

TCEQ

Attachment D

Quarterly Sludge Summary Report Form

- Note 1: If your site has more than one land application field, please submit a separate form for each field.
 Note 2: Please place this sheet at the top of your Quarterly Sludge Report.
 Note 3: If you have more than one permitted site, then fill-out this form for each one of those sites.
 Note 4: Please send a copy of this sheet and all attachments to the local TCEQ regional office.

For TCEQ Quarter <u>1st</u> Reporting period from <u>9/1/13</u> , to, <u>11/30/2013</u>	
PERMIT NO.: <u>WQ 000 444 7000</u>	DATE: <u>12/04/2013</u>
NAME OF PERMITTEE: <u>K-3 Resources, LP</u>	
MAILING ADDRESS: <u>PO Box 2236</u> <u>Alvin, TX 77512</u>	
CONTACT PERSON: Name: <u>Charles E. Pehl</u> Telephone No: <u>281-585-2817</u>	

Field No: _____ (Submit separate form for each field, if site has two or more fields)

- Class B Sewage Sludge Land Applied : 213.04 dry tons / quarter
 - Treated Domestic Septage - Land Applied : 0 gallons / quarter
 - Method used to treat Domestic Septage: N/A
 - Water Treatment Plant Sludge - Land Applied: 2.99 dry tons /quarter
 - Class A sludge land applied : 0 dry tons / quarter
- a. Acreage used for Sludge Application/disposal at this site: 89.78 acres
- b. Site Vegetation (such as grass type etc) and # of cuttings:- Bermudagrass/Winter Rye 7-ton/AC 4-6 cuttings
- c. Does any of the sludge you have generated or received NOT MEET concentration limits for any of the metals listed in Table 3 of "30 TAC §312.43 (b)"? Yes _____ No ✓
- d. Site location: Latitude: N 29° 54' 05", Longitude: W 95° 57' 28"
- e. Site physical address: West side of SH 362, 1 mile south of intersection of SH 362 and SH 529, Waller County,

Please attach the information regarding the following items (Sewage Sludge only):-

- * Please note the following information shall be provided in computer generated report format:
 * Please place check mark before each item below to indicate you have attached that item with this report.

1. Metal concentration, pathogen analysis data and vector attraction certifications of sludge for each source.
2. Provide a list containing the name and permit number of each source of sludge.
3. Date of delivery of each load of sludge land applied.
4. Date of land application of each load of sludge.
5. The cumulative metal loading rates for any metals as listed in Table 2 of 30 TAC §312.43 (b)"?
6. The suggested agronomic rate for the class B sludge.

PLEASE MAIL THE COMPLETED REPORT TO :

Texas Commission on Environmental Quality
 Municipal Permits Team (MC 148)
 Wastewater Permitting Section
 P.O. Box 13087
 Austin, TX 78711-3087

**Facilities Approved
by TCEQ for
Land Application**

Date: 11/30/2013

Facility Name	Permit Number	Approval Date
BMI Lime Stabilization Facility	4364	3/3/2004
BMI Lime Stabilization Facility	4538	7/26/2004
Addicks	11696-002	2/4/2003
Aldine Jr High	12072-001	2/4/2003
Arcola, City of	13362-001	1/26/2006
Baeliff	10627-001	2/4/2003
Bay View, City of	10770-001	8/22/2012
Bellville, City of	10385-002	3/3/2004
BC1	12332-001	2/4/2003
BC 31	14546-001	12/2/2011
Bernard Timbers WSC	12097-001	7/26/2004
Bilma	12025-001	1/26/2006
Blue Ridge	11553-001	2/4/2003
Carby MHP	14217-001	1/12/2005
Castlewood	11883-001	2/4/2003
Chelford City	14418-001	7/24/2013
Cinco Central	13558-001	2/4/2003
Cinco South	13172-002	2/4/2003
Cinco Southwest	14343-001	12/2/2011
Copperfield	11947-001	2/4/2003
Crosby	11388-001	2/4/2003
Cy-Klein	11366-001	3/3/2004
Durkee Manor	10419-001	3/3/2004
Dynamics Products	11841-001	10/21/2005
Emerson EST	14285-001	12/10/2004
Fairgreen	11791-001	2/4/2003
Fondren (HC WCID) Road	10570-001	2/4/2003
Fort Bend 25	12003-001	4/29/2003
Fort Bend 26	12073-001	3/3/2004
Fort Bend 30	12068-001	3/08/2012
Fort Bend 37	12370-001	2/4/2003
Fort Bend 81	13051-002	2/4/2003
Fort Bend 106	12356-001	2/4/2003
Fort Bend 116	13976-001	2/4/2003
Fort Bend 142	14408-001	3/29/2007
Fry Road	11989-001	10/21/2005
Grantham	12070-002	2/4/2003
Greentrails	12289-001	2/4/2003
Harris County Detention Center (HCDC)	13561-001	11/7/2006
Harris County Juvenile Boot Camp (HCBC)	13921-001	12/10/2004
HC/FB 1	12805-001	2/4/2003
HC 8	11727-001	4/29/2013
HCFWSD 6	10184-001	3/3/2004
HC FWSD 58	11941-001	2/4/2003
HC WCID 109	11026-002	2/4/2003
HC 24	11988-001	2/4/2003
HC 26	11406-001	2/4/2003
HC 58	11941-001	3/3/2004
HC 70	11486-001	1/12/2005
HC 71	11947-001	5/15/2013
HC 82	11799-001	3/3/2004

