ALS Environmental

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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

ANALYTICAL RESULTS

Workorder: 3056716 PHILADELPHIA RENEWABLE BIOFUEL

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
3056716001	1	5 Day Composite 09/04-08/19	SW846 8082A	Aroclor-1260

The detection of this compound was confirmed on an alternate column. Precision between the two results exceeded in house control limits (<40%RPD).

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ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 3056716 PHILADELPHIA RENEWABLE BIOFUEL

Lab ID	Sample ID	Analysis Method	Prep Method
3056716001	5 Day Composite 09/04-08/19	S2540G-11	
3056716001	5 Day Composite 09/04-08/19	SW846 8082A	SW846 3546

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September 12, 2019

Ms. Melissa Carmichael
Synagro Technologies
7800 Penrose Ferry Road
Philadelphia, PA 19153

Certificate of Analysis

Project Name:	**Synagro Philly - fecal**	Workorder:	**3056462**
Purchase Order:		Workorder ID:	**Synagro Philly - fecal**

Dear Ms. Carmichael:

Enclosed are the analytical results for samples received by the laboratory on Sunday, September 8, 2019.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Shannon Butler (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Amanda Bledsoe , Mr. Tripp Cerese , Mr. Chris Thornton , Accounts Payable Department , Mr. Derrick Shivar , Mr. Jeffrey Faust

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Shannon Butler

Ms. Shannon Butler
Project Coordinator

ALS Environmental

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SAMPLE SUMMARY

Workorder: 3056462 Synagro Philly - fecal

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3056462001	T-1 Cooler	Solid	9/8/2019 08:30	9/8/2019 12:10	Collected by Client
3056462002	T-1 Cooler	Solid	9/8/2019 08:45	9/8/2019 12:10	Collected by Client
3056462003	T-1 Cooler	Solid	9/8/2019 09:00	9/8/2019 12:10	Collected by Client
3056462004	T-1 Cooler	Solid	9/8/2019 09:15	9/8/2019 12:10	Collected by Client
3056462005	T-1 Cooler	Solid	9/8/2019 09:30	9/8/2019 12:10	Collected by Client
3056462006	T-1 Cooler	Solid	9/8/2019 09:45	9/8/2019 12:10	Collected by Client
3056462007	T-1 Cooler	Solid	9/8/2019 10:00	9/8/2019 12:10	Collected by Client

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SAMPLE SUMMARY

Workorder: 3056462 Synagro Philly - fecal

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
-- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.
-- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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ANALYTICAL RESULTS

Workorder: 3056462 Synagro Philly - fecal

Lab ID: **3056462001** Date Collected: 9/8/2019 08:30 Matrix: Solid

Sample ID: **T-1 Cooler** Date Received: 9/8/2019 12:10

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Moisture	6.4		%	0.1	S2540G-11			9/9/19 11:04	AXD	
Total Solids	93.6		%	0.1	S2540G-11			9/9/19 11:04	AXD	
MICROBIOLOGY										
Fecal Coliforms	ND		MPN/gram	2	EPA 1680	9/8/19 16:20	MBR	9/10/19 15:13	MBR	B

Shannon Butler

Ms. Shannon Butler
Project Coordinator

ALS Environmental

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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

ANALYTICAL RESULTS

Workorder: 3056462 Synagro Philly - fecal

Lab ID: **3056462002** Date Collected: 9/8/2019 08:45 Matrix: Solid

Sample ID: **T-1 Cooler** Date Received: 9/8/2019 12:10

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Moisture	6.3		%	0.1	S2540G-11			9/9/19 11:04	AXD	
Total Solids	93.7		%	0.1	S2540G-11			9/9/19 11:04	AXD	
MICROBIOLOGY										
Fecal Coliforms	ND		MPN/gram	2	EPA 1680	9/8/19 16:20	MBR	9/10/19 15:13	MBR	B

Shannon Butler

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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

ANALYTICAL RESULTS

Workorder: 3056462 Synagro Philly - fecal

Lab ID: **3056462003** Date Collected: 9/8/2019 09:00 Matrix: Solid

Sample ID: **T-1 Cooler** Date Received: 9/8/2019 12:10

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Moisture	6.0		%	0.1	S2540G-11			9/9/19 11:04	AXD	
Total Solids	94.0		%	0.1	S2540G-11			9/9/19 11:04	AXD	
MICROBIOLOGY										
Fecal Coliforms	ND		MPN/gram	2	EPA 1680	9/8/19 16:20	MBR	9/10/19 15:13	MBR	B

Shannon Butler

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ANALYTICAL RESULTS

Workorder: 3056462 Synagro Philly - fecal

Lab ID: **3056462004** Date Collected: 9/8/2019 09:15 Matrix: Solid

Sample ID: **T-1 Cooler** Date Received: 9/8/2019 12:10

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Moisture	6.2		%	0.1	S2540G-11			9/9/19 11:04	AXD	
Total Solids	93.8		%	0.1	S2540G-11			9/9/19 11:04	AXD	
MICROBIOLOGY										
Fecal Coliforms	ND		MPN/gram	2	EPA 1680	9/8/19 17:12	MBR	9/10/19 15:13	MBR	B

Shannon Butler

Ms. Shannon Butler
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3056462 Synagro Philly - fecal

Lab ID: **3056462005** Date Collected: 9/8/2019 09:30 Matrix: Solid

Sample ID: **T-1 Cooler** Date Received: 9/8/2019 12:10

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Moisture	5.9		%	0.1	S2540G-11			9/9/19 11:04	AXD	
Total Solids	94.1		%	0.1	S2540G-11			9/9/19 11:04	AXD	
MICROBIOLOGY										
Fecal Coliforms	ND		MPN/gram	2	EPA 1680	9/8/19 17:12	MBR	9/10/19 15:13	MBR	B

Shannon Butler

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Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3056462 Synagro Philly - fecal

Lab ID: **3056462006** Date Collected: 9/8/2019 09:45 Matrix: Solid

Sample ID: **T-1 Cooler** Date Received: 9/8/2019 12:10

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Moisture	6.0		%	0.1	S2540G-11			9/9/19 11:04	AXD	
Total Solids	94.0		%	0.1	S2540G-11			9/9/19 11:04	AXD	
MICROBIOLOGY										
Fecal Coliforms	ND		MPN/gram	2	EPA 1680	9/8/19 17:12	MBR	9/10/19 15:13	MBR	B

Shannon Butler

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Project Coordinator

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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

ANALYTICAL RESULTS

Workorder: 3056462 Synagro Philly - fecal

Lab ID: **3056462007** Date Collected: 9/8/2019 10:00 Matrix: Solid
Sample ID: **T-1 Cooler** Date Received: 9/8/2019 12:10

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Moisture	5.9		%	0.1	S2540G-11			9/9/19 11:04	AXD	
Total Solids	94.1		%	0.1	S2540G-11			9/9/19 11:04	AXD	
MICROBIOLOGY										
Fecal Coliforms	ND		MPN/gram	2	EPA 1680	9/8/19 17:43	MBR	9/10/19 15:13	MBR	B

Shannon Butler
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Project Coordinator

ALS Environmental

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ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 3056462 Synagro Philly - fecal

Lab ID	Sample ID	Analysis Method	Prep Method
3056462001	T-1 Cooler	EPA 1680	EPA 1680
3056462001	T-1 Cooler	S2540G-11	
3056462002	T-1 Cooler	EPA 1680	EPA 1680
3056462002	T-1 Cooler	S2540G-11	
3056462003	T-1 Cooler	EPA 1680	EPA 1680
3056462003	T-1 Cooler	S2540G-11	
3056462004	T-1 Cooler	EPA 1680	EPA 1680
3056462004	T-1 Cooler	S2540G-11	
3056462005	T-1 Cooler	EPA 1680	EPA 1680
3056462005	T-1 Cooler	S2540G-11	
3056462006	T-1 Cooler	EPA 1680	EPA 1680
3056462006	T-1 Cooler	S2540G-11	
3056462007	T-1 Cooler	EPA 1680	EPA 1680
3056462007	T-1 Cooler	S2540G-11	

ALS Environmental
54 Dogwood Lane • Middletown, PA 17057 ph 717.944-5541 Fax: 717.944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

3056462

1 of 1

Client Name: SYNAGRO
Address: 7800 PENROSE FERRY ROAD
PHILADELPHIA, PA 19153
Contact: ROBERT ABBOTT
Phone#: 2153695547
Project Name:
Quote Number:
TAT: [X] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALS approval and surcharges.
Date Required: approved By:
Email? [X] Y rabbott@synagro.com
Fax? [ ] Y No:

Container Type: P
Container Size: 500mL
Preservative: None

ANALYSES/METHOD REQUESTED

FC 90
Solids

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	SSL	Enter Number of Containers Per Sample or Field Results Below.
T-1 cooler	9-8	8:30	G	WT	1	
T-1 cooler	9-8	8:45	G	WT	1	
T-1 cooler	9-8	9:00	G	WT	1	
T-1 cooler	9-8	9:15	G	WT	1	
T-1 cooler	9-8	9:30	G	WT	1	
T-1 cooler	9-8	9:45	G	WT	1	
T-1 cooler	9-8	10:00			1	

Cooler Temp: ____ Cooler #: ____
Therm. ID ____

	Y	N
Custody Seals Present?		
(if present) Seals Intact?		
Received on Ice?		
COC/Labels Agree?		
Cont. in Good Cond.?		
Correct Containers?		
Correct Sample Volumes?		
Correct Preservation?		

Information concerning all nonconformances samples/containers shall be reported on this COC.

Ship. Carrier: UPS / FedEx / DHL / Other ____
Tracking #: ____

Sample/COC Comments

ALS Field Services: ☐Pickup ☐Labor ☐Composite Sampling ☐Rental Equipment ☐Other: ____

Project Comments:

Logged By (initials/date/time)
Reviewed By (initials/date/time)

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 Mike Farren	9-8-19			9/8/19	1000
	9/8/19	1200		9-8-19	1210
5			6		
7			8		
9			10		

Data Deliverables: [X] Standard [ ] CLP-like [ ] USACE [ ]
Special Processing: USACE [ ] Navy [ ]
State Samples Collected In: [ ] NY [ ] NJ [ ] PA [ ] NC
Reportable to PADEP? Yes [ ] PWSID#
Sample Disposal: Lab [ ] Special [ ]
EDDS: Format Type-

*G=Grab; C=Composite **Matrix - Al=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

Copies: WHITE - ORIGINAL CANARY - CUSTOMER MAILING PINK - FILE GOLDENROD - CUSTOMER COPY

Rev 7/11

301 Fulling Mill Road
Middletown, PA 17057
P: (717) 944-5541
F: (717) 944-1430

Condition of Sample Receipt Form

Client: SynAgro | Work Order #: 3057462 | Initials: SD | Date: 9/9/19

1. Were airbills / tracking numbers present and recorded?	(NONE)	YES	NO
Tracking number:			
2. Are Custody Seals on shipping containers intact?	(NONE)	YES	NO
3. Are Custody Seals on sample containers intact?	(NONE)	YES	NO
4. Is there a COC (Chain-of-Custody) present?		(YES)	NO
5. Are the COC and bottle labels complete, legible and in agreement?		(YES)	NO
5a. Does the COC contain sample locations?		(YES)	NO
5b. Does the COC contain date and time of sample collection for all samples?		(YES)	NO
5c. Does the COC contain sample collectors name?		(YES)	NO
5d. Does the COC note the type(s) of preservation for all bottles?		(YES)	NO
5e. Does the COC note the number of bottles submitted for each sample?		(YES)	NO
5f. Does the COC note the type of sample, composite or grab?		(YES)	NO
5g. Does the COC note the matrix of the sample(s)?		(YES)	NO
6. Are all aqueous samples requiring preservation preserved correctly?	(N/A)	YES	NO
7. Were all samples placed in the proper containers for the requested analyses, with sufficient volume?		(YES)	NO
8. Are all samples within holding times for the requested analyses?		(YES)	NO
9. Were all sample containers received intact and headspace free when required? (not broken, leaking, frozen, etc.)		(YES)	NO
10. Did we receive trip blanks (applies only for methods EPA 504, EPA 524.2 and 1631E (LL Hg)?	(N/A)	YES	NO
11. Were the samples received on ice?		(YES)	NO
12. Were sample temperatures measured at 0.0-6.0°C		(YES)	NO
13. Are the samples DW matrix ? If YES, fill out Reportable Drinking Water questions below		YES	(NO)
13a. Are the samples required for SDWA compliance reporting?	N/A	YES	NO
13b. Did the client provide a SDWA PWS ID#?	N/A	YES	NO
13c. Are all aqueous unpreserved SDWA samples pH 5-9?	N/A	YES	NO
13d. Did the client provide the SDWA sample location ID/Description?	N/A	YES	NO
13e. Did the client provide the SDWA sample type (D, E, R, C, P, S)?	N/A	YES	NO

Cooler #: ____

Temperature (°C): 2

Thermometer ID: 4B

Radiological (µCi): ____

COMMENTS (Required for all NO responses above and any sample non-conformance):

WATER

COC has TSS on it - only need fecal.

Rev. 4/29/2019

Waypoint ANALYTICAL

7621 Whitepine Road, Richmond, VA 23237
Main 804-743-9401 ° Fax 804-271-6446
www.waypointanalytical.com

9/24/2019

Synagro PRBF/30-3361
Lisa Callan
7800 Penrose Ferry Rd.
Philadelphia, PA, 19153

Ref: Analytical Testing
Report Number: 19-253-0005
Project Description: PRBF 5 DAY COMPOSITE

Dear Lisa Callan:
Waypoint Analytical Virginia, Inc. received sample(s) on 9/10/2019 for the analyses presented in the following report.

The above referenced project has been analyzed per your instructions. The analyses were performed in accordance with the applicable analytical method. Sub-contracted testing is noted on the Sample Summary Table if applicable.

The analytical data has been validated using standard quality control measures performed as required by the analytical method. Quality Assurance, method validations, instrumentation maintenance and calibration for all parameters (NELAP and non-NELAP) were performed in accordance with guidelines established by the USEPA (including 40 CFR 136 Method Update Rule May 2012) and NELAC unless otherwise indicated.

Certain parameters (chlorine, pH, dissolved oxygen, sulfite...) are required to be analyzed within 15 minutes of sampling. Usually, but not always, any field parameter analyzed at the laboratory is outside of this holding time. Refer to sample analysis time for confirmation of holding time compliance.

The results are shown on the attached Report of Analysis(s). Results for solid matrices are reported on an as-received basis unless otherwise indicated. This report shall not be reproduced except in full and relates only to the samples included in this report.

Please do not hesitate to contact me or client services if you have any questions or need additional information.

Sincerely,
Pauric McGroary

Pauric McGroary
Agronomist

Laboratory's liability in any claim relating to analyses performed shall be limited to, at laboratory's option, repeating the analysis in question at laboratory's expense, or the refund of the charges paid for performance of said analysis.

