



January 25, 2010

RECEIVED

083-87595

Mr. Scott M. Sheplak, PE
Bureau of Air Regulation
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, Florida 32399

JAN 26 2010

BUREAU OF AIR REGULATION

RE: JACKSONVILLE ELECTRIC AUTHORITY
DEP FILE NOS. 0310045-027-AC & -028-AV
AIR CONSTRUCTION PERMIT AND TITLE V PERMIT REVISION APPLICATION
RESPONSE TO RAI DATED SEPTEMBER 23, 2009

Dear Mr. Sheplak:

Jacksonville Electric Authority (JEA) and Golder Associates Inc. (Golder) have received the Florida Department of Environmental Protection's (FDEP's) request for additional information (RAI) dated September 23, 2009, regarding the air construction permit and Title V air permit revision application for JEA Northside Generating Station, St. Johns River Power-Park (NGS/SJRPP) and Separations Technology, LLC (ST) Facility. Each of FDEP's requests is answered below, in the same order as they appear in the RAI letter.

Air Construction Permit Application, File Number 0310045-027-AC

Comment 1. Natural Gas. In the application, the maximum % sulfur content of natural gas was stated as 2 gr/100 scf. What is the equivalent ppm value? How does this compare to the maximum expected sulfur content of the landfill gas? Please provide a current analysis for natural gas being burned in the NGS CFB Boiler Nos. 1 and 2 showing the sulfur content.

Response: The equivalent parts per million (ppm) value of the maximum percent sulfur content of the natural gas [2 grains per 100 standard cubic feet (gr/100 scf)], is calculated as follows:

2 grains x (1 lb / 7,000 grain) = 0.000286 lbs S

Convert mass to volume :

V = (mRT / P) = 0.000286 lbs S x (1,545.6 ft-lb_f / 32 lb-°R) x 528°R x (1 ft^2 / 2,116.8 lb_f) = 0.0034 ft^3

Convert volume to ppm :

ppm = (0.0034 ft^3 / 100 ft^3) x 10^6 = 34 ppm S

A current analysis of the natural gas distributed to JEA facilities Brandy Branch Generating Station and Kennedy Branch Generating Station is attached (see Attachment 1). This analysis is also representative of the natural gas distributed to the NGS. Based on these two analyses, the average total sulfur content of the natural gas is 0.005 gr/100 scf (1.4 ppm). Presently the North Municipal Solid Waste (MSW) Landfill



operating permit does not require monitoring of the sulfur content in the landfill gas (LFG); therefore, only limited data is available. The Landfill Gas Systems Evaluation for the North Landfill and the Girvin Road Landfill prepared by Camp Dresser & McKee (CDM) includes field samples of the LFG. The hydrogen sulfide (H₂S) content before the flare is 2.8 gr/100 scf (48.2 ppm), as shown in Attachment JEA-EU2-I2 of the application. It is recognized that LFG contains a higher sulfur content than pipeline natural gas. However, JEA is proposing to burn only small quantities of the fuel and can increase the sulfur dioxide (SO₂) removal efficiency to maintain emissions within permit limits at all times.

Comment 2. Landfill Gas.

- a. In the Attachment A of the application it was indicated that no physical changes will be required to be made to the NGS CFB Boiler Nos. 1 and 2. Are there any physical changes necessary at the plant to burn landfill gas in the NGS CFB Boiler Nos. 1 and 2?
- b. What type of landfill is the gas being generated from? Where is the landfill located? How far away is it? Where is the landfill gas currently going? Please provide a map showing the approximate locations of the landfill and the NGS CFB Boiler Nos. 1 and 2.
- c. In the attachment named "Attachment JEA-EU2-I2", Sample #1 indicates "before flare". Is there a flare on-site? Is the flare permitted? Who is the owner/operator of the flare and the landfill?
- d. In the attachment named "Attachment JEA-EU2-I2," a fuel analysis for a landfill gas is provided. The analysis indicates that two samples were taken. E.g., Sample #1 and #2. Sample #1 before flare indicates an H₂S content of 48.3 ppm using the GEM 200 analyzer method. Where physically were the Sample #1 and #2 taken at the landfill? A plot plan for the landfill was not found in the application. Please provide a plot plan showing the specific sample locations at the landfill. Also, what were the dates of the samples?
- e. Are there any plans to pretreat the landfill gas prior to being combusted in the boilers? If so, how?
- f. How long is the landfill gas supply expected to last, in years?
- g. Is the request to burn landfill gas alone or in combination with the other permitted fuels in the NGS CFB Boiler Nos. 1 and 2? Are you proposing to offset any of the % of total fuel heat input to each boiler with landfill gas? What is the requested maximum % of total fuel heat input of landfill gas to burn in each boiler?
- h. Do you plan to inject more limestone while burning landfill gas with H₂S contents that are higher than when burning natural gas?

Response:

- a. A gas line for landfill gas is already installed for NGS Boiler No. 3. A new line will be installed to deliver landfill gas to a lance above the existing above-bed burners in NGS circulating fluidized bed (CFB) Boiler Nos. 1 and 2. Landfill gas will not be burned in the boilers until the furnace temperatures due to burning solid fuel are above the ignition temperature of methane.
- b. The landfill gas is generated at a MSW landfill adjacent to NGS. The North MSW Landfill is located at 11405 Island Drive in Duval County, Florida. The landfill is directly north of the NGS. A map showing the approximate locations of the landfill and the NGS CFB Boiler Nos. 1 and 2 is attached (see Attachment 2). The landfill gas is currently being burned in NGS Boiler No. 3.
- c. An enclosed flare is located on-site at the landfill as a backup combustion device when the NGS Boiler No. 3 is unable to combust the landfill gas. The landfill is owned and operated by the Solid Waste Division of the City of Jacksonville. Permit No. 0310340-005-AV, issued on June 18, 2009, authorizes the use of the enclosed flare as an alternate method of operation.

- d. The landfill gas system operator for North MSW Landfill (Earth Tech) collected field samples before the flare and at Well No. 2 in Hill III-B on March 5, 2008. A plot plan of the landfill showing the specific sampling locations is attached (see Attachment 3).
- e. The collected landfill gas is already being processed through a treatment system prior to combustion in NGS Boiler No. 3. The landfill gas treatment system at the Fuel Gas Compressor System (FGCS) skid at the North MSW Landfill includes the following:
- A filter vessel at the inlet used to remove particulates from entering the system (particulate is reduced to less than 10 microns)
 - A compressor that raises the gas pressure to transport the gas through the pipeline
 - A knockout vessel that filters the compressor oil from the gas
 - An Air X-Changer that cools the gas and produces condensate
 - A knockout vessel to remove the condensate
 - A heat exchanger that cools the gas further and produces condensate
 - A knockout vessel to remove the condensate

Note that all of this equipment resides at the North MSW landfill, and no gas treatment occurs at NGS.

- f. Please refer to the gas curve generated by CDM in June 2008, where the gas production trends for the North MSW Landfill are shown. The graph projects landfill gas beyond 2032 (see Attachment 4).
- g. JEA is requesting to burn landfill gas in combination with the other permitted fuels in NGS CFB Boiler Nos. 1 and 2. The facility will continue to adhere to the current permit limits.

JEA is not requesting any change in the current maximum heat input to the units. Therefore, the landfill gas, although insignificant, would be offset by an equal reduction in the heat input to the boilers.

The requested maximum fuel heat input of landfill gas to each boiler is 6 million British thermal units per hour (MMBtu/hr), which is 0.22 percent of the maximum fuel input. This value was determined by using the requested maximum hourly rate of the landfill gas burned in each boiler of 60,000 standard cubic feet per hour (scf/hr) and the maximum heating value of landfill gas of 1,000 British thermal units per standard cubic foot (Btu/scf). The maximum heat input rate from landfill gas to each boiler of 6 MMBtu/hr was then divided by the maximum heat input rate to each boiler of 2,764 MMBtu/hr. Typically, landfill gas has a heating value of only 500 to 600 Btu/scf and therefore the actual heat input will be even lower than this.

- h. JEA will inject limestone into the CFB boiler beds or use the spray dryer absorber (SDA) as necessary to maintain SO₂ emissions within permit limits at all times.

Comment 3. In the Attachment A of the application, it was stated that "JEA does not expect emissions of any air pollutant to increase as a result of this project." In the air permit application form, the emissions unit pollutant detail information was completed showing the current permit allowable for the NGS CFB Boiler Nos. 1 and 2, e.g., SO₂ per boiler 0.2 lb/MMBtu, 553 lb/hr, 1,816 tons per year (TPY).

- a. Please provide air pollutant emission calculations showing the changes in emissions from the proposed project, e.g., Combustion of Landfill Gas in NGS CFB Boiler Nos. 1 and 2. Compare the emission changes against the prevention of significant deterioration (PSD) significant emission rates (SER). At a minimum include the following air pollutants of concern from this

proposed project: SO₂, PM, PM₁₀, NO_x, and CO. Indicate and provide any assumed air pollution control device efficiencies.

Response: As previously mentioned, JEA will adjust the lime slurry rate to the dryer to control SO₂ emissions to below SO₂ limits. The proposed project will not affect any other air pollutants or change the pound per million British thermal unit (lb/MMBtu), pound per hour (lb/hr), or ton per year (TPY) emission rates for any pollutant. The insignificant amount of heat input will not affect combustion within the boilers.

Title V Air Operation Permit Revision Application, File Number 0310045-028-AV

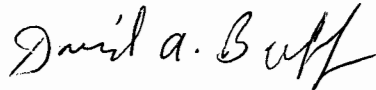
Comment 4. Table 6-Part B. In this revision request, a "revised" Table 6-Part B was provided. The recent Title V air operation permit renewal had a currently applicable Table 6-Part B attached to it. The table attached to the renewal was from the most recently issued PSD amendment. A copy of the Table 6-Part B from the Title V air operation permit renewal is attached. The table provided in this revision request is missing the "Predicted Emissions (lb/hr)" column along with the d. footnote. Are you requesting changes to this table from the PSD permit? If you have a different applicable Table 6-Part B, please provide a copy of or reference the permit under which it was issued.

Response: Per conversation between the District and JEA on October 20, 2009, the request related to Table 6-Part B is withdrawn. No changes to the table are requested at this time.

Thank you for your consideration of this information. If you have any questions, please do not hesitate to call me at (352) 336-5600.

Sincerely,

GOLDER ASSOCIATES INC.



