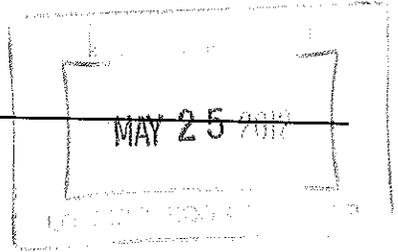


Hanover

Engineering Associates Inc



May 23, 2012

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

RE: Joint Municipal Landfill Committee
Minutes of May 17, 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 at 1:00 p.m. on May 17, 2012.

Attending the meeting were:

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

AGENDA ITEMS

I. Status of Waste Activities

Monthly Tonnages:

	<u>February 2012</u>	<u>March 2012</u>	<u>April 2012</u>
Mun Solid Waste - total	23,113.40	31,091.30	28,870.90
Mun Solid Waste - out/state	[14,693.70] (63%)	[21,769.50] (70%)	[18,759.10] (67%)
Construction and Demolition	5,392.10	5,735.00	4,266.70
Residual Waste (Total)	2,255.90	2,690.40	2,823.70
Asbestos	—[51.30]	—[16.30]	—[28.00]
TOTAL	30,761.40	39,516.70	35,961.30

Recycled Tonnage (percent from Lower Saucon Twp.)	52.13 (85%)	13.40 (70%)	8.1 (82%)
---	-------------	-------------	-----------

NOTES:

1. The tonnage for 'Mun Solid Waste – out/state' is included in the tonnage for 'Mun Solid Waste – total' and is therefore shown in brackets, with the percentage of the total shown in parentheses.
2. The tonnage for 'Asbestos' is included in the tonnage for 'Residual Waste (Total)' and is therefore shown in brackets.

ROUTING

- Council
- Manager *Orq*
- Asst. Mgr.
- Zoning
- Finance
- Police
- P. Works
- P/C
- P & R
- EAC
- Engineer
- Solicitor
- Planner
- Landfill
- EMC
- Other

<u>Form U Submittals</u>	<u>Waste</u>	<u>Approval Date</u>
Evergreen Recycling	Off-spec product	04-05-12
Calpine	Sand blast grit	04-23-12
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	submitted 05-09-12
Taverna Verde	Contaminated soil	submitted 05-11-12

Mr. Hijazi asked where the Taverna Verde waste is coming from. Mr. Schleyer explained and discussed the source and the testing involved. Mr. Hijazi asked how much soil was involved. Mr. Schleyer responded that it was about two-hundred (200) yards (meaning cubic yards).

II. Annual Groundwater Trend Analysis

- The 2nd Quarter 2012 Quarterly Groundwater Report sampling is scheduled to take place 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
- 4th Quarter 2011 LST Facility Quarterly Report
- 1st Quarter 2012 PADEP Facility Report
- 1st Quarter 2012 Groundwater Report

IV. Landfill Operations

- Department of Environmental Protection Inspections
 - April 5, 2012 – B. Bham: groundwater monitoring meeting
 - April 12, 2012 – S. French: Engineer's meeting
 - April 13, 2012 – W. Govern: site inspection
 - April 25, 2012 – B. Bham: site meeting
 - April 27, 2012 – W. Govern: site inspection
 - May 3, 2012 – S. French: Engineer's meeting
 - May 8, 2012 – W. Govern, S. Ripple: site inspection
- Host Municipal Inspection
 - April 13, 2012 – Chris Taylor
 - April 18, 2012 – Chris Taylor
 - May 7, 2012 – Chris Taylor
- Bethlehem Renewable Energy (BRE) and Flare Operations

On April 20, 2012, IESI Bethlehem Landfill received a Notice of Violation from the City of Bethlehem regarding an oily waste/heavy condensate discharge to the Bethlehem WWTP

that occurred on February 8, 2012. The discharge was determined to be a release from the Bethlehem Renewable Energy (BRE) plant oil/water separator and not from the Bethlehem Landfill. However, BRE was operating under the Bethlehem Landfill Industrial Waste Discharge Permit No. 050. BRE is currently in the process of obtaining a separate discharge permit from the City of Bethlehem and has since shut down their operations until an IWDP permit is issued in their name and they can meet the required discharge operating parameters.