**Facilities Approved
by TCEQ for
Land Application**

Facility Name	Permit Number	Approval Date
HC 89	12939-001	4/29/2003
HC WCID 92	10908-001	5/15/2013
HC 104	11925-001	9/5/2012
HC 105	11792-002	4/29/2003
HC 122	12250-001	4/26/2004
HC 130	12574-001	11/14/2013
HC 155	12726-001	2/4/2003
HC 185	12124-001	12/2/2011
HC 196	12447-001	2/4/2003
HC 200	12294-001	3/3/2004
HC 238	12802-001	2/4/2003
HC 249	13765-001	2/4/2003
HC 284	12949-001	2/4/2003
HC 345	12356-001	12/2/2011
HC 358	13290-002	5/15/2013
HC 365	13881-001	4/18/2013
HC 368	12044-001	3/3/2004
HC 374	14354-001	4/10/2013
HC 391	14327-001	12/2/2011
HC 405	14448-001	6/6/2013
HC 432	14589-001	11/14/2013
HC 408	14606-001	6/6/2013
Heather Glen	11231-001	2/4/2003
High Meadow	10812-001	2/4/2003
Hillman Schrimp	03719-001	2/4/2003
Holiday Inn Airport	14066-001	2/4/2003
Horsebend Bayou	12128-001	3/15/2011
Hunter's Glen	11618-001	2/4/2003
Inverness Forest	10783-001	2/4/2003
Katy, City of	10706-001	4/29/2003
Langham Creek	11682-001	12/13/2005
Manford Williams Elementary 8	13007-001	4/29/2003
Mayde Creek	11969-001	3/3/2004
Meadow Hill	11215-001	3/3/2004
Meadow Place	11039-001	10/15/2012
MC UD 2	11271-001	5/3/2013
MC 15	11395-001	2/4/2003
MC 24	14116-001	11/14/2013
MC 56	13760-001	12/2/2011
MC 112	14671001	3/15/2011
MC-Woodland Oaks	14166-001	5/3/2013
Missouri City	13873-001	2/4/2003
New Ulm	13655-001	2/7/2007
Northforest	10905-001	2/4/2003
Northampton	10910-001	12/10/2004
Northline	10518-001	2/4/2003
North Mission Glen	12379-001	1/15/2013
North Park	11855-001	2/4/2003
NWHC 9	14030-001	2/4/2003
NWHC 10	11912-002	2/4/2003
NWHC 15	11939-001	3/3/2004
NWHC 20	13625-001	3/3/2004

**Facilities Approved
by TCEQ for
Land Application**

Facility Name	Permit Number	Approval Date
NWHC 21-23	12144-001	3/3/2004
NWHC 24	13760-001	11/14/2013
NWHC 36	13573-001	12/2/2011
Oakwilde	10236-001	3/3/2004
Orange Grove	12070-004	2/4/2003
Palmer Plantation	12937-001	3/3/2004
Pearland, City of	21484-001	3/3/2004
Pecan Grove	11655-001	3/3/2005
'Plantation	11971-001	1/12/2005
Plantation Crossing	14490-001	12/2/2011
Ponderosa, Joint Powers	11081-001	2/4/2003
Rayford Road	12030-001	2/4/2003
Remington	11328-001	4/29/2005
Richmond, City of	10258-003	3/15/2011
River Oaks MHP	12692-001	12/10/2004
Riverside MHP(Glen Oaks)	12296-001	11/7/2006
Rosenberg, City of	10607-003	3/20/2013
Sealy, City of	10276-001	3/15/2011
Sienna Plantation	14100-001	3/15/2011
Southern Montgomery County	11001-01	7/26/2005
SWHC 1	12641-001	2/4/2003
Spring Creek	11574-001	2/4/2003
Spring Cypress	13711-001	2/4/2003
Sugarland, City of	12833-001	4/29/2005
Tiki Island	10879-001	2/4/2003
Timbercrest	13487-001	3/3/2004
Timberlake	11267-001	3/8/2012
Timberlane	11142-002	1/26/2006
City of Tomball, North	101616-001	2/26/2013
City of Tomball, South	101616-002	2/26/2013
Varco Shaffer	3994	12/10/2004
Waller, City of	10310-001	9/13/2012
WHC 7	12140-001	12/2/2011
WHC 11	13689-001	2/4/2003
WHC 15	12233-001	12/10/2004
Westlake	11284-001	11/14/2013
West Memorial	11152-001	2/4/2003
Westmont MHP	12761-001	12/10/2004
West Park	12346-001	7/26/2004
Ann Louise-Ed Complex (Alief ISD)Wilson	13609-001	2/4/2003
WHC 10 (Winchester)	10472-001	2/4/2003
Wild Peach Elementary (CBISD)	12103-001	Pending (7/25/13)
Williamsburg	11598-001	3/3/2004
Willow River Farms	13466-001	7/26/2004
Woodcreek	11933-001	2/4/2003
Woodland Oaks	11670-001	3/3/2004



Land Application Manifest Summary By Site

<Application Date Range: 09/01/2013 - 11/30/2013>

TCEQ # 22430

Site Type: Land Application
Permit No: WQ0004447000
Site Name: Carl Miller Farms 3 RN102643384
Address: Lat: 29 degrees 54' 5.41"N Lon: 95 degrees 57' 28.05"W Quality: Class B