David A. Buff, PE, QEP
Principal Engineer

cc: N. Bert Gianazza, JEA

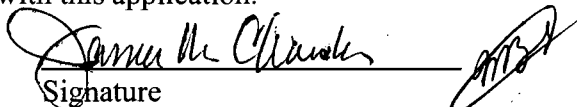
Enclosures

NG/tz

APPLICATION INFORMATION

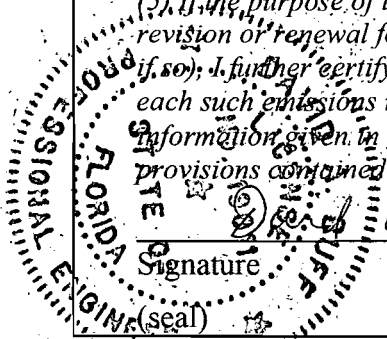
Application Responsible Official Certification

Complete if applying for an initial, revised, or renewal Title V air operation permit or concurrent processing of an air construction permit and revised or renewal Title V air operation permit. If there are multiple responsible officials, the "application responsible official" need not be the "primary responsible official."

1. Application Responsible Official Name: James M. Chansler, P.E, D.P.A., Chief Operating Officer
2. Application Responsible Official Qualification (Check one or more of the following options, as applicable): <input type="checkbox"/> For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C. <input type="checkbox"/> For a partnership or sole proprietorship, a general partner or the proprietor, respectively. <input checked="" type="checkbox"/> For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official. <input type="checkbox"/> The designated representative at an Acid Rain source, CAIR source, or Hg Budget source.
3. Application Responsible Official Mailing Address... Organization/Firm: JEA Street Address: 21 West Church Street City: Jacksonville State: FL Zip Code: 32202
4. Application Responsible Official Telephone Numbers... Telephone: (904) 665-4433 ext. Fax: (904) 665-7990
5. Application Responsible Official E-mail Address: chanjm@jea.com
6. Application Responsible Official Certification: I, the undersigned, am a responsible official of the Title V source addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other applicable requirements identified in this application to which the Title V source is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit. Finally, I certify that the facility and each emissions unit are in compliance with all applicable requirements to which they are subject, except as identified in compliance plan(s) submitted with this application.  Signature _____ Date <u>1/19/10</u>

APPLICATION INFORMATION

Professional Engineer Certification

1. Professional Engineer Name: David A. Buff Registration Number: 19011
2. Professional Engineer Mailing Address... Organization/Firm: Golder Associates Inc.** Street Address: 6241 NW 1st Place City: Gainesville State: FL Zip Code: 32607
3. Professional Engineer Telephone Numbers... Telephone: (352) 336-5600 ext. 21145 Fax: (352) 336-6603
4. Professional Engineer E-mail Address: <u>dbuff@golder.com</u>
5. Professional Engineer Statement: <i>I, the undersigned, hereby certify, except as particularly noted herein*, that:</i> <i>(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and</i> <i>(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.</i> <i>(3) If the purpose of this application is to obtain a Title V air operation permit (check here <input type="checkbox"/> , if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.</i> <i>(4) If the purpose of this application is to obtain an air construction permit (check here <input type="checkbox"/> , if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here <input checked="" type="checkbox"/> , if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.</i> <i>(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here <input type="checkbox"/> , if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.</i>  Signature: <u>David A. Buff</u> Date: <u>1/25/2010</u>

* Attach any exception to certification statement.

**Board of Professional Engineers Certificate of Authorization #00001670.

ATTACHMENT 1

NATURAL GAS ANALYSIS



September 17, 2008

JEA
P.O. Box 4910
Jacksonville, FL 32201-4910

CERTIFICATE OF ANALYSIS

REFERENCE: LINE SAMPLING
SAMPLED BY: JEA DATED 9/9/08
SAMPLE MARKS: BRANDY BRANCH GENERATING STATION
PRODUCT: NATURAL GAS
OUR REF: 334-9644-01

COMPONENTS, MOLE %

<u>TEST</u>	<u>METHOD</u>	<u>RESULTS</u>
METHANE	ASTM D-1945	96.287
ETHANE	ASTM D-1945	2.920
PROPANE	ASTM D-1945	0.618
I-BUTANE	ASTM D-1945	0.080
N-BUTANE	ASTM D-1945	0.057
NEO-PENTANE	ASTM D-1945	ND
I-PENTANE	ASTM D-1945	ND
N-PENTANE	ASTM D-1945	ND
N-HEXANES	ASTM D-1945	ND
N-HEPTANES	ASTM D-1945	ND
N-OCTANES	ASTM D-1945	ND
N-NONANES	ASTM D-1945	ND
N-DECANES	ASTM D-1945	ND
HENDECANES	ASTM D-1945	ND
DODECANES	ASTM D-1945	ND
TRIDECANES	ASTM D-1945	ND
TETRADECANES	ASTM D-1945	ND
HYDROGEN	ASTM D-1945	ND
NITROGEN	ASTM D-1945	0.037
OXYGEN	ASTM D-1945	ND
ARGON	ASTM D-1945	ND
CARBON DIOXIDE	ASTM D-1945	ND
CARBON MONOXIDE	ASTM D-1945	ND
WATER	ASTM D-1945	ND
HYDROGEN SULFIDE	ASTM D-5504	<0.05 ppm
HYDROGEN SULFIDE	ASTM D-5504	<0.002 gr/100 ft ³
TOTAL SULFUR	ASTM D-5504	1.1 ppm
TOTAL SULFUR	ASTM D-5504	0.004 gr/100 ft ³

ND = NOT DETECTED



JEA
P.O. Box 4910
Jacksonville, FL 32201-4910

CERTIFICATE OF ANALYSIS – 334-9644-01 (continued)

RESULTS

CALCULATED PROPERTIES

RELATIVE DENSITY	ASTM D-3588	0.5763
COMPRESSIBILITY FACTOR	ASTM D-3588	0.99865

HEATING VALUE, BTU/cf, GROSS, 14.73 psia, 60 deg. F

SATURATED	ASTM D-3588	1047
DRY - HIGHER HEATING VALUE	ASTM D-3588	1049
NET - LOWER HEATING VALUE	ASTM D-3588	1028

ND = NOT DETECTED

/S/: Neal Stevens, Tampa Area Manager
SGS NORTH AMERICA INC.
MINERALS SERVICES DIVISION

NS/sh

This document is issued by the Company under its General Conditions of Service accessible at http://www.sgs.com/terms_and_conditions.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any other holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



September 17, 2008

JEA
P.O. Box 4910
Jacksonville, FL 32201-4910**CERTIFICATE OF ANALYSIS**REFERENCE: LINE SAMPLING
SAMPLED BY: JEA DATED 9/9/08
SAMPLE MARKS: KENNEDY BRANCH GENERATING STATION
PRODUCT: NATURAL GAS
OUR REF: 334-9644-02**COMPONENTS, MOLE %**

<u>TEST</u>	<u>METHOD</u>	<u>RESULTS</u>
METHANE	ASTM D-1945	95.002
ETHANE	ASTM D-1945	3.628
PROPANE	ASTM D-1945	0.935
I-BUTANE	ASTM D-1945	0.163
N-BUTANE	ASTM D-1945	0.116
NEO-PENTANE	ASTM D-1945	ND
I-PENTANE	ASTM D-1945	ND
N-PENTANE	ASTM D-1945	ND
N-HEXANES	ASTM D-1945	ND
N-HEPTANES	ASTM D-1945	ND
N-OCTANES	ASTM D-1945	ND
N-NONANES	ASTM D-1945	ND
N-DECANES	ASTM D-1945	ND
HENDECANES	ASTM D-1945	ND
DODECANES	ASTM D-1945	ND
TRIDECANES	ASTM D-1945	ND
TETRADECANES	ASTM D-1945	ND
HYDROGEN	ASTM D-1945	ND
NITROGEN	ASTM D-1945	0.156
OXYGEN	ASTM D-1945	ND
ARGON	ASTM D-1945	ND
CARBON DIOXIDE	ASTM D-1945	ND
CARBON MONOXIDE	ASTM D-1945	ND
WATER	ASTM D-1945	ND
HYDROGEN SULFIDE	ASTM D-5504	<0.05 ppm
HYDROGEN SULFIDE	ASTM D-5504	<0.002 gr/100 ft ³
TOTAL SULFUR	ASTM D-5504	1.7 ppm
TOTAL SULFUR	ASTM D-5504	0.007 gr/100 ft ³

ND = NOT DETECTED



JEA
P.O. Box 4910
Jacksonville, FL 32201-4910

CERTIFICATE OF ANALYSIS – 334-9644-02 (continued)

RESULTS

CALCULATED PROPERTIES

RELATIVE DENSITY	ASTM D-3588	0.5853
COMPRESSIBILITY FACTOR	ASTM D-3588	0.99783

HEATING VALUE, BTU/cf, GROSS, 14.73 psia, 60 deg. F

SATURATED	ASTM D-3588	1059
DRY - HIGHER HEATING VALUE	ASTM D-3588	1061
NET - LOWER HEATING VALUE	ASTM D-3588	1040

ND = NOT DETECTED

/S/: Neal Stevens, Tampa Area Manager
SGS NORTH AMERICA INC.
MINERALS SERVICES DIVISION

NS/sh

This document is issued by the Company under its General Conditions of Service accessible at http://www.sgs.com/terms_and_conditions.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any other holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

ATTACHMENT 2

NGS LOCATION MAP



LEGEND

- Boiler

REFERENCES

- Boiler Location, JEA, 2009.

1,500 750 0 1,500
Feet

REV	DATE	DES	REVISION DESCRIPTION	GIS	CHK	R/W
PROJECT						

**JEA
NORTHSIDE GENERATING STATION**

AERIAL LOCATION MAP

PROJECT No. 063-87595		FILE No. 06367505B001	
DESIGN	MG	11/30/2009	SCALE AS SHOWN
GIS	NRL	12/1/2009	REV 0
CHECK	DB	1/6/2010	
REVIEW	DB	1/6/2010	

