

DOCKETED

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Enthalpy Analytical

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 305902
ANALYTICAL REPORT

Pacific Gas & Electric
4801 Oakport Street
Oakland, CA 94601

Project : STANDARD
Location : Resample 7 (1218/18)
Level : II

<u>Sample ID</u>	<u>Lab ID</u>
TIGER PIT-P	305902-001
TIGER PIT-UP	305902-002

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature which applies to this PDF file as well as any associated electronic data deliverable files. The results contained in this report meet all requirements of NELAP and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: _____

Date: 12/19/2018

Will Rice
Project Manager
will.rice@enthalpy.com
(510) 204-2221 Ext 13102

CA ELAP# 2896, NELAP# 4044-001

CASE NARRATIVE

Laboratory number: 305902
Client: Pacific Gas & Electric
Location: Resample 7 (1218/18)
Request Date: 12/18/18
Samples Received: 12/18/18

This data package contains sample and QC results for two water samples, requested for the above referenced project on 12/18/18. The samples were received cold and intact.

Total Cyanide (SM4500CN-C,E):

Low recoveries were observed for cyanide in the MS/MSD of TIGER PIT-P (lab # 305902-001); the LCS was within limits, and the associated RPD was within limits. No other analytical problems were encountered.

SAMPLE RECEIPT CHECKLIST



Section 1: Login # 305902
 Date Received: 12/18/18

Client: PGEO
 Project: _____

Section 2: Samples received in a cooler? Yes, how many? _____ No (skip Section 3 below)

If no cooler Sample Temp (°C): 1.3 using IR Gun # A, or B

Samples received on ice directly from the field. Cooling process had begun

If in cooler: Date Opened 12/18/18 By (print) AC (sign) [Signature]

Shipping info (if applicable) _____

Are custody seals present? No, or Yes. If yes, where? on cooler, on samples, on package

Date: _____ How many _____ Signature, Initials, None

Were custody seals intact upon arrival? Yes No N/A

Section 3: **Important : Notify PM if temperature exceeds 6°C or arrive frozen.**

Packing in cooler: (if other, describe) _____

Bubble Wrap, Foam blocks, Bags, None, Cloth material, Cardboard, Styrofoam, Paper towels

Samples received on ice directly from the field. Cooling process had begun

Type of ice used: Wet, Blue/Gel, None Temperature blank(s) included? Yes, No

Temperature measured using Thermometer ID: _____, or IR Gun # A B

Cooler Temp (°C): #1: _____, #2: _____, #3: _____, #4: _____, #5: _____, #6: _____, #7: _____

Section 4:	YES	NO	N/A
Were custody papers dry, filled out properly, and the project identifiable	/		
Were Method 5035 sampling containers present?		/	
If YES, what time were they transferred to freezer?			
Did all bottles arrive unbroken/unopened?	/		
Are there any missing / extra samples?		/	
Are samples in the appropriate containers for indicated tests?	/		
Are sample labels present, in good condition and complete?	/		
Does the container count match the COC?	/		
Do the sample labels agree with custody papers?	/		
Was sufficient amount of sample sent for tests requested?	/		
Did you change the hold time in LIMS for unpreserved VOAs?			/
Did you change the hold time in LIMS for preserved terracores?			/
Are bubbles > 6mm absent in VOA samples?			/
Was the client contacted concerning this sample delivery?			
If YES, who was called? _____ By _____ Date: _____			

Section 5:	YES	NO	N/A
Are the samples appropriately preserved? (if N/A, skip the rest of section 5)	/		
Did you check preservatives for all bottles for each sample?		/	
Did you document your preservative check?	/		

pH strip lot# HCL131225, pH strip lot# _____, pH strip lot# _____

Preservative added:

- H2SO4 lot# _____ added to samples _____ on/at _____
- HCL lot# _____ added to samples _____ on/at _____
- HNO3 lot# _____ added to samples _____ on/at _____
- NaOH lot# _____ added to samples _____ on/at _____

Section 6:

Explanations/Comments: _____

Date Logged in 12/18/18 By (print) AC (sign) [Signature]
 Date Labeled 12/18/18 By (print) AC (sign) [Signature]

Enthalpy Sample Preservation for 305902

Sample	pH: <2	>9	>12	Other
-001a	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
-002a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

Analyst: ALC
Date: 12/18/18
Page 1 of 1

Detections Summary for 305902

Results for any subcontracted analyses are not included in this summary.

Client : Pacific Gas & Electric
 Project : STANDARD
 Location : Resample 7 (1218/18)

Client Sample ID : TIGER PIT-P Laboratory Sample ID : 305902-001

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Cyanide	0.028		0.010	mg/L	TOTAL	1.000	SM4500CN-C,E	METHOD

Client Sample ID : TIGER PIT-UP Laboratory Sample ID : 305902-002

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Cyanide	0.028		0.010	mg/L	TOTAL	1.000	SM4500CN-C,E	METHOD

Total Cyanide			
Lab #:	305902	Location:	Resample 7 (1218/18)
Client:	Pacific Gas & Electric	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM4500CN-C,E
Analyte:	Cyanide	Sampled:	12/18/18
Matrix:	Water	Received:	12/18/18
Units:	mg/L	Prepared:	12/18/18
Diln Fac:	1.000	Analyzed:	12/19/18
Batch#:	266298		

Field ID	Type	Lab ID	Result	RL
TIGER PIT-P	SAMPLE	305902-001	0.028	0.010
TIGER PIT-UP	SAMPLE	305902-002	0.028	0.010
	BLANK	QC958894	ND	0.010

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Total Cyanide			
Lab #:	305902	Location:	Resample 7 (1218/18)
Client:	Pacific Gas & Electric	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM4500CN-C,E
Analyte:	Cyanide	Batch#:	266298
Field ID:	TIGER PIT-P	Sampled:	12/18/18
MSS Lab ID:	305902-001	Received:	12/18/18
Matrix:	Water	Prepared:	12/18/18
Units:	mg/L	Analyzed:	12/19/18
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC958895		0.2000	0.1834	92	76-120		
MS	QC958896	0.02790	0.2000	0.1537	63 *	66-120		
MSD	QC958897		0.2000	0.1539	63 *	66-120	0	28

*= Value outside of QC limits; see narrative

RPD= Relative Percent Difference

Attachment 10

Analytical Report on Resampling #8



ENTHALPY

ANALYTICAL



Enthalpy Analytical

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 306316
ANALYTICAL REPORT

Pacific Gas & Electric
4801 Oakport Street
Oakland, CA 94601

Project : STANDARD
Location : Resample 8-DW-01102019
Level : II

<u>Sample ID</u>	<u>Lab ID</u>
TIGER PIT-UP-DW	306316-001
SOURCE-UP-DW	306316-002

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Signature: _____

Date: 01/11/2019

Will Rice
Project Manager
will.rice@enthalpy.com
(510) 204-2221 Ext 13102

CA ELAP# 2896, NELAP# 4044-001

CASE NARRATIVE

Laboratory number: 306316
Client: Pacific Gas & Electric
Location: Resample 8-DW-01102019
Request Date: 01/10/19
Samples Received: 01/10/19

This data package contains sample and QC results for two water samples, requested for the above referenced project on 01/10/19. The samples were received cold and intact.

Total Cyanide (SM4500CN-C,E):

No analytical problems were encountered.

SAMPLE RECEIPT CHECKLIST



Section 1: Login # 304316
Date Received: 1.10.19

Client: PG&E
Project: _____

Section 2: Samples received in a cooler? Yes, how many? 1 No (skip Section 3 below)
If no cooler Sample Temp (°C): _____ using IR Gun # A, or B
 Samples received on ice directly from the field. Cooling process had begun
If in cooler: Date Opened 1.10.19 By (print) SH (sign) [Signature]
Shipping info (if applicable) _____
Are custody seals present? No, or Yes. If yes, where? on cooler, on samples, on package
 Date: _____ How many _____ Signature, Initials, None
Were custody seals intact upon arrival? Yes No N/A

Section 3: **Important: Notify PM if temperature exceeds 6°C or arrive frozen.**
Packing in cooler: (if other, describe) _____
 Bubble Wrap, Foam blocks, Bags, None, Cloth material, Cardboard, Styrofoam, Paper towels
 Samples received on ice directly from the field. Cooling process had begun
Type of ice used: Wet, Blue/Gel, None Temperature blank(s) included? Yes, No
Temperature measured using Thermometer ID: _____, or IR Gun # A B
Cooler Temp (°C): #1: 3.3, #2: _____, #3: _____, #4: _____, #5: _____, #6: _____, #7: _____

Section 4:	YES	NO	N/A
Were custody papers dry, filled out properly, and the project identifiable	—		
Were Method 5035 sampling containers present?		—	
If YES, what time were they transferred to freezer?			
Did all bottles arrive unbroken/unopened?	—		
Are there any missing / extra samples?		—	
Are samples in the appropriate containers for indicated tests?	—		
Are sample labels present, in good condition and complete?	—		
Does the container count match the COC?	—		
Do the sample labels agree with custody papers?	—		
Was sufficient amount of sample sent for tests requested?	—		
Did you change the hold time in LIMS for unpreserved VOAs?			—
Did you change the hold time in LIMS for preserved terracores?			—
Are bubbles > 6mm absent in VOA samples?			—
Was the client contacted concerning this sample delivery?			—
If YES, who was called? _____ By _____ Date: _____			—

Section 5:

YES	NO	N/A
		—

Are the samples appropriately preserved? (if N/A, skip the rest of section 5)
Did you check preservatives for all bottles for each sample?
Did you document your preservative check?
pH strip lot# _____, pH strip lot# _____, pH strip lot# _____
Preservative added:
 H2SO4 lot# _____ added to samples _____ on/at _____
 HCL lot# _____ added to samples _____ on/at _____
 HNO3 lot# _____ added to samples _____ on/at _____
 NaOH lot# _____ added to samples _____ on/at _____

Section 6:
Explanations/Comments: _____

Date Logged in 1/10/19 By (print) AL (sign) [Signature]
Date Labeled 1/10/19 By (print) AL (sign) [Signature]

Detections Summary for 306316

Results for any subcontracted analyses are not included in this summary.