The following is an update to the Gas Turbine Generator/Flare activity. We had the following BRE/LFG Generator shutdowns at Bethlehem Landfill. Auto-valves closed as designed for each shutdown of either the flare or turbine. 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.

April 3, 2012	Flare shutdown	12:43	Low temperature	
	Flare startup	13:50	Turbine running during downtime	
	Flare shutdown	14:08	High temperature	
	Flare startup	15:30	Turbine running	
	Flare shutdown	21:29	Low temperature thermocouple setting	
April 4, 2012	Flare startup	11:13	Turbine running	
April 6, 2012	Turbine shutdown	09:18	Maintenance	
	Turbine startup	15:46	Flare running	
April 8, 2012	Turbine shutdown	19:20	Protective shutdown	
	Flare shutdown	19:21	High temperature	
April 9, 2012	Turbine startup	23:51	Duration 4 hr 30 min	
	Flare startup	00:53	Duration 4 hr 30 min then turbine running	
	Turbine shutdown	00:59	Protective shutdown	
	Turbine startup	10:09	Flare running	
	Turbine shutdown	10:17	Protective shutdown	
	Turbine startup	11:14	Flare running	
	Turbine shutdown	14:08	Protective shutdown	
	Flare shutdown	14:09	High temperature	
	Turbine startup	15:02	Duration 53 min	
	Flare startup	16:19	Duration 53 min then turbine running	
	Turbine shutdown	15:40	Protective shutdown	
	Turbine startup	17:23	Duration 39 min then flare running	
	April 12, 2012	Turbine shutdown	09:43	Maintenance
		Turbine startup	15:18	Flare running
	April 16, 2012	Turbine shutdown	14:03	Protective shutdown
Flare shutdown		14:04	High temperature	
Flare startup		14:39	Duration 35 minutes	
Turbine startup		19:31	Duration 35 min then flare running	
Flare shutdown		20:14	Low temperature	
Flare startup		20:39	Turbine running	
April 17, 2012	Turbine shutdown	06:25	Protective shutdown	
	Flare shutdown	06:26	High temperature	
	Flare startup	09:30	Duration 3 hr 4 min	
	Turbine startup	10:32	Duration 3 hr 4 min then flare running	

April 21, 2012	Flare shutdown	21:16	Low temperature
	Flare startup	23:59	Turbine running during downtime
April 23, 2012	Flare shutdown	17:39	Low temperature adjust manual louvers
	Flare startup	18:46	Turbine running during downtime
April 24, 2012	Flare shutdown	06:50	Low temperature
	Flare startup	08:58	Turbine running during downtime
April 24, 2012	Turbine shutdown	14:48	Manual shutdown for equipment repair/ Replacement
	Flare operating as the primary GCCS		

All shutdown information is provided to the PADEP.

Mr. Schleyer stated that April 24 was a final shutdown for the power plant. He stated that IESI had received a Notice of Violation (NOV) from the City of Bethlehem for wastewater discharge, and that study and analysis showed that BRE violated IESI's permit, since they were operating under IESI's permit. Ms. deLeon asked if the City made them shutdown. Mr. Schleyer responded that once IESI received the NOV, their attorney sent the attorney for BRE a letter saying if BRE is out of compliance, they must shut down. Mr. Schleyer added that BRE is in the process of obtaining their own discharge permit, and that IESI has requested to move up one (1) manhole for their sampling point so it's separate from the BRE sampling point.

Ms. deLeon asked if the Township had been provided a copy of the NOV. Mr. Schleyer responded that he did not think so. Ms. deLeon stated that she wanted a copy of the NOV before the quarterly consultant's meeting (on May 22). Mr. Schleyer stated that he would provide a copy in that timeframe. Ms. deLeon started a general discussion regarding gas management using the BRE plant versus the landfill flare, the landfill's Air Quality Permit, and the Air Quality Permit shield (Title V).