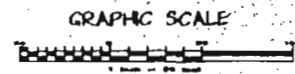
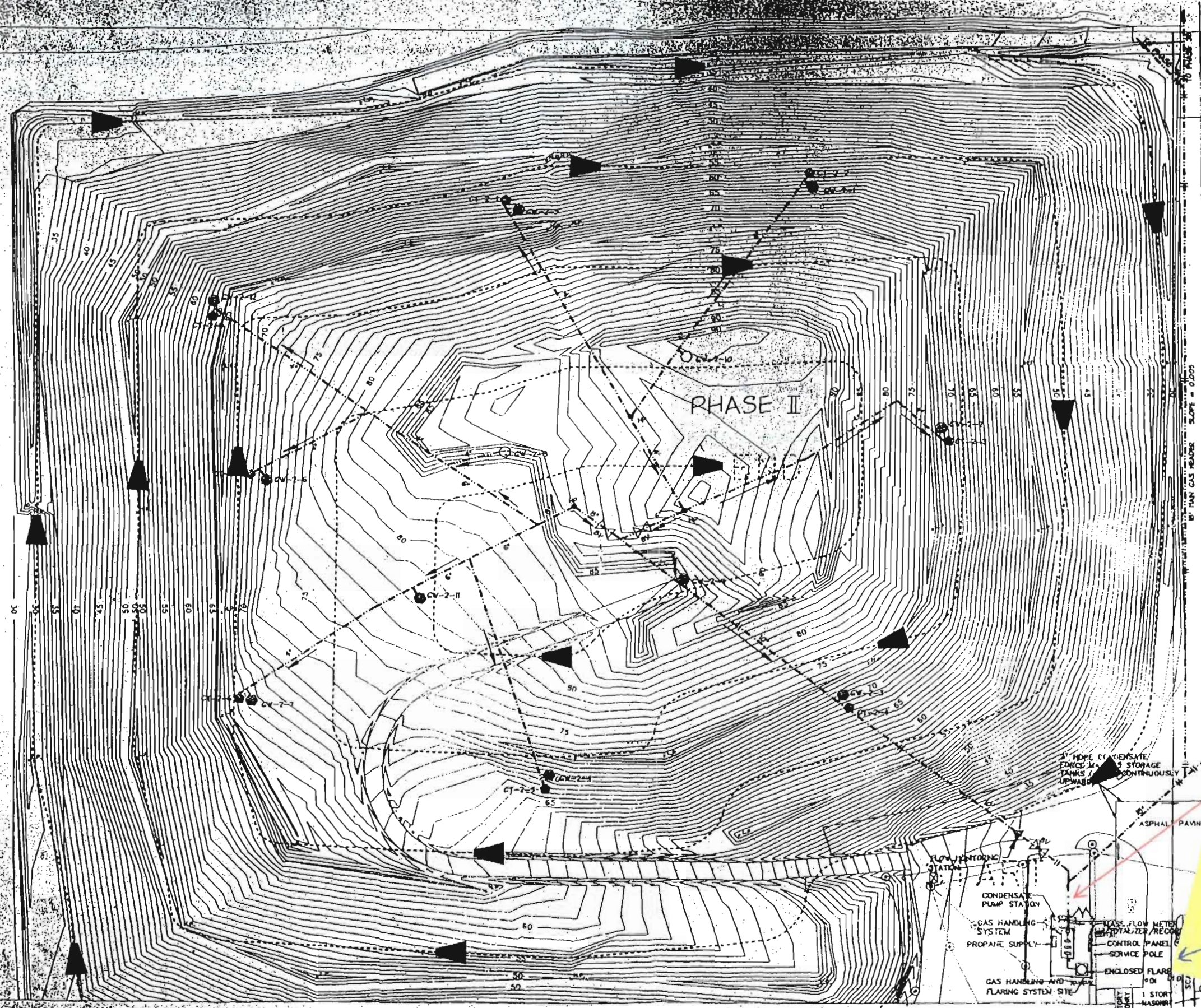
FIGURE 1

Golder Associates
Gainesville, Florida

Map Document: 06367505B001_AerialMap.mxd / Modified 12/1/2009 8:35:02 AM / Plotted 1/6/2010 11:27:11 AM by rhamar

ATTACHMENT 3

LANDFILL GAS SAMPLING LOCATION PLOT PLAN



NOTE:
BASE MAPING PREPARED BY SOUTHECH SURVEYORS, INC.
AND FINAL GRADING PLANS PREPARED BY GEE & JENSON.

SCHEDULE OF WELL COORDINATES & DEPTH			
WELL No.	NORTH	EAST	DEPTH (FT)
CW-2-1	507242.50	91442.60	31
CW-2-2	507247.13	91573.00	34
CW-2-3	507256.50	91478.60	33
CW-2-4	507243.60	9180.00	30
CW-2-5	507219.40	9180.25	30
CW-2-6	50724.96	90899.35	42
CW-2-7	50720.50	90884.17	33
CW-2-8	50724.00	9136.70	EAST
CW-2-9	50743.30	9136.50	51
CW-2-10	507072.20	9138.65	EAST
CW-2-11	50717.25	90886.70	45
CW-2-12	50724.75	90818.25	30

SCHEDULE OF CONDENSATE TRAPS COORDINATES		
CT No.	NORTH	EAST
CT-2-1	507229.50	9187.50
CT-2-2	507226.00	9140.00
CT-2-3	507201.17	9157.72
CT-2-4	50717.55	9176.60
CT-2-5	50743.15	9176.65
CT-2-6	50722.57	9267.09
CT-2-7	50715.67	90889.56
CT-2-8	50712.00	90845.90

NOTE:
LOCATION AND DEPTH OF WELLS AND LOCATION OF CONDENSATE TRAPS ARE FOR REFERENCE ONLY. ACTUAL LOCATIONS AND DEPTHS TO BE ESTABLISHED IN THE FIELD BY ENGINEER.

Sampling location before flare

Flare

DATE	DESIGNED	SCALE
	FFB	AS NOTED
	CHECKED	DATE
	APPROVED	OCTOBER 1993

SCALE
AS NOTED

DATE
OCTOBER 1993

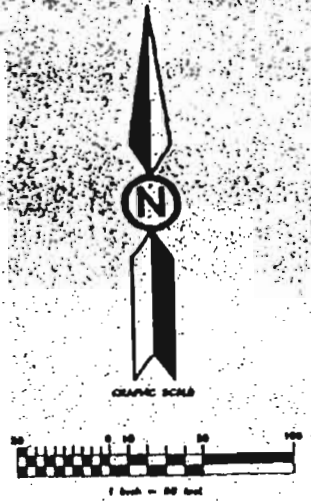
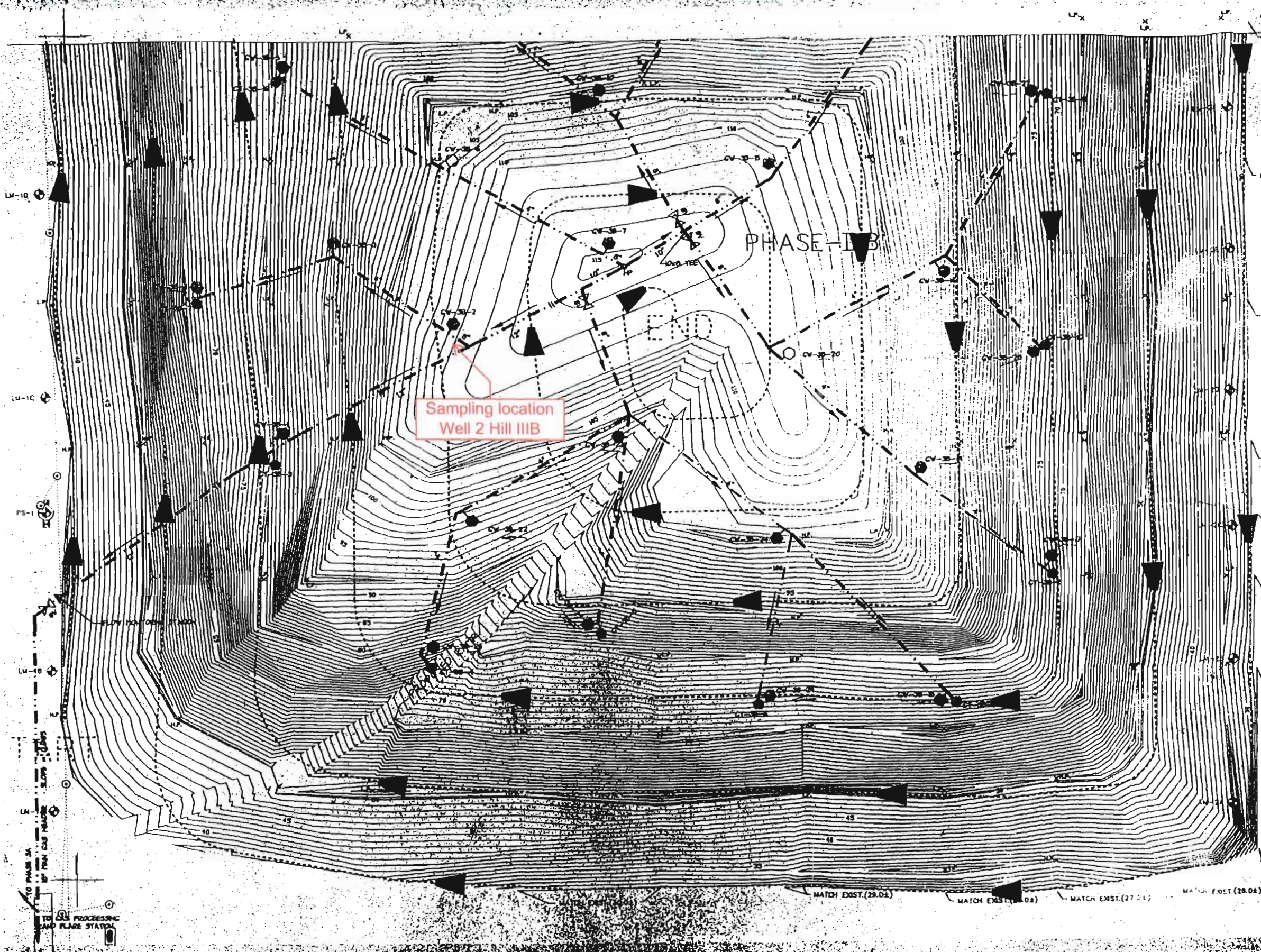
Hayden Wegman
Consulting Engineers

BOSTON WEST HARTFORD

CITY OF JACKSONVILLE, FLORIDA
NORTH LANDFILL CLOSURE

LANDFILL GAS MANAGEMENT SYSTEM
GAS COLLECTION WELLFIELD PLAN
PHASE - 2

SHEET
GM-3



- NOTES
1. BASE TRAPPING PREPARED BY SOUTHWEST SURVEYORS INC. AND FINAL GRADING PLANS PREPARED BY GIB & SODON.
 2. REFER TO SHT. G1-7 FOR SCHEDULE OF GAS WELLS AND CONDENSATE TRAPS.

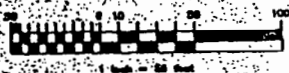
Surface Scan performed 3-22-09.
 0 Detections above the 500 ppm limit.

Robert M. ...
 AECOM/EarthTech

DRAWN PER DESIGNED JET CHECKED JET APPROVED		SCALE AS NOTED DATE OCTOBER 1997	HOYER WEGTON	CITY OF JACKSONVILLE, FLORIDA NORTH LANDFILL CLOSURE	LANDFILL GAS MANAGEMENT SYSTEM GAS COLLECTION WELLFIELD PLAN PHASE 1 SHEET 1 OF 2	SHEET GM-6 (24 8242)
------------------------------------------------------	--	-------------------------------------------	--------------	---------------------------------------------------------	-----------------------------------------------------------------------------------------	----------------------------



GRAPHIC SCALE



NOTE:
BASE MAPS PREPARED BY SOUTHTECH SURVEYORS, INC.
AND FINAL GRADING PLANS PREPARED BY CBE & JENSON.