Waypoint ANALYTICAL

7621 Whitepine Road, Richmond, VA 23237
Main 804-743-9401 ° Fax 804-271-6446
www.waypointanalytical.com

Sample Summary Table

Report Number: 19-253-0005

Client Project Description: PRBF 5 DAY COMPOSITE

Lab No	Client Sample ID	Matrix	Date Collected	Date Received	Method	Lab ID
68149	5 DAY COMPOSITE	Solids	09/09/2019 18:00	09/10/2019		
68149	5 DAY COMPOSITE	Solids	09/09/2019 18:00	09/10/2019	SM-2540G	WTN
68149	5 DAY COMPOSITE	Solids	09/09/2019 18:00	09/10/2019	6010D	WTN
68149	5 DAY COMPOSITE	Solids	09/09/2019 18:00	09/10/2019	SM-4500-NH3C-TKN	WTN
68149	5 DAY COMPOSITE	Solids	09/09/2019 18:00	09/10/2019	4500NO3F-2011	WTN
68149	5 DAY COMPOSITE	Solids	09/09/2019 18:00	09/10/2019	SOLUBLE P IN MANURE	WTN
68149	5 DAY COMPOSITE	Solids	09/09/2019 18:00	09/10/2019	SM-4500-NH3C	WTN
68149	5 DAY COMPOSITE	Solids	09/09/2019 18:00	09/10/2019	SW-7471B	WTN
68149	5 DAY COMPOSITE	Solids	09/09/2019 18:00	09/10/2019	9045D	WTN
68149	5 DAY COMPOSITE	Solids	09/09/2019 18:00	09/10/2019	9056A	WTN
68149	5 DAY COMPOSITE	Solids	09/09/2019 18:00	09/10/2019	AOAC 2.4.14	WTN

WTN: Waypoint Analytical - TN, Memphis, TN, Certification: #460181 - Virginia

Report Number: 19-220-0002
Account Number: 52660

Waypoint ANALYTICAL

7621 Whitepine Road, Richmond, VA 23237
Main 804-743-9401 * Fax 804-271-6446
www.waypointanalytical.com

Send To: Synagro PRBF/30-3361
Lisa Callan
7800 Penrose Ferry Rd.
Philadelphia , PA 19153

Project : PRBF 5 Day Composite

REPORT OF ANALYSIS

Lab Number : 67760
Sample Id : Pellet 5 Day Comp

Date Sampled: 8/6/2019 18:00:00
Date Received: 08/08/2019 00:00
Date Reported: 08/22/2019

PARAMETER	RESULT (%)	RESULT (mg/kg)	QUANTITATION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Solids *	90.50			ADM	08/12/2019 15:34	SM-2540G
Moisture *	9.50			ADM	08/12/2019 15:34	SM-2540G
Total Kjeldahl Nitrogen	2.80	28000	250	JPJ	08/19/2019 16:00	SM-4500-NH3C-TKN
Phosphorus	2.59	25900	50.0	JTR	08/15/2019 21:43	6010D
Potassium	0.11	1120	50.0	JTR	08/15/2019 21:43	6010D
Sulfur	0.86	8590	50.0	JTR	08/15/2019 21:43	6010D
Calcium	1.63	16300	250	JTR	08/15/2019 21:43	6010D
Magnesium	0.43	4340	50.0	JTR	08/15/2019 21:43	6010D
Sodium	0.04	396	250	JTR	08/15/2019 21:43	6010D
Iron		110000	500	KKM	08/16/2019 18:17	6010D
Aluminum		8940	50.0	JTR	08/15/2019 21:43	6010D
Manganese		2460	5.00	JTR	08/15/2019 21:43	6010D
Copper		621	2.50	JTR	08/15/2019 21:43	6010D
Zinc		1110	12.5	JTR	08/15/2019 21:43	6010D
Ammonia Nitrogen	0.22	2180	100	JPJ	08/20/2019 09:00	SM-4500-NH3C
Organic N	2.58	25820	250		08/19/2019 16:00	CALCULATION
Nitrate+Nitrite-N		5.79	4.80	ZBD	08/22/2019 14:27	4500NO3F-2011

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

B - Analyte detected in blank **H - Beyond holding time**

Pauric McGroary

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Pauric McGroary
Agronomist

Report Number: 19-220-0002
Account Number: 52660

Waypoint ANALYTICAL
7621 Whitepine Road, Richmond, VA 23237
Main 804-743-9401 ° Fax 804-271-6446
www.waypointanalytical.com

Send To: Synagro PRBF/30-3361
Lisa Callan
7800 Penrose Ferry Rd.
Philadelphia , PA 19153

Project : PRBF 5 Day Composite

REPORT OF ANALYSIS

Lab Number : 67760
Sample Id : Pellet 5 Day Comp

Date Sampled: 8/6/2019 18:00:00
Date Received: 08/08/2019 00:00
Date Reported: 08/22/2019

PARAMETER	RESULT (%)	RESULT (mg/kg)	QUANTITATION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Cadmium		3.24	1.00	JTR	08/15/2019 21:43	6010D
Chromium		101	2.50	JTR	08/15/2019 21:43	6010D
Nickel		35.9	2.50	JTR	08/15/2019 21:43	6010D
Lead		111	3.00	JTR	08/15/2019 21:43	6010D
Arsenic		13.8	5.00	JTR	08/15/2019 21:43	6010D
Mercury		0.464	0.0157	TJS	08/15/2019 17:11	SW-7471B
Selenium		7.23	5.00	JTR	08/15/2019 21:43	6010D
pH *	8.5			JSL	08/19/2019 06:50	9045D
Total Volatile Solids	44.30			ADM	08/12/2019 15:34	SM-2540G
Molybdenum		10.3	2.50	JTR	08/15/2019 21:43	6010D
Chloride		605	200	BW1	08/12/2019 09:22	SM-4500Cl-D
Boron		<25.0	25.0	JTR	08/15/2019 21:43	6010D
Beryllium		0.548	0.500	JTR	08/15/2019 21:43	6010D
Water Insoluble Nitrogen	2.44	24400	100	JM	08/19/2019 10:59	AOAC 2.4.14
Water Soluble Nitrogen	0.09	900	250		08/19/2019 10:59	CALCULATION
Soluble Phosphorus	0.01	130	100	JCM	08/21/2019 08:50	SOLUBLE P IN MANURE

Comments:

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

B - Analyte detected in blank **H - Beyond holding time**

Pauric McGroary

Pauric McGroary
Agronomist

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SYNAGRO

SA [barcode] 19-220-0002 52660 08-08-2019 13:21:51 iTODY

Synagro PRBF/30-3361
PRBF 5 Day Composite

PROJECT: Philadelphia Renewable Biofuels SAMPLED BY: Jim Sands

SHIPPED TO: Waypoint Analytical Laboratory SHIPPING DATE: 8-7-19

SUBMITTED BY: Jim Sands SAMPLE LOCATION: Pellet Cooler

COMMENTS: Plant return cooler SAMPLE(S) ICED: X

SEND RESULTS TO THE ABOVE ADDRESS

Sample Identification	Date Collected	Time Collected	COMP	GRAB	Container Info. #	Container Info. Type G=Glass P=Plastic	Container Info. Volume	Analysis Requested
677160								
Pellet 5day composite	5-2-19 6-6-19	1600	V		1	P	16oz	SYN-BIO
Pellet 5day composite	5-2-19 6-6-19	1600	V		1	P	16oz	BTU's

Relinquished by: (Signature/Affiliation) Jim Sands	Date:	5-7-19	Received by: (Signature/Affiliation)	Date:	
	Time:	1600		Time:	
Relinquished by: (Signature/Affiliation) UPS	Date:	8/8/19	Received by: (Signature/Affiliation) Maggie J.	Date:	
	Time	12:45pm		Time:	
Relinquished by: (Signature/Affiliation)	Date:		Received by: (Signature/Affiliation)	Date:	
	Time:			Time:	

White - With Sample Yellow - Regional Office Pink - Originator

SYNCOC 04/12

ALS Environmental

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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

August 15, 2019

Mr. Tripp Cerese
Synagro Technologies

Certificate of Analysis

Project Name:	**PHILADELPHIA RENEWABLE BIOFUELS**	Workorder:	**3050411**
Purchase Order:		Workorder ID:	**PHILADELPHIA RENEWABLE BIOFUEL**

Dear Mr. Cerese:

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Ms. Melissa Carmichael , Mr. Chris Thornton , Accounts Payable Department , Mr. Derrick Shivar

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Shannon Butler

Ms. Shannon Butler
Project Coordinator

ALS Environmental

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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

SAMPLE SUMMARY

Workorder: 3050411 PHILADELPHIA RENEWABLE BIOFUEL

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3050411001	Pellet 5 Day Composite	Solid	8/6/2019 18:00	8/7/2019 19:00	Collected by Client

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SAMPLE SUMMARY

Workorder: 3050411 PHILADELPHIA RENEWABLE BIOFUEL

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
-- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.
-- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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ANALYTICAL RESULTS

Workorder: 3050411 PHILADELPHIA RENEWABLE BIOFUEL

Lab ID: **3050411001** Date Collected: 8/6/2019 18:00 Matrix: Solid

Sample ID: **Pellet 5 Day Composite** Date Received: 8/7/2019 19:00

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
PCBs										
Total Polychlorinated Biphenyl	ND		mg/kg	1.6	SW846 8082A	8/13/19 05:15	JTH	8/14/19 21:08	EGO	A
Aroclor-1016	ND		mg/kg	0.18	SW846 8082A	8/13/19 05:15	JTH	8/14/19 21:08	EGO	A
Aroclor-1221	ND		mg/kg	0.18	SW846 8082A	8/13/19 05:15	JTH	8/14/19 21:08	EGO	A
Aroclor-1232	ND		mg/kg	0.18	SW846 8082A	8/13/19 05:15	JTH	8/14/19 21:08	EGO	A
Aroclor-1242	ND		mg/kg	0.18	SW846 8082A	8/13/19 05:15	JTH	8/14/19 21:08	EGO	A
Aroclor-1248	ND		mg/kg	0.18	SW846 8082A	8/13/19 05:15	JTH	8/14/19 21:08	EGO	A
Aroclor-1254	0.28		mg/kg	0.036	SW846 8082A	8/13/19 05:15	JTH	8/14/19 04:09	EGO	A
Aroclor-1260	0.12	1	mg/kg	0.036	SW846 8082A	8/13/19 05:15	JTH	8/14/19 04:09	EGO	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyl (S)	70.9		%	49 - 115	SW846 8082A	8/13/19 05:15	JTH	8/14/19 21:08	EGO	A
Decachlorobiphenyl (S)	79		%	49 - 115	SW846 8082A	8/13/19 05:15	JTH	8/14/19 04:09	EGO	A
Tetrachloro-m-xylene (S)	49.5		%	27 - 137	SW846 8082A	8/13/19 05:15	JTH	8/14/19 04:09	EGO	A
Tetrachloro-m-xylene (S)	88.1		%	27 - 137	SW846 8082A	8/13/19 05:15	JTH	8/14/19 21:08	EGO	A
WET CHEMISTRY										
Moisture	8.9		%	0.1	S2540G-11			8/12/19 09:20	AXD	A
Total Solids	91.1		%	0.1	S2540G-11			8/12/19 09:20	AXD	A

Shannon Butler

Ms. Shannon Butler
Project Coordinator

ALS Environmental

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ANALYTICAL RESULTS

Workorder: 3050411 PHILADELPHIA RENEWABLE BIOFUEL

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
3050411001	1	Pellet 5 Day Composite	SW846 8082A	Aroclor-1260

The detection of this compound was confirmed on an alternate column. Precision between the two results exceeded in house control limits (<40%RPD).

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ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 3050411 PHILADELPHIA RENEWABLE BIOFUEL

Lab ID	Sample ID	Analysis Method	Prep Method
3050411001	Pellet 5 Day Composite	S2540G-11	
3050411001	Pellet 5 Day Composite	SW846 8082A	SW846 3546

SYNAGRO

3050411

SAMPLE TRANSMITTAL FORM/CHAIN OF CUSTODY

PROJECT: Philadelphia Renewable BioFuels SAMPLED BY: Jim Sands

SHIPPED TO: ALS Environmental - Middletown SHIPPING DATE: 8-7-19

SUBMITTED BY: Jim Sands SAMPLE LOCATION: Pellet Cooler

COMMENTS: Please return coolers SAMPLE(S) ICED: X

SEND RESULTS TO THE ABOVE ADDRESS

Sample Identification	Date Collected	Time Collected	COMP	GRAB	Container Info. #	Container Info. Type G=Glass P=Plastic	Container Info. Volume	Analysis Requested
Pellet 5 day composite	8-2-19 8-6-19	1800	✓		1	G	8oz	Total Solids / PCB's

Relinquished by: (Signature/Affiliation) Jim Sands	Date:	8-7-19	Received by: (Signature/Affiliation) Jeremy Dunn ALS	Date:	8-7-19
	Time:	1800		Time:	1250
Relinquished by: (Signature/Affiliation) Jeremy Dunn ALS	Date:	8-7-19	Received by: (Signature/Affiliation)	Date:	8/7/19
	Time	1900		Time:	1500
Relinquished by: (Signature/Affiliation)	Date:		Received by: (Signature/Affiliation)	Date:	
	Time:			Time:	

White - With Sample Yellow - Regional Office Pink - Originator

SYNCOC 04/12

0252S

ALS

ALS Environmental

34 Dogwood Lane w Middletown, PA 17057 ph 717.944-5541 Fax: 717.944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

COC #: 0411

ALS Quote #: 566006

1 of 1

Client Name: SYNAGRO

Address: 7800 PENROSE FERRY ROAD
PHILADELPHIA, PA 19153

Contact: ROBERT ABBOTT

Phone#: 2153609517

Project Name:

Quote Number:

TAT [X] Normal-Standard TAT is 10-12 business days.
[ ] Rush-Subject to ALS approval and surcharges.

Date Required: _____ pproved By: _____

Email? [X] -Y rabbott@synagro.com

Fax? [ ] -Y No.:

Container Type	P
Container Size	500mL
Preservative	None

ANALYSES/METHOD REQUESTED

Enter Number of Containers Per Sample or Field Results Below.

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	TSS
5 Day Composite	8-7-19	1800		WT	
				WT	
				WT	
				WT	
				WT	
				WT	

Receipt Information (completed by Receiving Lab)

Cooler Temp: _____ Cooler #: _____

Therm. ID _____

	Y	N
Custody Seals Present?		
(if present) Seals Intact?		
Received on Ice?		
COC/Labels Agree?		
Cont. in Good Cond.?		
Correct Containers?		
Correct Sample Volumes?		
Correct Preservation?		

Information concerning all nonconformance samples/containers shall be recorded on the COC.

Ship. Carrier: UPS / FedEx / DHL / Other _____

Tracking #: _____

Sample/COC Comments

TS PCB's

ALS Field Services: ☐Pickup ☐Labor ☐Composite Sampling ☐Rental Equipment ☐Other: _____

Project Comments:

Logged By (initials/date/time)

Reviewed By (initials/date/time)

	Relinquished By / Company Name	Date	Time		Received By / Company Name	Date	Time
1	Jim Sands	8-7-19	1800		Jerry Dunn ALS	8-7-19	1252
	Jerry Dunn ALS	8-7-19	1900	4	[signature]	8/7/19	1900
5				6			
7				8			
9				10			

Data Deliverables: [X] Standard [ ] CLP-like [ ] USACE [ ]

Special Processing: USACE [ ] Navy [ ]

State Samples Collected In: [ ] NY [ ] NJ [X] PA [ ] NC [ ]

Reportable to PADEP? Yes [ ]

PWSID # _____

Sample Disposal: Lab [ ] Special [ ]

EDDS: Format Type-

* G=Grab; C=Composite **Matrix - AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

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Rev 7/11

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August 9, 2019

Amanda Bledsoe
Synagro Technologies

Certificate of Analysis

Project Name:	**Synagro Philly -Fecal Coliform**	Workorder:	**3049504**
Purchase Order:		Workorder ID:	**Synagro Philly -Fecal Coliform**

Dear Amanda Bledsoe:

Enclosed are the analytical results for samples received by the laboratory on Sunday, August 4, 2019.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Shannon Butler (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Ms. Melissa Carmichael , Mr. Tripp Cerese , Mr. Chris Thornton , Accounts Payable Department , Mr. Derrick Shivar , Mr. Jeffrey Faust

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Shannon Butler

Ms. Shannon Butler
Project Coordinator

ALS Environmental

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SAMPLE SUMMARY

Workorder: 3049504 Synagro Philly -Fecal Coliform

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3049504001	Fecal Coliform	Solid	8/4/2019 08:00	8/4/2019 12:50	Collected by Client
3049504002	Fecal Coliform	Solid	8/4/2019 08:15	8/4/2019 12:50	Collected by Client
3049504003	Fecal Coliform	Solid	8/4/2019 08:30	8/4/2019 12:50	Collected by Client
3049504004	Fecal Coliform	Solid	8/4/2019 08:45	8/4/2019 12:50	Collected by Client
3049504005	Fecal Coliform	Solid	8/4/2019 09:00	8/4/2019 12:50	Collected by Client
3049504006	Fecal Coliform	Solid	8/4/2019 09:15	8/4/2019 12:50	Collected by Client
3049504007	Fecal Coliform	Solid	8/4/2019 09:30	8/4/2019 12:50	Collected by Client

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SAMPLE SUMMARY

Workorder: 3049504 Synagro Philly -Fecal Coliform

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
-- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.
-- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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ANALYTICAL RESULTS

