. Certification The certification statement must be signed by an authorized representative of the generator/owner of the waste.

 This may be a consultant or contractor authorized to sign on behalf of the generator/owner of the waste.



November 05, 2014

Grant Sherwwood Remediation Services, Inc 2735 South 10th Street Independence, KS 67301 10450 Stancliff Rd. Suite 210 Houston, TX 77099 T: +1 281.530 5656 F: +1 281 530 5887 www.alsglobal.com

Work Order: HS14101239

Laboratory Results for: Cross Manufacturing

Dear Grant,

ALS Environmental received 1 sample(s) on Oct 29, 2014 for the analysis presented in the following report.

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

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

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

Sincerely,

Generated By: Jumoke.Lawal

Bernadette A. Fini

Project Manager

Work Order: HS14101239	Project: Cross Manufacturing SAMPLE SU	MMARY
Project: Cross Manufacturing SAMPLE SUMMARY	Client: Remediation Services, Inc	

28-Oct-2014 08:00

29-Oct-2014 09:17

Soil

HS14101239-01

21332-Soil-01

Pg 2 of 37

ALS Group USA, Corp

Date:

CASE NARRATIVE

05-Nov-14

Client:

Remediation Services, Inc.

Project:

Cross Manufacturing

Work Order:

HS14101239

Work Order Comments

• Sample received outside method holding time for pH. pH is an immediate test. Sample results are flagged with an "H" qualifier.

The temperature at the time of pH is reported. Please note that all pH results are already normalized to a temperature of 25 °C.

• The analyses for Reactive Cyanide, Reactive Sulfide and Flashpoint were subcontracted to ALS Environmental in Holland, MI.

GCMS Semivolatiles by Method SW1311/8270

Batch ID: 87509

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

GCMS Volatiles by Method SW1311/8260B

Batch ID: R244064

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

Metals by Method SW7470

Batch ID: 87521

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

Metals by Method SW1311/6020

Batch ID: 87502a

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

WetChemistry by Method SW9045B

Batch ID: R244116

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

Client:

Remediation Services, Inc

Project:

Cross Manufacturing

Sample ID:

21332-Soil-01

Collection Date:

28-Oct-2014 08:00

ANALYTICAL REPORT

WorkOrder:HS14101239 Lab ID:HS14101239-01

Matrix:Soil

ANALYSES	RESULT QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TCLP VOLATILES	Method:SW1311/8260	B Leache:SW1311 / 30-Oct-2014	Prep:SW1311	/ 30-Oct-2014	Analyst: PC
1,1-Dichloroethene	ND	100	ug/L	20	31-Oct-2014 21:16
1,2-Dichloroethane	ND	100	ug/L	20	31-Oct-2014 21:16
1,4-Dichlorobenzene	ND	100	ug/L .	20	31-Oct-2014 · 21:16
2-Butanone	ND	200	ug/L	20	31-Oct-2014 21:16
Benzene *	ND	100	ug/L	20	31-Oct-2014 21:16
Carbon tetrachloride	ND	100	ug/L	20	31-Oct-2014 21:16
Chlorobenzene	ND	100	ug/L	20	31-Oct-2014 21:16
Chloroform	ND	100	ug/L	20	31-Oct-2014 21:16
Tetrachloroethene	ND	. 100	ug/L	20	31-Oct-2014 21:16
Trichloroethene	ND	100	ug/L	20	31-Oct-2014 21:16
Vinyl chloride	ND	40	ug/L	20	31-Oct-2014 21:16
Surr: 1,2-Dichloroethane-d4	94.4	70-125	%REC	20	31-Oct-2014 21:16
Surr: 4-Bromofluorobenzene	104	72-125	%REC	20	31-Oct-2014 21:16
Surr: Dibromofluoromethane	98.1	71-125	%REC	20	31-Oct-2014 21:16
Surr: Toluene-d8	105	75 <mark>-125</mark>	%REC	20	31-Oct-2014 21:16
TCLP SEMIVOLATILES	Method:SW1311/8270	Leache SW1311// 30-Oct-2014	Prep:SW3510	/ 31-Oct-2014	Analyst: GEY
2,4,5-Trichlorophenol	ND	5.0	ug/L	1	31-Oct-2014 19:10
2,4,6-Trichlorophenol	ND	5.0	ug/L	1	31-Oct-2014 19:10
2,4-Dinitrotoluene	ND	5.0	ug/L	1	31-Oct-2014 19:10
Cresols, Total	ND	15	ug/L	1	31-Oct-2014 19:10
Hexachlorobenzene	ND	5.0	ug/L	1	31-Oct-2014 19:10
Hexachlorobutadiene	ND	5.0	ug/L	1	31-Oct-2014 19:10
Hexachloroethane	ND	5.0	ug/L	1	31-Oct-2014 19:10
Nitrobenzene	ND	5.0	ug/L	1	31-Oct-2014 19:10
Pentachlorophenol	' ND	5.0	ug/L	1	31-Oct-2014 19:10
Pyridine	ND	5.0	ug/L	1	31-Oct-2014 19:10
Surr: 2,4,6-Tribromophenol	57.4	39-153	%REC	1	31-Oct-2014 19:10
Surr: 2-Fluorobiphenyl	61.9	40-147	%REC	1	31-Oct-2014 19:10
Surr: 2-Fluorophenol	60.9	21-110	%REC	1	31-Oct-2014 19:10
Surr: 4-Terphenyl-d14	77.6	39-141	%REC	1	31-Oct-2014 19:10
Surr: Nitrobenzene-d5	63.8	37-140	%REC	1	31-Oct-2014 19:10
Surr: Phenol-d6	65,0	11-110	%REC	1	31-Oct-2014 19:10

05-Nov-14

Client:

Remediation Services, Inc.

Project:

Cross Manufacturing

Sample ID:

21332-Soil-01

Collection Date:

28-Oct-2014 08:00

ANALYTICAL REPORT

WorkOrder:HS14101239

Lab ID:HS14101239-01

Matrix:Soil

ANALYSES	RESULT Q	UAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TCLP METALS BY SW6020A	Met	hod:SW1311/6020	Leache: SW1311 / 30-Oct-2014			Analyst: RF
Antimony	ND		0.0500	mg/L	j	03-Nov-2014 15:
Arsenic	ND	der entremer i ger gjenerediede deur jewe jedge de	0.0500	mg/L	11	03-Nov-2014 15:
Barium	0.728		0.200	mg/L	j '	03-Nov-2014 15:
Beryllium	ND	· · · · · · · · · · · · · · · · · · ·	0.0200	mg/L	vi .	03-Nov-2014 15:
Cadmium	ND		0.0500	mg/L	35	03-Nov-2014 15:
Chromium	0.400	The second second second second	0.0500	mg/L	1	03-Nov-2014 15:
Lead	3.17		0.0500	mg/L	ij.	03-Nov-2014 15:
Nickel	ND	and the second s	0.0500	mg/L	· ·	03-Nov-2014 15:
Selenium	ND		0.0500	mg/L	7.1	03-Nov-2014 15:
Silver	ND		0.0500	mg/L	1	03-Nov-2014 15:
TCLP MERCURY BY SW7470A	N. S. S. N.	lethod:SW7470	Leache:SW1311 / 30-Oct-2014	Prep:SW7470 /	31-Oct-2014	Analyst: OF
Mercury	ND	Land Control of the C	0.000200	mg/L	1	31-Oct-2014 16:4
PH SOIL BY SW9045D	M	ethod:SW9045B				Ánalýst: JH
pH	9.75	onie postanie werten en timboli. H	0.100	pH Units	1	03-Nov-2014 14:
Temp Deg C @pH	22.2	H ,	O	°C	4	03-Nov-2014 14:
REACTIVE CYANIDE	Me A	ethod:SW7.3:3.2		ALTON TOP		Analyst: JŅ
Reactive Cyanide	ND	70 (88 (74.11) 3 (3.3.3)	100	mg/Kg	1	04-Nov-2014 16:0
REACTIVE SULFIDE	i i	ethod:SW7.3.4.2				Analyst: JM
Reactive Sulfide	ND		100	mg/Kg	1	04-Nov-2014 16:0
SUBCONTRACT ANALYSIS - FLASHPOINT		Method:NA				Analyst: JN
Subcontract Analysis	See Attached			Marie of Share	17	05-Nov-2014 09:0

05-Nov-14

Client:

Remediation Services, Inc.

Project:

Cross Manufacturing

WorkOrder:

HS14101239

DATES REPORT

WorkOrder:	HS14101239					
Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 87502a	Test Name :	TCLP METALS BY SWE	020A	Matrix: S	óil 🤝	
HS14101239-01	21332-Soil-01	28 Oct 2014 08:00	30 Oct 2014 16:0	0 31 Oct 2014 12:34	03 Nov 2014 15:30	1
Batch ID 87509	Test Name :	TCLP SEMIVOLATILES		Matrix: S	oil	
HS14101239-01		28 Oct 2014 08:00	•		31 Oct 2014 19:10	1:
Batch ID 87521	Test Name :	TCLP MERCURY BY SI	N7470A	Matrix: S		
HS14101239-01	21332-Soil-01	28 Oct 2014 08:00	30 Oct 2014 15:5	3 31 Oct 2014 11:05	31 Oct 2014 16:44	1
Batch ID R24406	Test Name :	TCLP VOLATILES		Matrix: S	oil.	
HS14101239-01	21332-Soil-01	28 Oct 2014 08:00	30 Oct 2014 19:2	1 30 Oct 2014 19:21	31 Oct 2014 21:16	20
Batch ID R2441	16 Test Name :	PH SOIL BY SW9045D		Matrix: So	oil	
HS14101239-01	21332-Soil-01	28 Oct 2014 08:00			03 Nov 2014 14:30	1
Batch ID R24422	29 Test Name :	REACTIVE SULFIDE		Matrix: S	sil g	1
HS14101239-01	21332-Soil-01	28 Oct 2014 08:00			05 Nov 2014 09:03	4
HS14101239-01	21332-Soil-01	28 Oct 2014 08:00			05 Nov 2014 09:03	1
HS14101239-01	21332-Soil-01	28 Oct 2014 08:00			05 Nov 2014 09:03	1.
HS14101239-01	21332-Soil-01	28 Oct 2014 08:00		,	04 Nov 2014 16:00	Ä
HS14101239-01	21332-Soil-01	28 Oct 2014 08:00			04 Nov 2014 16:00	9
HS14101239-01	21332-Soil-01	28 Oct 2014 08:00		į	04 Nov 2014 16:00	1
HS14101239-01	21332-Soil-01	28 Oct 2014 08:00			04 Nov 2014 16:00	1
HS14101239-01	21332-Soil-01	28 Oct 2014 08:00			04 Nov 2014 16:00	À
HS14101239-01	21332-Soil-01	28 Oct 2014 08:00			04 Nov 2014 16:00	, j1

05-Nov-14

Client:

Remediation Services, Inc.