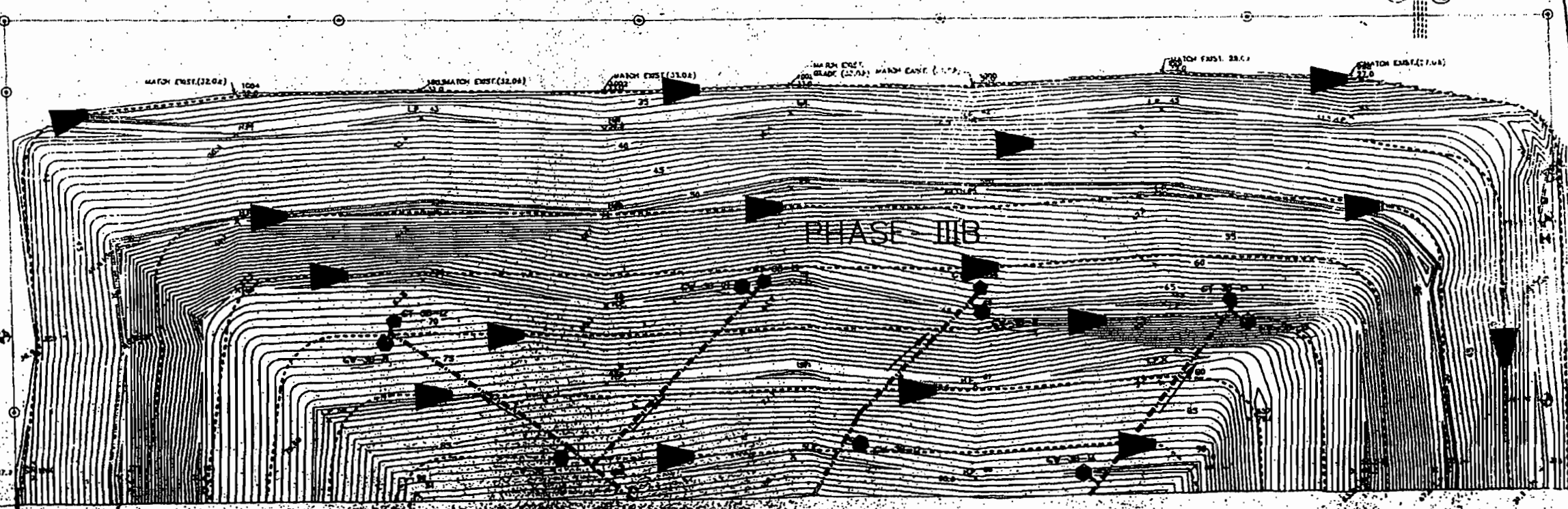
SCHEDULE OF WELL COORDINATES & DEPTH			
WELL No.	NORTH	EAST	DEPTH (FT)
CW-38-1	502485.21	42268.06	42
CW-38-2	503082.72	42248.11	67
CW-38-3	503170.25	42244.30	50
CW-38-4	503122.46	42261.87	30
CW-38-5	503357.40	42076.50	35
CW-38-6	503258.30	42250.83	EXIST.
CW-38-7	503167.46	42417.04	74
CW-38-8	503513.40	42210.8	35
CW-38-9	503488.24	42264.07	50
CW-38-10	503331.60	42405.20	64
CW-38-11	503535.05	42608.68	32
CW-38-12	503476.78	42508.80	55
CW-38-13	503524.10	42814.84	38
CW-38-14	503401.08	42658.78	38
CW-38-15	503750.54	42560.75	71
CW-38-16	503153.37	42765.25	54
CW-38-17	502823.74	42871.14	45
CW-38-18	502667.28	42771.87	34
CW-38-19	502425.52	42736.56	84
CW-38-20	503048.33	42538.08	EXIST.
CW-38-21	503588.17	42411.64	30
CW-38-22	502888.50	42253.33	62
CW-38-23	502494.85	42418.58	65
CW-38-24	502844.24	42487.48	70
CW-38-25	502744.72	42583.49	47
CW-38-26	502730.60	42524.34	47
CW-38-27	503525.47	42858.81	47
CW-38-28	503046.33	42853.81	43
CW-38-29	502675.53	42573.25	38

SCHEDULE OF CONDENSATE TRAPS COORDINATES		
CT No.	NORTH	EAST
CT-38-1	503104.35	42261.37
CT-38-2	502530.41	42259.47
CT-38-3	502108.34	42220.67
CT-38-4	502144.46	42298.47
CT-38-5	502666.72	42260.60
CT-38-6	502668.48	42254.83
CT-38-7	502803.78	42277.00
CT-38-8	503054.34	42268.82
CT-38-9	503321.46	42274.82
CT-38-10	503533.24	42268.77
CT-38-11	503527.24	42431.48
CT-38-12	503555.27	42607.00
CT-38-13	503543.06	42805.04
CT-38-14	503342.81	42067.94

NOTE:
LOCATION AND DEPTH OF WELLS AND LOCATION OF CONDENSATE TRAPS ARE FOR REFERENCE ONLY. ACTUAL TRAPS LOCATIONS AND DEPTHS TO BE ESTABLISHED IN THE FIELD BY ENGINEER.

WATER ELEV. = 11.8

Surface Scan performed
3-22-09.
0 Detections above the
500ppm limit.
Randy H. Mann
AECOM/EarthTech



DATE	REVISION	DRAWN: rfd	SCALE: AS NOTED	Hayden Wegman CITY OF JACKSONVILLE, FLORIDA NORTH LANDFILL CLOSURE	LANDFILL GAS MANAGEMENT SYSTEM GAS COLLECTION WELLFIELD PLAN PHASE - III B SHEET 2 OF 2	SHEET GM-7 92481
		DESIGNED: jef				
		CHECKED: jef	DATE: OCTOBER 1998			
		APPROVED:				

ATTACHMENT 4

LANDFILL GAS CURVE

North Landfill Gas Flowrates

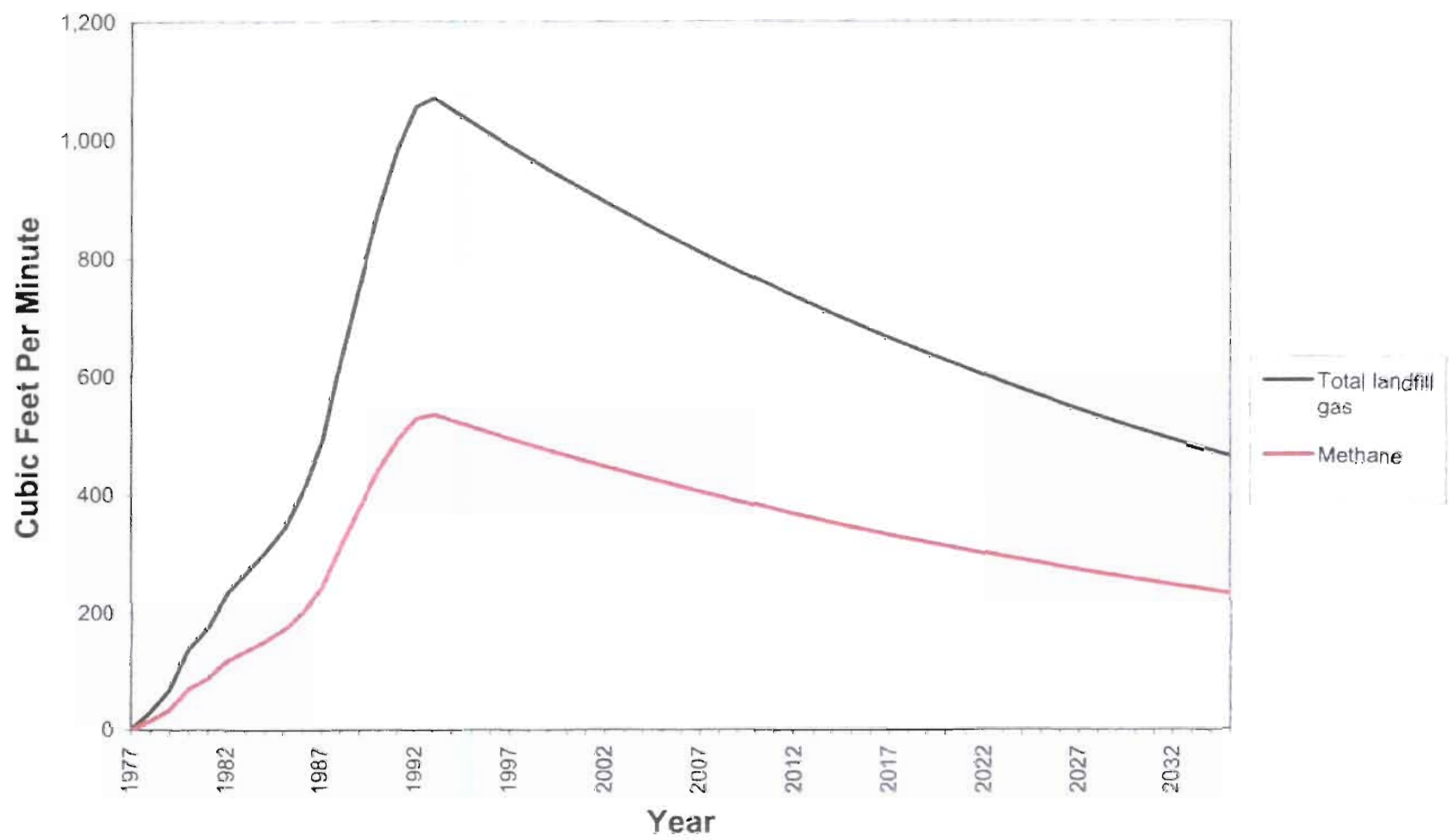


Figure 4-2
North Landfill Model Curve

Sheplak, Scott

-file-

From: Sheplak, Scott
Sent: Tuesday, October 26, 2010 10:29 AM
To: 'Oquendo.Ana@epamail.epa.gov'
Cc: 'Forney.Kathleen@epamail.epa.gov'; Holtom, Jonathan
Subject: public notice notification for draft/proposed project - parallel review title V permit - JEA

We have received proof of publication for the following project:

0310045-028-AV

JEA-Northside Generating Station and St. Johns River Power Park (NGS/SJRPP) Separations Technology, LLC (ST) Facility

They published on 10/16/2010 therefore

Day 30 = 11/15/2010 (end of the 30-day public comment period)

Day 45 = 11/30/2010 (end of the USEPA Region 4 review period)

Day 55 = 12/10/2010 (final permit by operation of law).

If you should have any questions, feel free to contact me.