Client : Pacific Gas & Electric
 Project : STANDARD
 Location : Resample 8-DW-01102019

Client Sample ID : TIGER PIT-UP-DW Laboratory Sample ID : 306316-001

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Cyanide	0.055		0.010	mg/L	TOTAL	1.000	SM4500CN-C,E	METHOD

Client Sample ID : SOURCE-UP-DW Laboratory Sample ID : 306316-002

No Detections

Total Cyanide			
Lab #:	306316	Location:	Resample 8-DW-01102019
Client:	Pacific Gas & Electric	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM4500CN-C,E
Analyte:	Cyanide	Sampled:	01/10/19
Matrix:	Water	Received:	01/10/19
Units:	mg/L	Prepared:	01/10/19
Diln Fac:	1.000	Analyzed:	01/11/19
Batch#:	266844		

Field ID	Type	Lab ID	Result	RL
TIGER PIT-UP-DW	SAMPLE	306316-001	0.055	0.010
SOURCE-UP-DW	SAMPLE	306316-002	ND	0.010
	BLANK	QC960973	ND	0.010

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Total Cyanide			
Lab #:	306316	Location:	Resample 8-DW-01102019
Client:	Pacific Gas & Electric	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM4500CN-C,E
Analyte:	Cyanide	Batch#:	266844
Field ID:	ZZZZZZZZZZ	Sampled:	01/07/19
MSS Lab ID:	306233-001	Received:	01/07/19
Matrix:	Water	Prepared:	01/10/19
Units:	mg/L	Analyzed:	01/11/19
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC960974		0.2000	0.1686	84	75-120		
MS	QC960975	<0.01000	0.2000	0.1710	86	56-120		
MSD	QC960976		0.2000	0.1580	79	56-120	8	25

RPD= Relative Percent Difference



ENTHALPY

ANALYTICAL



Enthalpy Analytical

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 306317
ANALYTICAL REPORT

Pacific Gas & Electric
4801 Oakport Street
Oakland, CA 94601

Project : STANDARD
Location : Resample 8-ENT-01102019
Level : II

Sample ID
TIGER PIT-UP

Lab ID
306317-001

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Signature: _____

Date: 01/11/2019

Will Rice
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(510) 204-2221 Ext 13102

CA ELAP# 2896, NELAP# 4044-001

CASE NARRATIVE

Laboratory number: 306317
Client: Pacific Gas & Electric
Location: Resample 8-ENT-01102019
Request Date: 01/10/19
Samples Received: 01/10/19

This data package contains sample and QC results for one water sample, requested for the above referenced project on 01/10/19. The sample was received cold and intact.

Total Cyanide (SM4500CN-C,E):

No analytical problems were encountered.

SAMPLE RECEIPT CHECKLIST



Section 1: Login # 306317
Date Received: 1.10.19

Client: PG&E
Project: _____

Section 2: Samples received in a cooler? Yes, how many? 1 No (skip Section 3 below)

If no cooler Sample Temp (°C): _____ using IR Gun # A, or B

Samples received on ice directly from the field. Cooling process had begun

If in cooler: Date Opened 1.10.19 By (print) SH (sign) [Signature]

Shipping Info (if applicable) _____

Are custody seals present? No, or Yes. If yes, where? on cooler, on samples, on package

Date: _____ How many _____ Signature, Initials, None

Were custody seals intact upon arrival? Yes No N/A

Section 3: **Important: Notify PM if temperature exceeds 6°C or arrive frozen.**

Packing in cooler: (if other, describe) _____

Bubble Wrap, Foam blocks, Bags, None, Cloth material, Cardboard, Styrofoam, Paper towels

Samples received on ice directly from the field. Cooling process had begun

Type of ice used: Wet, Blue/Gel, None Temperature blank(s) included? Yes, No

Temperature measured using Thermometer ID: _____ or IR Gun # A B

Cooler Temp (°C): #1: 3.3, #2: _____, #3: _____, #4: _____, #5: _____, #6: _____, #7: _____

Section 4:	YES	NO	N/A
Were custody papers dry, filled out properly, and the project identifiable	—		
Were Method 5035 sampling containers present?		—	
If YES, what time were they transferred to freezer?			
Did all bottles arrive unbroken/unopened?	—		
Are there any missing / extra samples?		—	
Are samples in the appropriate containers for indicated tests?	—		
Are sample labels present, in good condition and complete?	—		
Does the container count match the COC?	—		
Do the sample labels agree with custody papers?	—		
Was sufficient amount of sample sent for tests requested?	—		
Did you change the hold time in LIMS for unpreserved VOAs?			—
Did you change the hold time in LIMS for preserved terracores?			—
Are bubbles > 6mm absent in VOA samples?			—
Was the client contacted concerning this sample delivery?		—	
If YES, who was called? _____ By _____ Date: _____			

Section 5:	YES	NO	N/A
Are the samples appropriately preserved? (if N/A, skip the rest of section 5)			—
Did you check preservatives for all bottles for each sample?			
Did you document your preservative check?			
pH strip lot# _____, pH strip lot# _____, pH strip lot# _____			
Preservative added:			
<input type="checkbox"/> H2SO4 lot# _____ added to samples _____ on/at _____			
<input type="checkbox"/> HCL lot# _____ added to samples _____ on/at _____			
<input type="checkbox"/> HNO3 lot# _____ added to samples _____ on/at _____			
<input type="checkbox"/> NaOH lot# _____ added to samples _____ on/at _____			

Section 6:
Explanations/Comments: _____

Date Logged in 1/10/19 By (print) AC (sign) [Signature]
Date Labeled 1/10/19 By (print) AC (sign) [Signature]

Detections Summary for 306317

Results for any subcontracted analyses are not included in this summary.

Client : Pacific Gas & Electric
 Project : STANDARD
 Location : Resample 8-ENT-01102019

Client Sample ID : TIGER PIT-UP Laboratory Sample ID : 306317-001

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Cyanide	0.051		0.010	mg/L	TOTAL	1.000	SM4500CN-C,E	METHOD

Total Cyanide			
Lab #:	306317	Location:	Resample 8-ENT-01102019
Client:	Pacific Gas & Electric	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM4500CN-C,E
Analyte:	Cyanide	Batch#:	266844
Field ID:	TIGER PIT-UP	Sampled:	01/10/19
Matrix:	Water	Received:	01/10/19
Units:	mg/L	Prepared:	01/10/19
Diln Fac:	1.000	Analyzed:	01/11/19

Type	Lab ID	Result	RL
SAMPLE	306317-001	0.051	0.010
BLANK	QC960973	ND	0.010

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Total Cyanide			
Lab #:	306317	Location:	Resample 8-ENT-01102019
Client:	Pacific Gas & Electric	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM4500CN-C,E
Analyte:	Cyanide	Batch#:	266844
Field ID:	ZZZZZZZZZZ	Sampled:	01/07/19
MSS Lab ID:	306233-001	Received:	01/07/19
Matrix:	Water	Prepared:	01/10/19
Units:	mg/L	Analyzed:	01/11/19
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC960974		0.2000	0.1686	84	75-120		
MS	QC960975	<0.01000	0.2000	0.1710	86	56-120		
MSD	QC960976		0.2000	0.1580	79	56-120	8	25

RPD= Relative Percent Difference

Attachment 11

Analytical Report on Resampling #9



ENTHALPY

ANALYTICAL



Enthalpy Analytical

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 306446
ANALYTICAL REPORT

Pacific Gas & Electric
4801 Oakport Street
Oakland, CA 94601

Project : STANDARD
Location : Resample 9 (1/16/19)
Level : II

<u>Sample ID</u>	<u>Lab ID</u>
UP TIGER PIT	306446-001
UP HRSG IP A	306446-002
UP HRSG IP B	306446-003
UP PHOSPHATE	306446-004
UP CC COOLING WATER	306446-005
UP AMINE	306446-006
UP E-006	306446-007
UP HAMMOND TANK	306446-008
UP OWS	306446-009
UP AMMONIA SUMP	306446-010
UP SERVICE WATER	306446-011
UP SOURCE WATER	306446-012

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Signature: _____

Date: 01/17/2019

Will Rice
Project Manager
will.rice@enthalpy.com
(510) 204-2221 Ext 13102

CA ELAP# 2896, NELAP# 4044-001

CASE NARRATIVE

Laboratory number: 306446
Client: Pacific Gas & Electric
Location: Resample 9 (1/16/19)
Request Date: 01/16/19
Samples Received: 01/16/19

This data package contains sample and QC results for twelve water samples, requested for the above referenced project on 01/16/19. The samples were received cold and intact.

Total Cyanide (SM4500CN-C,E):

Low recoveries were observed for cyanide in the MS/MSD of UP TIGER PIT (lab # 306446-001); the LCS was within limits. No other analytical problems were encountered.

SAMPLE RECEIPT CHECKLIST



Section 1: Login # 356446
 Date Received: 1/16/19

Client: PG + E
 Project: _____

Section 2: Samples received in a cooler? Yes, how many? 1 No (skip Section 3 below)

If no cooler Sample Temp (°C): _____ using IR Gun # A, or B

Samples received on ice directly from the field. Cooling process had begun

If in cooler: Date Opened 1/16/19 By (print) AC (sign) [Signature]

Shipping Info (if applicable) _____

Are custody seals present? No, or Yes. If yes, where? on cooler, on samples, on package

Date: _____ How many _____ Signature, Initials, None

Were custody seals intact upon arrival? Yes No N/A

Section 3:

Important: Notify PM if temperature exceeds 6°C or arrive frozen.

Packing in cooler: (if other, describe) _____

Bubble Wrap, Foam blocks, Bags, None, Cloth material, Cardboard, Styrofoam, Paper towels

Samples received on ice directly from the field. Cooling process had begun

Type of ice used: Wet, Blue/Gel, None Temperature blank(s) included? Yes, No

Temperature measured using Thermometer ID: _____, or IR Gun # A B

Cooler Temp (°C): #1: 1.6, #2: _____, #3: _____, #4: _____, #5: _____, #6: _____, #7: _____

Section 4:

	YES	NO	N/A
Were custody papers dry, filled out properly, and the project identifiable	—		
Were Method 5035 sampling containers present?			
If YES, what time were they transferred to freezer?			
Did all bottles arrive unbroken/unopened?	—		
Are there any missing / extra samples?		—	
Are samples in the appropriate containers for indicated tests?	—		
Are sample labels present, in good condition and complete?	—		
Does the container count match the COC?	—		
Do the sample labels agree with custody papers?	—		
Was sufficient amount of sample sent for tests requested?	—		
Did you change the hold time in LIMS for unpreserved VOAs?			—
Did you change the hold time in LIMS for preserved terracores?			—
Are bubbles > 6mm absent in VOA samples?			—
Was the client contacted concerning this sample delivery?		—	
If YES, who was called? _____ By _____ Date: _____			

Section 5:

	YES	NO	N/A
Are the samples appropriately preserved? (if N/A, skip the rest of section 5)			—
Did you check preservatives for all bottles for each sample?			
Did you document your preservative check?			

pH strip lot# _____, pH strip lot# _____, pH strip lot# _____

Preservative added:

- H2SO4 lot# _____ added to samples _____ on/at _____
- HCL lot# _____ added to samples _____ on/at _____
- HNO3 lot# _____ added to samples _____ on/at _____
- NaOH lot# _____ added to samples _____ on/at _____

Section 6:

Explanations/Comments: _____

Date Logged In 1/16/19 By (print) AC (sign) [Signature]
 Date Labeled 1/16/19 By (print) AC (sign) [Signature]

Detections Summary for 306446

Results for any subcontracted analyses are not included in this summary.