Workorder: 3049504 Synagro Philly -Fecal Coliform

Lab ID: **3049504001** Date Collected: 8/4/2019 08:00 Matrix: Solid
Sample ID: **Fecal Coliform** Date Received: 8/4/2019 12:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Moisture	5.2		%	0.1	S2540G-11			8/6/19 11:00	AXD	
Total Solids	94.8		%	0.1	S2540G-11			8/6/19 11:00	AXD	
MICROBIOLOGY										
Fecal Coliforms	ND		MPN/gram	2	EPA 1680	8/4/19 14:58	TDB	8/6/19 15:57	MBR	B

Shannon Butler
Ms. Shannon Butler
Project Coordinator

ALS Environmental

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ANALYTICAL RESULTS

Workorder: 3049504 Synagro Philly -Fecal Coliform

Lab ID: **3049504002** Date Collected: 8/4/2019 08:15 Matrix: Solid
Sample ID: **Fecal Coliform** Date Received: 8/4/2019 12:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Moisture	5.1		%	0.1	S2540G-11			8/6/19 11:00	AXD	
Total Solids	94.9		%	0.1	S2540G-11			8/6/19 11:00	AXD	
MICROBIOLOGY										
Fecal Coliforms	ND		MPN/gram	2	EPA 1680	8/4/19 14:58	TDB	8/6/19 15:57	MBR	B

Shannon Butler
Ms. Shannon Butler
Project Coordinator

ALS Environmental

301 Fulling Mill Road - Middletown, PA 17057 - Phone: 717-944-5541 - Fax: 717-944-1430 - www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: PJLA 74618
State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

ANALYTICAL RESULTS

Workorder: 3049504 Synagro Philly -Fecal Coliform

Lab ID: **3049504003** Date Collected: 8/4/2019 08:30 Matrix: Solid
Sample ID: **Fecal Coliform** Date Received: 8/4/2019 12:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Moisture	5.1		%	0.1	S2540G-11			8/6/19 11:00	AXD	
Total Solids	94.9		%	0.1	S2540G-11			8/6/19 11:00	AXD	
MICROBIOLOGY										
Fecal Coliforms	ND		MPN/gram	2	EPA 1680	8/4/19 14:58	TDB	8/6/19 15:57	MBR	B

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ANALYTICAL RESULTS

Workorder: 3049504 Synagro Philly -Fecal Coliform

Lab ID: **3049504004** Date Collected: 8/4/2019 08:45 Matrix: Solid

Sample ID: **Fecal Coliform** Date Received: 8/4/2019 12:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Moisture	5.1		%	0.1	S2540G-11			8/6/19 11:00	AXD	
Total Solids	94.9		%	0.1	S2540G-11			8/6/19 11:00	AXD	
MICROBIOLOGY										
Fecal Coliforms	ND		MPN/gram	2	EPA 1680	8/4/19 15:09	TDB	8/6/19 15:57	MBR	B

Shannon Butler

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Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3049504 Synagro Philly -Fecal Coliform

Lab ID: **3049504005** Date Collected: 8/4/2019 09:00 Matrix: Solid

Sample ID: **Fecal Coliform** Date Received: 8/4/2019 12:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Moisture	5.1		%	0.1	S2540G-11			8/6/19 11:00	AXD	
Total Solids	94.9		%	0.1	S2540G-11			8/6/19 11:00	AXD	
MICROBIOLOGY										
Fecal Coliforms	ND		MPN/gram	2	EPA 1680	8/4/19 15:09	TDB	8/6/19 15:57	MBR	B

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Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3049504 Synagro Philly -Fecal Coliform

Lab ID: **3049504006** Date Collected: 8/4/2019 09:15 Matrix: Solid
Sample ID: **Fecal Coliform** Date Received: 8/4/2019 12:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Moisture	5.0		%	0.1	S2540G-11			8/6/19 11:00	AXD	
Total Solids	95.0		%	0.1	S2540G-11			8/6/19 11:00	AXD	
MICROBIOLOGY										
Fecal Coliforms	ND		MPN/gram	2	EPA 1680	8/4/19 15:09	TDB	8/6/19 15:57	MBR	B

Shannon Butler
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Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3049504 Synagro Philly -Fecal Coliform

Lab ID: **3049504007** Date Collected: 8/4/2019 09:30 Matrix: Solid
Sample ID: **Fecal Coliform** Date Received: 8/4/2019 12:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Moisture	5.0		%	0.1	S2540G-11			8/6/19 11:00	AXD	
Total Solids	95.0		%	0.1	S2540G-11			8/6/19 11:00	AXD	
MICROBIOLOGY										
Fecal Coliforms	ND		MPN/gram	2	EPA 1680	8/4/19 15:26	TDB	8/6/19 15:57	MBR	B

Shannon Butler
Ms. Shannon Butler
Project Coordinator

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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 3049504 Synagro Philly -Fecal Coliform

Lab ID	Sample ID	Analysis Method	Prep Method
3049504001	Fecal Coliform	EPA 1680	EPA 1680
3049504001	Fecal Coliform	S2540G-11	
3049504002	Fecal Coliform	EPA 1680	EPA 1680
3049504002	Fecal Coliform	S2540G-11	
3049504003	Fecal Coliform	EPA 1680	EPA 1680
3049504003	Fecal Coliform	S2540G-11	
3049504004	Fecal Coliform	EPA 1680	EPA 1680
3049504004	Fecal Coliform	S2540G-11	
3049504005	Fecal Coliform	EPA 1680	EPA 1680
3049504005	Fecal Coliform	S2540G-11	
3049504006	Fecal Coliform	EPA 1680	EPA 1680
3049504006	Fecal Coliform	S2540G-11	
3049504007	Fecal Coliform	EPA 1680	EPA 1680
3049504007	Fecal Coliform	S2540G-11	

ALS Environmental

34 Dogwood Lane • Middletown, PA 17057 ph 717.944-5541 Fax: 717.944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

3049504

1 of 1

Client Name: SYNAGRO
Address: 7880 PENROSE FERRY ROAD
PHILADELPHIA, PA 19153
Contact: ROBERT ABBOTT
Phone#: 2153689647
Project Name:
Quote Number:
TAT [X] Normal Standard TAT is 10-12 business days. [ ] Rush-Subject to ALS approval and surcharges.
Date Required: Approved By:
Email? [X] Y rabbott@synagro.com
Fax? [ ] Y No.:

ANALYSES/METHOD REQUESTED

Container Type	P
Container Size	500mL
Preservative	None

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	TSS	Enter Number of Containers Per Sample or Field Results Below.	Sample/COC Comments
Fecal Col farm	8/4	0800	G	WT			8047019008
	8/4	0815	G	WT			009
	8/4	0830	G	WT			010
	8/4	0845	G	WT			011
	8/4	0900	G	WT			012
	8/4	0915	G	WT			013
	8/4	0930					014

Receipt Information (completed by Receiving Lab)

Cooler Temp: Cooler #:
Therm. ID

	Y	N
Custody Seals Present?		
(If present) Seals Intact?		
Received on Ice?		
COC/Labels Agree?		
Cont. In Good Cond.?		
Correct Containers?		
Correct Sample Volumes?		
Correct Preservation?		

Information concerning all nonconformances/samples/containers shall be recorded on the COC.

Ship. Carrier: UPS / FedEx / DHL / Other
Tracking #:

ALS Field Services: ☐Pickup ☐Labor ☐Composite Sampling ☐Rental Equipment ☐Other:

Project Comments:

Logged By (initials/date/time)
Reviewed By (initials/date/time)

Data Deliverables: [ ] Standard [ ] CLP-like [ ] USACE [ ]
Special Processing: USACE [ ] Navy [ ]
State Samples Collected In: [ ] NY [ ] NJ [ ] PA [ ] NC

Reportable to PADEP? Yes [ ]
PWSID #
Sample Disposal: Lab [ ] Special [ ]
EDDS: Format/Type:

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 Aaron Paisley, Synagro	8/4/19		2	8/4/19	1035
3	8/4/19	1250	4	8/4/19	1250
5			6		
7			8		
9			10		

*G=Grab; C=Composite **Matrix - AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

Copies: WHITE - ORIGINAL CANARY - CUSTOMER MAILING PINK - FILE GOLDENROD - CUSTOMER COPY

Rev 7/11

ALS

3049504

SYNAGRO

SAMPLE TRANSMITTAL FORM/CHAIN OF CUSTODY

PROJECT: PRBF: Philadelphia Renewable Biosolids SAMPLED BY: Aaron Pawley

SHIPPED TO: ALS Environmental-Middletown SHIPPING DATE: 8/4/19

SUBMITTED BY: Aaron Pawley SAMPLE LOCATION: Pellet cooler

COMMENTS: Sample start Time: 0800. Samples collected every 15 mins from start time. SAMPLE(S) ICED: ☐

SEND RESULTS TO THE ABOVE ADDRESS

Sample Identification	Date Collected	Time Collected	COMP	GRAB	Container Info. #	Container Info. Type G=Glass P=Plastic	Container Info. Volume	Analysis Requested
Fecal samples	8/4	0800-0930		✓	7	P	40z	Fecal coliform

Relinquished by: (Signature/Affiliation) Aaron Pawley	Date:	8/4/19	Received by: (Signature/Affiliation) CJ FS	Date:	8/4/19
	Time:	1035		Time:	1035
Relinquished by: (Signature/Affiliation) CJ FS	Date:	8/4/19	Received by: (Signature/Affiliation)	Date:	
	Time	1250		Time:	
Relinquished by: (Signature/Affiliation)	Date:		Received by: (Signature/Affiliation)	Date:	
	Time:			Time:	

White - With Sample Yellow - Regional Office Pink - Originator

ALS

Report Number: 19-220-0002
Account Number: 52660

Waypoint ANALYTICAL

7621 Whitepine Road, Richmond, VA 23237
Main 804-743-9401 ° Fax 804-271-6446
www.waypointanalytical.com

Send To: Synagro PRBF/30-3361
Lisa Callan
7800 Penrose Ferry Rd.
Philadelphia , PA 19153

Project : PRBF 5 Day Composite

REPORT OF ANALYSIS

Lab Number : 67760
Sample Id : Pellet 5 Day Comp

Date Sampled: 8/6/2019 18:00:00
Date Received: 08/08/2019 00:00
Date Reported: 08/22/2019

PARAMETER	RESULT (%)	RESULT (mg/kg)	QUANTITATION LIMIT (mg/kg')	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Solids *	90.50			ADM	08/12/2019 15:34	SM-2540G
Moisture *	9.50			ADM	08/12/2019 15:34	SM-2540G
Total Kjeldahl Nitrogen	2.80	28000	250	JPJ	08/19/2019 16:00	SM-4500-NH3C-TKN
Phosphorus	2.59	25900	50.0	JTR	08/15/2019 21:43	6010D
Potassium	0.11	1120	50.0	JTR	08/15/2019 21:43	6010D
Sulfur	0.86	8590	50.0	JTR	08/15/2019 21:43	6010D
Calcium	1.63	16300	250	JTR	08/15/2019 21:43	6010D
Magnesium	0.43	4340	50.0	JTR	08/15/2019 21:43	6010D
Sodium	0.04	396	250	JTR	08/15/2019 21:43	6010D
Iron		110000	500	KKM	08/16/2019 18:17	6010D
Aluminum		8940	50.0	JTR	08/15/2019 21:43	6010D
Manganese		2460	5.00	JTR	08/15/2019 21:43	6010D
Copper		621	2.50	JTR	08/15/2019 21:43	6010D
Zinc		1110	12.5	JTR	08/15/2019 21:43	6010D
Ammonia Nitrogen	0.22	2180	100	JPJ	08/20/2019 09:00	SM-4500-NH3C
Organic N	2.58	25820	250		08/19/2019 16:00	CALCULATION
Nitrate+Nitrite-N		5.79	4.80	ZBD	08/22/2019 14:27	4500NO3F-2011

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

B - Analyte detected in blank **H - Beyond holding time**

Pauric McGroary

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Pauric McGroary
Agronomist

Report Number: 19-220-0002
Account Number: 52660

Waypoint ANALYTICAL

7621 Whitepine Road, Richmond, VA 23237
Main 804-743-9401 * Fax 804-271-6446
www.waypointanalytical.com

Send To: Synagro PRBF/30-3361
Lisa Callan
7800 Penrose Ferry Rd.
Philadelphia , PA 19153

Project : PRBF 5 Day Composite

REPORT OF ANALYSIS

Lab Number : 67760
Sample Id : Pellet 5 Day Comp

Date Sampled: 8/6/2019 18:00:00
Date Received: 08/08/2019 00:00
Date Reported: 08/22/2019

PARAMETER	RESULT (%)	RESULT (mg/kg)	QUANTITATION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Cadmium		3.24	1.00	JTR	08/15/2019 21:43	6010D
Chromium		101	2.50	JTR	08/15/2019 21:43	6010D
Nickel		35.9	2.50	JTR	08/15/2019 21:43	6010D
Lead		111	3.00	JTR	08/15/2019 21:43	6010D
Arsenic		13.8	5.00	JTR	08/15/2019 21:43	6010D
Mercury		0.464	0.0157	TJS	08/15/2019 17:11	SW-7471B
Selenium		7.23	5.00	JTR	08/15/2019 21:43	6010D
pH *	8.5			JSL	08/19/2019 06:50	9045D
Total Volatile Solids	44.30			ADM	08/12/2019 15:34	SM-2540G
Molybdenum		10.3	2.50	JTR	08/15/2019 21:43	6010D
Chloride		605	200	BW1	08/12/2019 09:22	SM-4500Cl-D
Boron		<25.0	25.0	JTR	08/15/2019 21:43	6010D
Beryllium		0.548	0.500	JTR	08/15/2019 21:43	6010D
Water Insoluble Nitrogen	2.44	24400	100	JM	08/19/2019 10:59	AOAC 2.4.14
Water Soluble Nitrogen	0.09	900	250		08/19/2019 10:59	CALCULATION
Soluble Phosphorus	0.01	130	100	JCM	08/21/2019 08:50	SOLUBLE P IN MANURE

Comments:

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

B - Analyte detected in blank **H - Beyond holding time**

Pauric McGroary

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Pauric McGroary
Agronomist

SYNAGRO

SA 19-220-0002 52660 08-08-2019 13:21:51 iTODY
Synagro PRBF/30-3361
PRBF 5 Day Composite

PROJECT: Philadelphia Renewable Biofuels SAMPLED BY: Jim Sands

SHIPPED TO: Waypoint Analytical Laboratories SHIPPING DATE: 8-7-19

SUBMITTED BY: Jim Sands SAMPLE LOCATION: Pellet Cooler

COMMENTS: Plase return cooler SAMPLE(S) ICED: X

SEND RESULTS TO THE ABOVE ADDRESS

Sample Identification 677160	Date Collected	Time Collected	COMP	GRAB	Container Info. #	Container Info. Type G=Glass P=Plastic	Container Info. Volume	Analysis Requested
Pellet 5day composite	5-2-19 6-6-19	1500	V		1	P	16 oz	SYN-BIO
Pellet 5day composite	5-2-19 6-6-19	1500	V		1	P	16 oz	BTU'S

Relinquished by: (Signature/Affiliation) Jim Sands	Date: 8-7-19	Received by: (Signature/Affiliation)	Date:	
	Time: 1500		Time:	
Relinquished by: (Signature/Affiliation) UPS	Date: 8/8/19	Received by: (Signature/Affiliation) Maggie J.	Date:	
	Time 12:45pm		Time:	
Relinquished by: (Signature/Affiliation)	Date:	Received by: (Signature/Affiliation)	Date:	
	Time:		Time:	

White - With Sample Yellow - Regional Office Pink - Originator

SYNCOC 04/12

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August 15, 2019

Mr. Tripp Cerese
Synagro Technologies

Certificate of Analysis

Project Name:	**PHILADELPHIA RENEWABLE BIOFUELS**	Workorder:	**3050411**
Purchase Order:		Workorder ID:	**PHILADELPHIA RENEWABLE BIOFUEL**

Dear Mr. Cerese:

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Ms. Melissa Carmichael , Mr. Chris Thornton , Accounts Payable Department , Mr. Derrick Shivar

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Shannon Butler

Ms. Shannon Butler
Project Coordinator

ALS Environmental

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SAMPLE SUMMARY

Workorder: 3050411 PHILADELPHIA RENEWABLE BIOFUEL

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3050411001	Pellet 5 Day Composite	Solid	8/6/2019 18:00	8/7/2019 19:00	Collected by Client