Sincerely,

Scott M. Sheplak, P.E., CPM
scott.sheplak@dep.state.fl.us
Telephone 850/921-9532

Sheplak, Scott

-file-

From: Gianazza, N. Bert [GianNB@jea.com]
Sent: Monday, March 08, 2010 7:17 AM
To: Sheplak, Scott
Cc: Gonzalez, Natalia; Dave Buff (dbuff@golder.com)
Subject: FW: SJRPP SCR Commercial Dates

Scott,

In answer to your question about the SCR completion of construction. These dates are probably what you need.

Bert

From: Worley, Jay A. - Director, Environmental Programs
Sent: Monday, February 22, 2010 9:37 AM
To: Gianazza, N. Bert
Cc: Worley, Jay A. - Director, Environmental Programs
Subject: SJRPP SCR Commercial Dates

Commercial Operation Unit 1 – July 16, 2009 Commercial Operation Unit 2 – March 24, 2009

Florida has a very broad Public Records Law. Virtually all written communications to or from State and Local Officials and employees are public records available to the public and media upon request. JEA does not differentiate between personal and business e-mails. E-mail sent on the JEA system will be considered public and will only be withheld from disclosure if deemed confidential pursuant to State Law. Under Florida law, e-mail addresses are public records. If you do not want your e-mail address released in response to a public-records request, do not send electronic mail to this entity. Instead, contact JEA by phone or in writing.

Sheplak, Scott

From: Sheplak, Scott
Sent: Friday, March 05, 2010 3:11 PM
To: 'Buff, Dave'; 'Gonzalez, Natalia'
Cc: 'Gianazza, N. Bert'
Subject: JEA Northside/SJRPP Requests - Project 0310045-027-AC/0310045-028-AV

I am working on processing the other parts of the subject project. I may have questions as I go along.

The permit application form indicates initial testing was completed June 22-26, 2009 for SAM emissions. When was the construction completed on each new SCR system for SJRPP Boiler No. 1 and SJRPP Boiler 2?

Sheplak, Scott

- file -

From: Gonzalez, Natalia [Natalia_Gonzalez@golder.com]
Sent: Thursday, January 21, 2010 3:43 PM
To: Sheplak, Scott
Cc: Buff, Dave
Subject: JEA Northside/SJRPP Title V Revision

Mr. Sheplak, as per our phone conversation this afternoon, we will be sending the RAI response for the JEA TV revision (File Nos. 0310045-027-AC & 0310045-028-AV) early next week.

Thanks for your help,

Natalia

Natalia Gonzalez, E.I. | Air Engineer | Golder Associates Inc.
6241 NW 23rd Street, Suite 500, Gainesville, Florida, USA 32653
T: +1 (352) 336-5600 | F: +1 (352) 336-6603 | E: Natalia_Gonzalez@golder.com |
www.golder.com

Work Safe, Home Safe

This email transmission is confidential and may contain proprietary information for the exclusive use of the intended recipient. Any use, distribution or copying of this transmission, other than by the intended recipient, is strictly prohibited. If you are not the intended recipient, please notify the sender and delete all copies. Electronic media is susceptible to unauthorized modification, deterioration, and incompatibility. Accordingly, the electronic media version of any work product may not be relied upon.

Golder, Golder Associates and the GA globe design are trademarks of Golder Associates Corporation.

Please consider the environment before printing this email.

1/21/2010

Sheplak, Scott

From: Vielhauer, Trina
Sent: Monday, December 21, 2009 10:40 AM
To: Buff, Dave; Sheplak, Scott
Cc: Gonzalez, Natalia
Subject: RE: JEA Northside/SJRPP Title V Revision

That's fine.

From: Buff, Dave [mailto:DBuff@GOLDER.com]
Sent: Monday, December 21, 2009 9:39 AM
To: Sheplak, Scott
Cc: Vielhauer, Trina; Gonzalez, Natalia
Subject: JEA Northside/SJRPP Title V Revision

File Nos. 0310045-027-AC & 0310045-028-AV

Scott and Trina, JEA would like to request a 30-day extension for responding to the RAI dated September 23, 2009. If acceptable to the Department, the RAI would then be due to FDEP by January 21, 2010. Please let me know if this is acceptable as soon as possible, as the RAI response is currently due tomorrow, December 22, 2009. Thanks for the help.

David A. Buff, P.E., Q.E.P. | Principal Engineer | **Golder Associates Inc.**
6026 NW 1st Place, Gainesville, Florida, USA 32607
Tel: +1 (352) 336-5600 ext. 21145 Fax: +1 (352) 336-6603 | Cell: +1 352 514-5600 |
E: dbuff@golder.com | www.golder.com

Work Safe, Home Safe

This email transmission is confidential and may contain proprietary information for the exclusive use of the intended recipient. Any use, distribution or copying of this transmission, other than by the intended recipient, is strictly prohibited. If you are not the intended recipient, please notify the sender and delete all copies. Electronic media is susceptible to unauthorized modification, deterioration, and incompatibility. Accordingly, the electronic media version of any work product may not be relied upon.

Please consider the environment before printing this email.

12/22/2009

Sheplak, Scott

- file -

From: Gianazza, N. Bert [GianNB@jea.com]
Sent: Tuesday, October 20, 2009 9:57 AM
To: Sheplak, Scott; Mitchell, Bruce
Subject: FW: Request for Additional Information, File Numbers 0310045-027-AC & 028-AV, JEA Northside Generating Station, St. Johns River Power Park (NGS/SJRPP) and Separations
Attachments: JamesChansler0310045-027-AC&-028AVJEANorthside,St.JohnsRiverPowerParkRAI.pdf; SJRPP.material.handling.operations.Revised.Table6-PartB.3.xls

I don't think I ever forwarded this to you for our call today.

From: Kofler, Bruce W. - Mgr. Environmental Compliance
Sent: Thursday, October 08, 2009 11:22 AM
To: Gianazza, N. Bert
Cc: Kofler, Bruce W. - Mgr. Environmental Compliance
Subject: FW: Request for Additional Information, File Numbers 0310045-027-AC & 028-AV, JEA Northside Generating Station, St. Johns River Power Park (NGS/SJRPP) and Separations

Bert

Attached is the excel spreadsheet with the current table 6B. The one attached to the James Chansler pdf is a 2006 version show the "Predicted Emissions" which was an artifact of the NGS/ SJRPP conveyor cross tie, which was to be removed per our conversation with Michael Hatcher. The attached spreadsheet is the Table 6B agreed upon by the agency & us.

Bruce W. Kofler

Manager Environmental Compliance

Tel: (904)665-7886

Cell: (904) 591- 6778

koflbw@jea.com

From: Gianazza, N. Bert
Sent: Tuesday, October 06, 2009 3:38 PM
To: Kofler, Bruce W. - Mgr. Environmental Compliance
Subject: FW: Request for Additional Information, File Numbers 0310045-027-AC & 028-AV, JEA Northside Generating Station, St. Johns River Power Park (NGS/SJRPP) and Separations

Bruce,

Per my voice mail. Is the last page the correct Table 6-B?

Thanks, Bert

From: Friday, Barbara [mailto:Barbara.Friday@dep.state.fl.us]
Sent: Wednesday, September 23, 2009 1:49 PM
To: Chansler, James M. - Chief Operating Officer
Cc: Gianazza, N. Bert; dbuff@golder.com; Kirts, Christopher; ROBINSON@coj.net; Halpin, Mike; Gibson, Victoria; Sheplak, Scott
Subject: Request for Additional Information, File Numbers 0310045-027-AC & 028-AV, JEA Northside Generating Station, St. Johns River Power Park (NGS/SJRPP) and Separations

Revised Table 6 - Part B. SJRPP: Materials Handling and Storage Operations

Emission Unit No.	Material Handling and Storage Emission Unit	Type Source	Opacity Limit (%)	AQCS	VE Testing Frequency	Rationale
022: SJRPP: Bottom Ash, Fly Ash and Gypsum Handling and Storage Operations						
022a	Gypsum Dewatering Building	Fugitive	5	1	Upon Request	Wet byproduct w/insignificant emissions
022a	Gypsum Storage Enclosure	Fugitive	5	1	Upon Request	Wet byproduct w/insignificant emissions
022j	Gypsum Truck Loadout	Fugitive	5	1	Upon Request	Wet byproduct w/insignificant emissions
022j	Fly Ash Loadout for Silo 1A (metal structure)	Fugitive	10	1 & 3	Upon Request	Emissions vented back to Saleable Ash Silo
022j	Fly Ash Loadout for Silo 1B (metal structure)	Fugitive	10	1 & 3	Upon Request	Emissions vented back to Saleable Ash Silo
022j	Fly Ash Loadout for Silo 2A (metal structure)	Fugitive	10	1 & 3	Upon Request	Emissions vented back to Saleable Ash Silo
022j	Fly Ash Loadout for Silo 2B (metal structure)	Fugitive	10	1 & 3	Upon Request	Emissions vented back to Saleable Ash Silo
022k	Solid Waste Disposal Area	Fugitive	10	1 & 2	Upon Request	Wet byproduct w/insignificant emissions
022l	Saleable Fly Ash Silo 1A with Fabric Filter (concrete structure)	Point-Vent	5	4 & 5	Annually	Vent with minor emissions
022l	Saleable Fly Ash Silo 1B with Fabric Filter (concrete structure)	Point-Vent	5	4 & 5	Annually	Vent with minor emissions
022l	Saleable Fly Ash Silo 2A with Fabric Filter (concrete structure)	Point-Vent	5	4 & 5	Annually	Vent with minor emissions
022l	Saleable Fly Ash Silo 2B with Fabric Filter (concrete structure)	Point-Vent	5	4 & 5	Annually	Vent with minor emissions
022l	Non-Saleable Fly Ash Silo Unit 1-A with Fabric Filter (concrete structure)	Point-Vent	5	4 & 5	Annually	Vent with minor emissions
022l	Non-Saleable Fly Ash Silo Unit 2-A with Fabric Filter (concrete structure)	Point-Vent	5	4 & 5	Annually	Vent with minor emissions
022m	Wet Fly Ash Load out 1A/1B	Fugitive	10	1, 4 & 6	Upon Request	Wet byproduct w/insignificant emissions
022m	Bottom Ash Loadouts 1A/1B	Fugitive	10	1	Upon Request	Wet byproduct w/insignificant emissions
022m	Wet Fly Ash Load out 2A/2B	Fugitive	10	1, 4 & 6	Upon Request	Wet byproduct w/insignificant emissions
022m	Bottom Ash Loadouts 2A/2B	Fugitive	10	1	Upon Request	Wet byproduct w/insignificant emissions
022n	Unpaved Road, By-Product Transport	Fugitive	10	1 & 2	Upon Request	No emission vent, reasonable Precautions conducted (watering)