Client : Pacific Gas & Electric
 Project : STANDARD
 Location : Resample 9 (1/16/19)

Client Sample ID : UP TIGER PIT Laboratory Sample ID : 306446-001

No Detections

Client Sample ID : UP HRSG IP A Laboratory Sample ID : 306446-002

No Detections

Client Sample ID : UP HRSG IP B Laboratory Sample ID : 306446-003

No Detections

Client Sample ID : UP PHOSPHATE Laboratory Sample ID : 306446-004

No Detections

Client Sample ID : UP CC COOLING WATER Laboratory Sample ID : 306446-005

No Detections

Client Sample ID : UP AMINE Laboratory Sample ID : 306446-006

No Detections

Client Sample ID : UP E-006 Laboratory Sample ID : 306446-007

No Detections

Client Sample ID : UP HAMMOND TANK Laboratory Sample ID : 306446-008

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Cyanide	0.026		0.010	mg/L	TOTAL	1.000	SM4500CN-C,E	METHOD

Client Sample ID : UP OWS	Laboratory Sample ID :	306446-009
No Detections		
Client Sample ID : UP AMMONIA SUMP	Laboratory Sample ID :	306446-010
No Detections		
Client Sample ID : UP SERVICE WATER	Laboratory Sample ID :	306446-011
No Detections		
Client Sample ID : UP SOURCE WATER	Laboratory Sample ID :	306446-012
No Detections		

Total Cyanide			
Lab #:	306446	Location:	Resample 9 (1/16/19)
Client:	Pacific Gas & Electric	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM4500CN-C,E
Analyte:	Cyanide	Sampled:	01/16/19
Matrix:	Water	Received:	01/16/19
Units:	mg/L	Prepared:	01/16/19
Diln Fac:	1.000	Analyzed:	01/17/19
Batch#:	266990		

Field ID	Type	Lab ID	Result	RL
UP TIGER PIT	SAMPLE	306446-001	ND	0.010
UP HRSG IP A	SAMPLE	306446-002	ND	0.010
UP HRSG IP B	SAMPLE	306446-003	ND	0.010
UP PHOSPHATE	SAMPLE	306446-004	ND	0.010
UP CC COOLING WATER	SAMPLE	306446-005	ND	0.010
UP AMINE	SAMPLE	306446-006	ND	0.010
UP E-006	SAMPLE	306446-007	ND	0.010
UP HAMMOND TANK	SAMPLE	306446-008	0.026	0.010
UP OWS	SAMPLE	306446-009	ND	0.010
UP AMMONIA SUMP	SAMPLE	306446-010	ND	0.010
UP SERVICE WATER	SAMPLE	306446-011	ND	0.010
UP SOURCE WATER	SAMPLE	306446-012	ND	0.010
	BLANK	QC961536	ND	0.010

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Total Cyanide			
Lab #:	306446	Location:	Resample 9 (1/16/19)
Client:	Pacific Gas & Electric	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM4500CN-C,E
Analyte:	Cyanide	Batch#:	266990
Field ID:	UP TIGER PIT	Sampled:	01/16/19
MSS Lab ID:	306446-001	Received:	01/16/19
Matrix:	Water	Prepared:	01/16/19
Units:	mg/L	Analyzed:	01/17/19
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC961537		0.2000	0.1742	87	75-120		
MS	QC961538	<0.01000	0.2000	<0.01000	0 *	56-120		
MSD	QC961539		0.2000	<0.01000	0 *	56-120	NC	25

*= Value outside of QC limits; see narrative

NC= Not Calculated

RPD= Relative Percent Difference

Attachment 12

Analytical Report on Resampling #10



ENTHALPY

ANALYTICAL



Enthalpy Analytical

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 307019
ANALYTICAL REPORT

Pacific Gas & Electric
4801 Oakport Street
Oakland, CA 94601

Project : STANDARD
Location : Resample 10 (2/7/19)
Level : II

<u>Sample ID</u>	<u>Lab ID</u>
UP HAMMOND TANK	307019-001
UP TIGER PIT	307019-002
UP SOURCE WATER	307019-003

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature which applies to this PDF file as well as any associated electronic data deliverable files. The results contained in this report meet all requirements of NELAP and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: _____

Haley Campbell
Project Manager
haley.campbell@enthalpy.com

Date: 02/08/2019

CA ELAP# 2896, NELAP# 4044-001

CASE NARRATIVE

Laboratory number: 307019
Client: Pacific Gas & Electric
Location: Resample 10 (2/7/19)
Request Date: 02/07/19
Samples Received: 02/07/19

This data package contains sample and QC results for three water samples, requested for the above referenced project on 02/07/19. The samples were received cold and intact.

Total Cyanide (SM4500CN-C,E):

No analytical problems were encountered.

SAMPLE RECEIPT CHECKLIST



Section 1: Login # 307019
 Date Received: 2/7/19

Client: TXEO
 Project: _____

Section 2: Samples received in a cooler? Yes, how many? _____ No (skip Section 3 below)
 If no cooler Sample Temp (°C): 2-3 using IR Gun # A, or B
 Samples received on ice directly from the field. Cooling process had begun
 If in cooler: Date Opened 2/7/19 By (print) AC (sign) _____
 Shipping Info (if applicable) _____
 Are custody seals present? No, or Yes. If yes, where? on cooler, on samples, on package
 Date: _____ How many _____ Signature, Initials, None
 Were custody seals intact upon arrival? Yes No N/A

Section 3: **Important: Notify PM if temperature exceeds 6°C or arrive frozen.**
 Packing in cooler: (if other, describe) _____
 Bubble Wrap, Foam blocks, Bags, None, Cloth material, Cardboard, Styrofoam, Paper towels
 Samples received on ice directly from the field. Cooling process had begun
 Type of ice used: Wet, Blue/Gel, None Temperature blank(s) included? Yes, No
 Temperature measured using Thermometer ID: _____, or IR Gun # A B
 Cooler Temp (°C): #1: _____, #2: _____, #3: _____, #4: _____, #5: _____, #6: _____, #7: _____

Section 4:	YES	NO	N/A
Were custody papers dry, filled out properly, and the project identifiable	/		
Were Method 5035 sampling containers present?		/	
If YES, what time were they transferred to freezer?			
Did all bottles arrive unbroken/unopened?	/		
Are there any missing / extra samples?		/	
Are samples in the appropriate containers for indicated tests?	/		
Are sample labels present, in good condition and complete?	/		
Does the container count match the COC?	/		
Do the sample labels agree with custody papers?	/		
Was sufficient amount of sample sent for tests requested?	/		
Did you change the hold time in LIMS for unpreserved VOAs?			/
Did you change the hold time in LIMS for preserved terracores?			/
Are bubbles > 6mm absent in VOA samples?			/
Was the client contacted concerning this sample delivery?		/	
If YES, who was called? _____ By _____ Date: _____			

Section 5: **YES NO N/A**
 Are the samples appropriately preserved? (if N/A, skip the rest of section 5)
 Did you check preservatives for all bottles for each sample?
 Did you document your preservative check?
 pH strip lot# _____, pH strip lot# _____, pH strip lot# _____
 Preservative added:
 H2SO4 lot# _____ added to samples _____ on/at _____
 HCL lot# _____ added to samples _____ on/at _____
 HNO3 lot# _____ added to samples _____ on/at _____
 NaOH lot# _____ added to samples _____ on/at _____

Section 6:
 Explanations/Comments: _____

Date Logged in 2/7/19 By (print) AC (sign) _____
 Date Labeled 2/7/19 By (print) AC (sign) _____

Detections Summary for 307019

Results for any subcontracted analyses are not included in this summary.

Client : Pacific Gas & Electric
 Project : STANDARD
 Location : Resample 10 (2/7/19)

Client Sample ID : UP HAMMOND TANK Laboratory Sample ID : 307019-001

No Detections

Client Sample ID : UP TIGER PIT Laboratory Sample ID : 307019-002

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Cyanide	0.013		0.010	mg/L	TOTAL	1.000	SM4500CN-C,E	METHOD

Client Sample ID : UP SOURCE WATER Laboratory Sample ID : 307019-003

No Detections

Total Cyanide			
Lab #:	307019	Location:	Resample 10 (2/7/19)
Client:	Pacific Gas & Electric	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM4500CN-C,E
Analyte:	Cyanide	Sampled:	02/07/19
Matrix:	Water	Received:	02/07/19
Units:	mg/L	Prepared:	02/07/19
Diln Fac:	1.000	Analyzed:	02/08/19
Batch#:	267621		

Field ID	Type	Lab ID	Result	RL
UP HAMMOND TANK	SAMPLE	307019-001	ND	0.010
UP TIGER PIT	SAMPLE	307019-002	0.013	0.010
UP SOURCE WATER	SAMPLE	307019-003	ND	0.010
	BLANK	QC964159	ND	0.010

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Total Cyanide			
Lab #:	307019	Location:	Resample 10 (2/7/19)
Client:	Pacific Gas & Electric	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM4500CN-C,E
Analyte:	Cyanide	Batch#:	267621
Field ID:	UP SOURCE WATER	Sampled:	02/07/19
MSS Lab ID:	307019-003	Received:	02/07/19
Matrix:	Water	Prepared:	02/07/19
Units:	mg/L	Analyzed:	02/08/19
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC964160		0.2000	0.1579	79	75-120		
MS	QC964161	<0.01000	0.2000	0.1211	61	56-120		
MSD	QC964162		0.2000	0.1513	76	56-120	22	25

RPD= Relative Percent Difference

Attachment 13

Analytical Report on Resampling #11



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1902474

Report Created for: PG&E Gateway Generating Station

3225 Wilbur Avenue
Antioch, CA 94509

Project Contact: Angel Espiritu

Project P.O.:

Project: Resample II (2/11/19)

Project Received: 02/11/2019

Analytical Report reviewed & approved for release on 02/12/2019 by:

Christine Askari
Project Manager

The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.