Delivery Date	Time	Manifest	Generator	Liquid Gallons	Cake Yards	Percent Solids	Dry Tons	Dry Metric Tons	Field #	Acres	Land Use	Appl. Date
10/17/2013	05:45 PM	148934	HC 238	6,500		1.79	0.485180	0.440058	1	89.78	Hay/Pasture	10/17/2013
10/17/2013	05:15 PM	149718	HC 238	6,500		1.79	0.485180	0.440058	1	89.78	Hay/Pasture	10/17/2013
10/17/2013	11:15 AM	150637	HC 238	6,500		1.79	0.485180	0.440058	1	89.78	Hay/Pasture	10/17/2013
10/17/2013	01:30 PM	150638	HC 238	6,500		1.79	0.485180	0.440058	1	89.78	Hay/Pasture	10/17/2013
10/17/2013	04:00 PM	150639	HC 238	6,500		1.79	0.485180	0.440058	1	89.78	Hay/Pasture	10/17/2013
10/17/2013	08:15 AM	150640	HC 238	6,500		1.79	0.485180	0.440058	1	89.78	Hay/Pasture	10/17/2013
10/17/2013	06:30 PM	150659	HC 238	6,500		1.79	0.485180	0.440058	1	89.78	Hay/Pasture	10/17/2013
10/17/2013	06:15 PM	151145	HC 238	6,500		1.79	0.485180	0.440058	1	89.78	Hay/Pasture	10/17/2013
10/17/2013	06:00 PM	151222	HC 238	6,500		1.79	0.485180	0.440058	1	89.78	Hay/Pasture	10/17/2013
10/17/2013	03:00 PM	151244	HC 238	6,500		1.79	0.485180	0.440058	1	89.78	Hay/Pasture	10/17/2013
10/17/2013	05:00 PM	151245	HC 238	6,500		1.79	0.485180	0.440058	1	89.78	Hay/Pasture	10/17/2013
10/18/2013	04:30 PM	150504	HC 238	6,500		1.79	0.485180	0.440058	1	89.78	Hay/Pasture	10/18/2013
10/18/2013	06:45 PM	150505	HC 238	6,500		1.79	0.485180	0.440058	1	89.78	Hay/Pasture	10/18/2013
10/18/2013	04:00 PM	151283	HC 238	6,500		1.79	0.485180	0.440058	1	89.78	Hay/Pasture	10/18/2013
10/18/2013	06:00 PM	151284	HC 238	6,500		1.79	0.485180	0.440058	1	89.78	Hay/Pasture	10/18/2013
10/18/2013	10:15 AM	151301	HC 238	6,500		1.79	0.485180	0.440058	1	89.78	Hay/Pasture	10/18/2013
10/18/2013	12:30 PM	151302	HC 238	6,500		1.79	0.485180	0.440058	1	89.78	Hay/Pasture	10/18/2013
10/18/2013	03:00 PM	151303	HC 238	6,500		1.79	0.485180	0.440058	1	89.78	Hay/Pasture	10/18/2013
10/18/2013	05:30 PM	151304	HC 238	6,500		1.79	0.485180	0.440058	1	89.78	Hay/Pasture	10/18/2013
10/18/2013	01:45 PM	151321	HC 238	6,500		1.79	0.485180	0.440058	1	89.78	Hay/Pasture	10/18/2013
10/18/2013	04:15 PM	151322	HC 238	6,500		1.79	0.485180	0.440058	1	89.78	Hay/Pasture	10/18/2013
10/23/2013	01:45 PM	151201	Waller WWTP	6,500		0.90	0.243945	0.221258	1	89.78	Hay/Pasture	10/23/2013
10/23/2013	08:30 AM	151236	Waller WWTP	6,500		0.90	0.243945	0.221258	1	89.78	Hay/Pasture	10/23/2013
10/23/2013	09:45 AM	151237	Waller WWTP	6,500		0.90	0.243945	0.221258	1	89.78	Hay/Pasture	10/23/2013
10/23/2013	10:45 AM	151238	Waller WWTP	6,500		0.90	0.243945	0.221258	1	89.78	Hay/Pasture	10/23/2013
10/23/2013	11:45 AM	151239	Waller WWTP	6,500		0.90	0.243945	0.221258	1	89.78	Hay/Pasture	10/23/2013
10/23/2013	12:45 PM	151240	Waller WWTP	6,500		0.90	0.243945	0.221258	1	89.78	Hay/Pasture	10/23/2013
10/23/2013	02:00 PM	151343	Waller WWTP	6,500		0.90	0.243945	0.221258	1	89.78	Hay/Pasture	10/23/2013
10/23/2013	03:00 PM	151344	Waller WWTP	6,500		0.90	0.243945	0.221258	1	89.78	Hay/Pasture	10/23/2013
10/23/2013	04:15 PM	151345	Waller WWTP	6,500		0.90	0.243945	0.221258	1	89.78	Hay/Pasture	10/23/2013
10/23/2013	01:30 PM	151569	Waller WWTP	6,500		0.90	0.243945	0.221258	1	89.78	Hay/Pasture	10/23/2013
10/25/2013	12:30 PM	150717	HC 432	6,500		1.10	0.298155	0.270427	1	89.78	Hay/Pasture	10/25/2013



Land Application Manifest Summary By Site

<Application Date Range: 09/01/2013 - 11/30/2013>

TCEQ # 22430

Site Type: Land Application
Permit No: WQ0004447000
Site Name: Carl Miller Farms 3 RN102643384
Address: Lat: 29 degrees 54' 5.41"N Lon: 95 degrees 57' 28.05"W Quality: Class B