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SAMPLE SUMMARY

Workorder: 3050411 PHILADELPHIA RENEWABLE BIOFUEL

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
-- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.
-- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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ANALYTICAL RESULTS

Workorder: 3050411 PHILADELPHIA RENEWABLE BIOFUEL

Lab ID: **3050411001** Date Collected: 8/6/2019 18:00 Matrix: Solid

Sample ID: **Pellet 5 Day Composite** Date Received: 8/7/2019 19:00

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
PCBs										
Total Polychlorinated Biphenyl	ND		mg/kg	1.6	SW846 8082A	8/13/19 05:15	JTH	8/14/19 21:08	EGO	A
Aroclor-1016	ND		mg/kg	0.18	SW846 8082A	8/13/19 05:15	JTH	8/14/19 21:08	EGO	A
Aroclor-1221	ND		mg/kg	0.18	SW846 8082A	8/13/19 05:15	JTH	8/14/19 21:08	EGO	A
Aroclor-1232	ND		mg/kg	0.18	SW846 8082A	8/13/19 05:15	JTH	8/14/19 21:08	EGO	A
Aroclor-1242	ND		mg/kg	0.18	SW846 8082A	8/13/19 05:15	JTH	8/14/19 21:08	EGO	A
Aroclor-1248	ND		mg/kg	0.18	SW846 8082A	8/13/19 05:15	JTH	8/14/19 21:08	EGO	A
Aroclor-1254	0.28		mg/kg	0.036	SW846 8082A	8/13/19 05:15	JTH	8/14/19 04:09	EGO	A
Aroclor-1260	0.12	1	mg/kg	0.036	SW846 8082A	8/13/19 05:15	JTH	8/14/19 04:09	EGO	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyl (S)	70.9		%	49 - 115	SW846 8082A	8/13/19 05:15	JTH	8/14/19 21:08	EGO	A
Decachlorobiphenyl (S)	79		%	49 - 115	SW846 8082A	8/13/19 05:15	JTH	8/14/19 04:09	EGO	A
Tetrachloro-m-xylene (S)	49.5		%	27 - 137	SW846 8082A	8/13/19 05:15	JTH	8/14/19 04:09	EGO	A
Tetrachloro-m-xylene (S)	88.1		%	27 - 137	SW846 8082A	8/13/19 05:15	JTH	8/14/19 21:08	EGO	A
WET CHEMISTRY										
Moisture	8.9		%	0.1	S2540G-11			8/12/19 09:20	AXD	A
Total Solids	91.1		%	0.1	S2540G-11			8/12/19 09:20	AXD	A

Shannon Butler

Ms. Shannon Butler
Project Coordinator

ALS Environmental

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ANALYTICAL RESULTS

Workorder: 3050411 PHILADELPHIA RENEWABLE BIOFUEL

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
3050411001	1	Pellet 5 Day Composite	SW846 8082A	Aroclor-1260

The detection of this compound was confirmed on an alternate column. Precision between the two results exceeded in house control limits (<40%RPD).

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ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 3050411 PHILADELPHIA RENEWABLE BIOFUEL

Lab ID	Sample ID	Analysis Method	Prep Method
3050411001	Pellet 5 Day Composite	S2540G-11	
3050411001	Pellet 5 Day Composite	SW846 8082A	SW846 3546

SYNAGRO

SAMPLE TRANSMITTAL FORM/CHAIN OF CUSTODY

3050411

PROJECT: Philadelphia Renewable BioFuels SAMPLED BY: Jim Sands

SHIPPED TO: ALS Environmental - Middletown SHIPPING DATE: 8-7-19

SUBMITTED BY: Jim Sands SAMPLE LOCATION: Pellet Cooler

COMMENTS: Please return coolers SAMPLE(S) ICED: X

SEND RESULTS TO THE ABOVE ADDRESS

Sample Identification	Date Collected	Time Collected	COMP	GRAB	Container Info. #	Container Info. Type G=Glass P=Plastic	Container Info. Volume	Analysis Requested
Pellet 5 day composite	8-2-19 8-6-19	1800	✓		1	G	8oz	Total Solids / PCB's

Relinquished by: (Signature/Affiliation) Jim Sands	Date: 8-7-19	Received by: (Signature/Affiliation) Jeremy Dunn ALS	Date: 8-7-19	
	Time: 1800		Time: 1250	
Relinquished by: (Signature/Affiliation) Jeremy Dunn ALS	Date: 8-7-19	Received by: (Signature/Affiliation)	Date: 8/7/19	
	Time 1900		Time: 1900	
Relinquished by: (Signature/Affiliation)	Date:	Received by: (Signature/Affiliation)	Date:	
	Time:		Time:	

White - With Sample Yellow - Regional Office Pink - Originator

SYNCOC 04/12

0252S

ALS Environmental

34 Dogwood Lane w Middletown, PA 17057 ph 717.944-5541 Fax: 717.944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

COC #: 0411

ALS Quote #: 566006

1 of 1

Client Name: SYNAGRO

Address: 7800 PENROSE FERRY ROAD
PHILADELPHIA, PA 19153

Contact: ROBERT ABBOTT

Phone#: 2153609517

Project Name:

Quote Number:

TAT: [X] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALS approval and surcharges.

Date Required: _____ pproved By: _____

Email? [X] -Y rabbott@synagro.com

Fax? [ ] -Y No.:

Container Type	P
Container Size	500mL
Preservative	None

ANALYSES/METHOD REQUESTED

Enter Number of Containers Per Sample or Field Results Below.

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	TSS
5 Day Composite	8-7-19	1800		WT	
				WT	
				WT	
				WT	
				WT	
				WT	

Receipt Information (completed by Receiving Lab)

Cooler Temp: _____ Cooler #: _____

Therm. ID _____

	Y	N
Custody Seals Present?		
(If present) Seals Intact?		
Received on Ice?		
COC/Labels Agree?		
Cont. in Good Cond.?		
Correct Containers?		
Correct Sample Volumes?		
Correct Preservation?		

Information concerning all nonconformance samples/containers shall be recorded on the COC.

Ship. Carrier: UPS / FedEx / DHL / Other _____

Tracking #: _____

Sample/COC Comments

TS PCB's

ALS Field Services: ☐Pickup ☐Labor ☐Composite Sampling ☐Rental Equipment ☐Other: _____

Project Comments:

Logged By (initials/date/time)

Reviewed By (initials/date/time)

	Relinquished By / Company Name	Date	Time		Received By / Company Name	Date	Time
1	Jim Sands	8-7-19	1800		Jerry Dunn ALS	8-7-19	1252
	Jerry Dunn ALS	8-7-19	1900	4	[signature]	8/7/19	1900
5				6			
7				8			
9				10			

Data Deliverables: [X] Standard [ ] CLP-like [ ] USACE [ ]

Special Processing: USACE [ ] Navy [ ]

State Samples Collected In: [ ] NY [ ] NJ [X] PA [ ] NC [ ]

Reportable to PADEP? Yes [ ]

PWSID # _____

Sample Disposal: Lab [ ] Special [ ]

EDDS: Format Type-

* G=Grab; C=Composite **Matrix - AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

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Rev 7/11

Thursday, August 15, 2019 11:47:46 AM
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ALS

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August 9, 2019

Amanda Bledsoe
Synagro Technologies

Certificate of Analysis

Project Name:	**Synagro Philly -Fecal Coliform**	Workorder:	**3049504**
Purchase Order:		Workorder ID:	**Synagro Philly -Fecal Coliform**

Dear Amanda Bledsoe:

Enclosed are the analytical results for samples received by the laboratory on Sunday, August 4, 2019.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Shannon Butler (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Ms. Melissa Carmichael , Mr. Tripp Cerese , Mr. Chris Thornton , Accounts Payable Department , Mr. Derrick Shivar , Mr. Jeffrey Faust

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Shannon Butler

Ms. Shannon Butler
Project Coordinator

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SAMPLE SUMMARY

Workorder: 3049504 Synagro Philly -Fecal Coliform

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3049504001	Fecal Coliform	Solid	8/4/2019 08:00	8/4/2019 12:50	Collected by Client
3049504002	Fecal Coliform	Solid	8/4/2019 08:15	8/4/2019 12:50	Collected by Client
3049504003	Fecal Coliform	Solid	8/4/2019 08:30	8/4/2019 12:50	Collected by Client
3049504004	Fecal Coliform	Solid	8/4/2019 08:45	8/4/2019 12:50	Collected by Client
3049504005	Fecal Coliform	Solid	8/4/2019 09:00	8/4/2019 12:50	Collected by Client
3049504006	Fecal Coliform	Solid	8/4/2019 09:15	8/4/2019 12:50	Collected by Client
3049504007	Fecal Coliform	Solid	8/4/2019 09:30	8/4/2019 12:50	Collected by Client

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SAMPLE SUMMARY

Workorder: 3049504 Synagro Philly -Fecal Coliform

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
-- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.
-- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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ANALYTICAL RESULTS

Workorder: 3049504 Synagro Philly -Fecal Coliform

Lab ID: **3049504001** Date Collected: 8/4/2019 08:00 Matrix: Solid

Sample ID: **Fecal Coliform** Date Received: 8/4/2019 12:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Moisture	5.2		%	0.1	S2540G-11			8/6/19 11:00	AXD	
Total Solids	94.8		%	0.1	S2540G-11			8/6/19 11:00	AXD	
MICROBIOLOGY										
Fecal Coliforms	ND		MPN/gram	2	EPA 1680	8/4/19 14:58	TDB	8/6/19 15:57	MBR	B

Shannon Butler

Ms. Shannon Butler
Project Coordinator

ALS Environmental

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ANALYTICAL RESULTS

Workorder: 3049504 Synagro Philly -Fecal Coliform

Lab ID: **3049504002** Date Collected: 8/4/2019 08:15 Matrix: Solid

Sample ID: **Fecal Coliform** Date Received: 8/4/2019 12:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Moisture	5.1		%	0.1	S2540G-11			8/6/19 11:00	AXD	
Total Solids	94.9		%	0.1	S2540G-11			8/6/19 11:00	AXD	
MICROBIOLOGY										
Fecal Coliforms	ND		MPN/gram	2	EPA 1680	8/4/19 14:58	TDB	8/6/19 15:57	MBR	B

Shannon Butler

Ms. Shannon Butler
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3049504 Synagro Philly -Fecal Coliform

Lab ID: **3049504003** Date Collected: 8/4/2019 08:30 Matrix: Solid

Sample ID: **Fecal Coliform** Date Received: 8/4/2019 12:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Moisture	5.1		%	0.1	S2540G-11			8/6/19 11:00	AXD	
Total Solids	94.9		%	0.1	S2540G-11			8/6/19 11:00	AXD	
MICROBIOLOGY										
Fecal Coliforms	ND		MPN/gram	2	EPA 1680	8/4/19 14:58	TDB	8/6/19 15:57	MBR	B

Shannon Butler

Ms. Shannon Butler
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3049504 Synagro Philly -Fecal Coliform

Lab ID: **3049504004** Date Collected: 8/4/2019 08:45 Matrix: Solid
Sample ID: **Fecal Coliform** Date Received: 8/4/2019 12:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Moisture	5.1		%	0.1	S2540G-11			8/6/19 11:00	AXD	
Total Solids	94.9		%	0.1	S2540G-11			8/6/19 11:00	AXD	
MICROBIOLOGY										
Fecal Coliforms	ND		MPN/gram	2	EPA 1680	8/4/19 15:09	TDB	8/6/19 15:57	MBR	B

Shannon Butler
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Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3049504 Synagro Philly -Fecal Coliform

Lab ID: **3049504005** Date Collected: 8/4/2019 09:00 Matrix: Solid
Sample ID: **Fecal Coliform** Date Received: 8/4/2019 12:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Moisture	5.1		%	0.1	S2540G-11			8/6/19 11:00	AXD	
Total Solids	94.9		%	0.1	S2540G-11			8/6/19 11:00	AXD	
MICROBIOLOGY										
Fecal Coliforms	ND		MPN/gram	2	EPA 1680	8/4/19 15:09	TDB	8/6/19 15:57	MBR	B

Shannon Butler
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Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3049504 Synagro Philly -Fecal Coliform

Lab ID: **3049504006** Date Collected: 8/4/2019 09:15 Matrix: Solid

Sample ID: **Fecal Coliform** Date Received: 8/4/2019 12:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Moisture	5.0		%	0.1	S2540G-11			8/6/19 11:00	AXD	
Total Solids	95.0		%	0.1	S2540G-11			8/6/19 11:00	AXD	
MICROBIOLOGY										
Fecal Coliforms	ND		MPN/gram	2	EPA 1680	8/4/19 15:09	TDB	8/6/19 15:57	MBR	B

Shannon Butler

Ms. Shannon Butler
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3049504 Synagro Philly -Fecal Coliform

Lab ID: **3049504007** Date Collected: 8/4/2019 09:30 Matrix: Solid
Sample ID: **Fecal Coliform** Date Received: 8/4/2019 12:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Moisture	5.0		%	0.1	S2540G-11			8/6/19 11:00	AXD	
Total Solids	95.0		%	0.1	S2540G-11			8/6/19 11:00	AXD	
MICROBIOLOGY										
Fecal Coliforms	ND		MPN/gram	2	EPA 1680	8/4/19 15:26	TDB	8/6/19 15:57	MBR	B

Shannon Butler
Ms. Shannon Butler
Project Coordinator

ALS Environmental

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ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 3049504 Synagro Philly -Fecal Coliform

Lab ID	Sample ID	Analysis Method	Prep Method
3049504001	Fecal Coliform	EPA 1680	EPA 1680
3049504001	Fecal Coliform	S2540G-11	
3049504002	Fecal Coliform	EPA 1680	EPA 1680
3049504002	Fecal Coliform	S2540G-11	
3049504003	Fecal Coliform	EPA 1680	EPA 1680
3049504003	Fecal Coliform	S2540G-11	
3049504004	Fecal Coliform	EPA 1680	EPA 1680
3049504004	Fecal Coliform	S2540G-11	
3049504005	Fecal Coliform	EPA 1680	EPA 1680
3049504005	Fecal Coliform	S2540G-11	
3049504006	Fecal Coliform	EPA 1680	EPA 1680
3049504006	Fecal Coliform	S2540G-11	
3049504007	Fecal Coliform	EPA 1680	EPA 1680
3049504007	Fecal Coliform	S2540G-11	

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CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

30495O4

1 of 1

Client Name: SYNAGRO	Container Type: P
Address: 7880 PENROSE FERRY ROAD PHILADELPHIA, PA 19153	Container Size: 500mL
Contact: ROBERT ABBOTT	Preservative: None
Phone#: 2153693547	
Project Name:	
Quote Number:	
TAT: [X] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALS approval and surcharges.	
Date Required: Approved By:	
Email? [X] Y rabbott@synagro.com	
Fax? [ ] Y No.:	

ANALYSES/METHOD REQUESTED

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	TSS	Enter Number of Containers Per Sample or Field Results Below.	Sample/COC Comments
Fecal Coliform	8/4	0800	G	WT			8047019008
	8/4	0815	G	WT			009
	8/4	0830	G	WT			010
	8/4	0845	G	WT			011
	8/4	0900	G	WT			012
	8/4	0915	G	WT			013
	8/4	0930					014

Receipt Information (completed by Receiving Lab)

Cooler Temp: Cooler #:
Therm. ID

	Y	N
Custody Seals Present?		
(If present) Seals Intact?		
Received on Ice?		
COC/Labels Agree?		
Cont. In Good Cond.?		
Correct Containers?		
Correct Sample Volumes?		
Correct Preservation?		

Information concerning the sample containers shall be recorded on the COC.