Glossary of Terms & Qualifier Definitions

Client: PG&E Gateway Generating Station
Project: Resample II (2/11/19)
WorkOrder: 1902474

Glossary Abbreviation

%D	Serial Dilution Percent Difference
95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DLT	Dilution Test (Serial Dilution)
DUP	Duplicate
EDL	Estimated Detection Limit
ERS	External reference sample. Second source calibration verification.
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PDS	Post Digestion Spike
PDSD	Post Digestion Spike Duplicate
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
ST	Sorbent Tube
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
TZA	TimeZone Net Adjustment for sample collected outside of MAI's UTC.
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)



Analytical Report

Client: PG&E Gateway Generating Station
Date Received: 2/11/19 10:05
Date Prepared: 2/12/19
Project: Resample II (2/11/19)

WorkOrder: 1902474
Extraction Method: SM4500-CN⁻ E
Analytical Method: SM4500-CN⁻ CE
Unit: µg/L

Cyanide, Total

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
UP Tiger Pit	1902474-001A	Water	02/11/2019 08:30	WC_SKALAR 021219A1_29	172888

Analytes	Result	RL	DF	Date Analyzed
Total Cyanide	29	1.0	1	02/12/2019 11:55

Analyst(s): NM

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
UP RO	1902474-002A	Water	02/11/2019 09:25	WC_SKALAR 021219A1_32	172888

Analytes	Result	RL	DF	Date Analyzed
Total Cyanide	1.7	1.0	1	02/12/2019 12:03

Analyst(s): NM



Quality Control Report

Client: PG&E Gateway Generating Station
Date Prepared: 2/12/19
Date Analyzed: 2/12/19
Instrument: WC_SKALAR
Matrix: Water
Project: Resample II (2/11/19)

WorkOrder: 1902474
BatchID: 172888
Extraction Method: SM4500-CN⁻ E
Analytical Method: SM4500-CN⁻ CE
Unit: µg/L
Sample ID: MB/LCS/LCSD-172888

QC Summary Report for SM4500-CN⁻ CE

Analyte	MB Result	MDL	RL			
Total Cyanide	ND	0.84	1.0	-	-	-

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Total Cyanide	41	40	40	102	101	80-120	1.19	20

McC Campbell Analytical, Inc.



1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

WaterTrax WriteOn EDF

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1902474

ClientCode: PGEA

Excel EQulS Email HardCopy ThirdParty J-flag
 Detection Summary Dry-Weight

Report to:

Angel Espiritu
PG&E Gateway Generating Station
3225 Wilbur Avenue
Antioch, CA 94509
(925) 459-7212 FAX:

Email: abe4@pge.com
cc/3rd Party:
PO:
Project: Resample II (2/11/19)

Bill to:

Angel Espiritu
PG&E Gateway Generating Station
3225 Wilbur Avenue
Antioch, CA 94509

Requested TAT: 1 day;

Date Received: 02/11/2019

Date Logged: 02/11/2019

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
1902474-001	UP Tiger Pit	Water	2/11/2019 08:30	<input type="checkbox"/>	A												
1902474-002	UP RO	Water	2/11/2019 09:25	<input type="checkbox"/>	A												

Test Legend:

1	CN_SM4500CE_W	2		3		4	
5		6		7		8	
9		10		11		12	

Prepared by: Agustina Venegas

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.



WORK ORDER SUMMARY

Client Name: PG&E GATEWAY GENERATING STATION

Project: Resample II (2/11/19)

Work Order: 1902474

Client Contact: Angel Espiritu

QC Level: LEVEL 2

Contact's Email: abe4@pge.com

Comments:

Date Logged: 2/11/2019

WaterTrax WriteOn EDF Excel EQUIS Email HardCopy ThirdParty J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1902474-001A	UP Tiger Pit	Water	SM4500-CN ⁻ CE (Cyanide, Total)	1	500mL aHDPE w/ NaOH + Na2S2O3	<input type="checkbox"/>	2/11/2019 8:30	1 day	None	<input type="checkbox"/>	
1902474-002A	UP RO	Water	SM4500-CN ⁻ CE (Cyanide, Total)	1	500mL HDPE w/ Na2S2O3	<input type="checkbox"/>	2/11/2019 9:25	1 day	Present	<input type="checkbox"/>	

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.



Sample Receipt Checklist

Client Name: **PG&E Gateway Generating Station**
 Project: **Resample II (2/11/19)**
 WorkOrder No: **1902474** Matrix: Water
 Carrier: Client Drop-In

Date and Time Received: **2/11/2019 10:05**
 Date Logged: **2/11/2019**
 Received by: **Julia Danielsson**
 Logged by: **Agustina Venegas**

Chain of Custody (COC) Information

Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample IDs noted by Client on COC?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Date and Time of collection noted by Client on COC?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sampler's name noted on COC?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
COC agrees with Quote?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper containers/bottles?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>
Samples Received on Ice?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	

(Ice Type: WET ICE)

Sample/Temp Blank temperature		Temp: 4.4°C	NA <input type="checkbox"/>
Water - VOA vials have zero headspace / no bubbles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Sample labels checked for correct preservation?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
pH acceptable upon receipt (Metal: <2; Nitrate 353.2/4500NO3: <2; 522: <4; 218.7: >8)?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>

UCMR Samples:

pH tested and acceptable upon receipt (200.8: ≤2; 525.3: ≤4; 530: ≤7; 541: <3; 544: <6.5 & 7.5)?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Free Chlorine tested and acceptable upon receipt (<0.1mg/L)?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>

 Comments:



ENTHALPY

ANALYTICAL



Enthalpy Analytical

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 307128
ANALYTICAL REPORT

Pacific Gas & Electric
4801 Oakport Street
Oakland, CA 94601

Project : STANDARD
Location : Resample 11 (2/11/19)
Level : II

<u>Sample ID</u>	<u>Lab ID</u>
UP TIGER PIT	307128-001
UP RO	307128-002

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Signature: _____

Haley Campbell
Project Manager
haley.campbell@enthalpy.com

Date: 02/12/2019

CA ELAP# 2896, NELAP# 4044-001

CASE NARRATIVE

Laboratory number: 307128
Client: Pacific Gas & Electric
Location: Resample 11 (2/11/19)
Request Date: 02/11/19
Samples Received: 02/11/19

This data package contains sample and QC results for two water samples, requested for the above referenced project on 02/11/19. The samples were received on ice and intact, directly from the field.

Total Cyanide (SM4500CN-C,E):

No analytical problems were encountered.

SAMPLE RECEIPT CHECKLIST



Section 1: Login # 307128
 Date Received: 2/11/19

Client: MUSkan Environmental
 Project: Resample 11

Section 2: Samples received in a cooler? Yes, how many? _____ No (skip Section 3 below)
 If no cooler Sample Temp (°C): 3.5 using IR Gun # A, or B
 Samples received on ice directly from the field. Cooling process had begun
 If in cooler: Date Opened _____ By (print) _____ (sign) _____
 Shipping Info (if applicable) _____
 Are custody seals present? No, or Yes. If yes, where? on cooler, on samples, on package
 Date: _____ How many _____ Signature, Initials, None
 Were custody seals intact upon arrival? Yes No N/A

Section 3: **Important: Notify PM if temperature exceeds 6°C or arrive frozen.**
 Packing in cooler: (if other, describe) _____
 Bubble Wrap, Foam blocks, Bags, None, Cloth material, Cardboard, Styrofoam, Paper towels
 Samples received on ice directly from the field. Cooling process had begun
 Type of ice used: Wet, Blue/Gel, None Temperature blank(s) included? Yes, No
 Temperature measured using Thermometer ID: _____, or IR Gun # A B
 Cooler Temp (°C): #1: 3.5, #2: _____, #3: _____, #4: _____, #5: _____, #6: _____, #7: _____

Section 4:	YES	NO	N/A
Were custody papers dry, filled out properly, and the project identifiable	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Were Method 5035 sampling containers present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
If YES, what time were they transferred to freezer?			
Did all bottles arrive unbroken/unopened?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are there any missing / extra samples?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Are samples in the appropriate containers for indicated tests?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are sample labels present, in good condition and complete?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the container count match the COC?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do the sample labels agree with custody papers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Was sufficient amount of sample sent for tests requested?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did you change the hold time in LIMS for unpreserved VOAs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Did you change the hold time in LIMS for preserved terracores?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Are bubbles > 6mm absent in VOA samples?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Was the client contacted concerning this sample delivery?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
If YES, who was called? _____ By _____ Date: _____			

Section 5:

	YES	NO	N/A
Are the samples appropriately preserved? (If N/A, skip the rest of section 5)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Did you check preservatives for all bottles for each sample?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Did you document your preservative check?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
pH strip lot# _____, pH strip lot# _____, pH strip lot# _____			
Preservative added:			
<input type="checkbox"/> H2SO4 lot# _____	added to samples	_____	on/at _____
<input type="checkbox"/> HCL lot# _____	added to samples	_____	on/at _____
<input type="checkbox"/> HNO3 lot# _____	added to samples	_____	on/at _____
<input type="checkbox"/> NaOH lot# _____	added to samples	_____	on/at _____

Section 6:
 Explanations/Comments: _____

Date Logged in 2/11/19 By (print) af (sign) af
 Date Labeled 2/11/19 By (print) af (sign) af

Detections Summary for 307128

Results for any subcontracted analyses are not included in this summary.