Delivery Date	Time	Manifest	Generator	Liquid Gallons	Cake Yards	Percent Solids	Dry Tons	Dry Metric Tons	Field #	Acres Land Use	Appl. Date
10/25/2013	01:15 PM	150718	HC 432	6,500		1.10	0.298155	0.270427	1	89.78 Hay/Pasture	10/25/2013
10/25/2013	01:15 PM	150753	HC 432	6,500		1.10	0.298155	0.270427	1	89.78 Hay/Pasture	10/25/2013
10/25/2013	02:15 PM	150809	HC 432	6,500		1.10	0.298155	0.270427	1	89.78 Hay/Pasture	10/25/2013
10/25/2013	12:15 PM	151046	HC 432	6,500		1.10	0.298155	0.270427	1	89.78 Hay/Pasture	10/25/2013
10/29/2013	10:00 AM	150784	Brookshire WWTP	6,500		2.60	0.704730	0.639190	1	89.78 Hay/Pasture	10/29/2013
10/29/2013	11:30 AM	150813	Brookshire WWTP	6,500		2.60	0.704730	0.639190	1	89.78 Hay/Pasture	10/29/2013
10/29/2013	10:00 AM	150922	Brookshire WWTP	6,500		2.60	0.704730	0.639190	1	89.78 Hay/Pasture	10/29/2013
10/29/2013	12:45 PM	151051	Beacon Estates	6,500		1.68	0.455364	0.413015	1	89.78 Hay/Pasture	10/29/2013
10/29/2013	09:30 AM	151270	Brookshire WWTP	6,500		2.60	0.704730	0.639190	1	89.78 Hay/Pasture	10/29/2013
10/29/2013	09:30 AM	151374	Brookshire WWTP	6,500		2.60	0.704730	0.639190	1	89.78 Hay/Pasture	10/29/2013
11/06/2013	05:15 PM	150829	HC 345	6,500		1.80	0.487890	0.442516	1	89.78 Hay/Pasture	11/06/2013
11/06/2013	02:45 PM	150848	Brookshire WWTP	6,500		2.60	0.704730	0.639190	1	89.78 Hay/Pasture	11/06/2013
11/06/2013	04:45 PM	150849	HC 345	6,500		1.80	0.487890	0.442516	1	89.78 Hay/Pasture	11/06/2013
11/06/2013	04:00 PM	150869	HC 345	6,500		1.80	0.487890	0.442516	1	89.78 Hay/Pasture	11/06/2013
11/06/2013	05:45 PM	151423	HC 345	6,500		1.80	0.487890	0.442516	1	89.78 Hay/Pasture	11/06/2013
11/06/2013	04:30 PM	151606	HC 345	6,500		1.80	0.487890	0.442516	1	89.78 Hay/Pasture	11/06/2013
11/06/2013	04:00 PM	152205	HC 345	6,500		1.80	0.487890	0.442516	1	89.78 Hay/Pasture	11/06/2013
11/07/2013	07:45 AM	151424	Willow Creek Farms	6,500		1.50	0.406575	0.368764	1	89.78 Hay/Pasture	11/07/2013
11/07/2013	09:15 AM	151425	Willow Creek Farms	6,500		1.50	0.406575	0.368764	1	89.78 Hay/Pasture	11/07/2013
11/07/2013	10:30 AM	151426	Willow Creek Farms	6,500		1.50	0.406575	0.368764	1	89.78 Hay/Pasture	11/07/2013
11/07/2013	11:45 AM	151427	Willow Creek Farms	6,500		1.50	0.406575	0.368764	1	89.78 Hay/Pasture	11/07/2013
11/07/2013	01:00 PM	151428	Willow Creek Farms	6,500		1.50	0.406575	0.368764	1	89.78 Hay/Pasture	11/07/2013
11/07/2013	02:00 PM	151452	HC MUD 26		13	12.50	1.381250	1.252794	1	89.78 Hay/Pasture	11/07/2013
11/08/2013	03:30 PM	150838	HC 345	6,500		1.80	0.487890	0.442516	1	89.78 Hay/Pasture	11/08/2013
11/08/2013	01:30 PM	150949	HC 345	6,500		1.80	0.487890	0.442516	1	89.78 Hay/Pasture	11/08/2013
11/08/2013	04:00 PM	150950	HC 345	6,500		1.80	0.487890	0.442516	1	89.78 Hay/Pasture	11/08/2013
11/08/2013	12:45 PM	151609	HC 345	6,500		1.80	0.487890	0.442516	1	89.78 Hay/Pasture	11/08/2013
11/08/2013	02:30 PM	151610	HC 345	6,500		1.80	0.487890	0.442516	1	89.78 Hay/Pasture	11/08/2013
11/08/2013	01:00 PM	152212	HC 345	6,500		1.80	0.487890	0.442516	1	89.78 Hay/Pasture	11/08/2013
11/08/2013	03:00 PM	152213	HC 345	6,500		1.80	0.487890	0.442516	1	89.78 Hay/Pasture	11/08/2013
11/11/2013	09:10 AM	150771	HC 358 Fairfield		20	14.00	2.380000	2.158660	1	89.78 Hay/Pasture	11/11/2013
11/11/2013	01:30 PM	152185	FB 30		13	14.60	1.613300	1.463263	1	89.78 Hay/Pasture	11/11/2013



Land Application Manifest Summary By Site

<Application Date Range: 09/01/2013 - 11/30/2013>

TCEQ # 22430

Site Type: Land Application
Permit No: WQ0004447000
Site Name: Carl Miller Farms 3 RN102643384
Address: Lat: 29 degrees 54' 5.41"N Lon: 95 degrees 57' 28.05"W Quality: Class B