Ship. Carrier: UPS / FedEx / DHL / Other
Tracking #:

ALS Field Services: ☐Pickup ☐Labor ☐Composite Sampling ☐Rental Equipment ☐Other:

Project Comments:

Logged By (initials/date/time)
Reviewed By (initials/date/time)

Data Deliverables: ☐Standard ☐CLP-like ☐USACE ☐

Special Processing: ☐USACE ☐Navy ☐

State Samples Collected In: ☐NY ☐NJ ☐PA ☐NC

Reportable to PADEP? ☐Yes PWSID #

Sample Disposal: ☐Lab ☐Special

EDDS: Format/Type:

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 Aaron Paisley, Synagro	8/4/19			8/4/19	1035
3	8/4/19	1250	4	8/4/19	1250
5			6		
7			8		
9			10		

*G=Grab; C=Composite **Matrix - AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

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Rev 7/11

3049504

SYNAGRO

SAMPLE TRANSMITTAL FORM/CHAIN OF CUSTODY

PROJECT: PRBF: Philadelphia Renewable Biosolids SAMPLED BY: Aaron Pawley

SHIPPED TO: ALS Environmental - Middletown SHIPPING DATE: 8/4/19

SUBMITTED BY: Aaron Pawley SAMPLE LOCATION: Pellet cooler

COMMENTS: Sample start Time: 0800. Samples collected every 15 mins from start time SAMPLE(S) ICED: ☐

SEND RESULTS TO THE ABOVE ADDRESS

Sample Identification	Date Collected	Time Collected	COMP	GRAB	Container Info. #	Container Info. Type G=Glass P=Plastic	Container Info. Volume	Analysis Requested
Fecal samples	8/4	0800-0830		✓	7	P	40z	Fecal coliform

Relinquished by: (Signature/Affiliation) Aaron Pawley	Date:	8/4/19	Received by: (Signature/Affiliation) CJ B	Date:	8/4/19
	Time:	1035		Time:	1035
Relinquished by: (Signature/Affiliation) CJ B	Date:	8/4/19	Received by: (Signature/Affiliation)	Date:	
	Time	1250		Time:	
Relinquished by: (Signature/Affiliation)	Date:		Received by: (Signature/Affiliation)	Date:	
	Time:			Time:	

White - With Sample Yellow - Regional Office Pink - Originator

ALS

Report Number: 19-191-0004
Account Number: 52660

Waypoint ANALYTICAL
7621 Whitepine Road, Richmond, VA 23237
Main 804-743-9401 ° Fax 804-271-6446
www.waypointanalytical.com

Send To: Synagro PRBF/30-3361
Lisa Callan
7800 Penrose Ferry Rd.
Philadelphia , PA 19153

Project : PRBF PELLET 5 DAY COMP

REPORT OF ANALYSIS

Lab Number : 67298
Sample Id : PELLET 5 DAY COMP

Date Sampled: 7/7/2019 08:30:00
Date Received: 07/10/2019 00:00
Date Reported: 07/19/2019

PARAMETER	RESULT (%)	RESULT (mg/kg)	QUANTITATION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Solids *	93.20			CJR	07/11/2019 15:35	SM-2540G
Moisture *	6.77			CJR	07/11/2019 15:35	SM-2540G
Total Kjeldahl Nitrogen	2.84	28400	250	JPJ	07/19/2019 10:00	SM-4500-NH3C-TKN
Phosphorus	2.35	23500	50.0	BKN	07/17/2019 21:49	6010D
Potassium	0.12	1170	50.0	BKN	07/17/2019 21:49	6010D
Sulfur	0.82	8200	50.0	BKN	07/17/2019 21:49	6010D
Calcium	1.67	16700	250	BKN	07/17/2019 21:49	6010D
Magnesium	0.44	4390	50.0	BKN	07/17/2019 21:49	6010D
Sodium	0.04	360	250	BKN	07/17/2019 21:49	6010D
Iron		117000	500	JTR	07/18/2019 17:50	6010D
Aluminum		9220	50.0	JTR	07/17/2019 21:49	6010D
Manganese		2130	5.00	BKN	07/17/2019 21:49	6010D
Copper		563	2.50	BKN	07/17/2019 21:49	6010D
Zinc		1080	12.5	BKN	07/17/2019 21:49	6010D
Ammonia Nitrogen	0.25	2470	100	JPJ	07/19/2019 11:00	SM-4500-NH3C
Organic N	2.59	25930	250		07/19/2019 10:00	CALCULATION
Nitrate+Nitrite-N		<5.00	5.00	ZBD	07/15/2019 13:30	4500NO3F-2011

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

B - Analyte detected in blank **H - Beyond holding time**

Pauric McGroary

Pauric McGroary
Agronomist

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Report Number: 19-191-0004
Account Number: 52660

Waypoint ANALYTICAL
7621 Whitepine Road, Richmond, VA 23237
Main 804-743-9401 ° Fax 804-271-6446
www.waypointanalytical.com

Send To: Synagro PRBF/30-3361
Lisa Callan
7800 Penrose Ferry Rd.
Philadelphia , PA 19153

Project : PRBF PELLET 5 DAY COMP

REPORT OF ANALYSIS

Lab Number : 67298
Sample Id : PELLET 5 DAY COMP

Date Sampled: 7/7/2019 08:30:00
Date Received: 07/10/2019 00:00
Date Reported: 07/19/2019

PARAMETER	RESULT (%)	RESULT (mg/kg)	QUANTITATION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Cadmium		2.62	1.00	BKN	07/17/2019 21:49	6010D
Chromium		106	2.50	BKN	07/17/2019 21:49	6010D
Nickel		35.8	2.50	BKN	07/17/2019 21:49	6010D
Lead		105	3.00	BKN	07/17/2019 21:49	6010D
Arsenic		11.0	5.00	BKN	07/17/2019 21:49	6010D
Mercury		0.462	0.0143	TJS	07/15/2019 12:12	SW-7471B
Selenium		<5.00	5.00	BKN	07/17/2019 21:49	6010D
pH *	7.5			JSL	07/18/2019 07:21	9045D
Total Volatile Solids	41.40			CJR	07/11/2019 15:35	SM-2540G
Molybdenum		12.0	2.50	BKN	07/17/2019 21:49	6010D
Chloride		1360	200	JCM	07/17/2019 16:14	SM-4500Cl-D
Boron		<25.0	25.0	BKN	07/17/2019 21:49	6010D
Beryllium		0.691	0.500	BKN	07/17/2019 21:49	6010D
Water Insoluble Nitrogen	2.64	26400	100	JM	07/15/2019 09:20	AOAC 2.4.14
Water Soluble Nitrogen	<0.03	<250	250		07/15/2019 09:20	CALCULATION
Soluble Phosphorus	<0.01	<100	100	JCM	07/18/2019 15:23	SOLUBLE P IN MANURE

Comments:

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

B - Analyte detected in blank **H - Beyond holding time**

Pauric McGroary

Pauric McGroary
Agronomist

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SYNAGRO

SAMPLE TRANSMITTAL

19-191-0004
52660
07-10-2019
13:51:40
Synagro PRBF/30-3361
PRBF PELLET 5 DAY COMP

PROJECT: Philadelphia Renewable Bio-Fuels SAMPLED BY: Jim Sands

SHIPPED TO: Way Point Analytical Labs SHIPPING DATE: 7-9-19

SUBMITTED BY: Jim Sands SAMPLE LOCATION: Pellet cooler

COMMENTS: Please return cooler SAMPLE(S) ICED: ☐

SEND RESULTS TO THE ABOVE ADDRESS Temp. below 6°C

Sample Identification	Date Collected	Time Collected	COMP	GRAB	Container Info. #	Container Info. Type G=Glass P=Plastic	Container Info. Volume	Analysis Requested
L7298								
Pellet 5 Day Comp	7-3-19 7-7-19	830	✓		1	P	16 oz	Syn - Bio
Pellet 5 Day Comp	7-3-19 7-7-19	830	✓		1	P	16 oz	BTU's

Relinquished by: (Signature/Affiliation) Jim Sands	Date:	7-9-19	Received by: (Signature/Affiliation)	Date:	
	Time:	830		Time:	
Relinquished by: (Signature/Affiliation) UPS	Date:	7/10/19	Received by: (Signature/Affiliation)	Date:	
	Time			Time:	
Relinquished by: (Signature/Affiliation)	Date:		Received by: (Signature/Affiliation)	Date:	
	Time:			Time:	

White - With Sample Yellow - Regional Office Pink - Originator

SYNCOC 04/12

ALS Environmental

301 Fulling Mill Road - Middletown, PA 17057 - Phone: 717-944-5541 - Fax: 717-944-1430 - www.alsglobal.com

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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

July 15, 2019

Mr. Tripp Cerese
Synagro Technologies

Certificate of Analysis

Project Name:	**PHILADELPHIA RENEWABLE BIOFUELS**	Workorder:	**3044428**
Purchase Order:		Workorder ID:	**PHILADELPHIA RENEWABLE BIOFUEL**

Dear Mr. Cerese:

Enclosed are the analytical results for samples received by the laboratory on Wednesday, July 10, 2019.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Shannon Butler (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

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CC: Ms. Melissa Carmichael , Mr. Chris Thornton , Accounts Payable Department , Mr. Derrick Shivar

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Shannon Butler

Ms. Shannon Butler
Project Coordinator

ALS Environmental

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July 15, 2019

Mr. Tripp Cerese
Synagro Technologies

Certificate of Analysis

Project Name:	**PHILADELPHIA RENEWABLE BIOFUELS**	Workorder:	**3044428**
Purchase Order:		Workorder ID:	**PHILADELPHIA RENEWABLE BIOFUEL**

Dear Mr. Cerese:

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Ms. Melissa Carmichael , Mr. Chris Thornton , Accounts Payable Department , Mr. Derrick Shivar

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Shannon Butler

Ms. Shannon Butler
Project Coordinator

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SAMPLE SUMMARY

Workorder: 3044428 PHILADELPHIA RENEWABLE BIOFUEL

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3044428001	Pellet 5 day Comp	Solid	7/7/2019 08:30	7/10/2019 10:51	Collected by Client

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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

SAMPLE SUMMARY

Workorder: 3044428 PHILADELPHIA RENEWABLE BIOFUEL

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
-- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.
-- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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ANALYTICAL RESULTS

Workorder: 3044428 PHILADELPHIA RENEWABLE BIOFUEL

Lab ID: **3044428001** Date Collected: 7/7/2019 08:30 Matrix: Solid

Sample ID: **Pellet 5 day Comp** Date Received: 7/10/2019 10:51

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
PCBs										
Total Polychlorinated Biphenyl	ND		mg/kg	1.5	SW846 8082A	7/11/19 04:15	JTH	7/11/19 08:50	KJH	A
Aroclor-1016	ND		mg/kg	0.17	SW846 8082A	7/11/19 04:15	JTH	7/11/19 08:50	KJH	A
Aroclor-1221	ND		mg/kg	0.17	SW846 8082A	7/11/19 04:15	JTH	7/11/19 08:50	KJH	A
Aroclor-1232	ND		mg/kg	0.17	SW846 8082A	7/11/19 04:15	JTH	7/11/19 08:50	KJH	A
Aroclor-1242	ND		mg/kg	0.17	SW846 8082A	7/11/19 04:15	JTH	7/11/19 08:50	KJH	A
Aroclor-1248	ND		mg/kg	0.17	SW846 8082A	7/11/19 04:15	JTH	7/11/19 08:50	KJH	A
Aroclor-1254	ND		mg/kg	0.17	SW846 8082A	7/11/19 04:15	JTH	7/11/19 08:50	KJH	A
Aroclor-1260	ND		mg/kg	0.17	SW846 8082A	7/11/19 04:15	JTH	7/11/19 08:50	KJH	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyl (S)	42.8	1	%	49 - 115	SW846 8082A	7/11/19 04:15	JTH	7/11/19 08:50	KJH	A
Tetrachloro-m-xylene (S)	113		%	27 - 137	SW846 8082A	7/11/19 04:15	JTH	7/11/19 08:50	KJH	A
WET CHEMISTRY										
Moisture	7.5		%	0.1	S2540G-11			7/12/19 12:20	AXD	A
Total Solids	92.5		%	0.1	S2540G-11			7/12/19 12:20	AXD	A

Shannon Butler

Ms. Shannon Butler
Project Coordinator

ALS Environmental

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ANALYTICAL RESULTS

Workorder: 3044428 PHILADELPHIA RENEWABLE BIOFUEL

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
3044428001	1	Pellet 5 day Comp	SW846 8082A	Decachlorobiphenyl

The surrogate Decachlorobiphenyl for method SW846 8082A was outside of control limits. The % Recovery was reported as 42.8 and the control limits were 49 to 115. This result was reported at a dilution of 5.

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ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 3044428 PHILADELPHIA RENEWABLE BIOFUEL

Lab ID	Sample ID	Analysis Method	Prep Method
3044428001	Pellet 5 day Comp	S2540G-11	
3044428001	Pellet 5 day Comp	SW846 8082A	SW846 3546

SYNAGRO

3044428

SAMPLE TRANSMITTAL FORM/CHAIN OF CUSTODY

PROJECT: Philadelphia Renewable BIO FUELS SAMPLED BY: Jim Sands

SHIPPED TO: ALS Environmental - Middletown SHIPPING DATE: 7-9-19

SUBMITTED BY: Jim Sands SAMPLE LOCATION: Pellet cooler

COMMENTS: Please return cooler SAMPLE(S) ICED: ☒

SEND RESULTS TO THE ABOVE ADDRESS

Sample Identification	Date Collected	Time Collected	COMP	GRAB	Container Info. #	Container Info. Type G=Glass P=Plastic	Container Info. Volume	Analysis Requested
Pellet 5 day Comp	7-3-19 7-7-19	830	X		1	P	8oz	TS, PCB's

Relinquished by: (Signature/Affiliation) Jim Sands	Date:	7-9-19	Received by: (Signature/Affiliation) UPS	Date:	
	Time:	830		Time:	
Relinquished by: (Signature/Affiliation) UPS	Date:		Received by: (Signature/Affiliation) Courtney Smith FUS	Date:	7/10/19
	Time			Time:	1057
Relinquished by: (Signature/Affiliation)	Date:		Received by: (Signature/Affiliation)	Date:	
	Time:			Time:	

White - With Sample Yellow - Regional Office Pink - Originator

SYNCOC 04/12

16°

ALS

ALS Environmental

34 Dogwood Lane w Middletown, PA 17057 ph 717.944-5541 Fax: 717.944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

COC #: 3044428 | 1 of 1

ALS Quote #: 566006

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Client Name: SYNAGRO

Address: 7900 PENROSE FERRY ROAD
PHILADELPHIA, PA 19153

Contact: ROBERT ABBOTT

Phone#: 2159609517

Project Name:

Quote Number:

TAT [X] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALS approval and surcharges.

Date Required: Approved By:

Email? [X] -Y rabbott@synagro.com

Fax? [ ] -Y No.:

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	TSS									
					Container Type	P								
					Container Size	500mL								
					Preservative	None								
					ANALYSES/METHOD REQUESTED									
					Enter Number of Containers Per Sample or Field Results Below									
5 Bay Comp	7-9-19	1530		WT										
				WT										
				WT										
				WT										
				WT										
				WT										

Receipt Information (completed by Receiving Lab)

Cooler Temp: Cooler #:

Therm. ID

	Y	N
Custody Seals Present?		
(If present) Seals Intact?		
Received on Ice?		
COC/Labels Agree?		
Cont. in Good Cond.?		
Correct Containers?		
Correct Sample Volumes?		
Correct Preservation?		

Information concerning all nonconformance samples/containers shall be recorded on the COC.

Ship. Carrier: UPS / FedEx / DHL / Other

Tracking #:

Sample/COC Comments

TS PCBS

ALS Field Services: ☐Pickup ☐Labor ☐Composite Sampling ☐Rental Equipment ☐Other:

Project Comments:

Logged By (initials/date/time)

Reviewed By (initials/date/time)

Data Deliverables: [X] Standard [ ] CLP-like [ ] USACE [ ]

Special Processing: USACE [ ] Navy [ ]

State Samples Collected In: [ ] NY [ ] NJ [ ] PA [ ] NC [ ]

Reportable to PADEP? Yes [ ]

PWSID #:

Sample Disposal: Lab [ ] Special [ ]

EDDS: Format Type:

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 Tim Sands UPS	7-9-19	1530	2 UPS		
5			4 Courtney Brand FedEx	7/10/19	1057
7			6		
9			8		
			10		

*G=Grab; C=Composite **Matrix - AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

Copies: WHITE - ORIGINAL CANARY - CUSTOMER MAILING PINK - FILE GOLDENROD - CUSTOMER COPY

Rev 7/11

ALS Environmental

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July 31, 2019

Mr. Tripp Cerese
Synagro Technologies

Certificate of Analysis

Project Name:	**PHILADELPHIA RENEWABLE BIOFUELS**	Workorder:	**3047900**
Purchase Order:		Workorder ID:	**PRBF- Fecal Coliform -07/26/19**

Dear Mr. Cerese:

Enclosed are the analytical results for samples received by the laboratory on Friday, July 26, 2019.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Shannon Butler (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

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ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Ms. Melissa Carmichael , Mr. Chris Thornton , Accounts Payable Department , Mr. Derrick Shivar

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Shannon Butler

Ms. Shannon Butler
Project Coordinator

ALS Environmental

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SAMPLE SUMMARY

Workorder: 3047900 PRBF- Fecal Coliform -07/26/19

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3047900001	Fecal Coliform	Solid	7/26/2019 09:00	7/26/2019 13:50	Collected by Client
3047900002	Fecal Coliform	Solid	7/26/2019 09:15	7/26/2019 13:50	Collected by Client
3047900003	Fecal Coliform	Solid	7/26/2019 09:30	7/26/2019 13:50	Collected by Client
3047900004	Fecal Coliform	Solid	7/26/2019 09:45	7/26/2019 13:50	Collected by Client
3047900005	Fecal Coliform	Solid	7/26/2019 10:00	7/26/2019 13:50	Collected by Client
3047900006	Fecal Coliform	Solid	7/26/2019 10:15	7/26/2019 13:50	Collected by Client
3047900007	Fecal Coliform	Solid	7/26/2019 10:30	7/26/2019 13:50	Collected by Client

ALS Environmental

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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

SAMPLE SUMMARY

Workorder: 3047900 PRBF- Fecal Coliform -07/26/19

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
-- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.
-- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.