WorkOrder:

HS14101239

Project:

Silver

Cross Manufacturing

QC BATCH REPORT

Batch ID: 87		Winds I was a second series of single	Instrument	ICPMS05		Metho	od: SW131		
MBLK	Sample ID:	MBLKT1-87502	•	Units:	mg/L	An	alysis Date:	03-Nov-2014	114:34
Client ID:			Run ID: ICPN	MS05_244100	SeqNo:	3075276	PrepDate:	31-Oct-2014	DF: 1
Analyte	,	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qua
Antimony	2.2.1.2.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1	ND	0.0500						
Arsenic		ND	0.0500	······································			·		
Barium		ND	0.200						
Beryllium		ND	0.0200						in the second se
Cadmium		ND	0.0500						
Chromium	-1-2-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-	ND	0.0500	,	11111				The state of the s
Lead		ND	0.0500						
Nickel	· · · · · · · · · · · · · · · · · · ·	· ND	0.0500	may may as a substitution of the day has been			······································	· · · · · · · · · · · · · · · · · · ·	The said of the sa
Selenium	•	ND	0.0500						
Silver		ND	0.0500	0.1.011			· · · · · · · · · · · · · · · · · · ·		
MBLK	Sample ID:	MBLK-87502	S-9-11.12.	Units:	mg/L	Ana	alysis Date:	03-Nov-2014	14:37
Client ID:			Run ID: ICPN	AS05_244100	SeqNo:	3075277	PrepDate:	31-Oct-2014	DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Antimony		, ND	0.00500						
Arsenic		ND	0.00500	······································					,
Barium		ND	0.0200				; '	*	
Beryllium		ND	0.00200						
Cadmium		ND	0.00500						
Chromium	······································	ND	0.00500		1 mg - mg - 1 - 1 - 1		<u></u>	<u></u>	· · · · · · · · · · · · · · · · · · ·
Lead	_100.000	ND	0.00500	and the second second					•
Nickel		ND	0.00500				<u> </u>	 	
Selenium		ND	0.00500						

ND

0.00500

Client:

Remediation Services, Inc

WorkOrder:

HS14101239

Project:

Cross Manufacturing

		*** 00 0==00		١		_			
LCS	Sample ID:	MLCS-87502			mg/L		•	03-Nov-2014	
Client ID:	~	Ru	un ID: ICPMS	S05_244100	1	o: 3075278	,	31-Oct-2014	
Analyte	ut tai	Result	PQL	SPK Val	SPK Re Value		Control Limit	RPD Ref Value	RPD ** %RPD Limit Qu
Antimony		0.04977	0.00500	0.05		0 99.5	80 - 120		4
Arsenic		0.04833	0.00500	0.05		0 96.7	80 - 120	,	
Barium		0.04779	0.0200	0.05		0 95.6	80 - 120		
Beryllium		0.04972	0.00200	0.05	1	0 99.4	80 - 120		
Cadmium		0.04931	0.00500	0.05		0 98.6	80 - 120		•
Chromium		0.04863	0.00500	0.05		0 97.3	80 - 120		
Lead		0.04878	0.00500	0.05		0 ,97.6	80 - 120	•	
Nickel		0.05053	0.00500	0.05	Ì	0 101	80 - 120	***************************************	
Selenium		0.04697	0.00500	0.05		0 93.9	80 - 120		
Silver	and a National Control of the Contro	0.05027	0.00500	0.05		0 101	80 - 120		
MS	Sample ID:	HS14101234-01MS		Units:	mg/L	An	alysis Date:	03-Nov-2014	14:58
Client ID:		Ru	ın ID; ICPMS	S05_244100	SeqNo	o: 3075285	PrepDate:	31-Oct-2014	DF: 1
Analyte		Result	PQL	SPK Val	SPK Re Value		Control Limit	RPD Ref Value	RPD %RPD Limit Qua
	1.75								
Antimony		0.4885	0.0500	0.5		0 97.7	80 - 120		
		0.4885	0.0500 0.0500	0.5 0.5		0 97.7 0 96.4	80 - 120 80 - 120	·	
Arsenic						0 96.4	. 5. 5	·	
Arsenic Barium		0.4818	0.0500	0.5	0.120	0 96.4	80 - 120		
Arsenic Barium Beryllium		0.4818 0.5984	0.0500 0.200	0.5 0.5	0.120	0 96.4 7 95.5	80 - 120 80 - 120		
Arsenic Barium Beryllium Cadmium		0.4818 0.5984 0.5281	0.0500 0.200 0.0200	0.5 0.5 0.5	0.120	0 96.4 17 95.5 0 106	80 - 120 80 - 120 80 - 120		
Arsenic Barium Beryllium Cadmium		0.4818 0.5984 0.5281 0.4902	0.0500 0.200 0.0200 0.0500	0.5 0.5 0.5 0.5	0.120	0 96.4 7 95.5 0 106 0 98.0	80 - 120 80 - 120 80 - 120 80 - 120		
Antimony Arsenic Barium Beryllium Cadmium Chromium Lead Nickel		0.4818 0.5984 0.5281 0.4902 0.4664	0.0500 0.200 0.0200 0.0500 0.0500	0.5 0.5 0.5 0.5	0.120	0 96.4 17 95.5 0 106 0 98.0 0 93.3 0 98.1	80 - 120 80 - 120 80 - 120 80 - 120 80 - 120		

05-Nov-14

Client:

Remediation Services, Inc

WorkOrder:

HS14101239

Project:

Cross Manufacturing

MSD	Sample ID:	HS14101234-01MS	D	Units:	mg/L	Ana	ilysis Date:	03-Nov-2014	15:01
Client ID:		Ru	ın ID; ICPM:	S05_244100	SeqNo: 3			31-Oct-2014	
Analyte		, Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qu
Antimony .		0.4984	0.0500	0.5	0	99.7	80 - 120	0.4885	2 20
Arsenic	······································	0.4942	0.0500	0.5	0	98.8	80 - 120	0.4818	2.53 20
Barium		0.5986	0.200	0.5	0.1207	95.6	80 - 120	0.5984	0.0251 20
Beryllium	***************************************	0.5051	0.0200	0.5	0	101	80 - 120	0.5281	4.45 20
Cadmium		0.4866	0.0500	0,5	0	97.3	80 - 120	0.4902	0.735 20
Chromium	2 - m	0.4929	0.0500	0.5	0	98.6	80 - 120	0.4664	5.53 20
Lead		0.494	0.0500	0.5	0	98.8	80 - 120	0.4906	0.687 20
Nickel		0.4977	0.0500,	0.5	0.0119	97.2	80 - 120	0.507	1.85 20
Selenium		0.4988	0.0500	0.5	0.	99.8	80 - 120	0.4957	0.619 20
Silver		0.474			····				
S. Agrania and A. Santa	a de tras de la compansión de la compans	0.471	0.0500	0.5	0	94.2	80 - 120	0.4829	2.51 20
DUP	Sample ID	HS14101234-01DU	```````````````````	0.5 Units:		<u>-</u>		0.4829 03-Nov-2014	**************************************
DUP	Sample ID:	HS14101234-01DU	```````````````````	Units		Ana	lysis Date:		14:47
S. Agaman and a second	Sample ID,	HS14101234-01DU	P	Units	mg/L	Ana 8 075281 %REC	lysis Date:	03-Nov-2014	14:47
DUP Client ID: Analyte	Sample ID	HS14101234-01DU Ru	P in ID: ICPM:	Units: S05_244100	mg/L SeqNo: 3 SPK Ref Value	Ana 8 075281 %REC	llysis Date: PrepDate: Control	03-Nov-2014 31-Oct-2014 RPD Ref	0 14:47 DF: 1 RPD
DUP Client ID: Analyte Antimony	Sample ID	HS14101234-01DU Ru Result	P In ID: ICPMS PQL	Units: S05_244100	mg/L SeqNo: 3 SPK Ref Value	Ana 8 075281 %REC	llysis Date: PrepDate: Control	03-Nov-2014 31-Oct-2014 RPD Ref Value	S 14:47 DF: 1 RPD %RPD Limit Qua
DUP Client ID: Analyte Antimony Arsenic	Sample ID	HS14101234-01DU Ru Result	P in ID: ICPM PQL 0.0500	Units: S05_244100	mg/L SeqNo: 3 SPK Ref Value	Ana 8 075281 %REC	llysis Date: PrepDate: Control	03-Nov-2014 31-Oct-2014 RPD Ref Value 0.00142	14:47 DF: 1 RPD %RPD Limit Qua
DUP Client ID: Analyte Antimony Arsenic Barium	Sample ID	HS14101234-01DU Ru Result ND	P In ID: ICPMS PQL 0.0500 0.0500	Units: S05_244100	mg/L SeqNo: 3 SPK Ref Value	Ana 8 075281 %REC	llysis Date: PrepDate: Control	03-Nov-2014 31-Oct-2014 RPD Ref Value 0.00142 0.0041	DF: 1 RPD %RPD Limit Qua 0 25 0 25 0 25
DUP Client ID: Analyte Antimony Arsenic Barium Beryllium	Sample ID:	HS14101234-01DU Ru Result ND ND ND	P PQL 0.0500 0.200	Units: S05_244100	mg/L SeqNo: 3 SPK Ref Value	Ana 8 075281 %REC	llysis Date: PrepDate: Control	03-Nov-2014 31-Oct-2014 RPD Ref Value 0.00142 0.0041 0.1207	DF: 1 RPD %RPD Limit Qua 0 25 0 25 0 25 0 25 0 25
DUP Client ID: Analyte Antimony Arsenic Barium Beryllium Cadmium	Sample ID.	Result ND ND ND ND ND	P PQL 0.0500 0.200 0.0200	Units: S05_244100	mg/L SeqNo: 3 SPK Ref Value	Ana 8 075281 %REC	llysis Date: PrepDate: Control	03-Nov-2014 31-Oct-2014 RPD Ref Value 0.00142 0.0041 0.1207 -0.00005	0 25 0 25 0 25 0 25 0 25 0 25 0 25
DUP Client ID: Analyte Antimony Arsenic Barium Beryllium Cadmium Chromium	Sample ID:	Result ND ND ND ND ND ND ND ND ND ND ND ND ND	PINID: ICPMS PQL 0.0500 0.0500 0.200 0.0200 0.0500	Units: S05_244100	mg/L SeqNo: 3 SPK Ref Value	Ana 8 075281 %REC	llysis Date: PrepDate: Control	03-Nov-2014 31-Oct-2014 RPD Ref Value 0.00142 0.0041 0.1207 -0.00005 0.00023	DF: 1 RPD %RPD Limit Qua 0 25 0 25 0 25 0 25 0 25 0 25
DUP Client ID:	Sample ID:	Result ND ND ND ND ND ND ND ND ND ND ND ND ND	P PQL 0.0500 0.0500 0.0500 0.0500 0.0500 0.0500	Units: S05_244100	mg/L SeqNo: 3 SPK Ref Value	Ana 8 075281 %REC	llysis Date: PrepDate: Control	03-Nov-2014 31-Oct-2014 RPD Ref Value 0.00142 0.0041 0.1207 -0.00005 0.00023	DF: 1 RPD %RPD Limit Qua 0 25 0 25 0 25 0 25 0 25 0 25 0 25 0 2