re: SEAP's version

not current version

Emission Unit No.	Material Handling and Storage Emission Unit	Type Source	Opacity Limit (%)	AQCS	VE Testing Frequency	Rationale
023: SJRPP: Materials Handling and Storage Operations						
023a	Rail Rotary Dumper - Building Emissions	Point-Fugitive	10	1, 2, 4, & 6	Upon Request	No emissions vent, minor emissions
023b	Conveyor C-3 Tunnel Ventilation - 6,400 cfm; No control	Point-Vent	5	1, 4, & 5	Upon Renewal of Title V	Provides tunnel ventilation only, minor emissions
023b	Conveyor C-3 Tunnel Ventilation - 6,400 cfm; No control	Point-Vent	5	1, 4, & 5	Upon Renewal of Title V	Provides tunnel ventilation only, minor emissions
023b	Conveyor C-3 Tunnel Ventilation - 21,600 cfm; No control	Point-Vent	5	1, 4, & 5	Upon Renewal of Title V	Provides tunnel ventilation only, minor emissions
023c	Shiphold	Fugitive	10	1, 4 & 6	Upon Request	No emissions vent, minor emissions
023d	Unloader Hopper and Spillage Collector Transfers	Fugitive	10	1, 3, 4 & 6	Upon Request	No emissions vent, minor emissions
023d	Ship Unloader Hopper to Transfer CT-1, Spillage Conveyor	Fugitive	10	1, 3, 4 & 6	Upon Request	Enclosed conveyor, no emissions vent
023e	Fuel Transfer Building (DC-2)	Fugitive	10	1, 3 & 4	Upon Request	No emissions vent, minor emissions, enclosed source
023e	Transfer Station No. 1	Fugitive	5	1, 2 & 4	Upon Request	Enclosed conveyor, no emissions vent
023e	Transfer Station No. 2	Fugitive	5	1, 2 & 4	Upon Request	Enclosed conveyor, no emissions vent
023e	Transfer Station No. 3	Fugitive	5	1, 2 & 4	Upon Request	Enclosed conveyor, no emissions vent
023e	Transfer Station No. 4	Fugitive	5	1 & 4	Upon Request	Enclosed conveyor, no emissions vent
023e	Transfer Station No. 5	Fugitive	5	1 & 4	Upon Request	Enclosed conveyor, no emissions vent
023e	Transfer Station No. 6	Fugitive	5	1 & 4	Upon Request	Enclosed conveyor, no emissions vent
023e	Transfer Station No. 7	Fugitive	5	1 & 4	Upon Request	Enclosed conveyor, no emissions vent
023e	Transfer Point 9GC-04 to 9GC-05	Fugitive	5	1	Upon Request	No emissions vent, minor emissions (gypsum)
023f	Stacker/Reclaimer (Stacker Mode)	Fugitive	10	1 & 3	Upon Request	No emissions vent, minor emissions
023f	Stacker	Fugitive	10	1 & 3	Upon Request	No emissions vent, minor emissions
023f	Reclaimer	Fugitive	10	1 & 3	Upon Request	No emissions vent, minor emissions
023g	Petroleum Coke-Reclaimer System (PC-1)	Fugitive	40	4	Upon Request	No emissions vent, minor emissions Source Eliminated
023g	Emergency Reclaim Hoppers - Loadout	Fugitive	10	1	Upon Request	Same as other reclaim systems, not typically used
023j	Limestone Truck Loadout & Transfer	Fugitive	10	1	Upon Request	No emissions vent, minor emissions
023k	Limestone Storage Pile #1 - Existing	Fugitive	10	1	Upon Request	No emissions location, minor emissions
023k	Limestone Storage Pile #2 - Fuel yard	Fugitive	10	1, 2 & 3	Upon Request	No emissions location, minor emissions, not currently used.
023k	Limestone Reclaim Loadout - Grizzly	Fugitive	10	1 & 3	Upon Request	Minor emissions
023k	Coal Pile	Fugitive	10	1, 2 & 3	Upon Request	No emissions location, minor emissions
023k	Petroleum Coke Pile	Fugitive	10	1, 2 & 3	Upon Request	No emissions location, minor emissions
023l	Limestone Reclaim Hopper with Fabric Filter (3DC-01)	Point-Vent	5	1, 4 & 5	Annually	Vent with minor emissions
023l	Limestone Silos with Fabric Filters (2: 1DC-01 and 2DC-01)	Point-Vent	5	1, 4 & 5	Annually	Minor emissions
023l	Quick Lime Silo with Filter Vent (used for water treatment)	Point-Vent	5	4 & 5	Upon Renewal of Title V	Minor emission source, low volume material handling; 15 min VE suggested
023l	Fuel Handling Building with Fabric Filter (DC-3)	Point-Vent	5	1, 4 & 5	Annually	Vent with minor emissions
023l	Unit #1 Fuel Storage Bins with Fabric Filter (DC-4)	Point-Vent	5	1, 4 & 5	Annually	Vent with minor emissions
023l	Unit #2 Fuel Storage Bins with Fabric Filter (DC-5)	Point-Vent	5	1, 4 & 5	Annually	Vent with minor emissions

missing predicted emissions

NOTE:

- a. "Italics" indicates that the emission point was not included in Revised Table 6 of PSD-FL-010(C), but is associated with the material handling and storage operations at SJRPP.
- b. The VE limit (% opacity) shall be used for compliance purposes and demonstrated using EPA Reference Method 9, pursuant to 40 CFR Part 60, Appendix A, and Chapter 62-297, F.A.C.
- c. **Air Quality Control Systems (AQCS)**
 1. Conditioned Materials
 2. Wet Suppression
 3. Water Sprays
 4. Enclosures (Total, Partial, Covers, & Wind Screens)
 5. Dust Control Systems
 6. Best Operating Practices

- file -

Sheplak, Scott

From: Sheplak, Scott
Sent: Monday, October 19, 2009 8:33 AM
To: Gianazza, N. Bert
Cc: Mitchell, Bruce
Subject: RE: conference call re. Table 6-B
Attachments: 0310045-020-AV Appendix SJRPP - Table 6 (Revised) Part B.xls

That works fine for both of us to discuss our favorite table.

[Attached is the Table 6 - Part B we show as the most current on file. This table was from Permit No. PSD-FL-010G/0310045-015-AC and was included in last fall's Title V permit renewal.

Have a good day!

From: Gianazza, N. Bert [mailto:GianNB@jea.com]
Sent: Friday, October 16, 2009 9:28 AM
To: Mitchell, Bruce; Sheplak, Scott
Subject: conference call re. Table 6-B

Bruce and Scott,

I set up a conference call for 10:00 AM Tuesday (Oct 20). Please let me know if that works for you.

The call-in number is: 866-907-1051 passcode 625567

Thanks, Bert

Florida has a very broad Public Records Law. Virtually all written communications to or from State and Local Officials and employees are public records available to the public and media upon request. JEA does not differentiate between personal and business e-mails. E-mail sent on the JEA system will be considered public and will only be withheld from disclosure if deemed confidential pursuant to State Law. Under Florida law, e-mail addresses are public records. If you do not want your e-mail address released in response to a public-records request, do not send electronic mail to this entity. Instead, contact JEA by phone or in writing.