Delivery Date	Time	Manifest	Generator	Liquid Gallons	Cake Yards	Percent Solids	Dry Tons	Dry Metric Tons	Field #	Acres	Land Use	Appl. Date
11/12/2013	09:00 AM	148999	Ponderosa JPA		20	14.90	2.533000	2.297431	1	89.78	Hay/Pasture	11/12/2013
11/12/2013	01:00 PM	149000	Chelford City		20	14.33	2.436100	2.209543	1	89.78	Hay/Pasture	11/12/2013
11/12/2013	02:00 AM	150772	HC 358 Fairfield		20	14.00	2.380000	2.158660	1	89.78	Hay/Pasture	11/12/2013
11/12/2013	06:20 AM	150773	HC 358 Fairfield		20	14.00	2.380000	2.158660	1	89.78	Hay/Pasture	11/12/2013
11/12/2013	10:10 AM	150774	HC 358 Fairfield		20	14.00	2.380000	2.158660	1	89.78	Hay/Pasture	11/12/2013
11/12/2013	02:00 PM	150775	HC 358 Fairfield		20	14.00	2.380000	2.158660	1	89.78	Hay/Pasture	11/12/2013
11/12/2013	06:50 PM	150776	HC 358 Fairfield		20	14.00	2.380000	2.158660	1	89.78	Hay/Pasture	11/12/2013
11/12/2013	-11:45 PM	150777	HC 358 Fairfield		20	14.00	2.380000	2.158660	1	89.78	Hay/Pasture	11/12/2013
11/12/2013	11:15 AM	152121	Tomball North		20	10.90	1.853000	1.680671	1	89.78	Hay/Pasture	11/12/2013
11/12/2013	06:00 AM	152186	Chelford City		20	14.33	2.436100	2.209543	1	89.78	Hay/Pasture	11/12/2013
11/12/2013	09:15 AM	152187	FB 106		13	15.70	1.734850	1.573509	1	89.78	Hay/Pasture	11/12/2013
11/12/2013	12:15 PM	152188	HC MUD 26		13	12.50	1.381250	1.252794	1	89.78	Hay/Pasture	11/12/2013
11/12/2013	12:15 PM	152217	North Park	6,500		1.50	0.406575	0.368764	1	89.78	Hay/Pasture	11/12/2013
11/13/2013	09:45 AM	150778	HC 358 Fairfield		20	14.00	2.380000	2.158660	1	89.78	Hay/Pasture	11/13/2013
11/13/2013	12:45 PM	151411	Brookshire WWTP	6,500		2.60	0.704730	0.639190	1	89.78	Hay/Pasture	11/13/2013
11/13/2013	02:15 PM	151412	Brookshire WWTP	6,500		2.60	0.704730	0.639190	1	89.78	Hay/Pasture	11/13/2013
11/13/2013	03:15 PM	151413	Brookshire WWTP	6,500		2.60	0.704730	0.639190	1	89.78	Hay/Pasture	11/13/2013
11/13/2013	04:15 PM	152041	Brookshire WWTP	6,500		2.60	0.704730	0.639190	1	89.78	Hay/Pasture	11/13/2013
11/13/2013	05:00 AM	152123	Chelford City		20	14.33	2.436100	2.209543	1	89.78	Hay/Pasture	11/13/2013
11/13/2013	08:45 AM	152124	Pecan Grove		20	17.50	2.975000	2.698325	1	89.78	Hay/Pasture	11/13/2013
11/13/2013	02:30 PM	152125	NWHC 21- 23		13	2.20	0.243100	0.220492	1	89.78	Hay/Pasture	11/13/2013
11/13/2013	06:45 PM	152126	Langham Creek		13	14.00	1.547000	1.403129	1	89.78	Hay/Pasture	11/13/2013
11/13/2013	11:00 PM	152127	FB 30		13	14.60	1.613300	1.463263	1	89.78	Hay/Pasture	11/13/2013
11/13/2013	03:45 AM	152189	Chelford City		20	14.33	2.436100	2.209543	1	89.78	Hay/Pasture	11/13/2013
11/13/2013	05:15 AM	152190	Cinco Central		20	14.80	2.516000	2.282012	1	89.78	Hay/Pasture	11/13/2013
11/13/2013	03:00 PM	152191	HC MUD 26		13	12.50	1.381250	1.252794	1	89.78	Hay/Pasture	11/13/2013
11/13/2013	02:45 PM	152220	Brookshire WWTP	6,500		2.60	0.704730	0.639190	1	89.78	Hay/Pasture	11/13/2013
11/14/2013	08:25 PM	150779	FB MUD 34 (2)		20	14.00	2.380000	2.158660	1	89.78	Hay/Pasture	11/14/2013
11/14/2013	01:00 PM	150897	Williamsburg	6,500		1.60	0.433680	0.393348	1	89.78	Hay/Pasture	11/14/2013
11/14/2013	02:30 PM	150898	Williamsburg	6,500		1.60	0.433680	0.393348	1	89.78	Hay/Pasture	11/14/2013
11/14/2013	04:30 PM	150899	Williamsburg	6,500		1.60	0.433680	0.393348	1	89.78	Hay/Pasture	11/14/2013
11/14/2013	06:15 PM	150900	Williamsburg	6,500		1.60	0.433680	0.393348	1	89.78	Hay/Pasture	11/14/2013



Land Application Manifest Summary By Site

<Application Date Range: 09/01/2013 - 11/30/2013>

TCEQ # 22430

Site Type: Land Application
Permit No: WQ0004447000
Site Name: Carl Miller Farms 3 RN102643384
Address: Lat: 29 degrees 54' 5.41"N Lon: 95 degrees 57' 28.05"W Quality: Class B

Delivery Date	Time	Manifest	Generator	Liquid Gallons	Cake Yards	Percent Solids	Dry Tons	Dry Metric Tons	Field #	Acres	Land Use	Appl. Date
11/14/2013	02:45 PM	151416	Williamsburg	6,500		1.60	0.433680	0.393348	1	89.78	Hay/Pasture	11/14/2013
11/14/2013	04:30 PM	151417	Williamsburg	6,500		1.60	0.433680	0.393348	1	89.78	Hay/Pasture	11/14/2013
11/14/2013	01:45 PM	151465	Williamsburg	6,500		1.60	0.433680	0.393348	1	89.78	Hay/Pasture	11/14/2013
11/14/2013	03:00 PM	151466	Williamsburg	6,500		1.60	0.433680	0.393348	1	89.78	Hay/Pasture	11/14/2013
11/14/2013	04:45 PM	151467	Williamsburg	6,500		1.60	0.433680	0.393348	1	89.78	Hay/Pasture	11/14/2013
11/14/2013	04:00 PM	151845	Williamsburg	6,500		1.60	0.433680	0.393348	1	89.78	Hay/Pasture	11/14/2013
11/14/2013	02:00 PM	152011	Williamsburg	6,500		1.60	0.433680	0.393348	1	89.78	Hay/Pasture	11/14/2013
11/14/2013	03:30 PM	152012	Williamsburg	6,500		1.60	0.433680	0.393348	1	89.78	Hay/Pasture	11/14/2013
11/14/2013	05:45 PM	152013	Williamsburg	6,500		1.60	0.433680	0.393348	1	89.78	Hay/Pasture	11/14/2013
11/14/2013	03:40 PM	152029	Williamsburg	6,500		1.60	0.433680	0.393348	1	89.78	Hay/Pasture	11/14/2013
11/14/2013	05:45 PM	152046	Williamsburg	6,500		1.60	0.433680	0.393348	1	89.78	Hay/Pasture	11/14/2013
11/14/2013	05:00 PM	152113	Williamsburg	6,500		1.60	0.433680	0.393348	1	89.78	Hay/Pasture	11/14/2013
11/14/2013	01:00 PM	152114	Williamsburg	6,500		1.60	0.433680	0.393348	1	89.78	Hay/Pasture	11/14/2013
11/14/2013	07:30 AM	152128	FB 106		13	15.70	1.734850	1.573509	1	89.78	Hay/Pasture	11/14/2013
11/14/2013	11:00 AM	152129	Chelford City		20	14.33	2.436100	2.209543	1	89.78	Hay/Pasture	11/14/2013
11/14/2013	03:45 PM	152194	Richmond Regional		20	12.96	2.203200	1.998302	1	89.78	Hay/Pasture	11/14/2013
11/14/2013	05:30 AM	152195	Chelford City		20	14.33	2.436100	2.209543	1	89.78	Hay/Pasture	11/14/2013
11/14/2013	09:45 AM	152196	HC MUD 26		13	12.50	1.381250	1.252794	1	89.78	Hay/Pasture	11/14/2013
11/14/2013	11:45 AM	152197	Cinco Central		20	14.80	2.516000	2.282012	1	89.78	Hay/Pasture	11/14/2013
11/14/2013	02:30 PM	152199	Chelford City		20	14.33	2.436100	2.209543	1	89.78	Hay/Pasture	11/14/2013
11/14/2013	05:45 PM	152227	Williamsburg	6,500		1.60	0.433680	0.393348	1	89.78	Hay/Pasture	11/14/2013
11/15/2013	09:15 AM	151846	Williamsburg	6,500		1.60	0.433680	0.393348	1	89.78	Hay/Pasture	11/15/2013
11/15/2013	11:00 AM	151847	Williamsburg	6,500		1.60	0.433680	0.393348	1	89.78	Hay/Pasture	11/15/2013
11/15/2013	12:30 PM	151848	Williamsburg	6,500		1.60	0.433680	0.393348	1	89.78	Hay/Pasture	11/15/2013
11/15/2013	10:00 AM	152048	Williamsburg	6,500		1.60	0.433680	0.393348	1	89.78	Hay/Pasture	11/15/2013
11/15/2013	11:45 AM	152049	Williamsburg	6,500		1.60	0.433680	0.393348	1	89.78	Hay/Pasture	11/15/2013
11/15/2013	01:30 PM	152050	Williamsburg	6,500		1.60	0.433680	0.393348	1	89.78	Hay/Pasture	11/15/2013
11/15/2013	09:15 AM	152061	Williamsburg	6,500		1.60	0.433680	0.393348	1	89.78	Hay/Pasture	11/15/2013
11/15/2013	10:45 AM	152062	Williamsburg	6,500		1.60	0.433680	0.393348	1	89.78	Hay/Pasture	11/15/2013
11/15/2013	12:15 PM	152063	Williamsburg	6,500		1.60	0.433680	0.393348	1	89.78	Hay/Pasturc	11/15/2013
11/15/2013	01:45 PM	152064	Williamsburg	6,500		1.60	0.433680	0.393348	1	89.78	Hay/Pasture	11/15/2013
11/15/2013	08:00 AM	152115	FB MUD 34 (2)		20	14.00	2.380000	2.158660	1	89.78	Hay/Pasture	11/15/2013