Client:

Remediation Services, Inc

WorkOrder:

HS14101239

Project:

Cross Manufacturing

PDS	Sample ID:	HS14101234-01B	5	Units:	mg/L		Ana	ilysis Date:	03-Nov-2014	15:03
Client ID:		R	un ID: ICPM	S05_244100	Seq	No: 3	075287	PrepDate:	31-Oct-2014	DF: 1
Analyte		Result	PQL	SPK Val	SPK Val		%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qu
Antimony		1.011	0.0500	í		0	101	75 - 125		Water in the
Arsenic		1.015	0.0500	1		0	101	75 - 125		***************************************
Barium		1.121	0.200	1	0.1	207	100	75 - 125		
Beryllium	e de la companie de l	1.006	0.0200	1		0	101	75 - 125		
Cadmium		1.003	0.0500	1		0	100	75 - 125		
Chromium	# \$ \$ 1 1 1 1 2 1 1 2 1 2 2 1 1 1 2 2 2 1 1 1 2 2 2 1 1 1 2 2 2 1 1 1 2 2 2 2 1 1 1 2 2 2 2 1 1 1 2	1.001	0.0500	1		0	100	75 - 125		
Lead		1.021	0.0500	1	•	0	102	75 - 125		Ć.
Nickel		1.027	0.0500	1	0.0	119	101	75 - 125	· · · · · · · · · · · · · · · · · · ·	
Selenium		1.036	0.0500	1		0	104	75 - 125		
Silver		0.9445	0.0500	1		0	94.5	75 - 125		
SD	Sample ID:	HS14101234-01 D	IL SX	Units:	mg/L		Ana	ılysis Date:	03-Nov-2014	14:55
Client ID:		R	un ID: ICPM	S05_244100	Sec	No: 3	075284	PrepDate:	31-Oct-2014	DF: 5
Analyte	este a se es contra como de contra como de contra c	Result	PQL	SPK Val	SPK Val	lue	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qu
		ND	0.250	,					0.00142	0 10
Antimony						†			0.0041	0 10
· · · · · · · · · · · · · · · · · · ·		ND	0.250							
Arsenic		ND 0.1208	0.250						0.1207	0 10
Arsenic Barium	7777		•		1. 41 i	<u> </u>			0.1207 -0.00005	·
Arsenic Barium Beryllium	333	0.1208	1.00		32.41X					·
Arsenic Barium Beryllium Cadmium		0.1208 ND	1.00 0.100		2.48				-0.00005	0 10
Arsenic Barium Beryllium Cadmium Chromium		0.1208 ND ND	0.100 0.250					· · · · · · · · · · · · · · · · · · ·	-0.00005 0.00023	0 10 0 10
Arsenic Barium Beryllium Cadmium Chromium		0.1208 ND ND ND	1.00 0.100 0.250 0.250					• • • • • • • • • • • • • • • • • • • •	-0.00005 0.00023 -0.00013	0 10 0 10 0 10
Antimony Arsenic Barium Beryllium Cadmium Chromium Lead Nickel Selenium		0.1208 ND ND ND ND	1.00 0.100 0.250 0.250 0.250						-0.00005 0.00023 -0.00013 0.00302	0 10 0 10 0 10 0 10 0 10

05-Nov-14

Client:

Remediation Services, Inc.

WorkOrder:

HS14101239

Project:

Cross Manufacturing

Batch ID:	87521	Si de Samouras	Instrumen	t: HG03	A Townson was	Metho	od: SW747	0	and the second s
MBLK	Sample ID:	GBLKW4-103114		· Units:	mg/L	Ana	alysis Date:`	31-Oct-2014	16:41
Client ID:		1	Run ID: HO	603_243930	SeqNo: 3	3072879	PrepDate:	31-Oct-2014	DF: 1
Analyte		Result	PQ	L SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Mercury		ND	0.00020	D					
MBLK	Sample ID:	GBLKT1-103014		Units:	mg/L	Ana	alysis Date:	31-Oct-2014	16:51
Client ID:		!	Run ID: HO	603_243930	SeqNo:	3072885	PrepDate:	31-Oct-2014	DF: 1
Analyte	e description of the second section of the section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the section of the second section of the se	Result	PQ	L SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Mercury		ND	0.00020	0		- ^- \>			
LCS	Sample ID:	GLCSW4-103114		Units:	mg/L	Ana	alysis Date:	31-Oct-2014	16:42
Client ID:			Run ID: HC	603_243930	SeqNo:	3072880	PrepDate:	31-Oct-2014	DF: 1
Analyte		Result	PQ	L SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Mercury		0.00517	0.00020	0.005	0	103	80 - 120		
MS	Sample ID:	HS14101239-01N	//S	Units:	mg/L	Ana	ilysis Date:	31-Oct-2014	16:48
Client ID:	21332-Soil-01	1	Run ID: HO	03_243930	SeqNo:	3072883		31-Oct-2014	
Analyte	en de la companya de la companya de la companya de la companya de la companya de la companya de la companya de	Result	PQ	L SPK Val	SPK Ref Value	%REC	Contral Limit	RPD Ref Value	RPD %RPD Limit Qual
Mercury		0.0051	0.00020	0.005	-0.000007	102	75 - 125	and which the same and the same	
MSD	Sample ID:	HS14101239-01N	ISD	Units:	mg/L	Ana	ilysis Date:	31-Oct-2014	16:49
Client ID:	21332-Soil-01	ار	Run ID: HO	03_243930	SeqNo: 3	3072884	PrepDate:	31-Oct-2014	DF: 1
Analyte		Result	PQ	**	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Mercury		0.00512	0.00020	0.005	-0.000007	103	75 - 125	0.0051	0.391 20
DUP	Sample ID:	HS14101239-010)UP	Units:	mg/L	Ana	llysis Date:	31-Oct-2014	16:46
Client ID:	21332-Soil-01	I	Run ID; HG	03_243930	SeqNo: 3	3072882	PrepDate:	31-Oct-2014	DF: 1
Analyte		Result	PQ	SPK Val	SPK Ref Value	%REC	Control Limit		RPD %RPD Limit Qual
Mercury		· ND	0.00020)				-0.000007	0 20
-5 to 100									

ALS Group USA, Corp

Date:

05-Nov-14

Client:

Remediation Services, Inc.

WorkOrder:

HS14101239

Project:

Cross Manufacturing

Batch ID: 87509		Instru	ment:	SV-5			an sh	Metho	d: SW131	1/8270	, visa il	Angelia sub
MBLK S	ample ID:	MBLK-87509		1	Units:	ug/L		Ana	lysis Date:	31-Oct-2014	16:34	
Client ID:		Run ID:	SV-5	_244048		Sed	No: 3	074319	PrepDate:	31-Oct-2014	DF	:1
Analyte		Result	PQL	SPK	. Val	SPK Val		%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qua
2,4,5-Trichlorophenol		ND	5.0	}						20.		يمني هاي وي دي
2,4,6-Trichlorophenol	·	ND	5.0`		***							
2,4-Dinitrotoluene		NĎ	5.0									
Cresols, Total		ND	15				**********					······································
Hexachlorobenzene	`	ND	5.0									
Hexachlorobutadiene		ND	5,0			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,						
Hexachloroethane		ND	5.0									
Nitrobenzene	,	ND	5.0		<u> </u>			······································		**************************************		
Pentachlorophenol		ND	5.0									
Pyridine	~ 55.56 \$5.00 S	ND	5.0									
Surr: 2,4,6-Tribromop	henol	65.99	5.0		100		0	66.0	39 - 153			
Surr: 2-Fluorobipheny	1	65.81	5.0		100	****	0	65.8	40 - 147	•	-,	
Surr: 2-Fluorophenol		61.21	5.0		100		o	61.2	21 - 110			
Surr: 4-Terphenyl-d14	Ī	72.26	5.0	Contraction of	100	,	0	72.3	39 - 141			
Surr: Nitrobenzene-d5	5	62.44	5.0		100		o	62.4	37 - 140			
Surr: Phenol-d6		64.05	5.0	· .;	100		0	64.0	11 - 110	· · · · · · · · · · · · · · · · · · ·		

05-Nov-14

Client:

Remediation Services, Inc

WorkOrder:

HS14101239

Project:

Cross Manufacturing

LCS Sample ID: I	_CS-87509		Units:	ug/L	Ana	lysis Date:	31-Oct-2014	17:41
Client ID:	Run	ID: SV-5_	244048	SeqNo: 3	074320	PrepDate:	31-Oct-2014	DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qua
2,4,5-Trichlorophenol	70.68	5.0	100	0	70.7	55 - 120	8 ** = 64 ** 00 ** 0 ** 0 ** 0 ** 0	
2,4,6-Trichlorophenol	71.88	5,0	100	Ó	71.9	55 - 120		
2,4-Dinitrotoluene	37.28	5.0	50	0	74.6	55 - 125		
Cresols, Total	192.3	15	250	0	76.9	40 - 120	1.11.11.11.11.11.11.11.11.11.11.11.11.1	· · · · · · · · · · · · · · · · · · ·
Hexachlorobenzene	39.31	5.0	50	Ô	78.6	55 - 120		
Hexachlorobutadiene	37.54	5:0	50	0	75.1	55 - 120	*	
Hexachloroethane	34.5	5.0	50	0	69.0	55 - 120		
Nitrobenzene	32.55	5:0	50	0	65.1	55 - 120		
Pentachlorophenol	76.53	5.0	100	. 0	76.5	50 - 135		
Pyridine	25.11	5.0	50	0	50.2	30 - 120	p47 x 947 x 24	
Surr: 2,4,6-Tribromophenol	76.19	5.0	100	0	76.2	39 - 153		
Surr: 2-Fluorobiphenyl	70.02	5.0	100	- · · O	70.0	40 - 147	······································	
Surr: 2-Fluorophenol	73.61	5.0	100	0	73.6	20 - 110		-
Surr: 4-Terphenyl-d14	75.47	5.0	100	0	75,5	39 - 141		The state of the s
Surr: Nitrobenzene-d5	<i>64.79</i> ,	5.0	100	0	64.8	37 - 140		
Surr: Phenol-d6	71.85	· 5.0	100	0	71.9	11 - 110	3	

05-Nov-14

Client:

Remediation Services, Inc

WorkOrder:

HS14101239

Project:

Cross Manufacturing

Batch ID: 87509		Instrument:	SV-5	, v		Metho	d: SW131	1/8270	
LCSD Sample	ID: LCSD-87509		Units:	ug/L		Ana	lysis Date:	31-Oct-2014	18:03
Client ID:		Run ID: SV-5	_244048	Se	qNo: 3	074321	PrepDate:	31-Oct-2014	DF: 1
Analyte	Result	PQL	SPK Val		K Ref ilue	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qua
2,4,5-Trichlorophenol	71.23	5.0	100		0	71.2	55 - 120	70.68	0.771 25
2,4,6-Trichlorophenol	70.42	5.0	100		0	70.4	55 - 120	71.88	2.06 25
2,4-Dinitrotoluene	37.11	5.0	50		0	74.2	55 - 125	37.28	0.445 25
Cresols, Total	186.1	15	250		0	74.5	40 - 120	192.3	3.25 25
Hexachlorobenzene	38.79	5.0	50		0	77.6	55 - 120	39.31	1.33 25
Hexachlorobutadiene	35.51	5.0	50		0	71.0	55 - 120	37.54	5.57 25
Hexachloroethane	33.33	5.0	50		0	66.7	55 - 120	34.5	3.45 25
Nitrobenzene	32.93	5.0	50		0	65.9	55 - 120	32.55	1.15 25
Pentachlorophenol	75.8	5.0	100		0	75.8	50 - 135	76.53	0.956 25
Pyridine	25.27	5.0	50		0	50.5	30 - 120	25.11	0.627 25
Surr: 2,4,6-Tribromophenol	73.66	5, <i>0</i>	100		0	· 73.7	39 - 153	76.19	3.38 25
Surr: 2-Fluorobiphenyl	68.72	5.0	100		0	68.7	40 - 147	70.02	1.87 25
Surr: 2-Fluorophenol	72.96	5,0	100		0	73.0	21 - 110	73.61	0.881 25
Surr: 4-Terphenyl-d14	73.84	5.0	100	rici co	0	73.8	39 - 141	75.47	2.19 25
Surr: Nitrobenzene-d5	62.48	5.0	100		o	62.5	. 37 - 140	64.79	3.64 25
Sum: Phenol-d6	70.39	5.0	100		0	70.4	11 - 110	71.85	2.06 25

05-Nov-14

Client:

Remediation Services, Inc

WorkOrder:

HS14101239

Project:

Cross Manufacturing

QC BATCH REPORT

MS Sa	ample ID:	HS14101152-01MS		Units:	ug/L	Ana	alysis Date:	31-Oct-2014	18:48
Client ID:	٠.	Run I	D: SV-5_	244048	SeqNo: 3	074323	PrepDate:	31-Oct-2014	DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qua
2,4,5-Trichlorophenol		76.22	5.0	100	0	76.2	55 - 120		
2,4,6-Trichlorophenol		76.4	5.0	100	0	76.4	55 - 120		
2,4-Dinitrotoluene		37.92	5.0	50	0	75.8	55 - 125		•
Cresols, Total		192	15	250	0	76.8	40 - 120		
Hexachlorobenzene	`,	37.81	5.0	50	0	75.6	55 - 1 20		
Hexachlorobutadiene		34.62	5.0	50	0	69.2	55 - 120		
Hexachloroethane		34.78	5.0	50	0	69.6	55 - 120		
Nitrobenzene		34.37	5.0	50	0	68.7	55 - 120		
Pentachlorophenol		79.97	5.0	100	0	80.0	50 - 135		
Pyridine	-	26.22	5.0	50	0	52.4	30 - 120	***************************************	
Surt: 2,4,6-Tribromop!	nenol	73.17	5.0	100	0	73.2	39 - 153		
Surr: 2-Fluorobipheny		73.77	5.0	100	0	73.8	40 - 147		
Surr: 2-Fluorophenol		59.53	5.0	100	. 0	59.5	21 - 110		
Surr: 4-Terphenyl-d14		69.6	5.0	100	0	69.6	39 - 141		
Surr: Nitrobenzene-d5		66.59	5.0	100	0	66.6	37 - 140		
Surr: Phenol-d6		65.41	5.0	100	0	65.4	11 - 110		

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

The following samples were analyzed in this batch: HS14101239-01

05-Nov-14

Client:

Remediation Services, Inc

WorkOrder:

HS14101239

Project:

Cross Manufacturing

MBLK Sa	ample ID:	VBLKW-141031		Units:	ug/L		Ana	alysis Date:	31-Oct-201	l4 17:34
Client ID:		Run ID:	VOA6	_244064	Segi	No: 3	074615	PrepDate	:	DF: 1
Analyte		Result	PQL	SPK Val	SPK Valu		%REC	Contro Limit	I RPD Re	ef RPD %RPD Limit Qua
1,1-Dichloroethene		ND	5.0							de virtual age virtual .
1,2-Dichloroethane		ND	5.0			~		V + - + + + + + + + + + + + + + + + + +		An agree to the second
1,4-Dichlorobenzene	•	ND	5.0			•				:
2-Butanone		ND	10		i	····				· · · · · · · · · · · · · · · · · · ·
Benzene		ND	5.0							
Carbon tetrachloride		ND	5,0		i			***************************************		
Chlorobenzene		ND	5.0							
Chloroform		N D	5.0							
Tetrachloroethene		ND	5.0		j					
Trichloroethene	2 . 1 . 2 . 4 . 4	ND	5.0	<u> </u>					11.11.77 1 2 7 7 7	A STATE OF THE STA
Vinyl chloride		ND	2.0							
Surr: 1,2-Dichloroethai	ne-d4	49.44	5.0	50		0	98.9	70 - 125		
Surr: 4-Bromofluorobe	nzene	49.07	5.0	50		0	98.1	72,4 - 125		
Surr: Dibromofluorome	thane	49.52	5.0	50	·	0	99.0	71.2 - 125		
Surr: Toluene-d8		51.23	5.0	50		0	102	75 - 125		

05-Nov-14

Client:

Remediation Services, Inc

WorkOrder: Project: HS14101239

Cross Manufacturing

Batch ID: R244064		Instrument:	VOA6		Meth	od: SW131	1/8260B	
MBLK Samp	le ID: MBLKV1-14103	0	Units	: ug/L	An	alysis Date:	31-Oct-2014	19:39
Client ID:	• .	Run ID: VOA	6_244064	SeqNo: 3	3074619	PrepDate:		DF: 20
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
1,1-Dichloroethene	ND	100						
1,2-Dichloroethane	ND	100				***************************************		
1,4-Dichlorobenzene	ND	100				*		
2-Butanone	ND	200		;		· · · · · · · · · · · · · · · · · · ·		
Benzene	· ND	100						
Carbon tetrachloride	ND	100		- 17 - 17 - 18	·	r		
Chlorobenzene	ND	100						
Chloroform	ND	100	M 6 % 6 6					
Tetrachioroethene	ND	100						
Trichloroethene	ND	100	* 174, 8* 15 15		p des tarada	*************		7 .
Vinyl chloride	ND	40						
Surr: 1,2-Dichloroethane-c	14 963.6	100	1000	0	96.4	70 - 125		
Surr: 4-Bromofluorobenze	ne 963,5	100	1000	0	96:4	72.4 - 125		
Surr: Dibromofluorometha	ne 961.8	100	1000	0	96,2	71.2 - 125		
Surr: Toluene-d8	1023	100	1000	0	102	75 - 125		

Date:

05-Nov-14

Client:

Remediation Services, Inc.

WorkOrder:

HS14101239

Project:

Cross Manufacturing

LCS Sample ID:	VLCSW-141031		Units:	ug/L		Ana	llysis Date:	31-Oct-2014	16:22
Client ID:	Run (D:	VOA6	_244064	` Sed	No: 3	074614	PrepDate:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Val		%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qua
1,1-Dichloroethene	55.6	5.0	50		0	111	73 - 124		
1,2-Dichloroethane	50.48	5.0	50	i	0	101	76 - 120	······································	
1,4-Dichlorobenzene	53.3	5.0	50	·	0	107	70 - 130		
2-Butanone	110.7	10	100		0	111	70 - 130	 	
Benzene	50.13	5.0	50		0	100	70 - 128		
Carbon tetrachloride	51.07	5.0	50		0	102	70 - 130	'	
Chlorobenzene	50.4	5.0	50		0	101	72 - 127		
Chloroform	55.66	5:0	50		0	111	70 - 130	· · · · · · · · · · · · · · · · · · ·	
Tetrachloroethene	49.99	5.0	50		0	100.0	70 - 130		
Trichloroethene	49.64	5.0	50		0	99.3	72 - 129		
Vinyl chloride	52.52	2.0	50		oʻ	105	70 - 130		
Surr: 1,2-Dichloroethane-d4	50.87	5.0	50		0	102	70 - 125		2
Surr: 4-Bromofluorobenzene	50.81	5.0	50		0	102	72 - 125		
Sun: Dibromofluoromethane	50.64	5.0	50		0	101	71 - 125		
Surr: Toluene-d8	49.59	5.0	50		0	99.2	75 - 125		

05-Nov-14

Client:

Remediation Services, Inc

WorkOrder:

HS14101239

Project: Cross Manufacturing

MS Sample ID:	HS14101248-04MS		Unit	s: ug/L	Ana	alysis Date:	31-Oct-2014	18:27
Client ID:	Run I	D: VOA6	_244064	SeqNo: 3	074617	PrepDate:		DF: 5
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qua
1,1-Dichloroethene	257.4	25	250	0	103	73 - 124		
1,2-Dichloroethane	259.4	25	250	0	104	76 - 120		
1,4-Dichlorobenzene	265.3	25	્250	. 0	106	70 - 130		
2-Butanone	471	50	500	0	94.2	70 - 130		5 100°
Benzene	252.9	25	250	Ô	101	70 - 128)	
Carbon tetrachloride	252.2	25	250	0	101	70 - 130		<u> </u>
Chlorobenzene	252.9	25	250	0	101	72 - 127		
Chloroform	272.4	25	250	0	109	70 - 130		
Tetrachloroethene	518.3	25	250	271.5	98.7	70 - 130		
Trichloroethene	286.9	25	250	41.17	98.3	72 - 129	Frank Santa	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Vinyl chloride	202.3	10	250	0	80.9	70 - 130		
Surr: 1,2-Dichloroethane-d4	241.7	25	250	0	96.7	70 - 125		
Surr: 4-Bromofluorobenzene	256.1	25	250	. 0	102	72 - 125		
Surr: Dibromofluoromethane	246	25	250	Q	98.4	71 - 125		
Surr: Toluene-d8	249.7	25	250	0	99.9	75 - 125		

05-Nov-14

Client:

Remediation Services, Inc.