Standard Acronyms/Flags

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N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

ALS Environmental

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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

ANALYTICAL RESULTS

Workorder: 3047900 PRBF- Fecal Coliform -07/26/19

Lab ID: **3047900001** Date Collected: 7/26/2019 09:00 Matrix: Solid
Sample ID: **Fecal Coliform** Date Received: 7/26/2019 13:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Moisture	4.9		%	0.1	S2540G-11			7/29/19 08:50	AXD	A
Total Solids	95.1		%	0.1	S2540G-11			7/29/19 08:50	AXD	A
MICROBIOLOGY										
Fecal Coliforms	ND		MPN/gram	2	EPA 1680	7/26/19 16:08	TDB	7/28/19 13:37	TDB	A

Shannon Butler
Ms. Shannon Butler
Project Coordinator

ALS Environmental

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ANALYTICAL RESULTS

Workorder: 3047900 PRBF- Fecal Coliform -07/26/19

Lab ID: **3047900002** Date Collected: 7/26/2019 09:15 Matrix: Solid

Sample ID: **Fecal Coliform** Date Received: 7/26/2019 13:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Moisture	4.7		%	0.1	S2540G-11			7/29/19 08:50	AXD	A
Total Solids	95.3		%	0.1	S2540G-11			7/29/19 08:50	AXD	A
MICROBIOLOGY										
Fecal Coliforms	ND		MPN/gram	2	EPA 1680	7/26/19 16:08	TDB	7/28/19 13:37	TDB	A

Shannon Butler

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Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3047900 PRBF- Fecal Coliform -07/26/19

Lab ID: **3047900003** Date Collected: 7/26/2019 09:30 Matrix: Solid

Sample ID: **Fecal Coliform** Date Received: 7/26/2019 13:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Moisture	4.7		%	0.1	S2540G-11			7/29/19 08:50	AXD	A
Total Solids	95.3		%	0.1	S2540G-11			7/29/19 08:50	AXD	A
MICROBIOLOGY										
Fecal Coliforms	ND		MPN/gram	2	EPA 1680	7/26/19 16:08	TDB	7/28/19 13:37	TDB	A

Shannon Butler

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Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3047900 PRBF- Fecal Coliform -07/26/19

Lab ID: **3047900004** Date Collected: 7/26/2019 09:45 Matrix: Solid

Sample ID: **Fecal Coliform** Date Received: 7/26/2019 13:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Moisture	4.9		%	0.1	S2540G-11			7/29/19 08:50	AXD	A
Total Solids	95.1		%	0.1	S2540G-11			7/29/19 08:50	AXD	A
MICROBIOLOGY										
Fecal Coliforms	ND		MPN/gram	2	EPA 1680	7/26/19 16:37	TDB	7/28/19 13:37	TDB	A

Shannon Butler

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Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3047900 PRBF- Fecal Coliform -07/26/19

Lab ID: **3047900005** Date Collected: 7/26/2019 10:00 Matrix: Solid
Sample ID: **Fecal Coliform** Date Received: 7/26/2019 13:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Moisture	5.6		%	0.1	S2540G-11			7/29/19 08:50	AXD	A
Total Solids	94.4		%	0.1	S2540G-11			7/29/19 08:50	AXD	A
MICROBIOLOGY										
Fecal Coliforms	ND		MPN/gram	2	EPA 1680	7/26/19 16:37	TDB	7/28/19 13:37	TDB	A

Shannon Butler
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Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3047900 PRBF- Fecal Coliform -07/26/19

Lab ID: **3047900006** Date Collected: 7/26/2019 10:15 Matrix: Solid

Sample ID: **Fecal Coliform** Date Received: 7/26/2019 13:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Moisture	5.6		%	0.1	S2540G-11			7/29/19 08:50	AXD	A
Total Solids	94.4		%	0.1	S2540G-11			7/29/19 08:50	AXD	A
MICROBIOLOGY										
Fecal Coliforms	ND		MPN/gram	2	EPA 1680	7/26/19 16:37	TDB	7/28/19 13:37	TDB	A

Shannon Butler

Ms. Shannon Butler
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3047900 PRBF- Fecal Coliform -07/26/19

Lab ID: **3047900007** Date Collected: 7/26/2019 10:30 Matrix: Solid

Sample ID: **Fecal Coliform** Date Received: 7/26/2019 13:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Moisture	5.7		%	0.1	S2540G-11			7/29/19 08:50	AXD	A
Total Solids	94.3		%	0.1	S2540G-11			7/29/19 08:50	AXD	A
MICROBIOLOGY										
Fecal Coliforms	ND		MPN/gram	2	EPA 1680	7/26/19 16:37	TDB	7/28/19 13:37	TDB	A

Shannon Butler

Ms. Shannon Butler
Project Coordinator

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ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 3047900 PRBF- Fecal Coliform -07/26/19

Lab ID	Sample ID	Analysis Method	Prep Method
3047900001	Fecal Coliform	EPA 1680	EPA 1680
3047900001	Fecal Coliform	S2540G-11	
3047900002	Fecal Coliform	EPA 1680	EPA 1680
3047900002	Fecal Coliform	S2540G-11	
3047900003	Fecal Coliform	EPA 1680	EPA 1680
3047900003	Fecal Coliform	S2540G-11	
3047900004	Fecal Coliform	EPA 1680	EPA 1680
3047900004	Fecal Coliform	S2540G-11	
3047900005	Fecal Coliform	EPA 1680	EPA 1680
3047900005	Fecal Coliform	S2540G-11	
3047900006	Fecal Coliform	EPA 1680	EPA 1680
3047900006	Fecal Coliform	S2540G-11	
3047900007	Fecal Coliform	EPA 1680	EPA 1680
3047900007	Fecal Coliform	S2540G-11	

SYNAGRO

SAMPLE TRANSMITTAL FORM/CHAIN OF CUSTODY

30479,00

PROJECT: PRBF-PHILADELPHIA RENEWABLE BIOFUELS SAMPLED BY: AARON PAWLEY

SHIPPED TO: ALS ENVIRONMENTAL-MIDDLETOWN SHIPPING DATE: 07/26/19

SUBMITTED BY: AARON PAWLEY SAMPLE LOCATION: PELLET

COMMENTS: SAMPLE START TIME: 0900. SAMPLES COLLECTED EVERY 15 MINS FROM START TIME SAMPLE(S) ICED: ☑

SEND RESULTS TO THE ABOVE ADDRESS

Sample Identification	Date Collected	Time Collected	COMP	GRAB	Container Info. #	Container Info. Type G=Glass P=Plastic	Container Info. Volume	Analysis Requested
FECAL SAMPLES	07/26	0900 1030		√	7	P	40Z	FECAL COLIFORM

Relinquished by: (Signature/Affiliation) AARON PAWLEY	Date:	07/26/19	Received by: (Signature/Affiliation)	Date:	7/26/19
	Time:	1040		Time:	1040
Relinquished by: (Signature/Affiliation)	Date:	7/26/19	Received by: (Signature/Affiliation)	Date:	7/26
	Time	1350		Time:	1350
Relinquished by: (Signature/Affiliation)	Date:		Received by: (Signature/Affiliation)	Date:	
	Time:			Time:	

White - With Sample Yellow - Regional Office Pink - Originator

SYNCOC 04/12

ALS

ALS Environmental
34 Dogwood Lane • Middletown, PA 17057 ph 717.944-5541 Fax: 717.944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

COC #: 7900 | 1 of 1
ALS Quote #: 566006

Client Name: SYNAGRO
Address: 7800 PENROSE FERRY ROAD
PHILADELPHIA, PA 19153
Contact: ROBERT ABBOTT
Phone#: 2156095.7
Project Name:
Quote Number:
TAT [X] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALS approval and surcharges.
Date Required: approved By:
Email? [X] Y rabbott@synagro.com
Fax? [ ] Y No:

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix
FECAL CULTURE	07/26	0900	G	WT
	07/26	0915	G	WT
	07/26	0930	G	WT
	07/26	0945	G	WT
	07/26	1000	G	WT
	07/26	1015	G	WT
	07/26	1030		

ANALYSES/METHOD REQUESTED

Container Type	P									
Container Size	500mL									
Preservative	None									
TSS	Enter Number of Containers Per Sample or Field Results Below:									

Receipt Information (completed by Receiving Lab)
Cooler Temp: Cooler #:
Therm. ID

	Y	N
Custody Seals Present?		
(if present) Seals Intact?		
Received on Ice?		
COC/Labels Agree?		
Cont. in Good Cond.?		
Correct Containers?		
Correct Sample Volumes?		
Correct Preservation?		

Information concerning all nonconformances sample/containers shall be recorded on the COC.

Ship. Carrier: UPS / FedEx / DHL / Other
Tracking #:

Sample/COC Comments

ALS Field Services: ☐Pickup ☐Labor ☐Composite Sampling ☐Rental Equipment ☐Other:

Project Comments:

Logged By (initials/date/time)
Reviewed By (initials/date/time)

Data Deliverables: [ ] Standard [ ] CLP-like [ ] USACE
Special Processing: USACE [ ] Navy [ ]
State Samples Collected In: [ ] NY [ ] NJ [ ] PA [ ] NC

Reportable to PADEP? Yes [ ]
PWSID#
Sample Disposal: Lab [ ] Special [ ]
EDDS: Format Type

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 AARON PARKER SYNAGRO	7/26	1040	2	7/26/19	1040
3	7/26/19	1350	4		
5			6		
7			8		
9			10		

* G=Grab; C=Composite **Matrix - AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