Land Application Manifest Summary By Site

<Application Date Range: 09/01/2013 - 11/30/2013>

TCEQ # 22430

Site Type: Land Application
Permit No: WQ0004447000
Site Name: Carl Miller Farms 3 RN102643384
Address: Lat: 29 degrees 54' 5.41"N Lon: 95 degrees 57' 28.05"W Quality: Class B

Delivery Date	Time	Manifest	Generator	Liquid Gallons	Cake Yards	Percent Solids	Dry Tons	Dry Metric Tons	Field #	Acres Land Use	Appl. Date
11/15/2013	09:30 AM	152116	FB MUD 34 (2)		20	14.00	2.380000	2.158660	1	89.78 Hay/Pasture	11/15/2013
11/15/2013	02:00 PM	152117	FB MUD 34 (2)		20	14.00	2.380000	2.158660	1	89.78 Hay/Pasture	11/15/2013
11/15/2013	07:30 PM	152118	FB MUD 34 (2)		20	14.00	2.380000	2.158660	1	89.78 Hay/Pasture	11/15/2013
11/15/2013	12:30 PM	152133	HC MUD 26		13	12.50	1.381250	1.252794	1	89.78 Hay/Pasture	11/15/2013
11/15/2013	03:45 PM	152134	Langham Creek		13	14.00	1.547000	1.403129	1	89.78 Hay/Pasture	11/15/2013
11/15/2013	08:00 PM	152135	FB 106		13	15.70	1.734850	1.573509	1	89.78 Hay/Pasture	11/15/2013
11/15/2013	03:45 AM	152200	Chelford City		20	14.33	2.436100	2.209543	1	89.78 Hay/Pasture	11/15/2013
11/15/2013	05:30 AM	152241	Sealy, City of		20	10.00	1.700000	1.541900	1	89.78 Hay/Pasture	11/15/2013
11/15/2013	08:15 AM	152242	Eagle Lake WWTP		20	14.80	2.516000	2.282012	1	89.78 Hay/Pasture	11/15/2013
11/15/2013	10:00 AM	152243	Bellville, City of		20	21.70	3.689000	3.345923	1	89.78 Hay/Pasture	11/15/2013
11/16/2013	05:30 PM	151901	Chelford City		20	14.33	2.436100	2.209543	1	89.78 Hay/Pasture	11/16/2013
11/16/2013	06:30 AM	152136	NWHC 21- 23		13	2.20	0.243100	0.220492	1	89.78 Hay/Pasture	11/16/2013
11/16/2013	11:00 AM	152137	HC MUD 200		20	12.50	2.125000	1.927375	1	89.78 Hay/Pasture	11/16/2013
11/16/2013	02:30 PM	152138	Cinco Central		20	14.80	2.516000	2.282012	1	89.78 Hay/Pasture	11/16/2013
11/16/2013	06:30 PM	152139	FB 30		13	14.60	1.613300	1.463263	1	89.78 Hay/Pasture	11/16/2013
11/16/2013	06:30 AM	152245	Tomball South		20	15.70	2.669000	2.420783	1	89.78 Hay/Pasture	11/16/2013
11/16/2013	08:15 AM	152247	Chelford City		20	14.33	2.436100	2.209543	1	89.78 Hay/Pasture	11/16/2013
11/16/2013	10:30 AM	152248	Richmond Regional		20	12.96	2.203200	1.998302	1	89.78 Hay/Pasture	11/16/2013
11/18/2013	08:30 AM	151902	Blue Ridge		20	15.83	2.691100	2.440828	1	89.78 Hay/Pasture	11/18/2013
11/18/2013	04:45 AM	152249	Rosenberg (1-A)		20	16.50	2.805000	2.544135	1	89.78 Hay/Pasture	11/18/2013
11/18/2013	01:30 PM	152250	Blue Ridge		20	15.83	2.691100	2.440828	1	89.78 Hay/Pasture	11/18/2013
11/19/2013	06:25 PM	150780	Cinco Southwest		20	14.00	2.380000	2.158660	1	89.78 Hay/Pasture	11/19/2013
11/19/2013	06:00 AM	151904	Ponderosa JPA		20	14.90	2.533000	2.297431	1	89.78 Hay/Pasture	11/19/2013
11/19/2013	11:30 AM	151905	NWHC 21- 23		13	2.20	0.243100	0.220492	1	89.78 Hay/Pasture	11/19/2013
11/19/2013	03:30 PM	151906	Chelford City		20	14.33	2.436100	2.209543	1	89.78 Hay/Pasture	11/19/2013
11/19/2013	07:15 PM	151907	Langham Creek		13	14.00	1.547000	1.403129	1	89.78 Hay/Pasture	11/19/2013
11/19/2013	10:45 PM	151908	Pecan Grove Water		13	27.08	2.992340	2.714052	1	89.78 Hay/Pasture	11/19/2013
11/19/2013	06:30 AM	152072	Cinco Central		20	14.80	2.516000	2.282012	1	89.78 Hay/Pasture	11/19/2013
11/19/2013	02:00 PM	152119	Cinco South		20	14.00	2.380000	2.158660	1	89.78 Hay/Pasture	11/19/2013
11/19/2013	02:00 AM	152120	Cinco South		20	14.00	2.380000	2.158660	1	89.78 Hay/Pasture	11/19/2013
11/19/2013	05:45 AM	152253	Richmond Regional		20	12.96	2.203200	1.998302	1	89.78 Hay/Pasture	11/19/2013
11/19/2013	08:00 AM	152254	Chelford City		20	14.33	2.436100	2.209543	1	89.78 Hay/Pasture	11/19/2013