Client : Pacific Gas & Electric
 Project : STANDARD
 Location : Resample 11 (2/11/19)

Client Sample ID : UP TIGER PIT Laboratory Sample ID : 307128-001

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Cyanide	0.014		0.010	mg/L	TOTAL	1.000	SM4500CN-C,E	METHOD

Client Sample ID : UP RO Laboratory Sample ID : 307128-002

No Detections

Total Cyanide			
Lab #:	307128	Location:	Resample 11 (2/11/19)
Client:	Pacific Gas & Electric	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM4500CN-C,E
Analyte:	Cyanide	Sampled:	02/11/19
Matrix:	Water	Received:	02/11/19
Units:	mg/L	Prepared:	02/11/19
Diln Fac:	1.000	Analyzed:	02/12/19
Batch#:	267700		

Field ID	Type	Lab ID	Result	RL
UP TIGER PIT	SAMPLE	307128-001	0.014	0.010
UP RO	SAMPLE	307128-002	ND	0.010
	BLANK	QC964476	ND	0.010

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Total Cyanide			
Lab #:	307128	Location:	Resample 11 (2/11/19)
Client:	Pacific Gas & Electric	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM4500CN-C,E
Analyte:	Cyanide	Batch#:	267700
Field ID:	UP TIGER PIT	Sampled:	02/11/19
MSS Lab ID:	307128-001	Received:	02/11/19
Matrix:	Water	Prepared:	02/11/19
Units:	mg/L	Analyzed:	02/12/19
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC964477		0.2000	0.1665	83	75-120		
MS	QC964478	0.01390	0.2000	0.1986	92	56-120		
MSD	QC964479		0.2000	0.1985	92	56-120	0	25

RPD= Relative Percent Difference

Attachment 14

Analytical Report on Resampling #12



ENTHALPY

ANALYTICAL



Enthalpy Analytical

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 307577
ANALYTICAL REPORT

Pacific Gas & Electric
4801 Oakport Street
Oakland, CA 94601

Project : STANDARD

Level : II

<u>Sample ID</u>	<u>Lab ID</u>
UP HAMMOND TAND	307577-001
UP RO REJECT	307577-002
UP TIGER PIT	307577-003
UP SOURCE WATER	307577-004

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Signature: _____

Haley Campbell
Project Manager
haley.campbell@enthalpy.com

Date: 02/26/2019

CA ELAP# 2896, NELAP# 4044-001

CASE NARRATIVE

Laboratory number: 307577
Client: Pacific Gas & Electric
Request Date: 02/25/19
Samples Received: 02/25/19

This data package contains sample and QC results for four water samples, requested for the above referenced project on 02/25/19. The samples were received cold and intact.

Total Cyanide (SM4500CN-C,E):

No analytical problems were encountered.

SAMPLE RECEIPT CHECKLIST



Section 1: Login # 307577 Client: PG+E
 Date Received: 2-25-19 Project: _____

Section 2: Samples received in a cooler? Yes, how many? _____ No (skip Section 3 below)
 If no cooler Sample Temp (°C): 3.0 C using IR Gun # A, or B
 Samples received on ice directly from the field. Cooling process had begun
 If in cooler: Date Opened 2-25-19 By (print) af (sign) af
 Shipping Info (if applicable) _____
 Are custody seals present? No, or Yes. If yes, where? on cooler, on samples, on package
 Date: _____ How many _____ Signature, Initials, None
 Were custody seals intact upon arrival? Yes No N/A

Section 3: **Important : Notify PM if temperature exceeds 6°C or arrive frozen.**
 Packing in cooler: (if other, describe) _____
 Bubble Wrap, Foam blocks, Bags, None, Cloth material, Cardboard, Styrofoam, Paper towels
 Samples received on ice directly from the field. Cooling process had begun
 Type of ice used : Wet, Blue/Gel, None Temperature blank(s) included? Yes, No
 Temperature measured using Thermometer ID: _____, or IR Gun # A B
 Cooler Temp (°C): #1: _____, #2: _____, #3: _____, #4: _____, #5: _____, #6: _____, #7: _____

Section 4:	YES	NO	N/A
Were custody papers dry, filled out properly, and the project identifiable	/		
Were Method 5035 sampling containers present?		/	
if YES, what time were they transferred to freezer?			
Did all bottles arrive unbroken/unopened?	/		
Are there any missing / extra samples?		/	
Are samples in the appropriate containers for indicated tests?	/		
Are sample labels present, in good condition and complete?	/		
Does the container count match the COC?	/		
Do the sample labels agree with custody papers?	/		
Was sufficient amount of sample sent for tests requested?	/		
Did you change the hold time in LIMS for unpreserved VOAs?			/
Did you change the hold time in LIMS for preserved terracores?			/
Are bubbles > 6mm absent in VOA samples?			/
Was the client contacted concerning this sample delivery?			/
if YES, who was called? _____ By _____ Date: _____			

Section 5: **YES NO N/A**
 Are the samples appropriately preserved? (if N/A, skip the rest of section 5) _____
 Did you check preservatives for all bottles for each sample? _____
 Did you document your preservative check? _____
 pH strip lot# _____, pH strip lot# _____, pH strip lot# _____
 Preservative added:
 H2SO4 lot# _____ added to samples _____ on/at _____
 HCL lot# _____ added to samples _____ on/at _____
 HNO3 lot# _____ added to samples _____ on/at _____
 NaOH lot# _____ added to samples _____ on/at _____

Section 6:
 Explanations/Comments: _____

Date Logged in 2-25-19 By (print) af (sign) af
 Date Labeled 2-25-19 By (print) af (sign) af

Detections Summary for 307577

Results for any subcontracted analyses are not included in this summary.

Client : Pacific Gas & Electric
Project : STANDARD
Location :

Client Sample ID : UP HAMMOND TAND Laboratory Sample ID : 307577-001

No Detections

Client Sample ID : UP RO REJECT Laboratory Sample ID : 307577-002

No Detections

Client Sample ID : UP TIGER PIT Laboratory Sample ID : 307577-003

No Detections

Client Sample ID : UP SOURCE WATER Laboratory Sample ID : 307577-004

No Detections

Total Cyanide			
Lab #:	307577	Prep:	METHOD
Client:	Pacific Gas & Electric	Analysis:	SM4500CN-C,E
Project#:	STANDARD		
Analyte:	Cyanide	Sampled:	02/25/19
Matrix:	Water	Received:	02/25/19
Units:	mg/L	Prepared:	02/25/19
Diln Fac:	1.000	Analyzed:	02/26/19
Batch#:	268093		

Field ID	Type	Lab ID	Result	RL
UP HAMMOND TAND	SAMPLE	307577-001	ND	0.010
UP RO REJECT	SAMPLE	307577-002	ND	0.010
UP TIGER PIT	SAMPLE	307577-003	ND	0.010
UP SOURCE WATER	SAMPLE	307577-004	ND	0.010
	BLANK	QC966128	ND	0.010

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Total Cyanide			
Lab #:	307577	Prep:	METHOD
Client:	Pacific Gas & Electric	Analysis:	SM4500CN-C,E
Project#:	STANDARD		
Analyte:	Cyanide	Batch#:	268093
Field ID:	ZZZZZZZZZZ	Sampled:	02/14/19
MSS Lab ID:	307279-002	Received:	02/15/19
Matrix:	Water	Prepared:	02/25/19
Units:	mg/L	Analyzed:	02/26/19
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC966129		0.2000	0.1828	91	75-120		
MS	QC966130	<0.01000	0.2000	0.1470	74	56-120		
MSD	QC966131		0.2000	0.1472	74	56-120	0	25

RPD= Relative Percent Difference

Attachment 15

Analytical Report on Resampling #13



ENTHALPY

ANALYTICAL



Enthalpy Analytical

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 307679
ANALYTICAL REPORT

Pacific Gas & Electric
4801 Oakport Street
Oakland, CA 94601

Project : STANDARD
Location : Resample Compliance-2/27/19
Level : II

Sample ID
UP-I-001

Lab ID
307679-001

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature which applies to this PDF file as well as any associated electronic data deliverable files. The results contained in this report meet all requirements of NELAP and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: _____

Haley Campbell
Project Manager
haley.campbell@enthalpy.com

Date: 03/01/2019

CA ELAP# 2896, NELAP# 4044-001

CASE NARRATIVE

Laboratory number: 307679
Client: Pacific Gas & Electric
Location: Resample Compliance-2/27/19
Request Date: 02/27/19
Samples Received: 02/27/19

This data package contains sample and QC results for one water sample, requested for the above referenced project on 02/27/19. The sample was received cold and intact.

Total Cyanide (SM4500CN-C,E):

Low recoveries were observed for cyanide in the MS/MSD for batch 268177; the parent sample was not a project sample, the LCS was within limits, and the associated RPD was within limits. No other analytical problems were encountered.

SAMPLE RECEIPT CHECKLIST



Section 1: Login # 357679 Client: Pge0
 Date Received: 2/27/19 Project: _____

Section 2: Samples received in a cooler? Yes, how many? 1 No (skip Section 3 below)
 If no cooler Sample Temp (°C): _____ using IR Gun # A, or B
 Samples received on ice directly from the field. Cooling process had begun
 If in cooler: Date Opened 2/27/19 By (print) AC (sign) _____
 Shipping info (if applicable) _____
 Are custody seals present? No, or Yes. If yes, where? on cooler, on samples, on package
 Date: _____ How many _____ Signature, Initials, None
 Were custody seals intact upon arrival? Yes No N/A

Section 3: **Important : Notify PM if temperature exceeds 6°C or arrive frozen.**

Packing in cooler: (if other, describe) _____
 Bubble Wrap, Foam blocks, Bags, None, Cloth material, Cardboard, Styrofoam, Paper towels
 Samples received on ice directly from the field. Cooling process had begun
 Type of ice used: Wet, Blue/Gel, None Temperature blank(s) included? Yes, No
 Temperature measured using Thermometer ID: _____, or IR Gun # A B
 Cooler Temp (°C): #1: 5.7, #2: _____, #3: _____, #4: _____, #5: _____, #6: _____, #7: _____

Section 4:	YES	NO	N/A
Were custody papers dry, filled out properly, and the project identifiable	—		
Were Method 5035 sampling containers present?			
if YES, what time were they transferred to freezer?			
Did all bottles arrive unbroken/unopened?	—		
Are there any missing / extra samples?		—	
Are samples in the appropriate containers for indicated tests?	—		
Are sample labels present, in good condition and complete?	—		
Does the container count match the COC?	—		
Do the sample labels agree with custody papers?	—		
Was sufficient amount of sample sent for tests requested?	—		
Did you change the hold time in LIMS for unpreserved VOAs?			—
Did you change the hold time in LIMS for preserved terracores?			—
Are bubbles > 6mm absent in VOA samples?			—
Was the client contacted concerning this sample delivery?			—
if YES, who was called? _____ By _____ Date: _____			

Section 5: **YES NO N/A**

Are the samples appropriately preserved? (if N/A, skip the rest of section 5) YES NO N/A

Did you check preservatives for all bottles for each sample? YES NO N/A

Did you document your preservative check?
 pH strip lot# _____, pH strip lot# _____, pH strip lot# _____

Preservative added:

H2SO4 lot# _____ added to samples _____ on/at _____

HCL lot# _____ added to samples _____ on/at _____

HNO3 lot# _____ added to samples _____ on/at _____

NaOH lot# _____ added to samples _____ on/at _____

Section 6:
 Explanations/Comments: _____

Date Logged In 2/27/19 By (print) AC (sign) _____
 Date Labeled 2/27/19 By (print) AC (sign) _____

Detections Summary for 307679

Results for any subcontracted analyses are not included in this summary.

