

# Hanover

Engineering Associates Inc

July 2, 2012

Mr. Jack Cahalan, Manager  
Lower Saucon Township  
3700 Old Philadelphia Pike  
Bethlehem, PA 18015

RE: Joint Municipal Landfill Committee  
Minutes of June 21, 2012 Meeting  
Hanover Project LS90-07

Dear Mr. Cahalan:

The Joint Municipal Committee between IESI Bethlehem Landfill and Lower Saucon Township met at the Landfill Office on June 21, 2012. The start of the meeting was delayed until about 1:30PM due to the fact the Mr. Schleyer was occupied with an unannounced inspection by Ms. Susan French of the PADEP. Ms. Donna Louder, a resident of Steel City, was welcomed to the Committee as a new member.

Attending the meeting were:

Ms. Priscilla deLeon  
Ms. Donna Louder  
Mr. Allen Schleyer  
Mr. Hazem Hijazi, PE  
Mr. Christopher Taylor, PG, HMI

## AGENDA ITEMS

### I. Status of Waste Activities

Monthly Tonnages:

	<u>March 2012</u>	<u>April 2012</u>	<u>May 2012</u>
Municipal Solid Waste	31,091.30	28,870.90	29,075.60
Construction and Demolition	5,735.00	4,266.70	6,345.10
Residual Waste (Total)	2,690.40	2,823.70	3,136.80
Asbestos	<u>[16.30]</u>	<u>[28.00]</u>	<u>[12.40]</u>
<b>TOTAL</b>	<b>39,516.70</b>	<b>35,961.30</b>	<b>38,557.50</b>
Out of state (total)	27,251.00	24,225.00	23,862.00
Out of state (percentage)	69%	67%	62%
Recycled Tonnage (percent from Lower Saucon Twp.)	13.40 (70%)	8.10 (82%)	6.50 (82%)

NOTES: 1. The tonnage for 'Asbestos' is included in the tonnage for 'Residual Waste (Total)' and is therefore shown in brackets.  
2. The 'Out of state (total)' tonnage figure has now been consolidated to include total tonnage from all waste categories.

The 'Out of state (total)' and 'Out of state (percentage)' figures are new, and were provided in an e-mail from Mr. Schleyer to Committee members on June 29, 2012. In a telephone conversation with Mr. Taylor to discuss this new format, Mr. Schleyer stated that this was the most accurate and appropriate way to provide the out of state figures, by including out of state waste in all categories.

<u>Form U Submittals</u>	<u>Waste</u>	<u>Approval Date</u>
Lutron	Sand blast grit	05-07-12
FreshPet	Plant trash	05-10-12
Ruben Management	Asbestos	05-10-12
Corrosion Control Corp	Sand blast grit	05-21-12
Taverna Verde	Contaminated soil	05-21-12
SunOpta	Plant trash	06-11-12
BASF	PCB contaminated debris	06-11-12
Power Component System	ACM	06-11-12
Cast-Pac	Plant trash	06-11-12
Ametek	ACM	06-20-12

Mr. Hijazi asked about the nature of the Lutron waste and the Taverna Verde waste. Mr. Schleyer provided an explanation.

Ms. Louder asked about Form U's. Ms. deLeon provided a general overview of the submittal and review process.

## II. Annual Groundwater Trend Analysis

- The 2<sup>nd</sup> Quarter 2012 Quarterly Groundwater Report sampling was completed the week of June 18, 2012.
- The Annual 2011 Groundwater Trend report is due June 30, 2012.

## III. Correspondence and Reports

- Form U Submittals to PADEP and Lower Saucon Township
- Abatement System Report
- Private well analysis 1<sup>st</sup> Quarter 2012.

Ms. deLeon stated that, in reviewing the narrative in the 4<sup>th</sup> Quarter 2011 Facility Report, she observed exceedances noted under Groundwater Monitoring, Well Sampling Program. Mr. Schleyer responded that some values will fluctuate based upon outside influences. As an example he stated that chlorides will rise when the roads are being salted. He also stated that nitrates have been historically present. He added that no wells were found to have VOC (meaning Volatile Organic Compound) levels exceeding the MCL (meaning Maximum Contaminant Level) for each constituent.