Permit No. PSD-FL-010G/0310045-015-AC

Table 6 (Revised) - Part B. SJRPP: Materials Handling and Storage Operations

Emission Unit No.	Materials Handling and Storage Operations Emission Unit/Point	Type Source	VE Limit (% Opacity)	AQCS	Predicted Emissions (lbs/hr)	VE Testing Frequency	Rationale
022: SJRPP: Bottom Ash, Fly Ash and Gypsum Handling and Storage Operations							
022a	Gypsum Dewatering Building	Fugitive	5	1	0.04	Upon Request	Wet byproduct w/insignificant emissions
022a	Gypsum Storage Enclosure	Fugitive	5	1	0.008	Upon Request	Wet byproduct w/insignificant emissions
022j	Gypsum Truck Loadout	Fugitive	5	1	0.28	Upon Request	Wet byproduct w/insignificant emissions
022j	Fly Ash Loadout for Silo 1A (metal structure)	Fugitive	10	1 & 3	0.06	Upon Request	Emissions vented back to Saleable Ash Silo
022j	Fly Ash Loadout for Silo 1B (metal structure)	Fugitive	10	1 & 3	0.06	Upon Request	Emissions vented back to Saleable Ash Silo
022j	Fly Ash Loadout for Silo 2A (metal structure)	Fugitive	10	1 & 3	0.06	Upon Request	Emissions vented back to Saleable Ash Silo
022j	Fly Ash Loadout for Silo 2B (metal structure)	Fugitive	10	1 & 3	0.06	Upon Request	Emissions vented back to Saleable Ash Silo
022k	Solid Waste Disposal Area	Fugitive	10	1 & 2	0.31	Upon Request	Wet byproduct w/insignificant emissions
022l	Saleable Fly Ash Silo 1A with Fabric Filter (concrete structure)	Point-Vent	5	4 & 5	0.2	Annually	Vent with minor emissions
022l	Saleable Fly Ash Silo 1B with Fabric Filter (concrete structure)	Point-Vent	5	4 & 5	0.2	Annually	Vent with minor emissions
022l	Saleable Fly Ash Silo 2A with Fabric Filter (concrete structure)	Point-Vent	5	4 & 5	0.2	Annually	Vent with minor emissions
022l	Saleable Fly Ash Silo 2B with Fabric Filter (concrete structure)	Point-Vent	5	4 & 5	0.2	Annually	Vent with minor emissions
022l	Non-Saleable Fly Ash Silo Unit 1-A with Fabric Filter (concrete structure)	Point-Vent	5	4 & 5	0.2	Annually	Vent with minor emissions
022l	Non-Saleable Fly Ash Silo Unit 2-A with Fabric Filter (concrete structure)	Point-Vent	5	4 & 5	0.2	Annually	Vent with minor emissions
022m	Wet Fly Ash Load out 1A/1B	Fugitive	10	1, 4 & 6	0.2	Upon Request	Wet byproduct w/insignificant emissions
022m	Bottom Ash Loadouts 1A/1B	Fugitive	10	1	0.09	Upon Request	Wet byproduct w/insignificant emissions
022m	Wet Fly Ash Load out 2A/2B	Fugitive	10	1, 4 & 6	0.2	Upon Request	Wet byproduct w/insignificant emissions
022m	Bottom Ash Loadouts 2A/2B	Fugitive	10	1	0.09	Upon Request	Wet byproduct w/insignificant emissions
022n	Unpaved Road, By-Product Transport	Fugitive	10	1 & 2	0.58	Upon Request	No emission vent, reasonable precautions conducted (watering)
023: SJRPP: Fuel and Limestone Handling and Storage Operations							
023a	Rotary Railcar Dumper Building	Point-Fugitive	10	1, 2, 4 & 6	0.15	Upon Request	No emissions vent, minor emissions, enclosed source w/spray bar
023b	Conveyor C-3 Tunnel Ventilation - 6,400 cfm; No control	Point-Vent	5	4	0.32	Upon Renewal of Title V	Provides tunnel ventilation only, minor emissions
023b	Conveyor C-3 Tunnel Ventilation - 6,400 cfm; No control	Point-Vent	5	1, 3 & 4	0.32	Upon Renewal of Title V	Provides tunnel ventilation only, minor emissions
023b	Conveyor C-3 Tunnel Ventilation - 21,600 cfm; No control	Point-Vent	5	1 & 4	0.32	Upon Renewal of Title V	Provides tunnel ventilation only, minor emissions
023c	Shiphold Operations	Fugitive	10	1, 4 & 6	0.54	Upon Request	No emissions vent, minor emissions
023d	Ship Unloader Hopper and Spillage Collector Transfers	Fugitive	10	1, 3, 4 & 6	0.28	Upon Request	No emissions vent, minor emissions
023d	Ship Unloader Hopper to Transfer CT-1, Spillage Conveyor	Fugitive	10	1, 3, 4 & 6	1	Upon Request	Enclosed conveyor, no emissions vent
023e	Fuel Transfer Building (DC-2)	Fugitive	10	1, 3 & 4	0.65	Upon Request	No emissions vent, minor emissions, enclosed source
023e	Transfer Station No. 1	Fugitive	5	1, 2 & 4	0.04	Upon Request	Enclosed conveyor, no emissions vent
023e	Transfer Station No. 2	Fugitive	5	1, 2 & 4	0.04	Upon Request	Enclosed conveyor, no emissions vent
023e	Transfer Station No. 3	Fugitive	5	1, 2 & 4	0.04	Upon Request	Enclosed conveyor, no emissions vent
023e	Transfer Station No. 4	Fugitive	5	1 & 4	0.04	Upon Request	Enclosed conveyor, no emissions vent
023e	Transfer Station No. 5	Fugitive	5	1 & 4	0.04	Upon Request	Enclosed conveyor, no emissions vent
023e	Transfer Station No. 6	Fugitive	5	1 & 4	0.04	Upon Request	Enclosed conveyor, no emissions vent
023e	Transfer Station No. 7	Fugitive	5	1 & 4	0.04	Upon Request	Enclosed conveyor, no emissions vent
023e	Transfer Point 9GC-04 to 9GC-05	Fugitive	5	1	0.007	Upon Request	No emissions vent, minor emissions (gypsum)
023f	Stacker/Reclaimer (Stacker Mode)	Fugitive	10	1 & 3	2.29	Upon Request	No emissions vent, minor emissions
023f	Stacker	Fugitive	10	1 & 3	1.15	Upon Request	No emissions vent, minor emissions
023f	Reclaimer	Fugitive	10	1 & 3	0.43	Upon Request	No emissions vent, minor emissions
023g	Emergency Reclaim Hoppers - Loadout	Fugitive	10	1	0.29	Upon Request	Same as other reclaim systems; not typically used
023j	Limestone Truck Loadout & Transfer	Fugitive	10	1	0.1	Upon Request	No emissions vent, minor emissions.
023k	Limestone Storage Pile #1 - Existing	Fugitive	10	1	0.26	Upon Request	No emissions location, minor emissions
023k	Limestone Storage Pile #2 - Fuel Yard	Fugitive	10	1, 2 & 3	0.71	Upon Request	No emissions location, minor emissions.
023k	Limestone Reclaim Loadout - Grizzly	Fugitive	10	1 & 3	None	Upon Request	Minor emissions
023k	Coal Pile	Fugitive	10	1, 2 & 3	0.26	Upon Request	No emissions location, minor emissions
023k	Petroleum Coke Pile	Fugitive	10	1, 2 & 3	0.71	Upon Request	No emissions location, minor emissions
023l	Limestone Reclaim Hopper with Fabric Filter (3DC-01)	Point-Vent	5	1, 4 & 5	0.14	Annually	Vent with minor emissions
023l	Limestone Silos with Fabric Filters (2: 1DC-01 and 2DC-01)	Point-Vent	5	1, 4 & 5	0.05	Annually	Minor emissions
023l	Quick Lime Silo with Filter Vent (used for vapor treatment)	Point-Vent	5	4 & 5	None	Upon Renewal of Title V	Minor emission source, low volume material handling, 15 min VE suggested
023l	Fuel Handling Building with Fabric Filter (DC-3)	Point-Vent	5	1, 4 & 5	0.24	Annually	Vent with minor emissions
023l	Unit #1 Fuel Storage Bins with Fabric Filter (DC-4)	Point-Vent	5	1, 4 & 5	0.009	Annually	Vent with minor emissions
023l	Unit #2 Fuel Storage Bins with Fabric Filter (DC-5)	Point-Vent	5	1, 4 & 5	0.009	Annually	Vent with minor emissions

NOTES:

- "Italics" indicates that the emission point was not included in Revised Table 6 of PSD-FL-010(C), but is associated with the material handling and storage operations at JEA's SJRPP.
- The VE limit (% opacity) shall be used for compliance purposes and demonstrated using EPA Reference Method 9, pursuant to 40 CFR Part 60, Appendix A, and Chapter 62-297, F.A.C.
- Air Quality Control Systems (AQCS)**
 - Conditioned Materials
 - Wet Suppression, as needed
 - Water Sprays, as needed
 - Enclosures (Total, Partial, Covers, & Wind Screens)
 - Dust Control System - AQCS
 - Best Operating Practices
- Predicted emissions (lbs/hr): these values were predicted/estimated and used in a preliminary screening/modeling evaluation for as permitting action (PSD-FL-010) and are not considered to be allowable emission limits.

Sheplak, Scott

-file-

From: Gianazza, N. Bert [GianNB@jea.com]
Sent: Tuesday, September 21, 2010 3:13 PM
To: Sheplak, Scott
Cc: Holtom, Jonathan; Buff, Dave
Subject: RE: landfill gas project - renewable energy - JEA

Scott,

The 5MW or so (my guesstimate based on the amount of gas the landfill is generating) is for the entire facility.

Any chance we can get pre-draft of the Title V permit since we will be revising it in parallel?

Thanks, Bert

From: Sheplak, Scott [mailto:Scott.Sheplak@dep.state.fl.us]
Sent: Friday, September 17, 2010 8:23 AM
To: Gianazza, N. Bert; 'Buff, Dave'
Cc: Holtom, Jonathan
Subject: landfill gas project - renewable energy - JEA

Attached is a pre-draft of the subject AC permit.

Jon and I discussed some of the specific conditions more and we do not think an H₂S analysis or a VE test is necessary at this time due to the uniqueness of the CFB units, i.e., they have air pollution controls for SO₂, SO₂ CEMS and COMS. The project also proposes a limited quantity of landfill gas. For your own knowledge, you may want to know what is in the landfill gas as high levels of H₂S could cause problems like corrosion.

Please take a quick look at the pre-draft and contact me after reviewing it.

I believe the only item remaining was the GHG permitting concern that Jon had mentioned yesterday. I defer to the experts in our NSR Program on that issue/concern.

Have a good day!

Sincerely,

Scott M. Sheplak, P.E.
scott.sheplak@dep.state.fl.us
Telephone 850/921-9532

P.S. Was the "5 MW" you mentioned from the combustion of landfill gas at the entire JEA-SJRPP/NGS plant?

The Department of Environmental Protection values your feedback as a customer. DEP Secretary Mimi Drew is committed to continuously assessing and improving the level and quality of services provided to you. Please take a few minutes to comment on the quality of service you received. Simply click on [this link to the DEP Customer Survey](#). Thank you in advance for completing the survey.

Florida has a very broad Public Records Law. Virtually all written communications to or from State and Local Officials and employees are public records available to the public and media

Sheplak, Scott

From: Gianazza, N. Bert [GianNB@jea.com]
Sent: Friday, April 23, 2010 11:16 AM
To: Sheplak, Scott
Cc: Dave Buff (dbuff@golder.com); Gonzalez, Natalia
Subject: NGS Landfill gas flow rate curve
Attachments: twr08mishrplj@corp.jea.com_20100423_111928.pdf

Scott,

Is this what you were looking for?

Bert

Florida has a very broad Public Records Law. Virtually all written communications to or from State and Local Officials and employees are public records available to the public and media upon request. JEA does not differentiate between personal and business e-mails. E-mail sent on the JEA system will be considered public and will only be withheld from disclosure if deemed confidential pursuant to State Law. Under Florida law, e-mail addresses are public records. If you do not want your e-mail address released in response to a public-records request, do not send electronic mail to this entity. Instead, contact JEA by phone or in writing.