Client : Pacific Gas & Electric
Project : STANDARD
Location : Resample Compliance-2/27/19

Client Sample ID : UP-I-001

Laboratory Sample ID :

307679-001

No Detections

Total Cyanide			
Lab #:	307679	Location:	Resample Compliance-2/27/19
Client:	Pacific Gas & Electric	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM4500CN-C,E
Analyte:	Cyanide	Batch#:	268177
Field ID:	UP-I-001	Sampled:	02/27/19
Matrix:	Water	Received:	02/27/19
Units:	mg/L	Prepared:	02/27/19
Diln Fac:	1.000	Analyzed:	02/28/19

Type	Lab ID	Result	RL
SAMPLE	307679-001	ND	0.010
BLANK	QC966472	ND	0.010

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Total Cyanide			
Lab #:	307679	Location:	Resample Compliance-2/27/19
Client:	Pacific Gas & Electric	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM4500CN-C,E
Analyte:	Cyanide	Batch#:	268177
Field ID:	ZZZZZZZZZZ	Sampled:	02/27/19
MSS Lab ID:	307710-001	Received:	02/27/19
Matrix:	Water	Prepared:	02/27/19
Units:	mg/L	Analyzed:	02/28/19
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC966473		0.2000	0.1816	91	75-120		
MS	QC966474	<0.01000	0.2000	0.1003	50 *	56-120		
MSD	QC966475		0.2000	0.1001	50 *	56-120	0	25

*= Value outside of QC limits; see narrative

RPD= Relative Percent Difference

Attachment 16

Analytical Report on Resampling #14



ENTHALPY

ANALYTICAL



Enthalpy Analytical

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 307726
ANALYTICAL REPORT

Pacific Gas & Electric 4801 Oakport Street Oakland, CA 94601	Project : STANDARD Location : Resample Compliance (2/28/19) Level : II
--	--

<u>Sample ID</u>	<u>Lab ID</u>
UP I-001	307726-001

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature which applies to this PDF file as well as any associated electronic data deliverable files. The results contained in this report meet all requirements of NELAP and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: _____

Haley Campbell
Project Manager
haley.campbell@enthalpy.com

Date: 03/01/2019

CA ELAP# 2896, NELAP# 4044-001

CASE NARRATIVE

Laboratory number: 307726
Client: Pacific Gas & Electric
Location: Resample Compliance (2/28/19)
Request Date: 02/28/19
Samples Received: 02/28/19

This data package contains sample and QC results for one water sample, requested for the above referenced project on 02/28/19. The sample was received cold and intact.

Total Cyanide (SM4500CN-C,E):

Low recoveries were observed for cyanide in the MS/MSD for batch 268177; the parent sample was not a project sample, the LCS was within limits, and the associated RPD was within limits. No other analytical problems were encountered.

SAMPLE RECEIPT CHECKLIST



Section 1: Login # 307726 Client: PEEO
 Date Received: 2/28/19 Project: _____

Section 2: Samples received in a cooler? Yes, how many? _____ No (skip Section 3 below)
 If no cooler Sample Temp (°C): 4.0 using IR Gun # A, or B
 Samples received on ice directly from the field. Cooling process had begun
 If in cooler: Date Opened 2/28/19 By (print) AC (sign) _____
 Shipping Info (if applicable) _____
 Are custody seals present? No, or Yes. If yes, where? on cooler, on samples, on package
 Date: _____ How many _____ Signature, Initials, None
 Were custody seals intact upon arrival? Yes No N/A

Section 3: **Important: Notify PM if temperature exceeds 6°C or arrive frozen.**
 Packing in cooler: (if other, describe) _____
 Bubble Wrap, Foam blocks, Bags, None, Cloth material, Cardboard, Styrofoam, Paper towels
 Samples received on ice directly from the field. Cooling process had begun
 Type of ice used: Wet, Blue/Gel, None Temperature blank(s) included? Yes, No
 Temperature measured using Thermometer ID: _____, or IR Gun # A B
 Cooler Temp (°C): #1: _____, #2: _____, #3: _____, #4: _____, #5: _____, #6: _____, #7: _____

Section 4:	YES	NO	N/A
Were custody papers dry, filled out properly, and the project identifiable	/		
Were Method 5035 sampling containers present?		/	
If YES, what time were they transferred to freezer?			
Did all bottles arrive unbroken/unopened?	/		
Are there any missing / extra samples?		/	
Are samples in the appropriate containers for indicated tests?	/		
Are sample labels present, in good condition and complete?	/		
Does the container count match the COC?	/		
Do the sample labels agree with custody papers?	/		
Was sufficient amount of sample sent for tests requested?	/		
Did you change the hold time in LIMS for unpreserved VOAs?			/
Did you change the hold time in LIMS for preserved terracores?			/
Are bubbles > 6mm absent in VOA samples?			/
Was the client contacted concerning this sample delivery?			/
If YES, who was called? _____ By _____ Date: _____			

Section 5: **YES NO N/A**
 Are the samples appropriately preserved? (If N/A, skip the rest of section 5)
 Did you check preservatives for all bottles for each sample?
 Did you document your preservative check?
 pH strip lot# _____, pH strip lot# _____, pH strip lot# _____
 Preservative added:
 H2SO4 lot# _____ added to samples _____ on/at _____
 HCl lot# _____ added to samples _____ on/at _____
 HNO3 lot# _____ added to samples _____ on/at _____
 NaOH lot# _____ added to samples _____ on/at _____

Section 6:
 Explanations/Comments: _____

Date Logged in 2/28/19 By (print) AC (sign) _____
 Date Labeled 2/28/19 By (print) AC (sign) _____

Detections Summary for 307726

Results for any subcontracted analyses are not included in this summary.

Client : Pacific Gas & Electric
Project : STANDARD
Location : Resample Compliance (2/28/19)

Client Sample ID : UP I-001 Laboratory Sample ID : 307726-001

No Detections

Total Cyanide		
Lab #:	307726	Location: Resample Compliance (2/28/19)
Client:	Pacific Gas & Electric	Prep: METHOD
Project#:	STANDARD	Analysis: SM4500CN-C,E
Analyte:	Cyanide	Batch#: 268177
Field ID:	UP I-001	Sampled: 02/28/19
Matrix:	Water	Received: 02/28/19
Units:	mg/L	Analyzed: 02/28/19
Diln Fac:	1.000	

Type	Lab ID	Result	RL	Prepared
SAMPLE	307726-001	ND	0.010	02/28/19
BLANK	QC966472	ND	0.010	02/27/19

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Total Cyanide			
Lab #:	307726	Location:	Resample Compliance (2/28/19)
Client:	Pacific Gas & Electric	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM4500CN-C,E
Analyte:	Cyanide	Batch#:	268177
Field ID:	ZZZZZZZZZZ	Sampled:	02/27/19
MSS Lab ID:	307710-001	Received:	02/27/19
Matrix:	Water	Prepared:	02/27/19
Units:	mg/L	Analyzed:	02/28/19
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC966473		0.2000	0.1816	91	75-120		
MS	QC966474	<0.01000	0.2000	0.1003	50 *	56-120		
MSD	QC966475		0.2000	0.1001	50 *	56-120	0	25

*= Value outside of QC limits; see narrative

RPD= Relative Percent Difference



**Pacific Gas and
Electric Company®**



Mailing Address:
Pacific Gas & Electric Company
Gateway Generating Station
3225 Wilbur Ave.
Antioch, CA 94509
(925) 522-7801

March 13, 2019

Michael Auer
Delta Diablo (DD)
2500 Pittsburg-Antioch Hwy.
Antioch, CA 94509-1373

Reference: Pacific Gas and Electric Company - Gateway Generating Station (GGS)
DDSD Industrial Wastewater Discharge Permit
Permit Number: 0208841-C

Subject: Request: Exemption from 126 Priority Pollutants Applicability

Dear Mr. Auer,

With reference to 40 CFR 403.12(e)(2), 40 CFR 423.17(d)(2) and Section D.3 of the Industrial Wastewater Discharge Permit (0208841-C), the PG&E Gateway Generating Station (GGS) respectfully requests to forego the monitoring requirement on the Categorical Waste Stream based on the following premises:

1. We understand that the monitoring for the categorical 126 criteria pollutants resulted from GGS operation of the Wet Surface Air Condenser (WSAC).
2. The attached certification from Nalco, indicates that the use of indicated products at the WSAC and elsewhere in the plant will not contribute detectable concentrations of Priority Pollutants listed in 40 CFR 423 to the effluent by the criteria specified in 40 CFR 136, and will not contribute listed priority pollutants to the discharge stream at concentrations greater than 10 parts per billion (ppb).
3. The attached Closure Report on the cyanide event of September 27, 2018 clearly indicate the "false positive" impact of sodium hydroxide preservation of samples on the result of cyanide analysis.
4. The attached Closure Report demonstrates the completion of two consecutive clean results (<10 ppb) on cyanide resampling

If you have any questions about this request, please feel free to contact Angel Espiritu at 925-522-7838, 510-861-1597, or at abe4@pge.com. Thank you.

Sincerely,

Tim Wisdom
Senior Plant Manager

Attachment: a/s

March 07, 2019

Angel B. Espiritu
Pacific Gas & Electric – Gateway Generating Station
Sr. Environmental Consultant-Environmental Compliance Manager

To Whom It May Concern

With respect to your request for information regarding the following list of products and whether these products contain chemicals present on the Priority Pollutants List Appendix A (Total Toxic Organics), and Appendix B (40 CFR part 423-126 Priority Pollutants).