Mr. Taylor asked about the private well analysis referenced. Mr. Schleyer responded that refers to the Hahn well. Ms. deLeon asked if someone lives next to Ms. Hahn. Mr. Schleyer responded that he did not know. Ms. deLeon asked if Mr. Schleyer could visit the property neighboring Hahn and let them know that well testing is available. Mr. Schleyer responded yes, absolutely. Ms. Louder asked if there are mailings going out to advise neighbors that well testing is available. Mr. Schleyer

responded no, because the neighboring properties have the same owners, who are already aware of this. A general discussion on how the private well testing program works followed.

IV. Landfill Operations

- Department of Environmental Protection Inspections
  - May 3, 2012 – S. French: Engineer’s meeting
  - May 8, 2012 – W. Govern, S. Ripple: site inspection
  - May 29, 2012 – W. Govern: site inspection
  - June 5, 2012 – B. Bham: inspection
  - June 6, 2012 – B. Bham: inspection
  - June 12, 2012 – R. Laczi, D. Golobek, M. Lucsky, A. Faulch, D. Fisher, W. Govern: Trashnet
  - June 12, 2012 – W. Govern: site inspection
  - June 14, 2012 – S. French: Engineer’s meeting
  - June 18, 2012 – B. Bham: groundwater monitoring
  - June 19, 2012 – B. Bham: groundwater monitoring
  - June 20, 2012 – R. Croll, A. Gomes: inspection of Radium 226 radioactive waste
  - June 20, 2012 – B. Bham: groundwater monitoring

Mr. Taylor asked why the extra DEP inspections were conducted. Mr. Schleyer responded that there were more groundwater inspections due to the quarterly sampling event. Mr. Schleyer then ran through the list of inspectors and gave a summary of their duties and typical routine.

Mr. Taylor asked about “Trashnet”. Mr. Schleyer responded that it is a joint enforcement effort between the PADEP and PennDOT that rotates among the different regulated facilities in the state.

- Host Municipal Inspection
  - May 7, 2012 – Chris Taylor
  - May 17, 2012 – Chris Taylor
  - June 8, 2012 – Chris Taylor
- Bethlehem Renewable Energy (BRE) and Flare Operations

The following is an update to the Gas Turbine Generator/Flare activity. We had the following LFG shutdowns at Bethlehem Landfill. Auto-valves closed as designed for each shutdown of the flare. No odors were noted or odor complaints received by Bethlehem Landfill during the outage events. BRE is currently shutdown for equipment repairs. The flare is currently the primary gas collection control system.

May 10, 2012	Flare shutdown	09:34	Manual shutdown – maintenance
	Flare startup	11:30	Duration 1 hr 56 min
	Flare shutdown	12:03	Manual shutdown – maintenance
	Flare startup	12:55	Duration 52 min
May 18, 2012	Flare shutdown	11:17	Manual shutdown – maintenance
	Flare startup	13:15	Duration 1 hr 58 min

May 24, 2012	Flare shutdown	15:23	High temperature
	Flare startup	16:43	Duration 1 hr 20 min
May 25, 2012	Flare shutdown	11:56	High temperature/Blower 103*
	Flare startup	12:27	Duration 31 min
June 3, 2012	Flare shutdown	18:04	High temperature
	Flare startup	19:35	Duration 1 hr 31 min

\*Contractor was called and determined a contactor malfunctioned on Blower 103; part was ordered and installed on 6/18/12. Blower 103 is operational.

All shutdown information is provided to the PADEP.

Mr. Schleyer provided a general explanation of flare operation and shutdown protocols. He stated that everything related to the flare is in duplicate, and that the other blower was running while Blower 103 was down. Ms. Louder asked how long the flare can be down. Mr. Schleyer responded that the PADEP allows for an outage to last up to five (5) days. He added that IESI minimizes shutdowns, keeping the duration as short as possible, by responding quickly to outages and having any needed work done as soon as possible.