WorkOrder:

HS14101239

Project:

Cross Manufacturing

QC BATCH REPORT

MSD Sample ID:	HS14101248-04MSD		` Units:	ug/L		Ana	lysis Date:	31-Oct-2014	18:51	
Client ID:	Run ID:	VOA6	_244064	Sec	No: 3	074618	PrepDate:		DF: 5	5
Analyte	Result	PQL	SPK Val	SPK Va	Ref lue	%REC	Control Limit	RPD Ref Value	R %RPD Li	PD imit Qua
1,1-Dichloroethene	265.4	25	250		0	106	73 - 124	257.4	3.07	20
1,2-Dichloroethane	263	25	250		0	105	76 - 120	259.4	1.39	20
1,4-Dichlorobenzene	278.6	25	250		0	111	70 - 130	265.3	4.87	20
2-Butanone	530.6	50	500		0	106	70 - 130	471	11.9	20
Benzene	259.5	25	250		0	104	70 - 128	252.9	2.56	20
Carbon tetrachloride	264	25	250		. 0	106	70 - 130	252.2	4.56	20
Chlorobenzene	259.9	25	250		0	104	72 - 127	252.9	2.74	20
Chloroform	279	25	250		0	112	70 - 130	272.4	2.38	20
Tetrachloroethene	518.4	· 25	250	2	71.5	98.8	70 - 130	518.3	0.0307	20
Trichloroethene	295.4	25	250	.4	1.17	102	72 - 129	286.9	2.93	20
Vinyl chloride	212	10	_250		0	84.8	70 - 130	202.3	4.71	20
Surr: 1,2-Dichloroethane-d4	241.2	25	250		0	96.5	70 - 125	241.7	0.185	20
Surr: 4-Bromofluorobenzene	255.7	25	250		o	102	72 - 125	256.1	0.148	20
Surr: Dibromofluoromethane	243.9	25	250		0	97.6	71 - 125	246	0.861	20
Surr: Toluene-d8	247⊹7	25	250		0	99.1	75 - 125	249.7	0.795	20

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

05-Nov-14

Client:

Project:

Remediation Services, Inc

WorkOrder:

HS14101239

. 1131410123

Cross Manufacturing

QC BATCH REPORT

LCS	Sample ID:	LCS-244116		Units:	pH Units	Ana	alysis Date:	03-Nov-2014	14:30
Client ID:		Run	ID: WetCl	hem_HS_2441	16 SeqNo: 3	075574	PrepDate:)	DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qua
pH		6.02	0.100	6	0	100	97 - 103		
DUP	Sample ID:	HS14101107-01DUP		Units:	pH Units	Ana	alysis Date:	03-Nov-2014	1 14:30
Client ID:		Run	ID: WetCl	hem_HS_2441 [,]	16 SeqNo: 3	075575	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qua
pН		6.87	0.100					6.82	0.73 10
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Note: See Qualifiers Page for a list of qualifiers and their explanation,

Date:

05-Nov-14

Client:

Remediation Services, Inc

Project:

Cross Manufacturing

WorkOrder:

HS14101239

QUALIFIERS, ACRONYMS, UNITS

	· ·
Qualifier	Description
	Value exceeds Regulatory Limit
а	Not accredited
В	Analyte detected in the associated Method Blank above the Reporting Lim
E	Value above quantitation range
Н	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
М	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
0	Sample amount is > 4 times amount spiked
Р	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL
Acronym	Description.
DCS	Detectability Check Study

DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL '	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
µg/L	Micrograms per Liter
Dato	

pH Units

CERTIFICATIONS, ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	AR - 2014	27-Mar-2015
California	2919	31-Jul-2015
Dept of Defense	L2231 Rev 3-20-2014	22-Dec-2015
Illinois	003403	09-May-2015
Kansas	E-10352 8/15/2013-2014	30-Nov-2014 /
Kentucky	KY 2014-2015	30-Apr-2015
Louisiana	03087 2014/2015	30-Jun-2015
North Carolina	624 - 2014	31-Dec-2014
North Dakota	R-193 2025	30-Apr-2015
Oklahoma	2014-128	31-Aug-2015
Texas	T104704231-14-14	30-Apr-2015

Date:

05-Nov-14

Client:

Remediation Services, Inc

Project:

Cross Manufacturing

Work Order:

HS14101239

SAMPLE TRACKING

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HS14101239-01	21332-Soil-01	Login	10/29/201	4 5:07:12 PM	RPG	11D
HS14101239-01	21332-Soil-01	Login	10/29/201	4 5:07:12 PM	RPG	11D
HS14101239-01	21332-Soil-01	Login	10/29/201	4 5:07:12 PM	RPG	Sub

Sample Receipt Checklist

Client Name:

RSI - DIRECT

Work Order:

HS14101239

Date/Time Received:

29-Oct-2014 09:17

Received by:

DES

Checklist completed by:		netarijani, as etata int				
Signature Date Esignature Date Esignature Date	Checklist completed by:	Raegen Giga	29-Oct-2014	Reviewed by:	Rernadette A. Fini	30-Oct-2014
Shipping container/cooler in good condition? Custody seals intact on shipping container/cooler? Custody seals intact on sample bottles? Chain of custody present? Chain of custody signed when relinquished and received? Chain of custody signed when relinquished and received? Chain of custody signed when relinquished and received? Chain of custody signed when relinquished and received? Chain of custody signed when relinquished and received? Chain of custody signed when relinquished and received? Chain of custody signed when relinquished and received? Chain of custody signed when relinquished and received? Chain of custody signed when relinquished and received? Yes				7		
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Everett, WA +1 425 356 2600

Holland, MI +1 616 399 6070

Chain of Custody Form Page ____ol ___

HS14101239

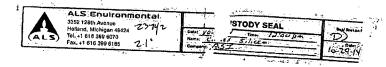
Remediation Services, Inc.

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Pg 26 of 37



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WED - 29 OCT 10:30A PRIORITY OVERNIGHT

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05-Nov-2014

Bernadette Fini ALS Environmental 10450 Stancliff Rd Suite 210 Houston, TX 77099

Re: HS14101239

Dear Bernadette,

ALS Environmental received 1 sample on 30-Oct-2014 09:30 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

Sample results are compliant with NELAP standard requirements and QC results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 10.

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

Sincerely,

Electronically approved by: Chad Wilelton

Chad Whilton

Chad Whelton
Project Manager

A STATE OF THE STA

Work Order: 14101786

Certificate No: MN 532786

Report of Laboratory Analysis

ADDRESS 3362 128th Avenue Holland Michigan 43424-9263 | PHONE [616] 399-6070 | FAX (516) 399-6195
ALS GROUP USA, CORP. Part of the ALS Laboratory Group. A Campbell Brothers Limited Company

(General C)

www.alsglobal.com

. RICHT SOLUTIONS MICHE PANTINGS

Date: 05-Nov-14

Client:

ALS Environmental

Project: Work Order: HS14101239

14101786

Work Order Sample Summary

Lab Samp ID Client Sample ID

14101786-01 HS14101239-01

Matrix

Soil

Tag Number 21332-Soil-01 10/28/2014 08:00 10/30/2014 09:30

Date: 05-Nov-14

Client:

ALS Environmental

Project:

HS14101239

WorkOrder:

14101786

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description	
*	Value exceeds Regulatory Limit	
a	Not accredited	·
В	Analyte detected in the associated Method Blank above the Reporting Lim	it
E	Value above quantitation range	
Н	Analyzed outside of Holding Time	
J ,	Analyte is present at an estimated concentration between the MDL and Re	port Limit
n	Not offered for accreditation	
ND	Not Detected at the Reporting Limit	A.
0	Sample amount is > 4 times amount spiked	
P B	Dual Column results percent difference > 40%	
R · S	RPD above laboratory control limit Spike Recovery outside laboratory control limits	
U	Analyzed but not detected above the MDL	
Acronym	Description	
DUP	Method Duplicate	
LCS	Laboratory Control Sample	
LCSD	Jahoratory Control Sample Dunlicate	· /
LOD	Limit of Detection (see MDL)	,
LOQ	Limit of Quantitation (see PQL)	
MBLK	Method Blank	
MDL	Method Detection Limit	
· MS	Matrix Spike	
MSD	Matrix Spike Duplicate	•
PQL	Practical Quantitation Limit	
RPD ·	Relative Percent Difference	
TDL	Target Detection Limit	
TNTC	Too Numerous To Count	
A	APHA Standard Methods	
- D	ASTM	•
. E	EPA ,	
SW <	SW-846 Update III	
Units Reported	Description	
°F	Degrees Fahrenheit	
mg/Kg	Milligrams per Kilogram	

Client:

ALS Environmental

Project:

HS14101239

Sample ID:

HS14101239-01

Collection Date: 10/28/2014 08:00 AM

Date: 05-Nov-14

Work Order: 14101786

Lab ID: 14101786-01

Matrix: SOIL

Analyses		Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE, REACTIVE				SW7.3.	3.2		Analyst: AXL
Cyanide, Reactive		ND		100	mg/Kg	İ	11/4/2014 04:00 PM
FLASHPOINT, OPEN-CUP				D92			Analyst: MB [/]
Flashpoint, Open-cup	2	>200			°F	1	11/4/2014 09:00 AM
SULFIDE, REACTIVE				SW7.3.	4.2		Analyst: AXL
Sulfide, Reactive		ND		100	mg/Kg	Ħ	11/4/2014 04:00 PM

Client:

ALS Environmental

Work Order:

14101786

Project:

HS14101239

Date: 05-Nov-14

Batch ID: R151788	Instrument ID	WETCHEM		Metho	d: SW7.3 .	.4.2				1		
MBLK	Sample ID: MB-R18	51788-R151788	<u> </u>		محمد مهاد میداند.	Un	its: mg/l	Kg	Analy	ysis Date: 1	1/4/2014 ()4:00 PM
Client ID:		Run ID	WETCH	IEM_14110	4H	Seq	vo: 301 7	7208	Prep Date:		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value		%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide, Reactive	anderen en standigen for tal for the transfer for the forest of the fore	ND	100	nden valennet a andri d es ^{ge} renor pr		-(*****************			پهجون سايونده إحد ب إينان
LCS	Sample ID: LCS-R1	51788-R15178	38	***************************************		Ųn	its: mg/	Kg	Analy	ysis Date: 1	1/4/2014 ()4:00 PM
Client ID:		Run ID	WETCH	IEM_14110	4H	Seq	vo: 301 7	7209	Prep Date:	*	DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value		%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide, Reactive		1776	100	2149	•	0	82.6	60-120		0		
The following samp	eles were analyzed in	this batch:	01	101786- A	Frida (

Client:

ALS Environmental

Work Order:

14101786

Project:

HS14101239

Batch ID: R151789

Instrument ID WETCHEM

Method: SW7.3.3.2

MBLK

Sample ID: MBLK-R151789-R151789

Units: mg/Kg Analysis Date: 11/4/2014 04:00 PM

QC BATCH REPORT

Client ID:

Run ID: WETCHEM_141104I SeqNo: 3017213

Prep Date:

Analyte

Result

SPK Ref Value

Control Limit %REC

RPD Ref Value

RPD Limit %RPD

Cyanide, Reactive:

ND 100

Sample ID: LCS-R151789-R151789

Units: mg/Kg

Analysis Date: 11/4/2014 04:00 PM

%RPD

Client ID:

Run ID: WETCHEM_1411041

SeqNo: 3017214 Prep Date:

DF: 1

Analyte

LCS

Result **PQL** SPK Val

PQL

SPK Ref Value

Limit %REC

RPD Ref Value

RPD Limit

Control

Qual

Cyanide, Reactive

124.8

248.1

250

250

SPK Val

99.8 75-125

Sample ID: 14101786-01A MS

Units: mg/Kg

Analysis Date: 11/4/2014 04:00 PM

Client ID: HS14101239-01

Run ID: WETCHEM_1411041

SeqNo: 3017217 Prep Date:

© DF: 1 **RPD**

Limit

SPK Ref RPD Ref: Control Value Limit Value Analyte Result PQL SPK Val %REC

Cyanide, Reactive

99.2 50-150

%RPD

Sample ID: 14101786-01A MSD

100

Units: mg/Kg

Analysis Date: 11/4/2014 04:00 PM

Client ID: HS14101239-01 Run ID: WETCHEM_1411041

SeqNo: 3017218 Prep Date:

DF: 1

SPK Ref

100

Control

%REC

99.2

RPD Ref

248.1

RPD

Cyanide, Reactive

Result 248.1

Value SPK Val

Limit 50-150

Value

Limit %RPD 0

35

The following samples were analyzed in this batch:

14101786-

Client:

ALS Environmental

Work Order:

14101786

Project:

HS14101239

Batch ID: R151802	Instrum	ent ID W	ETCHEM		Metho	d: D92			S -				
LCS	Sample ID: L	.CS-R151	802-R1518	02			Uı	nits: °F		Analy	sis Date: 1	1/4/2014 0	9:00 AN
Client ID:		11:	Run ID	: WETCH	IEM_14110	4N	Seq	No: 301	7495	Prep Date:		DF: 1	
Analyte			Result	PQL	SPK Val	SPK Ref Value		%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
lashpoint, Open-cup	l _	grie grie	80	0	81		0	98.8	97-103		0		

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ALS Houston					
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Houston, TX 77099		Houslan, TX 7	7099		
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Client Samp ID	Collection Date	Matrix	Analysis Requeste	: :d	e e la la la la la la la la la la la la la
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	ALS Houston ALS Houston 10450 Stanciliff Rd, Ste : Houston, TX 77099 281-530-5656 Bernadette,fini@alsglob Client Samp ID 21332-Soli-01 Please analyze for the abolumoke.fawal@alsglobal.cd	Phone 6163996070 Pax 6163996185 Rustomer Information Project Name ALS Houston Company Name Inv Attn 10450 Stanciiff Rd, Ste 210 Address Houston, TX 77099 Phone Bernadette, fini@alsglobal.com Email2 Client Samp ID Collection Date 21332-Soil-01 28-Oci-14 08:00 am Please analyze for the above, Send report to Bernadet jumoke, lawel@alsglobal.com	Phone 6163996070 Pax 6163996185 Rustomer information Project Name HS14101239 ALS Houston Company Name Inv Attn Accounts Paya 10450 Stancilif Rd, Ste 210 Address Houston, TX 77099 Houston, TX 77099 Phone 281-530-5656 Bemadette fini@alsglobal.com Email2 Client Samp ID Collection Date Matrix 21332-Soil-01 Please analyze for the above. Send report to Bernadette fini@alsglobal.com Jumoke lawel@alsglobal.com	Phone 6163996070 49263 Fax 6163996185 Dustomer Information Project Name HS14101239 ALS Houston Company Name Inv Attn Accounts Payable 10450 Stanciff Rd, Sta 210 Houston, TX 77099 Houston, TX 77099 Phone 281-530-5656 Bemadelta fini@alsglobal.com Email2 Client Samp ID Collection Date Matrix Analysis Requeste 21332-Soil-01 Z8-Oci-14 08:00 am Soil RCN_S SUB_FLASHPOII	Due date Phone

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Sample Receipt Checklist

Client Name: AL	S - HOUSTON		Date/Time	Received: 30-Oct-1	4 <u>09:30</u>
Work Order: 14	101786		Received b	by: <u>DS</u>	
Checklist complete	(**************************************	30-Oct-14	Reviewed by:	Chad Whelton	30-Oct-14
Matrices:	eSignature	Date		eSignature	Date
-	FedEx			,	
Shipping container	/cooler in good condition?	Yes · 🗹	No 🗔	Not Present	
Custody seals intac	ct on shipping container/cooler?	Yes 🗹	No 🗔	Not Present	
Custody seals intac	ct on sample bottles?	Yes 🗌	No 🗔	Not Present	
Chain of custody p	resent?	Yes 🛂	No 🗌		
Chain of custody si	igned when relinquished and received?	Yes 🗹	No 🗔		
Chain of custody a	grees with sample labels?	Yes 🗹	No 🗔		
Samples in proper	container/bottle?	Yes 🗹	No 🗌		
Sample containers	intact?	Yes 🗹	No 🗌		
Sufficient sample v	volume for indicated test?	Yes 🗹	No 🗐	•	
All samples receive	ed within holding time?	Yes 🗸	No 🗆		
·	ank temperature in compliance?	Yes 🗹	No 🗔		
Sample(s) received	•	Yes 🗹	No 🖵		•
Temperature(s)/Th	, i	3.8 c			
Cooler(s)/Kit(s):			The same of the sa)
• •	s) sent to storage:		4:40:41 PM		
	have zero headspace?	Yes 🗔		No VOA vials submitted	
Nater - pH accepta	able upon receipt?	Yes 🗀	No 🗔		
oH adjusted? oH adjusted by:		Yes L	No L	N/A 🗸	
_ogin Notes:		Commission	anne and a distribution of the second second second	aran arang menganakan mengantah di kabupatan dan aran salah dan a	i
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Client Contacted:	Date Contacted	ty.	Person	Contacted:	<u>~</u>
Contacted By:	Regarding:	١			,
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CorrectiveAction:					
	ì				SPC Page 1 of 1

Longs 1

FORD (JNTY LANDELL

D C JNTY LANDFILL 100 Gunamoke Oedge City, KS 67801 (620) 225-5288

DRIVER COPY RECEIPT DOCUMENT NUMBER

Bill To:					RECEIPT DOCUMENT NUMBER				
000680 Date 11/07/2014 00224366 Vehicle No NE416 Quantity 11.0866	NORTHEND D PO BOX 428 DODGE CITY Rater Time 09:12 Scale 01 Type Rolloff 1 WC COND-SOIL FORD GOUN ALL ORIGINS	ISPOSAL KS 67801 Operator Plate Denor	Scale 01	O00680	NORTHEND D PO BOX 426 DODGE CITY Gross: Weight (56620 LB) Scale 01 (28.31 T) Transaction Type Units TON 100.00%	3222221	•		
raby covery that the b VER NAME	nformation on this form (s in	. •		OU		Document Total	1		
		1		T T					

Lewis

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G. Additional Coacelpitons for Malariale Listed Above

3 LOADS NH CONCRETE = 28,66 TONS

LOWD Z

FORD COUNTY LANDFILL

100 Gunamoke Dodge City, KS 57801 (620) 225-5286

DRIVER COPY RECEIPT DOCUMENT NUMBER

BIII To:					Hauler:	,	22223	
000680	NOR PO B	THEND D	DISPOSAL		000880	NORTHEND D	ISPOSAL .	<u> </u>
et .	DOD	GE CITY	KS 67801	1	1.	DODGE CITY	KS 8780	
Date		y filme	Operator	Buit Time	Operator	IngleWeenD	·	
11/07/2014	1 12	2:09		12:28	abatator	(66640 LB)	Tare Weight (35520 LB)	Not Weight
00224375	Sca	le:01		Scale 01		Scale 01	Scale 01	(33120 LB)
Veitala No.	1	/pe	Plate	OCHIO UT		(34.32 T)	(17.78 T)	(_18.56 T)
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16.586)	1000	COND-80] FORD COL ALL ORIGI	INTY NG	DI	500	Units YON: 100.00%	Unit Price	Amount
VER NAME	Information	on this form i	true to the best of m	/ Knowledge. SIGNATURE:	Mer		Document Total	

Remedition Services IN LEWIS

NON-HAZARDOUS WASTE MANIFEST

Plęa	se print or type (Form designed for use on elite	(12 pitch) typewriter)		İ					
	NON-HAZARDOUS WASTE MANIFEST	1. Generator's US EPA ID N	0,			Manilest Document No.	IG-001	2	. Page 1 1
	3: Generator's Name and Mailing Address	Kan Manakeming		i –				L	
	1	00 Icruso H. Cross I	Blad.				1		•
1	· .	ewis, KS 67352	(620) 324-5525					·····	
	4. Generator's Phone ()								
K	5. Transporter & Company Name	6.	US EPA ID Number	Ì	.,	A. State Trans	porter's ID	1 444 ·	B45/40 et
	iorigicas energoni pai and			j		B. Transporter	brers	J. 645 / 1	
	7. Transporter 2 Company Name	8.	US EPA ID Number			C. State Trans	sporter's ID		
	1		W ₁			D. Transporte	r 2 Phone		
	Designated Facility Name and Site Address	10.	US EPA ID Number			E. State Facili	ly's ID		
	Ferd County Lendill								
	13049 110 Rocd - Dodge	City, KS 67201				F. Facility's Pr	ione 620-225	-5263	
	11. WASTE DESCRIPTION			İ	· Co	ntainers	13.	-	14.
					No.	Туре	Total Quantity		14. Unit Wt,/Vol,
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	G. Additional Descriptions for Materials Listed Abo	ove		 	L	H. Handling C	odes for Wastes Lister	Above	
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`	15. Special Handling Instructions and Additional In			.					
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		11.11.11	11 11 11	//			// // /	1: 1	/ //
	 GENERATOR'S CERTIFICATION: I hereby c in proper condition for transport. The materials 	ertify that the contents of this ship described on this manifest are no	ment are fully and accurately de of subject to federal hazardous w	scribed aste rec	and are in gulations.	all respects			
	On behalf of Cross Man		,	'	- ,				
1			Table American	. -		- / -		<u> </u>	Date
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Ė	17. Transporter 1 Acknowledgement of Receipt o	ı maienais	Siepotigo /	-		16 j	3	Month	Date / Day Year
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Š	18. Transporter 2 Acknowledgement of Receipt of	Matarials	<u> </u>	1		1			Date,
Ĭ₽.	Printed/Typed Name	· materials /	Signature	1				Month	Day Year
TRANSPORTER								,,,,,,,,,,,	
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A		•		1					
C				<u> </u>					
L	20. Facility Owner or Operator: Certification of rec	eipt of the waste materials covere	d by this manifest, except as not	éd in ite	m 19.				.,
1								<u> </u>	Date
Y	Printed/Typed Name	•	Signature					Month	Day Year
Ľ	<i>y</i> .			1					