- **NALCO® BT-3400**
- **3D TRASAR™ 3DT447**
- **NALCO® TRAC107**
- **STABREX™ ST70**
- **NALCO® 5711**

These products do not contain materially identified components as contained in 40 CFR 423 (Appendix A to Part 423-126 Priority Pollutants) either as a formulation component or as a known contaminant. Use of these products will not contribute detectable concentrations of Priority Pollutants listed in 40 CFR 423 to the effluent by the criteria specified in 40 CFR 136, and will not contribute listed priority pollutants to the discharge at concentrations greater than 10 ppb

This information is provided in good faith and is believed accurate as of the date of this letter based on a review of current composition data and information supplied by the vendors. No warranty is expressed or implied. Liability is expressly disclaimed.

Please contact your local Sales Representative if you have additional questions regarding Nalco Water products.

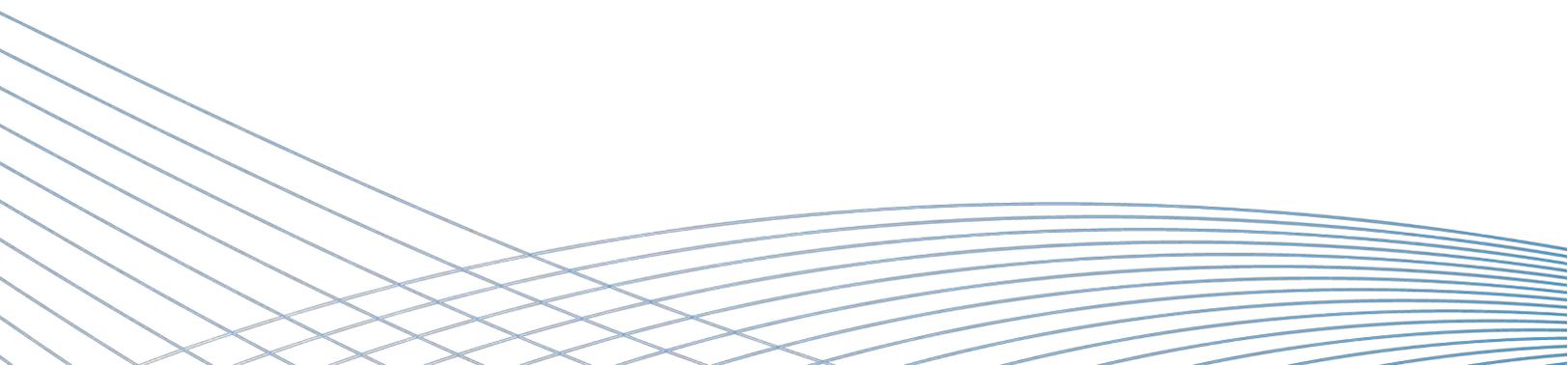
Sincerely,



Nicolás Martín de Eugenio

Product Stewardship North America
PRODUCT, SOLUTIONS & INNOVATION MARKETING
NALCO Water | An Ecolab Company

CONFIDENTIAL





**Pacific Gas and
Electric Company®**

Mailing Address:
Pacific Gas & Electric Company
Gateway Generating Station
3225 Wilbur Ave.
Antioch, CA 94509
(925) 522-7801

Mar 8, 2019

Michael Auer
Delta Diablo District
2500 Pittsburg-Antioch Hwy.
Antioch, CA 94509-1373

Reference: Pacific Gas and Electric Company - Gateway Generating Station (GGS)
Delta Diablo Industrial Wastewater Discharge Permit Number: 0208841-C

Subject: Closure Report on Cyanide Event of September 2018

Dear Mr. Auer,

This report submits the timeline of activities that GGS implemented as a result of the cyanide exceedance event during the 9/19/2018 semi-annual monitoring of the categorical waste stream. The activities include investigation of the plant's operation processes to identify potential sources of cyanide contamination, clean up of process/storage waste water tanks to remove accumulated debris and sediment, and resampling/analysis of waste streams. This report also submits the results of two consecutive resamplings with non-detectable (<10 parts per billion, ppb) cyanide concentrations.

9/19/2018: The semi-annual monitoring of the categorical waste stream was conducted.

9/27/2018: The analytical result on semi-annual monitoring was received. The cyanide limit (of 0.01 mg/L, or 10 ppb) was exceeded (with 0.047 mg/L, or 47 ppb)

9/27/2018: Notification of exceedance was submitted to the District. GGS suspected a "false positive" on the result. (See Attachment 1 – Notification to Delta Diablo on Cyanide Exceedance)

10/30/2018: The first resampling for cyanide was conducted. Following the recommendations from the District, the samples were collected not from the compliance (sampling) point but from the underground tank (Tiger Pit), which is prior to the compliance point in the plant's process flow. Split samples were collected and sent for analysis to three separate ELAP certified laboratories. All samples were pre-treated with sodium thiosulfate. Each laboratory received two split samples. One sample was preserved with sodium hydroxide the other was not. This approach aims to address the concern on "false positive" results. The samples were analyzed as immediately as feasible to prevent the possible degradation of the analyte over time on the un-preserved samples.

Of the three laboratories, two reported detection levels on cyanide (> 10 ppb) in the preserved samples, but only one in the un-preserved samples. Also, the concentration of cyanide in this un-preserved sample was lower (slightly above the detection level) than in the preserved sample (14 ppb to 21 ppb). The results on this first resampling clearly indicate the "false positive" impact of sodium hydroxide preservation on the cyanide analysis result. (See Attachment 2 – Summary of Cyanide Resampling, and Attachment 3 - Analytical Report on Resampling #1.)

11/07/2018: The second resampling on cyanide was collected and analyzed. This is to validate the findings of the first resampling. All results from three laboratories were non-detectable (ND <10 ppb) for both preserved and un-preserved samples. (See Attachment 2 – Summary of Cyanide Resampling, and Attachment 4 – Analytical Report on Resampling #2.)

11/24/2018: The third resampling on cyanide was collected and analyzed. The results indicated non-detectable (<10 ppb) concentration in un-preserved sample, and 12 ppb in the preserved sample. (See Attachment 2 – Summary of Cyanide Resampling, and Attachment 5 – Analytical Report on Resampling #3.)

12/04/2018: The fourth resampling on cyanide was collected and analyzed. The results in both un-preserved and preserved samples were above detection levels, 32 ppb and 30 ppb, respectively. (See Attachment 2 – Summary of Cyanide Resampling, and Attachment 6 – Analytical Report on Resampling #4.)

12/11/2018: The fifth resampling on cyanide was collected and analyzed. The results in both un-preserved and preserved samples were above detection levels, 18 ppb and 13 ppb, respectively. (See Attachment 2 – Summary of Cyanide Resampling, and Attachment 7 – Analytical Report on Resampling #5.)

12/14/2018: The sixth resampling on cyanide was collected and analyzed. The results indicated 20 ppb concentration in un-preserved sample, and ND in the preserved sample. (See Attachment 2 – Summary of Cyanide Resampling, and Attachment 8 – Analytical Report on Resampling #6.)

12/18/2018: The seventh resampling on cyanide was collected and analyzed. The results in both un-preserved and preserved samples were above detection levels, 28 ppb. (See Attachment 2 – Summary of Cyanide Resampling, and Attachment 9 – Analytical Report on Resampling #7.)

1/10/2019: The eighth resampling on cyanide was collected and analyzed. Following the guidance by the District, two sets of samples were collected: one collected by the laboratory sampler, the other by GGS laboratory technician. Both samplers follow the standard sampling procedure. The samples were not preserved. The results in both samples were above detection levels, 51 ppb and 55 ppb, respectively. (See Attachment 2 – Summary of Cyanide Resampling, and Attachment 10 – Analytical Report on Resampling #8.)

1/16/2019: The ninth resampling on cyanide was collected and analyzed. On this resampling, GGS investigated the plant's operational processes. This approach aims to identify the potential source/s of cyanide contamination in the wastewater streams prior to and including the Tiger Pit. The source water supply from the City was also sampled. Of the twelve samples, all had non-detectable (ND<10 ppb) concentrations excepting the sample from the Hammond Tank with 26 ppb. (See Attachment 2 – Summary of Cyanide Resampling, and Attachment 11 – Analytical Report on Resampling #9.)

1/29/2019: The Hammond Tank was emptied and cleaned-up. GGS suspected that the algal growth inside the tank might have contributed to the above detection level concentration in ninth resampling.

2/7/2019: The tenth resampling on cyanide was collected and analyzed. Three samples were collected: from the Tiger Pit, Hammond Tank, and Source Water. Of these three samples only that which was

collected from the Tiger Pit had detectable concentration. (See Attachment 2 – Summary of Cyanide Resampling, and Attachment 12 – Analytical Report on Resampling #10.)

2/11/2019: The eleventh resampling on cyanide was collected and analyzed. Two sets of split samples were collected from the Tiger Pit and RO Reject, and sent to two separate ELAP certified laboratories. The results were closely consistent between the two laboratories. Only the samples that were collected from the Tiger Pit had detectable concentrations. (See Attachment 2 – Summary of Cyanide Resampling, and Attachment 13 – Analytical Report on Resampling #11.)

2/20/2019: The Tiger Pit was emptied and cleaned-up.

2/21/2019: The Waste Water Tank was emptied and cleaned-up.

2/25/2019: The twelfth resampling on cyanide was collected and analyzed. Four samples were collected: from the Tiger Pit, Hammond Tank, RO Reject, and Source Water. The results indicated non-detectable concentration (ND<10 ppb) in all samples. (See Attachment 2 – Summary of Cyanide Resampling, and Attachment 14 – Analytical Report on Resampling #12.)

2/27/2019: The thirteenth resampling on cyanide was collected and analyzed. The analytical report on the sample collected from the compliance point indicated non-detectable concentration (ND<10 ppb). (See Attachment 2 – Summary of Cyanide Resampling, and Attachment 15 – Analytical Report on Resampling #13.)

2/28/2019: The fourteenth resampling on cyanide was collected and analyzed. The analytical report on the sample collected from the compliance point indicated non-detectable concentration (ND<10 ppb). (See Attachment 2 – Summary of Cyanide Resampling, and Attachment 16 – Analytical Report on Resampling #14.)

Based on the result of the thirteenth and fourteenth resamplings, GGS believes that the cyanide concentrations of the waste water streams in the system are now below the permit limit.

If you have any questions about this report, please feel free to contact Angel Espiritu at 925-522-7838, 510-861-1597, or at abe4@pge.com. Thank you.