A short discussion regarding the status of the proposed holding tank for the BRE plant took place. Mr. Taylor stated that the proposal is before the Township and is being reviewed.

- Well Sampling
  - The 2<sup>nd</sup> Quarter 2012 Quarterly Groundwater Monitoring sampling is scheduled to take place the week of June 18, 2012.
- North Slope
  - The North Slope sedimentation traps are functional.
  - The North Slope perimeter road is accessible.
- Abatement System Operations
  - The abatement system continues to operate and discharge to the Bethlehem Waste Water Treatment Plant.
- Gas Collection
  - The Bethlehem Renewable Energy plant is currently shut down and the landfill flare is the primary gas collection and control system.

During the inspection following the meeting, Mr. Taylor confirmed that the landfill flare was operating.

- Leachate Collection

Flow rates continue to be monitored and reported.

Following is a summary of the work history and developments:

- IESI submitted the report from Mieser and Earl, Inc. on December 23, 2008, to DEP and Lower Saucon Township evaluating the various tests that were performed to locate the source of the elevated detection zone flows as outlined in their May 7, 2008 Work Plan. Lower Saucon Township has forwarded their comments on the December 23, 2008 report to DEP.
- IESI has completed welding of approximately 1,200 L.F. of the secondary line to the primary liner along the northern end of Cell 3-D while the anchor trench was open and prior to completing the weld, a 2½-inch rain event occurred. A spike in the leachate collection/detection flow may be observed.
- IESI will retest the gabion stormwater channel over Cell 3-C and discharging into sedimentation Pond 4 for possible infiltration into the detection zone by flooding the channel on September 24, 2009.
- The capping of the remaining five (5) acres of Phase III has been completed.
- IESI provided an updated report on their LMC investigation to DEP and Lower Saucon Township November 2009. The reports in part indicated that:
  1. LMC 7 does not appear to be affected by rainfall since the northern Cell 3 anchor trench cap/liner welding occurred.
  2. LMC 8 still spiking from rainfall events.
- The next investigation will be to the integrity of the liner under gabion channel in Cell 3-C which will occur in the 1<sup>st</sup> Quarter 2010. IESI is looking for a seven to ten (7-10) day window with no rain for a meaningful evaluation. IESI received authorization for the Gabion Channel Work Plan from DEP on December 22, 2009.
- The investigation of the integrity of the liner under the gabion downchannel located in Cell 3C began April 10, 2010. The southern-most end of the gabion channel was excavated down to the anchor trench as well as to the east and west of the channel along the anchor trench. Toe drains above the primary liner were replaced and the primary and secondary liners were welded together in the excavated areas. The gabion channel and piping leading to Basin 4 were reconstructed. IESI will continue to monitor the LMC flows and prepare a report on the latest work performed.
- To date the flows into LMC-8 appear to have been substantially reduced since the repair in the first week of April 2010.
- As of this date the data appears to indicate that the repairs to the southern end of the gabion downchannel leading to Sedimentation Pond 4 and the toe drains running east/west at the southern most end of the gabion channel have caused a substantial reduction in the detection zone of LMC-8.
- The LMC-8 Detection Zone flow rate continues to be monitored. Existing data continues to show a substantial reduction in the flow rate.
- September/October 2010 – the recent rain events have shown influence on LMC-8. The committee is recommending that IESI investigate and consider extending the toe-drain, which was replaced in April along the toe of the southern slope and above Sedimentation Pond 4, to the east and west. Mr. Schleyer provided a summary of the remedial work completed to date to alleviate the high leachate flows being recorded in LMC-8. He reviewed the recent flow data, and stated his opinion that the remedial work has helped to reduce the overall flows. He stated his opinion that the flow data for 2010 indicates that the “response time” between a storm event and high flows observed in LMC-8 is less, and that the flows are of a shorter duration, since the work has been completed. He stated that he is monitoring the flow data and planning out the next step in the process, but is currently concentrating his efforts on the methane gas problem experienced at the residence at 2293 Applebutter Road. Ms. deLeon stated that Lower Saucon Township is very concerned about the high leachate flows, since these could indicate a tear in the landfill liner or other serious problem.
- February 2011: Discussion regarding monitoring results, as provided in the Third Quarter 2010 Quarterly Facility Report, revealed that samples taken from the