Land Application Manifest Summary By Site

<Application Date Range: 09/01/2013 - 11/30/2013>

TCEQ # 22430

Site Type: Land Application
Permit No: WQ0004447000
Site Name: Carl Miller Farms 3 RN102643384
Address: Lat: 29 degrees 54' 5.41"N Lon: 95 degrees 57' 28.05"W Quality: Class B

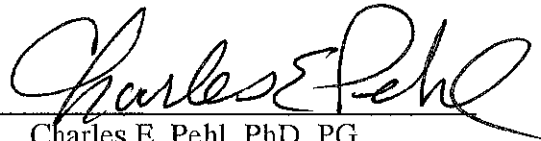
Delivery Date	Time	Manifest	Generator	Liquid Gallons	Cake Yards	Percent Solids	Dry Tons	Dry Metric Tons	Field #	Acres	Land Use	Appl. Date
11/19/2013	08:10 PM	152261	Cinco Southwest		20	14.00	2.380000	2.158660	1	89.78	Hay/Pasture	11/19/2013
11/19/2013	12:00 PM	152301	Cinco South		20	14.00	2.380000	2.158660	1	89.78	Hay/Pasture	11/19/2013
11/19/2013	01:15 PM	152302	Cinco South		20	14.00	2.380000	2.158660	1	89.78	Hay/Pasture	11/19/2013
11/20/2013	06:30 AM	151909	HC WCID 109		20	15.10	2.567000	2.328269	1	89.78	Hay/Pasture	11/20/2013
11/20/2013	10:30 AM	151910	Chelford City		20	14.33	2.436100	2.209543	1	89.78	Hay/Pasture	11/20/2013
11/20/2013	07:15 PM	151912	Langham Creek		13	14.00	1.547000	1.403129	1	89.78	Hay/Pasture	11/20/2013
11/15/2013	07:00 AM	152132	Ponderosa JPA		20	14.90	2.533000	2.297431	1	89.78	Hay/Pasture	11/20/2013
11/19/2013	04:00 AM	152252	Tomball North		20	10.90	1.853000	1.680671	1	89.78	Hay/Pasture	11/20/2013
11/20/2013	05:45 AM	152258	Chelford City		20	14.33	2.436100	2.209543	1	89.78	Hay/Pasture	11/20/2013
11/20/2013	07:30 AM	152303	Cinco Southwest		20	14.00	2.380000	2.158660	1	89.78	Hay/Pasture	11/20/2013
11/20/2013	09:00 AM	152304	Cinco Southwest		20	14.00	2.380000	2.158660	1	89.78	Hay/Pasture	11/20/2013
11/20/2013	03:30 PM	152305	Cinco Southwest		20	14.00	2.380000	2.158660	1	89.78	Hay/Pasture	11/20/2013
11/20/2013	06:00 PM	152306	Cinco Southwest		20	14.00	2.380000	2.158660	1	89.78	Hay/Pasture	11/20/2013
11/19/2013	06:30 AM	151948	Tomball South		20	15.70	2.669000	2.420783	1	89.78	Hay/Pasture	11/23/2013
Site Total				617,500	1,447		216.032999	195.941936				

Cumulative Pollutants
November 30, 2013

<i>Pollutants</i>	Cumulative Pollutants 8/31/2013	Weighted Means	Application 09/01/13 to 11/30/2013	Cumulative to 11/30/2013	
	(kg/ha)	(mg/kg)	(kg/ha)	(kg/ha)	(lb./ac.)
Arsenic	3.84	6.17	0.0135	3.85	3.44
Cadmium	1.80	1.57	0.0034	1.80	1.61
Chromium	11.74	19.61	0.0430	11.78	10.52
Copper	52.42	515.93	1.1315	53.55	47.81
Lead	18.04	16.27	0.0357	18.08	16.14
Mercury	0.17	0.66	0.0014	0.17	0.15
Molybdenum	1.60	9.28	0.0204	1.62	1.45
Nickel	4.09	12.22	0.0268	4.12	3.68
Selenium	1.15	8.78	0.0193	1.17	1.04
Zinc	97.52	950.57	2.0847	99.60	88.93

Biosolids Application (9/01/13 to 11/30/13):

2.41 (tons/acre)



Charles E. Pehl, PhD, PG
Compliance Director

Appendix A
Agronomic Rate Calculations

TCEQ 04447

Part 1: Biosolids Application Rate

11/30/2013

Step 1- CALCULATE QUANTITY OF NUTRIENTS & METALS IN POUNDS PER TON.