Copies: WHITE - ORIGINAL CANARY - CUSTOMER MAILING PINK - FILE GOLDENROD - CUSTOMER COPY

Rev 7/11

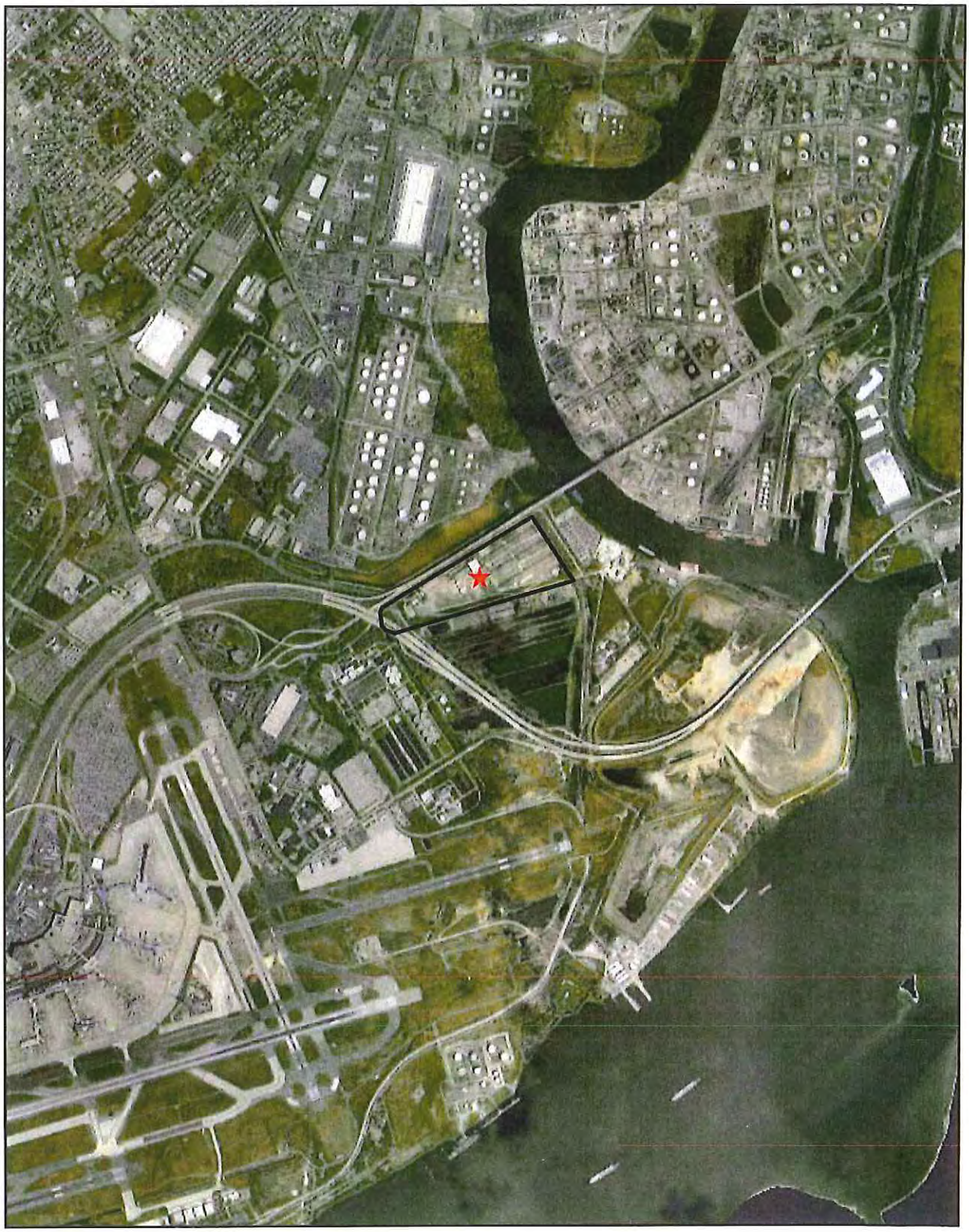
Section Seven

Attachments

Attachment A

Maps and Process Flow Diagrams

SYNAGRO

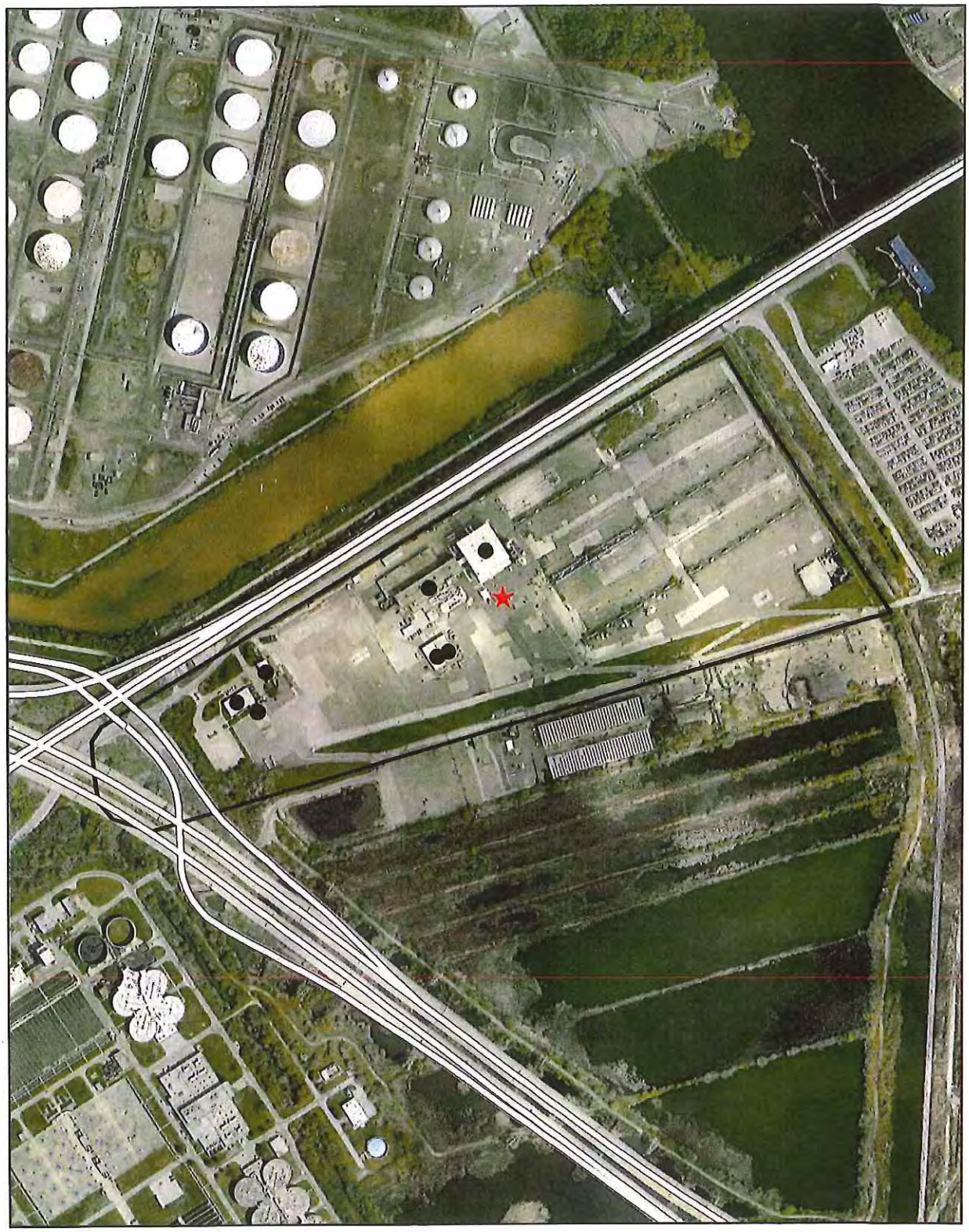


0 0.2 0.4 0.8 Miles

Philadelphia Dryer Facility
Location Map

N
W E
S

SYNAGRO

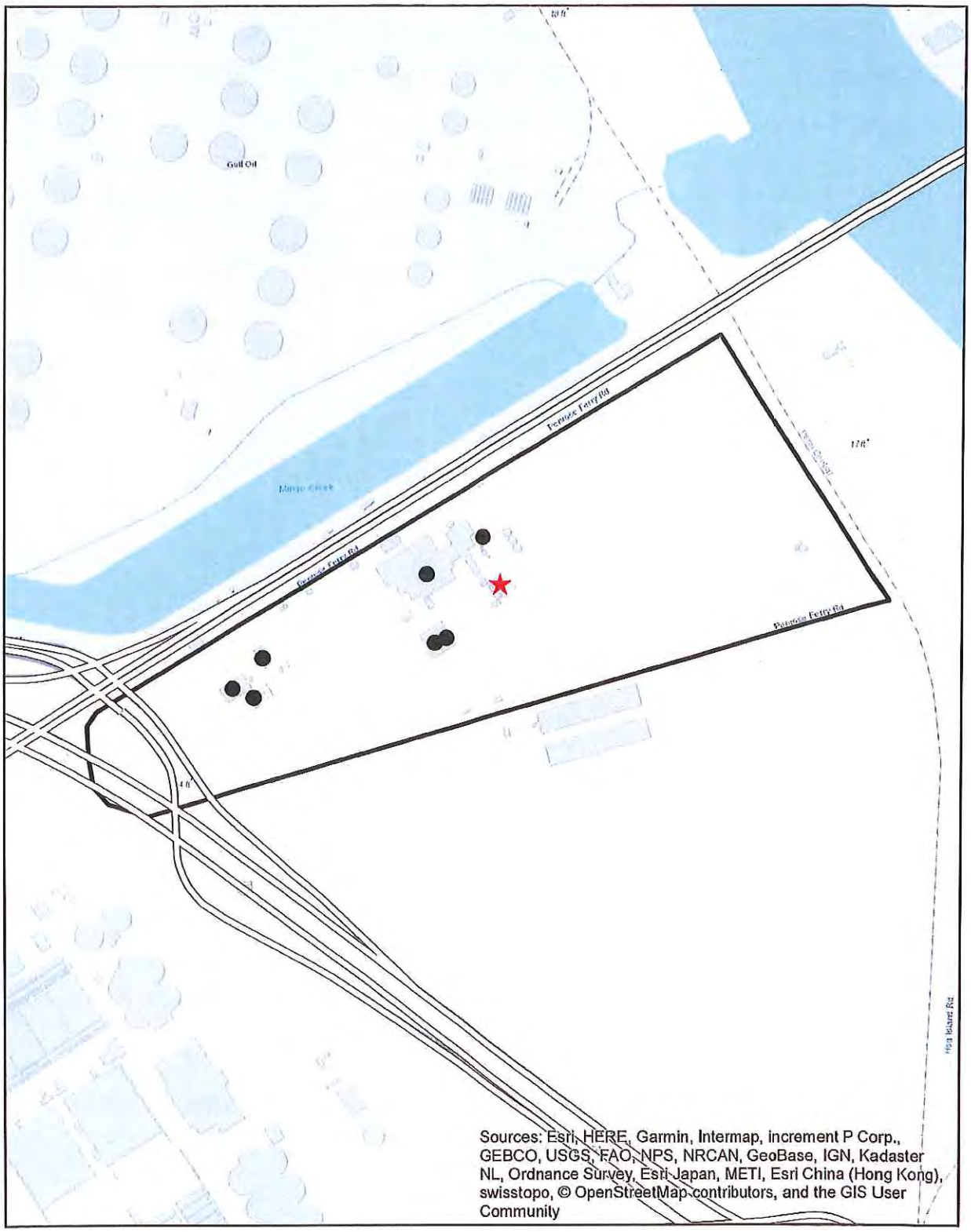


0 0.05 0.1 0.2 Miles

Philadelphia Dryer Facility
Aerial Map

N
W E
S

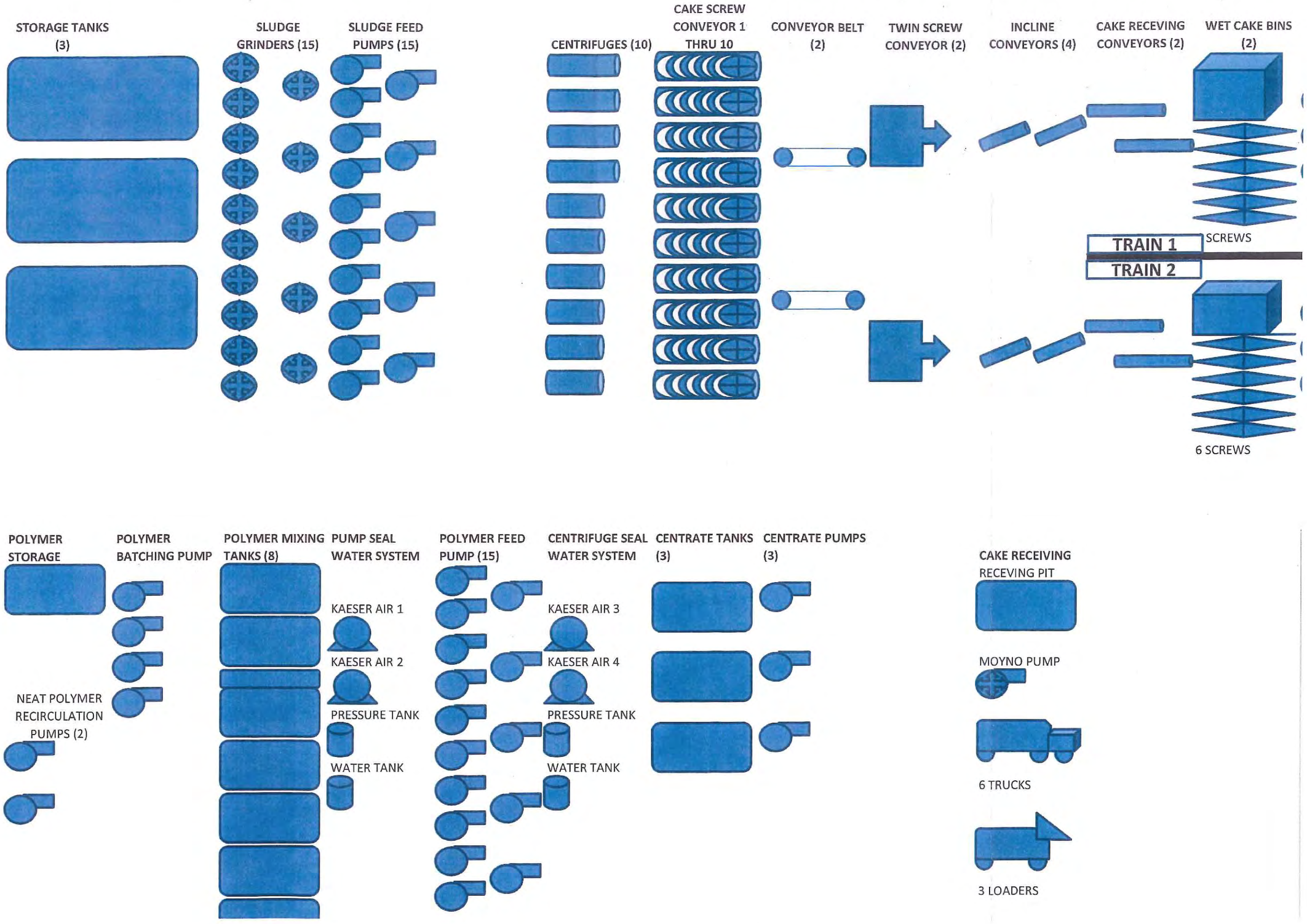
SYNAGRO

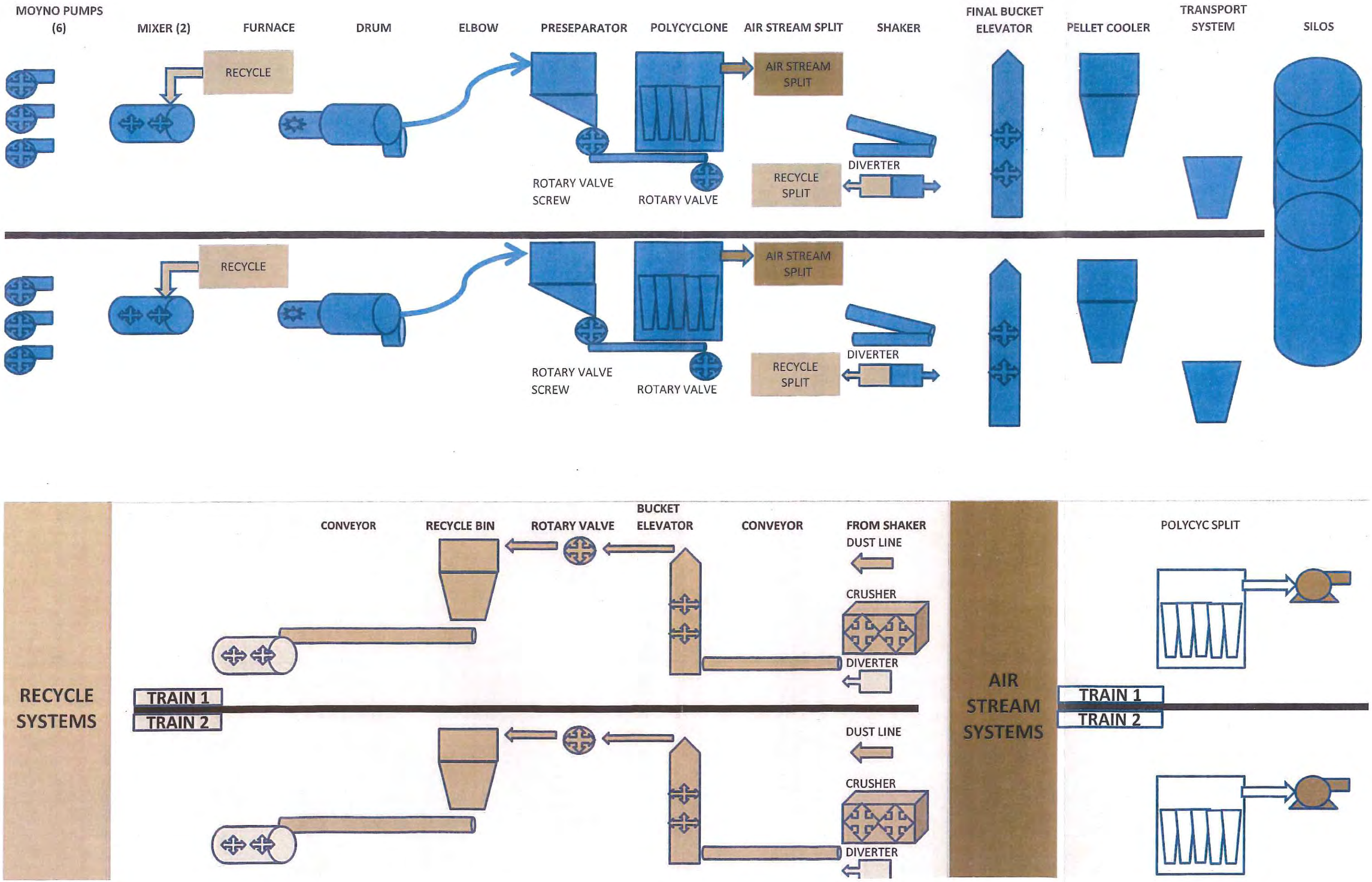


0 0.05 0.1 0.2 Miles

Philadelphia Dryer Facility
Topographic Map

N
W E
S


STORAGE TANKS (3)
SLUDGE GRINDERS (15)
SLUDGE FEED PUMPS (15)
CENTRIFUGES (10)
CAKE SCREW CONVEYOR 1 THRU 10
CONVEYOR BELT (2)
TWIN SCREW CONVEYOR (2)
INCLINE CONVEYORS (4)
CAKE RECEVING CONVEYORS (2)
WET CAKE BINS (2)
TRAIN 1
TRAIN 2
SCREWS
6 SCREWS
POLYMER STORAGE
POLYMER BATCHING PUMP
POLYMER MIXING TANKS (8)
PUMP SEAL WATER SYSTEM
POLYMER FEED PUMP (15)
CENTRIFUGE SEAL WATER SYSTEM
CENTRATE TANKS (3)
CENTRATE PUMPS (3)
NEAT POLYMER RECIRCULATION PUMPS (2)
KAESER AIR 1
KAESER AIR 2
PRESSURE TANK
WATER TANK
KAESER AIR 3
KAESER AIR 4
PRESSURE TANK
WATER TANK
CAKE RECEIVING
RECEVING PIT
MOYNO PUMP
6 TRUCKS
3 LOADERS