Mr. Hijazi asked Mr. Schleyer if he expects issues with all of the landfill gas now going to the flare. Mr. Schleyer responded that IESI has been preparing for this situation, and mentioned measures such as attending to the filters on the flare stack to allow the flare to operate more efficiently, and rebalancing the gas wells to optimize gas flow toward the flare. Mr. Hijazi asked if the flare is set up to handle all the gas flow. Mr. Schleyer responded yes. Ms. deLeon asked if this was true even with new sections of the landfill in existence. Mr. Schleyer responded yes. Mr. Hijazi asked how long it would take for BRE to get their new permit. Mr. Schleyer responded he thought it would take until June. Mr. Hijazi asked if the violation was due to malfunction. Mr. Schleyer responded that the oil/water separator malfunctioned and sent a slug of oil to the Wastewater Treatment Plant. Ms. deLeon observed that when the BRE plant dumped out the slug, it was diluted with leachate. Mr. Hijazi added that, in theory, they have been benefitting from this dilution. Ms. deLeon stated that every discharger should have a separate sampling point so you know what they're discharging. A general discussion on this topic followed. Ms. deLeon observed that BRE's discharge isn't technically a DEP-regulated discharge, that it has nothing to do with DEP permits, such as air, groundwater, etc. Mr. Schleyer responded no, it's not a DEP-regulated discharge.

Mr. Hijazi asked the committee members if Ms. McNemar had a question about the gas management situation. Mr. Taylor said yes, and asked if the landfill can run off the flare, both from a practical standpoint (is it physically possible?) and from a permit standpoint (is it

allowed?). Mr. Schleyer responded yes, that the landfill was designed to do so, and that the addition of the BRE plant was just a bonus.

- Well Sampling
 - The 2nd 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, and that the feed rate of gas was higher than it usually was when the BRE plant was in operation.

- 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 1st 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).

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.

- Radiation Monitoring

- April 4, 2012: I-131 Level 1
- April 7, 2012: I-131 Level 1
- April 17, 2012: I-131 Level 1
- April 18, 2012: I-131 Level 1
- April 24, 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 area. Cell F was approved for disposal March 1, 2012. Capping certification is in the process of completion for submittal.

Mr. Taylor asked what is the status of the minor permit modification application for Cell 4E, as far as Mr. Schleyer was aware. Mr. Schleyer responded that he expected to receive the permit soon. Mr. Taylor advised Mr. Schleyer that the Township's review of the application was not yet complete, and that there may still be some outstanding issues that need to be addressed. A short general discussion on this topic followed.

- Complaints

- 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.

- Miscellaneous

- Mr. Schleyer confirmed that the replacement of the missing section of perimeter fence along the northern property line near the electric utility line is now complete.
- Mr. Schleyer stated that he had looked into the Notice of Violation for the landfill that is posted on the DEP's "efacts" website. He stated that his contact informed

him that this was related to the leachate release to Basin 4 that had occurred in January, and that it was entered into the database since it was technically a violation according to regulations. However, no formal written Notice of Violation was issued to the landfill because they acted immediately to remediate the situation, and there was therefore no need for an enforcement action on the part of the DEP.

V. Commercial Waste Vehicles

	<u>February 2012</u>	<u>March 2012</u>	<u>April 2012</u>
Total Trucks	2,652	3,227	3,027
Overweight	42	53	38
Warnings	31	33	28
Suspensions	11 (1>3%) 1-TT	20 (6>3%) 3-TT, 3-DT	10 (2>3%) 1-TT, 1-RO

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

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
 - Ms. deLeon stated that the Township Planning Commission will review the proposed changes to the Zoning Map on May 24 (relative to the proposed landfill expansion).

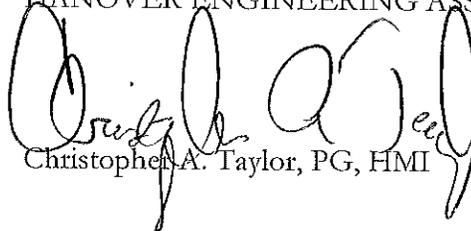
VIII. Establish Time for Next Meeting

1:00 p.m. June 21, 2012 at the Landfill Facility Office.