- leachate detection zone provided very similar chemical analyses to samples taken from the leachate collection zone. Mr. Schleyer indicated that IESI had recognized this correlation, and noted it in their cover letter for the report. Mr. Schleyer provided further explanation with regard to how the report is prepared, and noted that the drainage area for LMC-8 is Phase 3, Cell C, which was completed prior to IESI's ownership of the facility.
- March 2011: Mr. Schleyer stated that rainy weather is necessitating working on erosion control, but that the toe-drain work is still at the forefront of his work plan. Ms. deLeon asked "What's going on there" in reference to the high leachate flows documented in the leachate demand report. Mr. Schleyer stated that "stormwater is still getting in" and that they have an "open cell; rainwater is going directly in there". Ms. deLeon stated that leachate flows jumped up starting February 11, 2011. Mr. Schleyer attributed this to a neighboring cell "filling up and overtopping" the short barrier between cells. He stated that LMC-8 serves Phase 3 Cell C, and that when this cell "fills up" with leachate, it causes the high flows documented in LMC-8, but also causes leachate to overspill to the adjacent Phase IV, causing high flows there also.
  - April 2011: Mr. Schleyer noted that flows recorded in LMC 6 increased starting March 18, 2011, but that he is not sure exactly why other than to say it is stormwater-related. Mr. Schleyer stated that it is "the same scenario" as last month, with heavy rains every week that has his crews busy repairing leachate seeps and erosion rills.
  - May 2011: Additional toe-drain drainage piping was constructed during the beginning of May. A final report will be completed and submitted to the PADEP and Township.
  - June 2011: Mr. Taylor asked if the toe drains have been carrying water to daylight (i.e. – has water been flowing out of the new outlets installed in May). Mr. Schleyer responded that there have been a few flowing out.
  - July 2011: Ms. deLeon asked what the PADEP says about the LMC 8 work that was completed. Mr. Schleyer stated that they're okay with it, and that it's "everything we said we'd do". Mr. Taylor commented that we'll probably need up to one (1) year of data to evaluate the effectiveness of the work.
  - August 2011: Mr. Schleyer confirmed that that he is still collecting leachate flow data. He stated that he is taking LMC 8 detection zone readings every other day to see if the recent heavy rain causes a "bump" in the data. He indicated that the flow data during rain events should be a good tell-tale sign of whether the toe drains are working. He stated that he wants to collect more data, through the wet season.
  - September 2011: Mr. Schleyer acknowledged higher detection zone flows during the monitoring period reported herein. He stated that the toe drains are functioning, because he has seen water flowing from them, and noted the extreme rainfall conditions that occurred during this monitoring period.
  - October 2011: Mr. Schleyer stated that the flows in LMC 8 still bounce up when it rains. Ms. deLeon asked if anyone has any other ideas (to remediate this problem). Mr. Schleyer responded no. During the inspection following the meeting, I observed water flowing from each of the toe drain outlets. It had just rained in the last twenty-four (24) hours preceding the inspection.
  - November 2011: Mr. Taylor asked what specific steps IESI is taking to identify the source of the inflow creating high flows in LMC 8. Mr. Schleyer responded that they are monitoring flow rates versus rainfall.