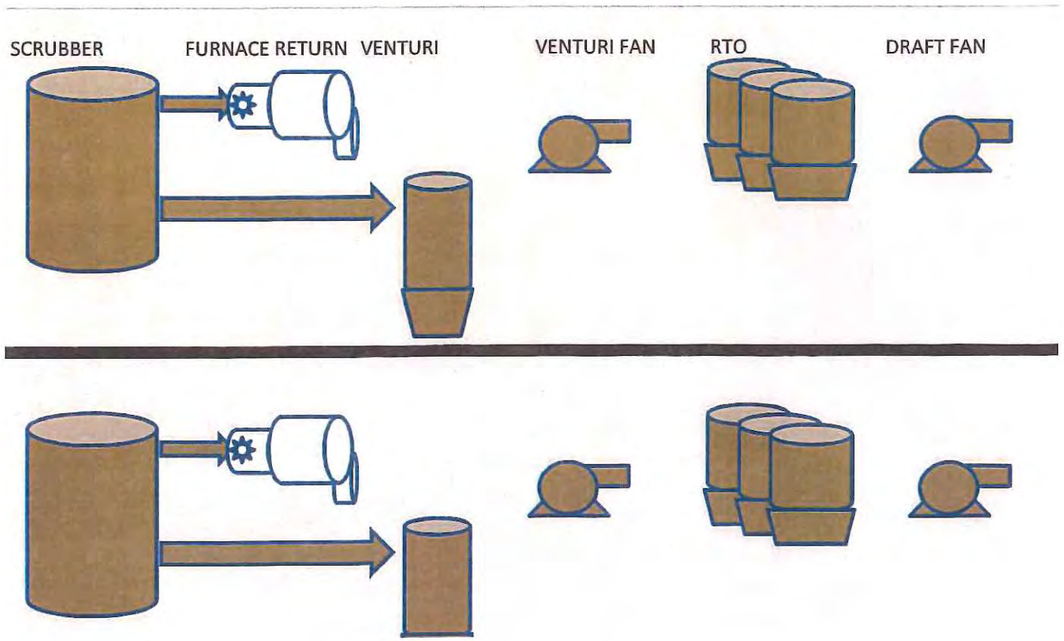

MOYNO PUMPS (6)
MIXER (2)
FURNACE
DRUM
ELBOW
PRESEPARATOR
POLYCYCLONE
AIR STREAM SPLIT
SHAKER
FINAL BUCKET ELEVATOR
PELLET COOLER
TRANSPORT SYSTEM
SILOS
RECYCLE
AIR STREAM SPLIT
DIVERTER
RECYCLE SPLIT
ROTARY VALVE SCREW
ROTARY VALVE
RECYCLE
AIR STREAM SPLIT
DIVERTER
RECYCLE SPLIT
ROTARY VALVE SCREW
ROTARY VALVE
RECYCLE SYSTEMS
CONVEYOR
RECYCLE BIN
ROTARY VALVE
BUCKET ELEVATOR
CONVEYOR
FROM SHAKER DUST LINE
CRUSHER
DIVERTER
TRAIN 1
TRAIN 2
DUST LINE
CRUSHER
DIVERTER
AIR STREAM SYSTEMS
POLYCYC SPLIT
TRAIN 1
TRAIN 2

LOADOUT

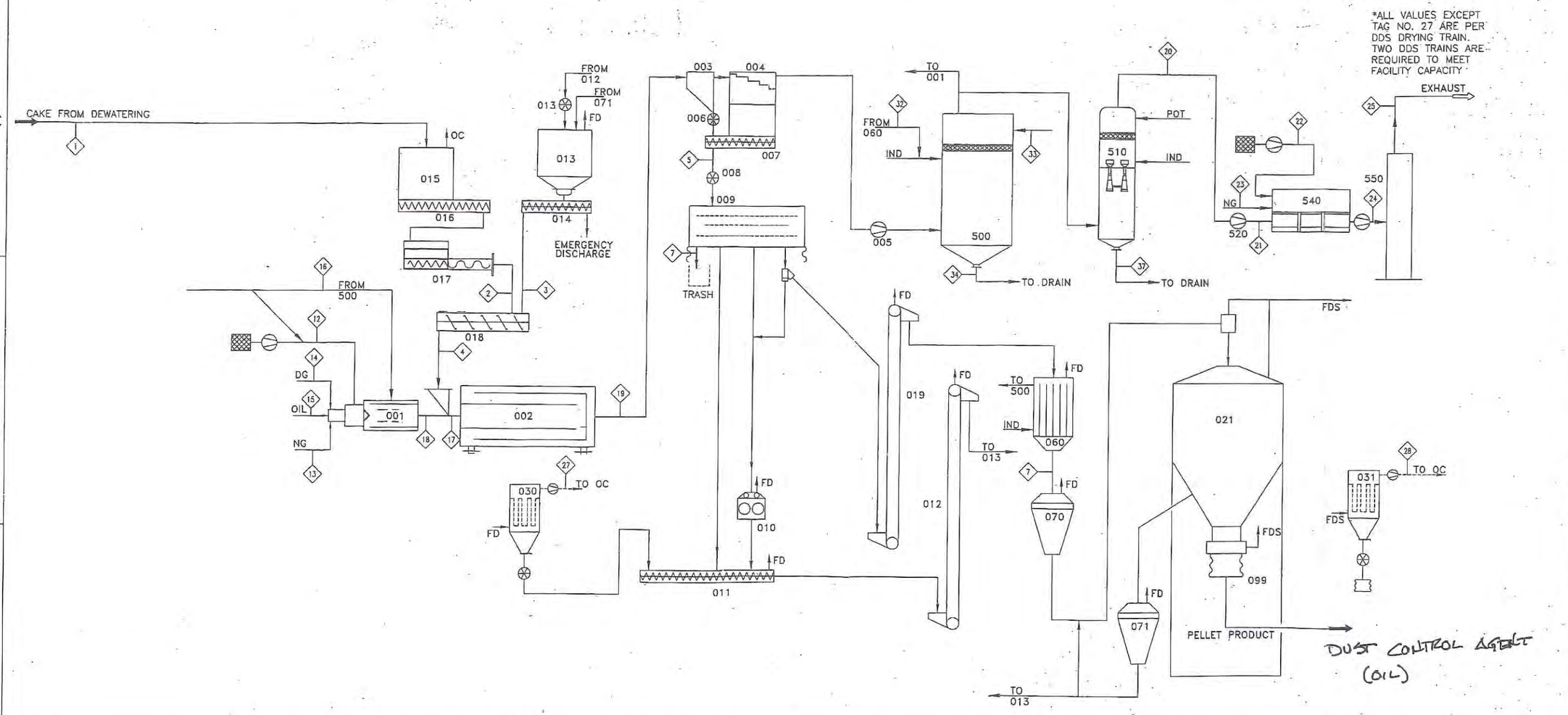
CONVEYORS (3)

SPOUTS (2)

TRANSPORTER



Tag No.	1	2	3	4	5	7	8	12	13	14	15	16	17	18	19	20	21	22	23	24	25	27	28	32	33	34	35	36	37	38
Stream	Cake from Dewatering	Wet Cake	Recycle Material	Dryer Feed	Dried Solids	Pellet Product	Trash Product	Comb. Air	Natural Gas	Digester Gas	Fuel Oil	Circulating Process Gas	Leak air	Process Gas	Process Gas	Process Gas	Process Gas	Comb. Air	Natural Gas	Process Gas	Process Gas	Aspiration air	Aspiration air	Cooling Water	Cooling Water	Cooling Water	Cooling Water	Cooling Water	Cooling Water	Cooling Water
Location		To Mixer	To mixer	Mixer Discharge	Screen Inlet	To Silo	To Trash Container	To Dryer Furnace	To Dryer Furnace	To Dryer Furnace	To Dryer Furnace	To Dryer Furnace	Various	Drum Inlet	Drum Outlet	Venturi Outlet	At RTO Inlet	To RTO Furnace	To RTO Furnace	At RTO Outlet	At Stack Outlet	Solids Handling	Storage Silo	Condenser Inlet	Pellet Cooler Outlet	Condenser Mist Eliminator	Condenser Outlet	Venturi Inlet	Venturi Mist Eliminator	Venturi Outlet



*ALL VALUES EXCEPT TAG NO. 27 ARE PER DDS DRYING TRAIN. TWO DDS TRAINS ARE REQUIRED TO MEET FACILITY CAPACITY

REVIEWED FOR CONSTRUCTION

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ARLINGTON, TEXAS 76001
(817) 465-5611

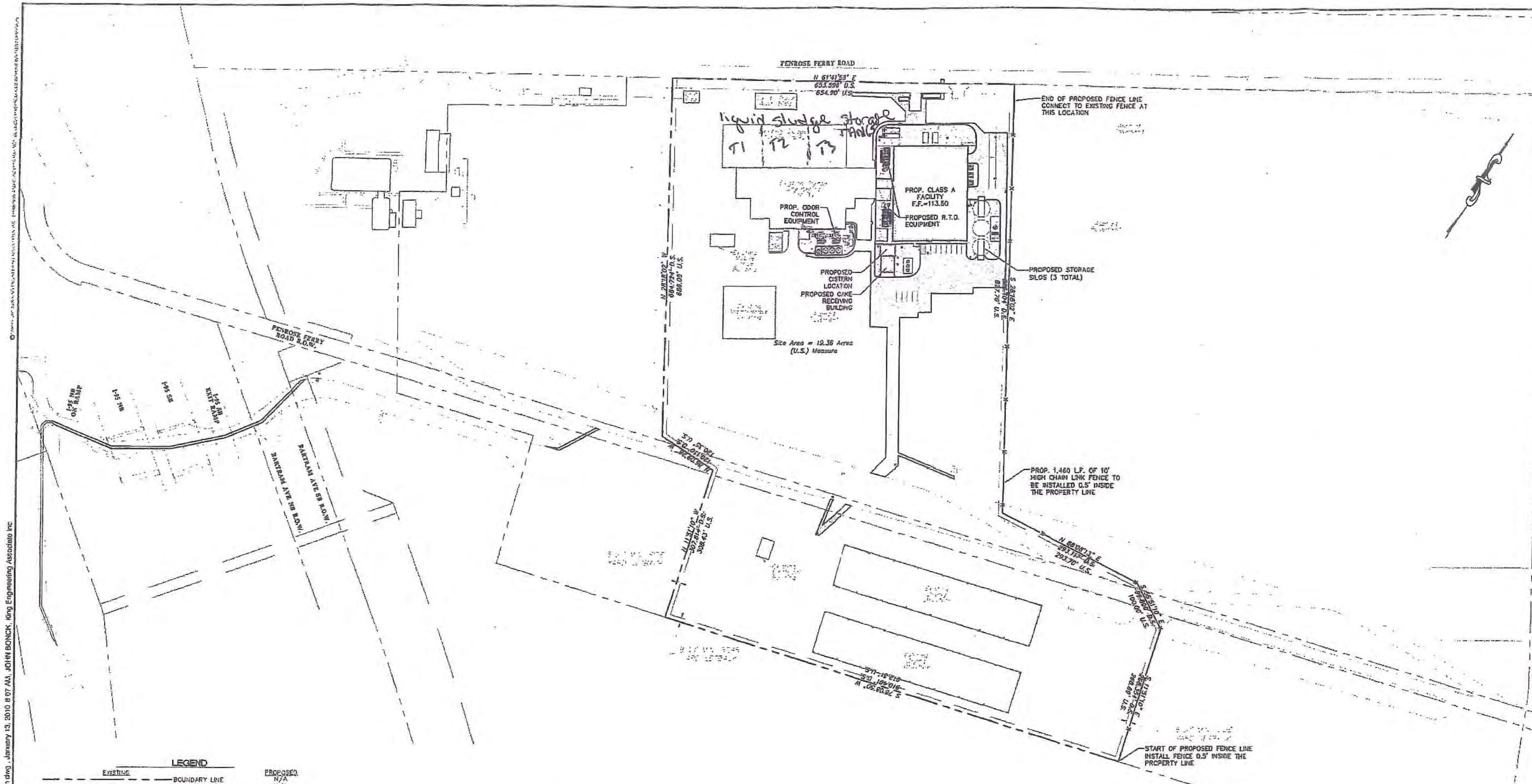
REV	REVISION	DATE
0	ISSUED FOR CONSTRUCTION	10/19/10
C	UPDATES	2/4/10

DRAWN BY: DAN DATE: 4/20/09
CHECKED BY: DATE:
APPROVED BY: DATE:
SCALE: NONE FILE: 805899PI002
SIZE: 110X

JOB NAME: PHILADELPHIA RENEWABLE BIO-FUELS, LLC
PHILADELPHIA COUNTY, PA

TITLE: PROCESS DIAGRAM
MASS BALANCE

PROJECT NUMBER: 805899
DRAWING NUMBER: PI-002 REV: 0
SHEET 1 OF 1



LEGEND

EXISTING		PROPOSED
	BOUNDARY LINE	N/A
	EASEMENT LINE	N/A
	RIGHT-OF-WAY LINE	N/A
	SETBACK LINE	N/A
	CENTERLINE	N/A
	BUILDING	
	CONCRETE CURB	
	CHAIN LINK FENCE	
	GUIDE RAIL	N/A
N/A	GRASS AREA	
	GRAVEL AREA	
N/A	BITUMINOUS PAVEMENT	

NOTE:

CONTRACTOR AND OWNER SHALL REFER TO FINAL APPROVED PERMIT DRAWINGS PRIOR TO COMMENCEMENT OF ALL CONSTRUCTION. ANY CONSTRUCTION NOT IN ACCORDANCE WITH THE FINAL APPROVED REGULATORY PERMIT DRAWINGS IS STRICTLY PROHIBITED.

SITE IMPROVEMENT NOTES:

1. FOR GENERAL NOTES SEE SHEET C-100.
2. FOR EROSION AND SEDIMENT CONTROL NOTES SEE SHEET C-904.
3. THE PURPOSE OF THIS PLAN IS TO SHOW PROPOSED SURFACE IMPROVEMENTS.
4. ALL WORK ON THIS DRAWING IS BY THE GENERAL CONTRACTOR UNLESS OTHERWISE INDICATED.
5. VERIFY BUILDING AND FOUNDATION GEOMETRY WITH ARCHITECTURAL AND STRUCTURAL PLANS PRIOR TO STAKING OUT PROPOSED CLASS A FACILITY BUILDING.
6. WHERE NEW CURBS ARE TO BE INSTALLED IN EXISTING PAVEMENT, SAW CUT, REMOVE, AND RESTORE A PORTION OF THE PAVEMENT AS NECESSARY TO ACCOMPLISH THE WORK.
7. CONSTRUCT NEW CURBS, SIDEWALKS, AND PAVEMENTS TO THE GRADES INDICATED ON THE GRADING PLAN. MEET EXISTING GRADES WHERE SHOWN. ANY VALVE BOXES, MANHOLES, OR OTHER UTILITY ITEMS WITHIN THE PROJECT WORK AREA THAT ARE TO REMAIN SHALL BE ADJUSTED TO FINISH GRADES.
8. PROVIDE SERIES PG-64-22 SEALANT WHERE BITUMINOUS PAVEMENT MEETS CONCRETE CURBS OR UTILITY STRUCTURES. APPLY SEALANT IN LAYER THICKNESS WHICH PROVIDES FOR CURING AND WILL NOT CAUSE TRACKING OR LIFTING OF SEALANT TO OTHER SURFACES. APPLY A FINE SAND COVERING TEMPORARILY OVER SEALANT DURING CURING PERIOD.

Before You Dig Anywhere

In... PENNSYLVANIA

STOP! CALL 1-800-242-1776

PA Act 187 (1996) requires notification to ONE CALL SYSTEM 3 working days for construction phase and 10 working days for design phase before you excavate.

PA ONE CALL SYSTEM, INC.
DESIGN PHASE SERIAL NO. 20091030364

EXCAVATIONS, TRENCHING AND SHORING

ALL EXCAVATIONS, TRENCHING, AND SHORING OPERATIONS SHALL COMPLY WITH THE REQUIREMENTS OF ALL UNITED STATES DEPARTMENT OF LABOR OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) PUBLICATIONS OF THE LATEST REVISION.

GRAPHIC SCALE

100 0 100 200 400

(IN FEET)
1 inch = 100 ft.

100% SUBMITTAL

IF THIS BAR DOES NOT MEASURE 1 INCH THEN DRAWING HAS BEEN REDUCED

SYNAGRO
A Residuals Management Company

King Engineering Associates, Inc.

Hunt Engineering Company

CLASS A FACILITIES
FOR
PHILADELPHIA RENEWABLE BIO-FUELS, LLC

4	01/07/10	100% DESIGN SUBMITTAL
3	12/03/09	STORMWATER PERMIT APPLICATION ONLY
2	08/06/09	60% DESIGN SUBMITTAL
1	05/15/09	30% DESIGN SUBMITTAL

OVERALL PROPOSED SITE PLAN

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL ENGINEER — RICHARD M. CSHLAHAN — 026651

THE SIGNATURE OF THE QUALITY CONTROL OFFICER IN THIS SPACE INDICATES THAT ALL REQUIRED PERMITS HAVE BEEN OBTAINED AND THAT CONSTRUCTION IS AUTHORIZED TO COMMENCE

JOB NO. 4175-000-002	SHEET NO. C-200
DATE Nov. 2009	
SCALE AS SHOWN	

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