NON-HAZARDOUS WASTE

ease print or type (Form designed for use or	n elite (12 pitch) typewriter)									
NON-HAZARDOUS WASTE MANIFEST	1. Generator's US EPA ID No.			Manifest Document No.	IG-00	A 2. Pag	e 1			
3- Generator's Name and Mailing Address	CAOUR INTERNITY CANALS									
	100 Junes H. Cross Biv				•					
	Lewis, KS 67552	(620) 324-5525								
4. Generator's Phone ()	,									
5. Transporter of Company Name 30	vices 6.	US EPA ID Number		A. State Transporter's ID						
*		·		B. Transporter 1 Phone						
7. Transporter 2 Company Name	8.	US EPA ID Number		C. State Transporter's ID						
		D. Transporter								
9. Designated Facility Name and Site Addres	ss 10.	US EPA ID Number		E. State Facilii	y's ID					
Ford County Landill	A. Feri We (MOA)			F. Facility's	one 620-225-					
1300 IIV ROES - DO	13049 110 Rocd - Dedge City, KS 67801									
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11. WASTE DESCRIPTION		, i		ntainers	13. Total		14. Unit			
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G. Additional Descriptions for Materials Liste	d Above			H. Handling C	odes for Wastes Listed	Above	· · · · · · · · · · · · · · · · · · ·			
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15. Special Handling Instructions and Addition	nal Information	,								
KS SWDA No.	11139	•			*					
This Authorization Ex	1438 nry 6, 2018						7			
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16. GENERATOR'S CERTIFICATION: I here in proper condition for transport. The mat	eby certify that the contents of this shipment erials described on this manifest are not suf	i are fully and accurately described a bject to lederal hazardous waste regi	ind are in a ulations.	all respects	3					
On behalf of Cross Ma	and child	A Comment of the Comm			ſ	D-1	 			
Printed/Typed Name '		Signature	· ~~ ~			Date Month Da				
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18. Transporter 2 Acknowledgement of Rece	aipt of Materials	TV-LEW T	* * * * * * * * * * * * * * * * * * * *	· · · · · · · · · · · · · · · · · · ·	* * * * * * * * * * * * * * * * * * * *	Date) 1 			
17. Transporter J. Acknowledgement of Reco		Signature	· · · · · · · · · · · · · · · · · · ·	A.	F	Month Day	/ Year			
19 Discrepancy Indication Space										
•	ı			~						
20. Facility Owner or Operator: Certification of	of receipt of the waste materials covered by	this manifest, except as noted in iten	n 19.							
.					Г	. Date	·			
Printed/Typed Name		Signature			<u>-</u>	Month Day				
	4									

NON-HAZARDOUS WASTE MANIFEST



Project number: E0036483 Dated: December 17, 2015 Revised:



KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT BUREAU OF ENVIRONMENTAL REMEDIATION

Application for an

ENVIRONMENTAL USE CONTROLFor property located in the State of Kansas

Application Form Instructions: Please type or print legibly. Incomplete applications may be returned to the applicant. If any of the information requested is not applicable, please enter "NA" in the blank.

Please refer to Appendix A for additional instructions.

SECTION I. PROPERTY INFORMATION	
Name of Site: Cross Manufacturing Facility	
Property Address: 100 James H Cross Blvd	
City (or Township): Lewis County: Edwards	Zip Code: 67552
Township: 24 South Range: 18W (E/W) Ser	ction: 25 Quarter(s): SE/4NE/4
Tax Lot #: Portion of Lot #003 Property Size (in acre	
Has a legal survey been conducted on the portion of property subject Yes No	
Please include a copy of the legal survey and a map that clearly of	
Current use of property: Cross manufactures hydraulic cy	linders at this facility.
Future use of property (if known): Same	
Land use surrounding property (check most applicable description or	
Residential Industrial Commercial Agricultural Industri	Other (explain)
Current zoning of property: No zoning in Lewis.	1
Local governmental entity responsible for zoning this property: N/A Are there mineral rights associated with this property? *Yes 1	<u> </u>
Is there an easement(s) associated with this property? *Yes *Yes *Yes	
*Please altach contact information for the holder(s) of any mineral right	•
Do you have a copy of the current deed? 2 *Yes · 1 No *If yes, ple	1 2 4 4
Is there more than one owner of the property? \(\begin{align*} \text{*Yes} \times \text{No *If yes} \\ \text{No *If yes} \end{align*}	
	on: Cross Manufacturing, Inc.
Owner's Mailing Address: 11011 King Street, Suite 210	
City: Overland Park State: Kansas	Zip Code: 66210
Telephone: (9/3) 45/-/233 Fax: (9/3) 45/-/235 Email	aaron.carriker@crossmfg.com
SECTION II. APPLICANT INFORMATION	
In the Owner of the Present the configuration (M) Very	The state of the s
Is the Owner of the Property the applicant? Yes The *No *If an Authorized Representative of the Owner(s) is submitting the applicant.	Basica alama analytata bina fallaccia a
in an Authorized Representative of the Owner(s) is submitting the apprinformation.	lication please provide the following :
Authorized Representative: John H. Cross, CEO, Cross Ma	nufactuing Inc
	Corporate Coordinator
Mailing Address: 100 James H Cross Blvd	The state of the s
City: Lewis State: Kansas	Zip Code: 67552
Telephone: (620) 324-5525 Fax: (620) 324-5737 Email	
Please attach a notarized letter of authorization, provided in appe	
Environmental Has Control Application Bankage Version 9.0 May 20, 2015	Denot et d

Kansas Department of Health and Environment/Bureau of Environmental Remediation APPLICATION FOR AN ENVIRONMENTAL USE CONTROL

EUC Application Form Page 2 of 4

SECTION III. NATURE OF POTENTIAL CONTAMINATION
Contaminant Type identified at the property (check all that you are aware of): Solvents/degreasers Petroleum products Inorganics (salt, soda ash, etc.) PCBs Acids/bases Fertilizer (nitrate, ammonia) Sludge Paint/paint wastes Other (list) limited to hexavalent chromium
Contaminated media on property: Surface Soil Surface Water Surface Water
Please reference any relevant documents that will provide the department with a detailed description of the contamination and the proposed remedy. Attach a list of additional references if necessary.
Title/Date: KDHE Voluntary Agreement 12VCP0006 February 23, 2015 Title/Date: Title/Date:
Identify the KDHE Cleanup Program currently addressing the property: State Cooperative Voluntary Cleanup Brownfields State Water Plan Dry Cleaner Trust Fund Above/Underground Storage Tank Other:
Please describe the remedy for the contamination on the property:
Hexavalent chromium contamination in soils treated in situ to less than Tier II industrial/commercial cleanup levels. Reference KDHE VC Plan for details.
Is active remediation occurring at the property? Yes No Will contamination be left on the subject property at concentrations above levels allowing unrestricted residential use following a KDHE approved remediation? Yes No Unknown
nvironmental Use Control Application Package Version 8.0 May 20, 2015

Kansas Department of Health and Environment/Bureau of Environmental Remediation APPLICATION FOR AN ENVIRONMENTAL USE CONTROL

EUC Application Form Page 3 of 4

	· ·
SECTION IV. REQUESTED RESTRICT	IONS/REQUIREMENTS/FREQUENCY
REQUESTED RESTRICTIONS:	
Please check all that apply:	
Restrict excavation, dredging, construction, or digging activ	vities
Restrict drilling or using water wells for domestic or other p	
Restrict or limit access to property	
Restrict land use	
Restrict the type of plant growth or vegetative cover	; →.
Other Restrictions – Please specify:	
Please note the restrictions applied for in this applied for in this applied for in this applied for in this applied for in the county where the subject property is located.	ication will be specified in a property-specifi lepartment and filed with the Register of Deeds in
OST-REMEDIATION REQUIREMENTS:	·
Please check all that apply:	*
Posting notices, maintaining postings	undwater monitoring
Protective structure maintenance (patching, erosion control	l, regrading, etc.)
Vegetative maintenance (mowing, watering, planting, etc.)	
☐ Fence maintenance	•
Other Requirements – Please specify: NONE	(
MONITORING/INSPECTION:	
flonitoring Responsibility: 🚨 Owner 🚨 Authorized R	epresentative 🔲 KDHE 🖾 N/A
requency: Every five years Annual Semi-annual	Quarterly 🛭 Other - Please specify: N/A
espection Responsibility: Owner Authorized R	epresentative
requency: D Every five years D Annual D Semi-annual D	Quarterly XI Other - Please specify: N/A
	Quarterly War Other - Flease specify.
pon approval of an Environmental Use Control Agreement, ersonnel or contractors for the purpose of inspecting the pro-	does the applicant agree to allow access to KDH
Ipon approval of an Environmental Use Control Agreement, ersonnel or contractors for the purpose of inspecting the propaintained?	does the applicant agree to allow access to KDHE
Ipon approval of an Environmental Use Control Agreement, ersonnel or contractors for the purpose of inspecting the pro	does the applicant agree to allow access to KDHE operty to ensure the requested restrictions are being
Ipon approval of an Environmental Use Control Agreement, ersonnel or contractors for the purpose of inspecting the propaintained? Yes No* Please note this application will not be approved if the responsible as a indicate the preferred payment schedule for the proposition.	does the applicant agree to allow access to KDHE operty to ensure the requested restrictions are being se to this question is "NO."
Ipon approval of an Environmental Use Control Agreement, ersonnel or contractors for the purpose of inspecting the propaintained? Yes No* Please note this application will not be approved if the responsible as a indicate the preferred payment schedule for the proposition of the	does the applicant agree to allow access to KDHE operty to ensure the requested restrictions are being se to this question is "NO."
Jpon approval of an Environmental Use Control Agreement, ersonnel or contractors for the purpose of inspecting the pronaintained? ☑ Yes □ No*	does the applicant agree to allow access to KDHE operty to ensure the requested restrictions are being se to this question is "NO."

Kansas Department of Health and Environment/Bureau of Environmental Remediation

APPLICATION FOR AN ENVIRONMENTAL USE CONTROL

EUC Application Form Page 4 of 4

SECTION V.

APPLICATION TO PARTICIPATE TERMS/APPLICATION SIGNATURE

The undersigned has voluntarily applied to the Kansas Department of Health and Environment/Bureau of Environmental Remediation (KDHE/BER) to restrict the use of, or activities on, the property defined in this application due to residual contamination remaining on the subject property above regulatory limits for unrestricted "residential" use. The undersigned agrees that based on this application the KDHE/BER shall issue an Environmental Use Control Agreement to restrict specific use of, or activities on, the subject property. The Environmental Use Control Agreement will contain property-specific restrictions identified in this application as approved by the department, inspection frequencies, access provisions, maintenance requirements, funding requirements, and any other requirements associated with this application. The applicant agrees to register an approved, notarized Environmental Use Control Agreement with the Register of Deeds in the county in which the property is located.