- December 2011: Mr. Schleyer stated that, as part of the construction of new cell 4F, the anchor trench along the north side of adjacent Cell 4B was exposed in order to “attach” the old cell to the new cell. He stated that this exposure allowed water from rain events at that time to run right into the collection and detection zones, which caused a spike in the flow numbers for those zones in both LMC 7 and LMC 8. He stated that he expects the numbers to come down. Mr. Taylor asked if everything was buttoned up now (i.e. – no continuing exposure to stormwater). Mr. Schleyer responded that, yes, it was.
- January 2012: Mr. Taylor noted that secondary leachate flows continue to exceed 100 gallons per acre per day (G/A/D) through LMC-8, and are also elevated above normal levels for LMC-6 and LMC-7. Mr. Taylor asked Mr. Schleyer if he is still attributing these higher leachate flows to Cell F being open. Mr. Schleyer stated that, yes, he was.
- February 2012: Mr. Schleyer stated that the high leachate flow numbers are, in his opinion, still due to Cell F being open.
- March 2012: Mr. Schleyer stated that there was a misunderstanding between himself and Mr. Taylor, and that what he meant to say was that there was only one (1) week where the connection between Cell 4F and the adjacent cells were open, in order to fuse the liners together, and that there was a large rain event that week. He stated that in no way did he mean this condition was the continuous cause of high flows in LMC-8 (over many weeks).
- April 2012: Mr. Taylor noted that leachate flows are down overall, including secondary flows in LMC-8. Ms. deLeon asked if, regarding the leachate totals, did it help that it didn’t rain much lately. Mr. Schleyer responded yes, and noted that LMC-8 is now down to 15 gallons per acre per day (secondary flows).
- May 2012: Mr. Taylor addressed the issue of secondary leachate flows in LMC-8 as one of the issues that is being tracked by him at the monthly landfill committee meetings, and reminded Mr. Schleyer that this is still an issue of concern with the Township. Mr. Taylor noted that flows were up in the last two (2) weeks due to increased rainfall, but still just under one-hundred gallons per acre per day in the last week of reporting.

Mr. Schleyer provided a general overview of the leachate collection and management system, the metering of the system, and how the reported figures are obtained. Mr. Taylor briefed Ms. Louder on the figures contained in the leachate flow table.

Mr. Taylor stated that elevated secondary leachate flows in LMC-8 is an issue that is being tracked by him, and is still an issue of concern with the Township.

- Radiation Monitoring

- May 25, 2012: I-131 Level 1

Level 1 isotopes were disposed of on site.

Ra-226 Construction and Demolition material continues to remain in the isolation area until directed from PADEP for off-site transport.

- Phase IV Construction Activities
  - Phase IV D-Stage 3, Cell 4-B, and Cell F are currently the active disposal areas. Cell E Stage 1 is currently under construction.

Mr. Schleyer stated that Cell 4E is under construction, and that hopefully by next week they will have the liner down.

- Complaints
  - 05/05/12: A neighbor called to complain that a tractor trailer crossed over the yellow line when exiting the landfill. Truck drivers were given a warning the next day to exit without crossing the yellow line.
  - 06/06/12: Trash trucks not following designated route.
  - 06/07/12: Trash trucks not following designated route. Hauling companies notified to tell drivers to follow the designated entrance route.
  - 06/11/12: Lower Saucon Township, J. Birdsall, C. Taylor; LST received complaints of trash trucks not following designated approach route. Sam responded and notified haulers that drivers would be suspended if they didn't follow the designated approach route.
  - 06/14/12: Neighbor on Skyline Drive called in an odor complaint. IESI investigated and could not detect odors at the house or west of the landfill. Neighbor stated it smelled like bottled gas.
  - 06/15/12: Neighbor complained that a tractor trailer cut him off on Applebutter Road. Driver was given a warning.
  - 06/18/12: Neighbor complained that a trash truck did not follow designated approach route. Driver received written warning, hauling company enforced additional driver penalty.
  - 06/18/12: Neighbor on Steel City side complained about loud noise. IESI investigated and determined it was from the topsoil offload. Tailgate from drum truck made the noise.

Mr. Hijazi stated that the list of complaints is long. Mr. Taylor asked if the trucks that did not follow the designated route were driven by new drivers. Mr. Schleyer responded that he didn't know, but added that a hauling company pulled a driver's incentive bonus as punishment for using the wrong route. Mr. Taylor asked if the problem with trucks not following the designated route was taken care of. Mr. Schleyer responded yes.