North Landfill Gas Flowrates

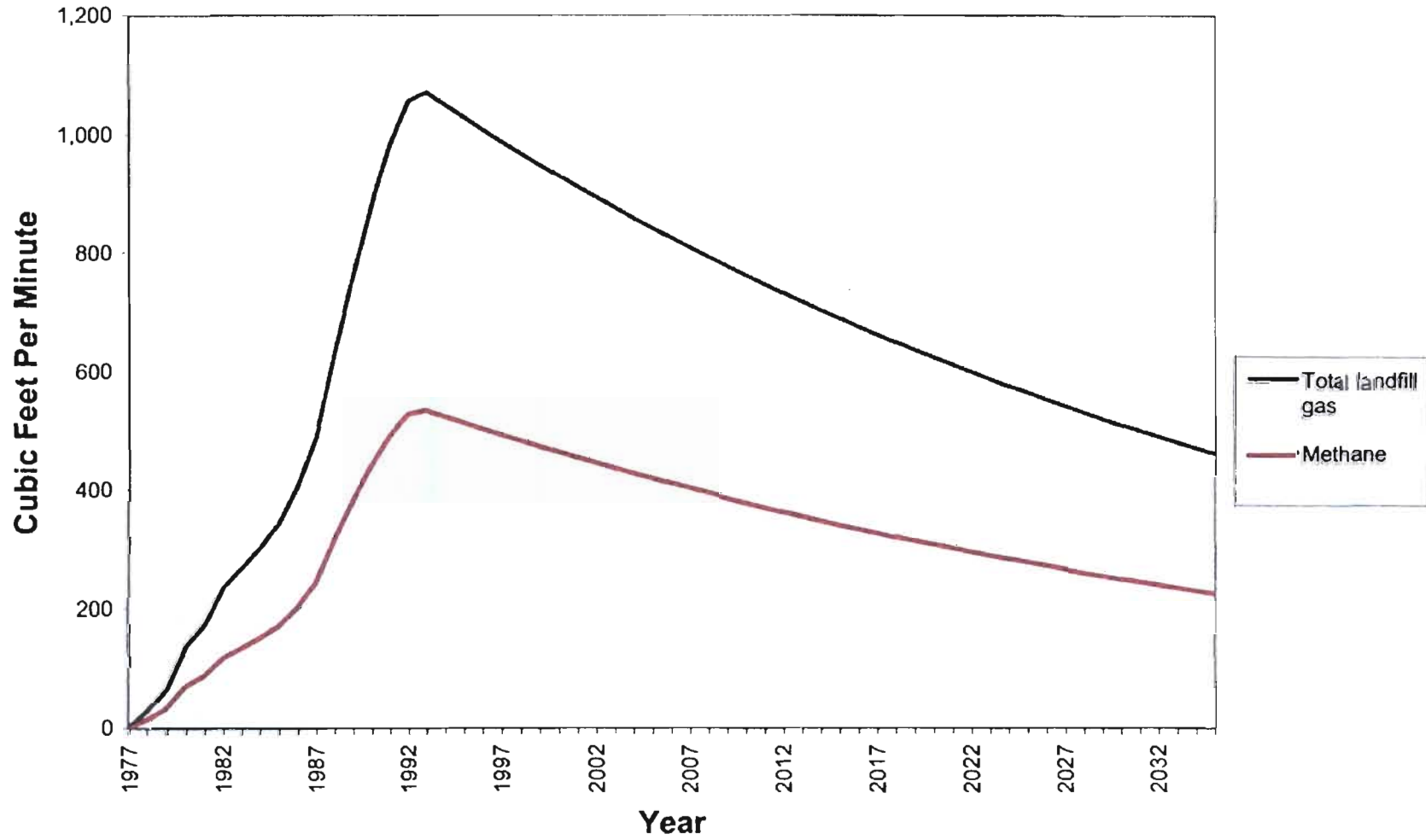


Figure 4-2
North Landfill Model Curve

From: Buff, Dave [DBuff@GOLDER.com]
Sent: Thursday, February 25, 2010 12:05 PM
To: Sheplak, Scott
Cc: Gonzalez, Natalia; Gianazza, N. Bert
Subject: JEA Northside/SJRPP TV Revision

Mr. Sheplak,

Scott, the questions you asked on the emails received on February 10th and 17th of 2010 are listed and answered below.

1. How much time is needed for the construction related activities to install the new pipeline to the NGS CFB Boiler Nos. 1 and 2? {I'll use this to set the expiration date for the air construction permit.}

Currently, the pipeline carrying landfill gas (LFG) from the North Landfill connects through a valve to the natural gas pipeline running to Unit 3. This same system allows LFG to be directed to the Units 1, and 2 through existing valves/piping. Therefore, the existing pipeline used for the transportation of natural gas to NGS CFB Boiler Nos. 1 and 2 will be used to transport the LFG. At the moment there is no cost justification for re-piping to those units, therefore no construction will be required.

It is important to note that although the infrastructure to burn LFG in NGS CFB Boiler Nos. 1 and 2 is already in place because of the facility's current piping configuration, this fuel will only be burned in the boilers once the air construction permit is issued.

2. Also, it seems highly unlikely that the JEA NGS Boiler No. 3 can burn the maximum landfill gas as indicated in Permit No. 0310045-001-AV. Burning about 10% landfill gas in a boiler seems more realistic. Per my review of AOR data, the maximum landfill gas burned in the JEA NGS Boiler No. 3 was 279 million ft³/year in 2000, roughly 14% of the heat input. The quantity burned by the JEA NGS Boiler No. 3 declined from the 279 million ft³/year in 2000 to none (0) in 2008. Any reason(s) why? Any idea how much was burned last year (2009)?

Due to contractual issues between JEA and the City of Jacksonville as well as maintenance of the LFG pumping station at the landfill, there was an extended period of time (possibly 2007-2009) that the City of Jacksonville was not able to deliver LFG to JEA. These issues were resolved in late 2009 and JEA started receiving LFG again in early January, 2010. No LFG was burned at NGS in 2009.

3. Does (or has) the North Landfill accept(ed) construction and demolition (C&D) debris?

It is not clear if the North Landfill has accepted C&D debris. However, if the concern is the H₂S content of the LFG due to C&D debris, SO₂ emissions will be better controlled if the LFG is burned in NGS CFB Boiler Nos. 1 and 2 than if the gas is flared at the landfill. If the LFG is not burned in the boilers, it is flared which creates uncontrolled SO₂ emissions. The boilers, unlike the flare, are equipped with limestone injection which is used to maintain emissions within permit limits at all times.

Thank you for your consideration of this information. If you have any questions, please do not hesitate to call or email me or Natalia.

David A. Buff, P.E., Q.E.P. | Principal Engineer | **Golder Associates Inc.**
6026 NW 1st Place, Gainesville, Florida, USA 32607
Tel: +1 (352) 336-5600 ext. 21145 **Fax:** +1 (352) 336-6603 | **Cell:** +1 352 514-5600 |
E: dbuff@golder.com | www.golder.com

Work Safe, Home Safe

This email transmission is confidential and may contain proprietary information for the exclusive use of the intended recipient. Any use, distribution or copying of this transmission, other than by the intended recipient, is strictly prohibited. If you are not the intended recipient, please notify the sender and delete all copies. Electronic media is

Sheplak, Scott

- file -

From: Sheplak, Scott
Sent: Wednesday, February 17, 2010 2:27 PM
To: 'Gonzalez, Natalia'
Cc: 'Buff, Dave'
Subject: RE: Comments on JEA's RAI response

One last question:

3. Does (or has) the North Landfill accept(ed) construction and demolition (C&D) debris?

From: Sheplak, Scott
Sent: Wednesday, February 10, 2010 1:06 PM
To: 'Gonzalez, Natalia'
Cc: Buff, Dave
Subject: RE: Comments on JEA's RAI response

Thank you for the correction below and helping me with the location of the JEA NGS Boiler No. 3 at the site.

I have a few minor follow up questions:

1. How much time is needed for the construction related activities to install the new pipeline to the NGS CFB Boiler Nos. 1 and 2? {I'll use this to set the expiration date for the air construction permit.}
2. Also, it seems highly unlikely that the JEA NGS Boiler No. 3 can burn the maximum landfill gas as indicated in Permit No. 0310045-001-AV. Burning about 10% landfill gas in a boiler seems more realistic. Per my review of AOR data, the maximum landfill gas burned in the JEA NGS Boiler No. 3 was 279 million ft³/year in 2000, roughly 14% of the heat input. The quantity burned by the JEA NGS Boiler No. 3 declined from the 279 million ft³/year in 2000 to none (0) in 2008. Any reason(s) why? Any idea how much was burned last year (2009)?

From: Gonzalez, Natalia [mailto:Natalia_Gonzalez@golder.com]
Sent: Tuesday, February 09, 2010 12:54 PM
To: Sheplak, Scott
Cc: Buff, Dave
Subject: Comments on JEA's RAI response

Mr. Sheplak

As discussed early in our phone conversation, there is a typographical error in the response to comment 2.g of the RAI response dated January 25, 2010 for JEA's air construction permit and Title V permit revision application.

The requested maximum hourly rate of the landfill gas burned in each boiler should have been 6,000 scf/hr NOT 60,000 scf/hr. This value concurs with the maximum landfill gas burned of 0.012×10^6 scf/hr for both boilers shown in the segment information section for landfill gas in the NGS-CFB Boiler Nos. 1 and 2 of the permit application. Therefore, the maximum heat input rate to each boiler is indeed 6 MMBtu/hr as stated in the response to comment 2.g.

Please do not hesitate to contact me if you have further questions,

Natalia

Natalia Gonzalez, E.I. | Air Engineer | Golder Associates Inc.

6026 NW 1st Place, Gainesville, Florida, USA 32607

T: +1 (352) 336-5600 | F: +1 (352) 336-6603 | E: Natalia_Gonzalez@golder.com | www.golder.com

Work Safe, Home Safe

This email transmission is confidential and may contain proprietary information for the exclusive use of the intended recipient. Any use, distribution or copying of this transmission, other than by the intended recipient, is strictly prohibited. If you are not the intended recipient, please notify the sender and delete all copies. Electronic media is susceptible to unauthorized modification, deterioration, and incompatibility. Accordingly, the electronic media version of any work product may not be relied upon.

Golder, Golder Associates and the GA globe design are trademarks of Golder Associates Corporation.

Please consider the environment before printing this email.

Sheplak, Scott

-file-

From: Gonzalez, Natalia [Natalia_Gonzalez@golder.com]
Sent: Tuesday, February 09, 2010 12:54 PM
To: Sheplak, Scott
Cc: Buff, Dave
Subject: Comments on JEA's RAI response

Mr. Sheplak

As discussed early in our phone conversation, there is a typographical error in the response to comment 2.g of the RAI response dated January 25, 2010 for JEA's air construction permit and Title V permit revision application.

The requested maximum hourly rate of the landfill gas burned in each boiler should have been 6,000 scf/hr NOT 60,000 scf/hr. This value concurs with the maximum landfill gas burned of 0.012×10^6 scf/hr for both boilers shown in the segment information section for landfill gas in the NGS-CFB Boiler Nos. 1 and 2 of the permit application. Therefore, the maximum heat input rate to each boiler is indeed 6 MMBtu/hr as stated in the response to comment 2.g.

Please do not hesitate to contact me if you have further questions,

Natalia

Natalia Gonzalez, E.I. | Air Engineer | Golder Associates Inc.
6026 NW 1st Place, Gainesville, Florida, USA 32607
T: +1 (352) 336-5600 | F: +1 (352) 336-6603 | E: Natalia_Gonzalez@golder.com | www.golder.com

Work Safe, Home Safe

This email transmission is confidential and may contain proprietary information for the exclusive use of the intended recipient. Any use, distribution or copying of this transmission, other than by the intended recipient, is strictly prohibited. If you are not the intended recipient, please notify the sender and delete all copies. Electronic media is susceptible to unauthorized modification, deterioration, and incompatibility. Accordingly, the electronic media version of any work product may not be relied upon.

Golder, Golder Associates and the GA globe design are trademarks of Golder Associates Corporation.

Please consider the environment before printing this email.

STATE OF FLORIDA, DEP, BUREAU OF AIR REGULATION

TELEPHONE CONVERSATION RECORD

TO: file

FROM: SCOTT SHEPLAK

DATE: 04/21/2010 TIME: ~1:30 p.m.

WITH: Mr. Timothy Gee, Landfill Supervisor

REPRESENTING: North Landfill - City of Jacksonville

TELEPHONE NO.: cell # 904/237-6997

SUBJECT: Permit No. 0310045-027-AC, JEA-NGS/SJRAP/ST Facility
C&D debris

SUMMARY: The North Landfill closed around 1995; no longer
accepts waste. It had accepted construction & demolition
(C&D) debris in the past.

{ past years from what could have been possible }