BER shall determine, and notify the undersigned accordingly, if the subject property is eligible for an Environmental Use Control. If the subject property is determined eligible, the undersigned shall sign an Environmental Use Control Agreement describing the voluntary restrictions requested by the applicant, register the Environmental Use Control Agreement with the Register of Deeds, and submit a notarized copy to the KDHE/BER within 90 days of KDHE/BER approval of this application.

Execution of this application form does not constitute an Environmental Use Control, and the undersigned shall not be bound to proceed with the voluntary restrictions. By completing and signing this application, the undersigned does not admit or assume liability for contamination at the property. The undersigned may terminate this application at any time by notifying KDHE/BER.

The application should be submitted to:

Environmental Use Control Program

Remedial Section

Kansas Department of Health and Environment

Bureau of Environmental Remediation

1000 SW Jackson, Suite 410 Topeka, Kansas 66612-1367

Name: (print or type)	Raymond Law	Title:	EH&S Corp. Coordinator
Signature: fugnion	of four	Date:	Locan bez 14, 2015

Environmental Use Control Application Package, Version 8.0, May 20, 2015

Page 4 of 4



MANUFACTURING, INC.

Dependable Hydraulics

11011 King Street • Suite 210 • Overland Park, Kansas 66210 Phone: (913) 451-1233 Fax: (913) 451-1235

December 11, 2015

VIA U.S. MAIL AND E-MAIL: KWHEELER@KDHEKS.GOV

Environmental Use Control Program Remedial Section Attn: Kelsee Wheeler Kansas Department of Health and Environment Bureau of Environmental Remediation 1000 SW Jackson, Suite 540 Topeka, KS 66612-1367

RE: Authorization for Environmental Use Control Application

Dear Ms. Wheeler:

I, John H. Cross, President of Cross Manufacturing, Inc. ("CMI"), am familiar with environmental work performed on CMI's property through the VCP, under KDHR Voluntary Agreement 12VCP0006 February 23, 2015, which is on file at KDHE. I am aware that the activities contemplated herein may restrict certain activities on CMI's property and are being performed voluntarily pursuant to the Environmental Use Control (EUC) Act ("K.S.A. 65-1.221 et seq.).

Raymond Law of CMI is hereby authorized to make application on behalf of CMI to the EUC program.

I understand that, with my approval, I will be the signatory of any EUC Agreement applied to CMI property.

CROSS MANUFACTURING, INC.

State of Kansas County of Johnson)

This instrument was acknowledged before me on December 11 3015 by John H. Cross whose identity was proved to me on the basis of satisfactory evidence.

Notary Public

My appointment expires: 7-18-18

NOTARY PUBLIC STATE OF KANSAS SONDRA TODD My Appointment Expires

Garber Surveying Service, P.A.



2908 North Plum St. Hutchinson, Kansas 67502 none 620 665-7032 . FAX 620 663-7401

511 North Poplar St. 115 East Marlin Newton, Kansas 67114 McPherson, Kansas 67460 Phone 316 283-5053 • FAX 316 283-5073 Phone 620 241-4441 • FAX 620 241-4458

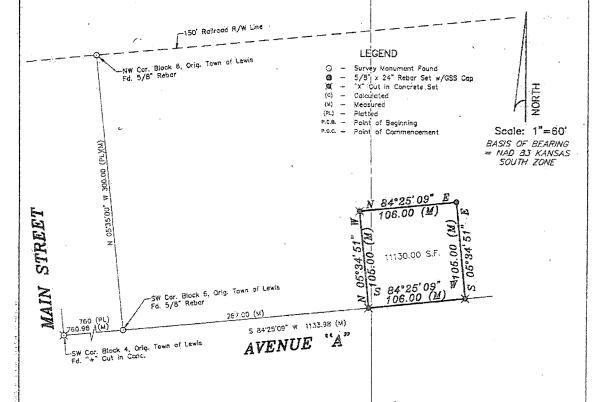
Project No. G2015-841

SURVEY FOR: REMEDIATION SERVICES, INC.

DESCRIPTION:

A portion of the Northwest Quarter of Section 25, Township 24 South, Range 16 Wast of the 6th Principal Meridian in the Town of Lewis, Edwards County, Kansas, more particularly described as follows:

Commencing at the Southwest corner of Block 5, Original Town of Lewis; thence with a bearing North 84 25 09" East (basis of bearings Commencing at the Southwest corner of Block 6, Original town of Lewis; theree with a pearing north 64 20 US that Quality the South line of said Block 6 and the extension thereof a distance of 267.00 feet for the point of beginning; thence North 65'34'5'. West perpendicular to the South line of said Block 6 a distance of 105.00 feet; thence North 64'25'09" Bast parallel with the South line of said Block 6 a distance of 105.00 feet to the extension of the South line of said Block 6; thence South 84'25'09" West along the extension of the South line of said Block 6 a distance of 105.00 feet to the extension of the South line of said Block 6; thence South 84'25'09" West along the extension of the South line of said Block 6 a distance of 105.00 feet to the point of beginning containing 11.130.00 square feet.



DATE OF FIELD WORK: Dec. 1, 2015

SURVEYOR'S CERTIFICATE:

I hereby certify this plat to be a true, correct and complete representation of the property described supervision.

Dated: Dec. 9, 2015

Copyright 0 2015 Garber Surveying Service, P.A.

SURV

DIED RECORD NO. 5 8 PAGE 329 CHICAGO TITLE INSURANCE COMPANY KANSAS CITY DIVISION

KANSAS QUITCLAIM DEED (Statutory Form)

HI-PL	AINS LEASING, INC., a Kansas corporation) • • • • • • • • • • • • • • • • • • •
,	w(o) and warrant(o) / Quitclaim(a) to	
CROSS	MANUFACTURING, INC., 8 Kansas corporati	ion,
-an-jai	nt-tenente-end-not-ee-tenente-in-common	
(Gran	tee's address: Suite 210, 11011 King Street	et, Overland Park, Kansas 66210
all of	the following described real estate in Edwards	County, Kansas:
Tract 1:	Twenty-four (24) South, Range Eighteen (18) West es follows: Beginning at the intersection of South R/W line of the A.T. & S.F. Ry., esid point 25, thence Northerly 25 feat, thence eastner and e distance of 102.67 feet to a point on the Easterly on the South R/W line of old US 50 hangle South 605.87 feat, thence Westerly through	r (NE/4) of Section Twesty-five (25), in Township of the 6th P.M., more particularly described of the East City Limits of Lewis, Kensas, and the t being on the N-S 1/2 section line of Section ritheasterly through an interior angle of 1050 35' South R/M line of Old U. S. 50 Highway, thence Highway a distance of 479 feet, thence at a right an angle of 840 00' end a distance of 638.39 thence North on the 1/2 section line 501.18 feet more or less.
Tract 2;	tollows: Beginning at a point 109-1/2 feet a line of Jersey Street, in Lewis, Kensos, thence a the extended morth line of Avenue "A", thence the quarter section line, thence south to a point Avenue "B", thence west to the place of begin	the NM/4 of Sec. 25-T24S-RIBN, described as north of the north line of Avenue "B" on the east northerly on the east line of Jersey Street to extended north line of Avenue "A" to t 109-1/2 feet north of the north line of nning, EXCEPT that portion of sold lends occupied that portion thereof lying south of the north
Tract 5:	more perticularly described and located with reference, as follows: Commencing at a point or east of the point of intersection of the East line of Price East 150 feet to the middle of the alley of Block the west line of Jersey Street, thence north Kansas and Meatern Railroad Company, now the A.T. to the east line of Price Street; thence so the place of beginning, said tract boing 10 feet	Township 24 South, Range 18 West of the 6th P.M., ereace to streets and evenues in the town of a the extended north line of Avenue "A", 390 feet me of Lewis Street and the North line of Avenue Street, 150 feet, for place of beginning, thence & 6. as formerly platted, and 150 feet west of h 150 feet to the station grounds of the Chicago, & S.F. Reilway Co., thence westerly 150 feet with on the east line of Price Street, 150 feet to off the west aide of said allay, and all of 3 in Block 6 of the original townsite of the city my, in Edwards County, Kamass.
owned or	MITH cil other real property and interests in real claimed by said Hi-Plains Leasing, Inc.	
for the	e sum of OHE DOLLAR and other valuable	considerations.
Date:	August 24, 1989	,
ATTE	ST:	
		HI-PLAINS LEASING, INC.
Patr	click B. Cross, Secretary (Seal)	By: Orh V. Cross, President
Cauti	ion: This is a multiple-purpose deed form a Obtain legal advice before completing	and inapplicable portions must be stricken. ;.







	KANSAS ACKNO	OWLEDGMENT	
STATE OF	1		
County of	} **		•
DE 1S BEHEMBEREN SE	-4 4bi-		
before me, the undersigned, a N	lotary Public in and for s	aid County and State, cam	e
who personally	brown to me to be the si	ame nerson who execu	ted the mithin instrument of
writing, and duly acknowledged	the execution of the sam	i e.	•
IN WITNESS WHEREOF, I last above written.	have hereunto subscribed	d my name and affixed my	official seal the day and year
(*			
My commission expires			Notary Public
*			3
*			
	KANSAS ACKNO	WLEDGMENT	
STATE OF	{_		
County of			
BE IT REMEMBERED. The	nt on this	day of	
before me, the undersigned, a N	otary Public in and for so	ild County and State, came	
who personally	known to me to be the so	ime person who execu	ted the within instrument of
writing, and duly acknowledged IN WITNESS WHEREOF, I			official east the day and weer
last above written.	moe nereunto suoscribea	iny name uni opiaco my t	Micial seal the day and year
My commission expires	19		`
			Notary Public
		`	
بز	MINSAL CORPORATION	ACKNOWLEDGMENT	
STATE OF KANSAS	188	į	
County of Tohuser	WONAUT TO		
RE IT DEMEMBERED 4	PURIC PA	day of AUGUST	A.D. 1989 hefore me
BE IT REMEMBERED (1) the undersigned, a Notary (8)	ic in and for said County	and State, camelot	n H. Cross
President of the Hi-Plan	Proprinted bell existing a	inder and by virtue of the	laws of Kenses
a corporation duly organized, in and Patrice E. Gross	Secr	retary of said corporation, i	oho are personally known to
me to be such officers, and who a within instrument on behalf of so			
the act and deed of said corpora	ition		
IN WITNESS WHEREOF, I last above written.	have hereunto subscribed	i my name and affixed my	official seal, the day and year
	,	1 1	11 1
My commission expires Lac	da2.1095	Jewn (X.)	Made
			Notary Public.
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