- Miscellaneous
  - Ms. deLeon stated that a resident at Steel City complained about hearing beeping, such as that from construction equipment, at 5:30 AM, and asked Mr. Schleyer if the landfill has any operations occurring at that time. Mr. Schleyer responded that landfill construction occurs from 6:00 AM to 6:00 PM. A general discussion on the location and timing of landfill-related construction work followed. Ms. Louder stated that there was a problem with noise after 4:30 PM. Mr. Schleyer responded that the landfill is allowed in the host agreement to work from 6:00 AM to 6:00 PM to conduct construction activity. He explained how a truck can enter the landfill just prior to closing time, but due to the time it takes to off-load, activity will be



occurring after closing while the truck is off-loaded and the last loads of garbage are covered with daily cover.

- Mr. Taylor asked Mr. Schleyer about trying to manage the noise situation by warning dump truck drivers about “tailgate slapping” and changing the vehicle back-up alarms to less intrusive types. Mr. Schleyer was receptive to these ideas. Mr. Taylor stated that this was an issue that he would begin tracking.
- Ms. deLeon asked about the frequency with which a state agency inspects and certifies the landfill scale. Mr. Schleyer explained that IESI hires an independent company, Mettler-Toledo, to check the scale every six (6) months, but stated that he didn’t know how often the state checks the scale.
- Ms. deLeon stated that a resident told her that IESI will be demolishing buildings along Applebutter Road. Mr. Schleyer responded yes. Mr. Hijazi asked if there was an historic property along there. Mr. Schleyer responded yes.

V. Commercial Waste Vehicles

	<u>March 2012</u>	<u>April 2012</u>	<u>May 2012</u>
Total Trucks	3,227	3,027	3,221
Overweight	53	38	41
Warnings	33	28	32
Suspensions	20 (6>3%) 3-TT, 3-DT	10 (2>3%) 1-TT, 1-RO	9 (2>3%) 2-TT

FL = front loader, RO = roll off, TT = tractor trailer, RL = rear loader,  
DT = triaxle dump truck

Mr. Schleyer stated that IESI’s policy for overweight trucks is that for the first offense, they issue a written warning, for the second offense, they implement a three (3) day suspension of the driver, and that for each additional offense, they implement an additional three (3) day suspension of the driver.

VI. Correspondence

- Correspondence from Department of Environmental Protection
  - No discussion.
- Correspondence to Department of Environmental Protection
  - No discussion.
- Other Correspondences
  - No discussion.

VII. Township Activities/Township Staff Meeting Update

- Township correspondence to the Department of Environmental Protection
  - No discussion.

- Council Meeting IESI Issues
  - No discussion.
- Miscellaneous
  - No discussion.

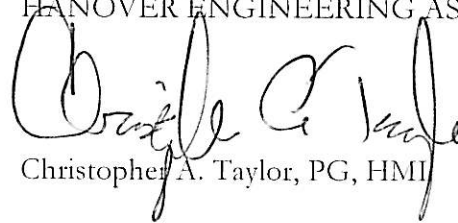
VIII. Establish Time for Next Meeting

1:00 p.m. July 19, 2012 at the Landfill Facility Office.

**END OF MINUTES**

Respectfully,

HANOVER ENGINEERING ASSOCIATES, INC.