END OF MINUTES

Respectfully,

HANOVER ENGINEERING ASSOCIATES, INC.



Christopher A. Taylor, PG, HMI

cat:bls/rfr

E:\Proj\1.SauconTwp\000-Landfill\2012\1F51 landfill report of May 17, 2012 mtg.doc

Enclosure(s)

cc: Ms. Priscilla deLeon (via e-mail)
Mr. Hazem Hijazi, PE (via e-mail)
Mr. Allen Schleyer (via e-mail)
Ms. Laoussa 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

April 2012

<u>Location</u>	<u>Total gallons</u>
LMC-6	12,499
LMC-7	13,396
LMC-8	68,814
LMC-10	1,483,000
PS-1	455,967
PS-2	112,036
Phase-IV	568,003

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	1,483,000
Phase IV	<u>568,003</u>
TOTAL	2,051,003 gallons

Total Leachate

Leachate	203,489
Phase IV	<u>568,003</u>
TOTAL	771,492 gallons

LMC-10 Flow – Abatement System Flow = Leachate System Flow (gallons).
Abatement System Flow = 1,279,511 gallons (Neptune Flow meters)

IESI BETHLEHEM LANDFILL

	A	B	C	D	E	F	H	I	J	K	M	N	O
473		TIME	Phase IV PS-1 (Secondary Flows)				Phase IV PS-1 (Primary Flow)						Sump
474		(days)	TOTALIZER	GALLONS	FLOW (gpd)	g/ac/day	TIME	TOTALIZER	Gallons	FLOW (gpd)	g/ac/day	Level	
475	12/30/2011	40907	225335	469	67	3		20146806	171752	24536		1031	12.5*
476	1/6/2012	7	225609	274	39	2		20241943	95137	13591		571	22.1
477	1/13/2012	7	225889	280	40	2		20365489	123546	17649		742	22.1
478	1/20/2012	7	226169	280	40	2		20478132	112643	16092		676	21.2*
479	1/27/2012	7	226503	334	48	2		20618373	140241	20034		842	18.9*
480	2/3/2012	7	226872	369	53	2		20787532	169159	24166		1015	19.1*
481	2/10/2012	7	227083	211	30	1		20877618	90086	12869		541	22.7*
482	2/16/2012	6	227261	178	30	1		20952699	75081	12514		526	14.2*
483	2/24/2012	8	227503	242	30	1		21044854	92155	11519		484	20.8*
484	3/2/2012	7	227746	243	35	1		21126496	81642	11663		449	23.8*
485	3/9/2012	7	227981	235	34	1		21213120	86624	12375		476	23.4*
486	3/16/2012	7	228269	288	41	2		21318994	105874	15125		582	23.6*
487	3/23/2012	7	228535	266	38	1		21411515	92521	13217		508	21.2*
488	3/30/2012	7	228823	288	41	2		21509600	98085	14012		539	23.8*
489	4/6/2012	7	229131	308	44	2		21611815	102215	14602		562	14.4*
490	4/13/2012	7	229420	289	41	2		21710217	98402	14057		541	19.5*
491	4/20/2012	7	229684	264	38	1		21800600	90383	12912		497	18.5*
492	4/26/2012	6	229999	315	53	2		21913246	112646	18774		722	21.7*
493	4/30/2012	4	230213	214	54	2		21965567	52321	13080		503	22.5*
494													
495													
496													
497													
498													
499													
500													
501													
502													
503													
504													
505													
506													
507													
508													
509													
510													
511													
512													
513													
514													
515													
516													
517													
518													
519													
520													
521													
522													
523													
524													
525													
526													
527													
528													
529													
530													
531													
532													
533													
534													
535													
536													
537													
538													
539													
540													

*3/2/12 Added Cell F acreage to G/A/D