Nutrients		Percent	Conversion Factor	Pounds per ton
Total Nitrogen	(TKN)	4.11	x 20 =	82.2
Ammonium Nitrogen	(NH ₄)	0.43	x 20 =	8.6
Nitrate Nitrogen	(NO ₃)	0.07	x 20 =	1.4
Total Phosphorus	(P)	1.43	x 20 =	28.6
Total Potassium	(K)	0.35	x 20 =	7

Pollutants		(mg/kg x 0.002 = lb./ton)	mg/kg*	lb./ton
Total Arsenic	(As)	6.17	x 0.002 =	0.01234
Total Cadmium	(Cd)	1.57	x 0.002 =	0.00314
Total Chromium	(Cr)	19.61	x 0.002 =	0.03922
Total Copper	(Cu)	515.93	x 0.002 =	1.03186
Total Lead	(Pb)	16.27	x 0.002 =	0.03254
Total Mercury	(Hg)	0.66	x 0.002 =	0.00132
Total Molybdenum	(Mo)	9.28	x 0.002 =	0.01856
Total Nickel	(Ni)	12.22	x 0.002 =	0.02444
Total Selenium	(Se)	8.78	x 0.002 =	0.01756
Total Zinc	(Zn)	950.57	x 0.002 =	1.90114

* Values from sludge tests (dry weight)

(Conversion: mg/kg x 0.0001 = %; PPM = mg/kg)

Appendix A
Agronomic Rate Calculations

TCEQ 04447

Step 2.- SOIL TEST ANALYSIS AND FERTILIZER RECOMMENDATIONS

Note: Please include fertilizer recommendation from the local County Extension Service or equivalent source for determining the nitrogen need for the specific crop(s)

Intended Crop(s): Bermudagrass, Winter Rye and native pasture grasses

Yield Goal(s): 7 tons/ac in 4 to 6 cuttings.

pH: 7.0

	<i>N lb/ac</i>
A. Crop nutrient need for specific yield goal**	350
B. Nutrients available in soil	11.42
= 2 x NO ₃ -N (ppm)(0-6" soil depth)+ 6 x NO ₃ -N(ppm)(6-24" soil depth)	
C. Nutrient amount still needed: (A -B) (enter this amount in step 4A.)	338.58

** Crop nutrient need is based on 50 lb.N/ton of forage, Texas Agriculture Extension Service, Fertilizing Summer Perennial Pastures, Publication 1-2210.

Step 3 - CALCULATE THE PLANT AVAILABLE NITROGEN (PAN) PROVIDED BY THE SLUDGE.

(Use the values for Total N, NH₄-N and NO₃-N from Step 1)

	%	lb./ton
A. Organic-N = Total N-(NH ₄ -N+NO ₃ -N)	3.61	72.2
B. Ammonium Nitrogen (NH ₄ -N)	0.43	8.6
C. Nitrate Nitrogen (NO ₃ -N)	0.07	1.4
D. Total PAN = (0.3 x 3A) + (0.5 x 3B) + 3C =	1.583	27.36

Step 4. CALCULATE MAXIMUM SLUDGE APPLICATION RATE FROM CROP NITROGEN NEED (BARN):

A. Enter amount from Step 2. Nitrogen amount still needed:	338.58	<i>lb./ac./yr</i>
B. Enter amount from Step 3D. Total PAN in sludge	27.36	<i>lb./ton</i>
C. Sludge application rate(SARN)	12.38	<i>ton/ac./yr</i>

**Appendix A
Agronomic Rate Calculations**

TCEQ 04447

Step 5 - CALCULATE MAXIMUM SLUDGE APPLICATION RATE BASED ON METALS (SARM).

	A	B	C	D	E	F
	Cumulative Metal Limits (lb./ac.)	Max Metal Loading/yr (lb./ac./yr)	Metals in Sludge (lb./ton)	Metals Applied Annually at SARN (lb./ac./yr)	Metals Applied Annually at SARM (lb./ac./yr)	Max Sludge Loading Rate (ton/ac.)
Pollutants	<i>Appendix C</i>	<i>Appendix C</i>	<i>(Step 1)</i>	<i>C x SARN</i>	<i>B/C</i>	<i>A/C</i>
Arsenic	36	1.8	0.01234	0.1527075	0.1527075	2917.341977
Cadmium	35	1.7	0.00314	0.0388575	0.0388575	11146.49682
Chromium	2677	134	0.03922	0.4853475	0.4853475	68255.99184
Copper	1339	67	1.03186	12.7692675	12.7692675	1297.656659
Lead	268	13	0.03254	0.4026825	0.4026825	8236.01721
Mercury	15	0.76	0.00132	0.016335	0.016335	11363.63636
Molybdenum	Monitor	Monitor				
Nickel	375	18.7	0.02444	0.302445	0.302445	15343.69885
Selenium	89	4.5	0.01756	0.217305	0.217305	5068.33713
Zinc	2500	125	1.90114	23.5266075	23.5266075	1315.000473
Other						

If value in column B > D use nitrogen for biosolids application rate.

If value in column B < D use pollutant for biosolids application rate.

Step 6. CALCULATE SITE LIFE AND MAXIMUM APPLICATION RATE BASED ON CUMULATIVE LOADING OF NITROGEN OR LIMITING METAL(S).

A. Maximum allowable cumulative biosolids loading rate:	1315.00	<i>tons/acre</i>
B. Previous application of biosolids:	6.24	<i>tons/acre</i>
C. Remaining biosolids application rate to reach metal limits:	1308.76	<i>tons/acre</i>
D. Maximum allowable biosolids application rate:	12.38	<i>tons/acre/yr</i>
E. Years remaining to reach the maximum cumulative loading:	106	<i>years</i>