Christopher A. Taylor, PG, HMI

cat:bls/rfr

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Enclosure(s)

cc: Ms. Priscilla deLeon (via e-mail)  
Mr. Hazem Hijazi, PE (via e-mail)  
Ms. Donna Louder (via e-mail)  
Mr. Allen Schleyer (via e-mail)  
Ms. Laressa J. McNemar, PE (via e-mail)  
Mr. James B. Birdsall, PE (via e-mail)  
Mr. Scott J. Brown, HMI (via e-mail)  
Mr. Jacob A. Schray, HMI (via e-mail)  
Mr. Rich Sichler (via e-mail)  
Ms. Leslie Huhn (via e-mail)  
Ms. Diane Palik (via e-mail)

**BETHLEHEM LANDFILL**  
**LEACHATE DEMAND REPORT**

May 2012

<u>Location</u>	<u>Total gallons</u>
LMC-6	9,153
LMC-7	14,230
LMC-8	82,428
LMC-10	1,635,000
PS-1	373,006
PS-2	153,813
Phase-IV	526,819

Total LMC-10 Flow = LMC-6, 7, 8, Abatement Well System, Phase I and II, and LFG condensate. Phase-IV total from PS-1 and PS-2.

Total Discharge

LMC-10	1,635,000
Phase IV	<u>526,819</u>
TOTAL	2,161,819 gallons

Total Leachate

Leachate	231,671
Phase IV	<u>526,819</u>
TOTAL	758,490 gallons

LMC-10 Flow - Abatement System Flow = Leachate System Flow (gallons).  
Abatement System Flow = 1,403,329 gallons (Neptune Flow meters)



IESI BETHLEHEM LANDFILL

A	B	C	D	E	F	H	I	J	K	M	N	O
	TIME	Phase IV PS-1 (Secondary Flows)				Phase IV PS-1 (Primary Flow)						Sump
	(days)	TOTALIZER	GALLONS	FLOW (gpd)	g/ac/day	TIME	TOTALIZER	Gallons	FLOW (gpd)	g/ac/day	Level	
473												
474	12/30/2011	40907	225335	469	67	3	20146806	171752	24536	1031	12.5'	
475	1/6/2012	7	225609	274	39	2	20241943	95137	13591	571	22.1	
476	1/13/2012	7	225889	280	40	2	20365489	123546	17649	742	22.1	
477	1/20/2012	7	226169	280	40	2	20478132	112643	16092	676	21.2'	
478	1/27/2012	7	226503	334	48	2	20618373	140241	20034	842	18.9'	
479	2/3/2012	7	226872	369	53	2	20787532	169159	24166	1015	19.1'	
480	2/10/2012	7	227083	211	30	1	20877618	90086	12869	541	22.7'	
481	2/16/2012	6	227261	178	30	1	20952699	75081	12514	526	14.2'	
482	2/24/2012	8	227503	242	30	1	21044854	92155	11519	484	20.8'	
483	3/2/2012	7	227746	243	35	1	21126496	81642	11663	449	23.8'	
484	3/9/2012	7	227981	235	34	1	21213120	86624	12375	476	23.4'	
485	3/16/2012	7	228269	288	41	2	21318994	105874	15125	582	23.6'	
486	3/23/2012	7	228535	266	38	1	21411515	92521	13217	508	21.2'	
487	3/30/2012	7	228823	288	41	2	21509600	98085	14012	539	23.8'	
488	4/6/2012	7	229131	308	44	2	21611815	102215	14602	562	14.4'	
489	4/13/2012	7	229420	289	41	2	21710217	98402	14057	541	19.5'	
490	4/20/2012	7	229684	264	38	1	21800600	90383	12912	497	18.5'	
491	4/26/2012	6	229999	315	53	2	21913246	112646	18774	722	21.7'	
492	4/30/2012	4	230213	214	54	2	21965567	52321	13080	503	22.5'	
493	5/4/2012	4	230391	178	45	2	22010373	44806	11202	431	23.2'	
494	5/11/2012	7	230748	357	51	2	22097316	86943	12420	478	20.6'	
495	5/18/2012	7	231087	339	48	2	22179489	82173	11739	452	23.6'	
496	5/25/2012	7	231419	332	47	2	22258261	78772	11253	433	20.8'	
497	6/1/2012	7	231789	370	53	2	22338573	80312	11473	441	21.0'	
498	6/8/2012	7	232034	245	35	1	22422882	84309	12044	463	23.8'	
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\*3/2/12 Added Cell F acreage to G/A/D