Sincerely,

Tim Wisdom
Senior Plant Manager

Attachment: a/s

Attachment 1

Notification to Delta Diablo on Cyanide Exceedance (09/27/2018)

Espiritu, Angel

From: Espiritu, Angel
Sent: Thursday, September 27, 2018 5:40 PM
To: 'Auer, Michael'
Cc: Wisdom, Tim; Price, Charles; Hammond, David
Subject: Permit Number:0208841-C PG&E Gateway Generating Station
Attachments: 1809780.pdf

Importance: High

Hi Mike,

This is to comply Section F.8 of the Industrial Discharge Permit. Attached is a copy of analytical results on the semi-annual monitoring of the categorical flow. The results on total cyanide is 47 ppb. The limit is 10 ppb. Please let me know if you have questions. I will be off of work tomorrow. Thank you.

Angel B. Espiritu
Pacific Gas & Electric – Gateway Generating Station
Sr. Environmental Consultant-Environmental Compliance Manager
3225 Wilbur Avenue, Antioch, CA 94509
925-522-7838, 510-861-1597 (Cell)
ABE4@pge.com

From: Yen Cao <yen.cao@mccampbell.com> **On Behalf Of** main@mccampbell.com
Sent: Thursday, September 27, 2018 4:20 PM
To: Espiritu, Angel <ABE4@pge.com>
Cc: Hankins, Adam <A1HE@pge.com>; Laurin, Jeremy <J5Ld@pge.com>; Wisdom, Tim <T1WY@pge.com>
Subject: PARTIAL Analytical Report for Project: Semi-Annually Sampling (September 2018) [MAI WO#: 1809780]

*******CAUTION: This email was sent from an EXTERNAL source. Think before clicking links or opening attachments.*******

Angel,

Attached is your PARTIAL analytical report. The final report and invoice will follow upon completion of the Dioxins and subcontracted results.

Best regards,

Yen Cao

McC Campbell Analytical, Inc.
Ph: 925-252-9262
Fx: 925-252-9269
www.mccampbell.com

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Glossary of Terms & Qualifier Definitions

Client: PG&E Gateway Generating Station
Project: Semi-Annually Sampling (September 2018)
WorkOrder: 1809780

Glossary Abbreviation

%D	Serial Dilution Percent Difference
95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DLT	Dilution Test (Serial Dilution)
DUP	Duplicate
EDL	Estimated Detection Limit
ERS	External reference sample. Second source calibration verification.
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PDS	Post Digestion Spike
PDSD	Post Digestion Spike Duplicate
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
ST	Sorbent Tube
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)



Analytical Report

Client: PG&E Gateway Generating Station
Date Received: 9/19/18 13:45
Date Prepared: 9/19/18
Project: Semi-Annually Sampling (September 2018)

WorkOrder: 1809780
Extraction Method: E608/SW3620B
Analytical Method: E608
Unit: µg/L

Organochlorine Pesticides + PCBs w/ Florisil Clean-up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
I-001	1809780-001E	Water	09/19/2018 11:10	GC22 09211811.D	165139

Analytes	Result	MDL	RL	DF	Date Analyzed
Aldrin	ND	0.00028	0.0010	1	09/21/2018 15:03
a-BHC	ND	0.00031	0.0010	1	09/21/2018 15:03
b-BHC	ND	0.00069	0.0010	1	09/21/2018 15:03
d-BHC	ND	0.00014	0.0010	1	09/21/2018 15:03
g-BHC	ND	0.00045	0.0010	1	09/21/2018 15:03
Chlordane (Technical)	ND	0.0023	0.020	1	09/21/2018 15:03
a-Chlordane	ND	0.00085	0.0010	1	09/21/2018 15:03
g-Chlordane	ND	0.00015	0.0010	1	09/21/2018 15:03
p,p-DDD	ND	0.00011	0.0010	1	09/21/2018 15:03
p,p-DDE	ND	0.00018	0.0010	1	09/21/2018 15:03
p,p-DDT	ND	0.00017	0.0010	1	09/21/2018 15:03
Dieldrin	ND	0.00014	0.0010	1	09/21/2018 15:03
Endosulfan I	ND	0.00011	0.0010	1	09/21/2018 15:03
Endosulfan II	ND	0.00046	0.0010	1	09/21/2018 15:03
Endosulfan sulfate	ND	0.00033	0.0020	1	09/21/2018 15:03
Endrin	ND	0.00018	0.0010	1	09/21/2018 15:03
Endrin aldehyde	ND	0.00053	0.0010	1	09/21/2018 15:03
Endrin ketone	ND	0.00026	0.0010	1	09/21/2018 15:03
Heptachlor	ND	0.00041	0.0010	1	09/21/2018 15:03
Heptachlor epoxide	ND	0.00025	0.0010	1	09/21/2018 15:03
Methoxychlor	ND	0.00012	0.0010	1	09/21/2018 15:03
Toxaphene	ND	0.0020	0.020	1	09/21/2018 15:03
Aroclor1016	ND	0.0019	0.020	1	09/21/2018 15:03
Aroclor1221	ND	0.0024	0.020	1	09/21/2018 15:03
Aroclor1232	ND	0.0038	0.020	1	09/21/2018 15:03
Aroclor1242	ND	0.0028	0.020	1	09/21/2018 15:03
Aroclor1248	ND	0.0018	0.020	1	09/21/2018 15:03
Aroclor1254	ND	0.0015	0.020	1	09/21/2018 15:03
Aroclor1260	ND	0.0028	0.020	1	09/21/2018 15:03
PCBs, total	ND	0.020	0.020	1	09/21/2018 15:03

Surrogates	REC (%)	Limits	Date Analyzed
Decachlorobiphenyl	97	14-168	09/21/2018 15:03

Analyst(s): CK



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Analytical Report

Client: PG&E Gateway Generating Station
Date Received: 9/19/18 13:45
Date Prepared: 9/20/18
Project: Semi-Annually Sampling (September 2018)

WorkOrder: 1809780
Extraction Method: E624
Analytical Method: E624
Unit: µg/L

Acrolein, Acrylonitrile, & 2-Chloroethyl Vinyl Ether

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
I-001	1809780-001C	Water	09/19/2018 11:10	GC28 09201815.D	165341

Analytes	Result	RL	DF	Date Analyzed
Acrolein (Propenal)	ND	5.0	1	09/20/2018 19:05
Acrylonitrile	ND	2.0	1	09/20/2018 19:05
2-Chloroethyl Vinyl Ether	ND	1.0	1	09/20/2018 19:05

Surrogates	REC (%)	Limits	
Dibromofluoromethane	115	78-141	09/20/2018 19:05

Analyst(s): JEM



Analytical Report

Client: PG&E Gateway Generating Station
Date Received: 9/19/18 13:45
Date Prepared: 9/24/18
Project: Semi-Annually Sampling (September 2018)

WorkOrder: 1809780
Extraction Method: E624
Analytical Method: E624
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
I-001	1809780-001B	Water	09/19/2018 11:10	GC10 09241810.D	165451

Analytes	Result	RL	DF	Date Analyzed
Benzene	ND	0.50	1	09/24/2018 13:31
Bromodichloromethane	1.5	0.50	1	09/24/2018 13:31
Bromoform	ND	0.50	1	09/24/2018 13:31
Bromomethane	ND	0.50	1	09/24/2018 13:31
Carbon tetrachloride	ND	0.50	1	09/24/2018 13:31
Chlorobenzene	ND	0.50	1	09/24/2018 13:31
Chloroethane	ND	0.50	1	09/24/2018 13:31
Chloroform	1.2	0.50	1	09/24/2018 13:31
Chloromethane	ND	0.50	1	09/24/2018 13:31
Dibromochloromethane	ND	0.50	1	09/24/2018 13:31
1,2-Dibromoethane (EDB)	ND	0.50	1	09/24/2018 13:31
1,2-Dichlorobenzene	ND	0.50	1	09/24/2018 13:31
1,3-Dichlorobenzene	ND	0.50	1	09/24/2018 13:31
1,4-Dichlorobenzene	ND	0.50	1	09/24/2018 13:31
1,1-Dichloroethane	ND	0.50	1	09/24/2018 13:31
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	09/24/2018 13:31
1,1-Dichloroethene	ND	0.50	1	09/24/2018 13:31
trans-1,2-Dichloroethene	ND	0.50	1	09/24/2018 13:31
1,2-Dichloropropane	ND	0.50	1	09/24/2018 13:31
cis-1,3-Dichloropropene	ND	0.50	1	09/24/2018 13:31
trans-1,3-Dichloropropene	ND	0.50	1	09/24/2018 13:31
Ethylbenzene	ND	0.50	1	09/24/2018 13:31
Methyl-t-butyl ether (MTBE)	ND	0.50	1	09/24/2018 13:31
Methylene chloride	ND	2.0	1	09/24/2018 13:31
1,1,2,2-Tetrachloroethane	ND	0.50	1	09/24/2018 13:31
Tetrachloroethene	ND	0.50	1	09/24/2018 13:31
Toluene	ND	0.50	1	09/24/2018 13:31
1,2,4-Trichlorobenzene	ND	0.50	1	09/24/2018 13:31
1,1,1-Trichloroethane	ND	0.50	1	09/24/2018 13:31
1,1,2-Trichloroethane	ND	0.50	1	09/24/2018 13:31
Trichloroethene	ND	0.50	1	09/24/2018 13:31
Trichlorofluoromethane	ND	0.50	1	09/24/2018 13:31
Vinyl chloride	ND	0.50	1	09/24/2018 13:31
m,p-Xylene	ND	0.50	1	09/24/2018 13:31
o-Xylene	ND	0.25	1	09/24/2018 13:31
Xylenes, Total	ND	0.25	1	09/24/2018 13:31

(Cont.)



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Analytical Report

Client: PG&E Gateway Generating Station
Date Received: 9/19/18 13:45
Date Prepared: 9/24/18
Project: Semi-Annually Sampling (September 2018)

WorkOrder: 1809780
Extraction Method: E624
Analytical Method: E624
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
I-001	1809780-001B	Water	09/19/2018 11:10	GC10 09241810.D	165451

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	104	78-141		09/24/2018 13:31
Toluene-d8	93	78-129		09/24/2018 13:31
4-BFB	86	61-140		09/24/2018 13:31

Analyst(s): TK



Analytical Report

Client: PG&E Gateway Generating Station
Date Received: 9/19/18 13:45
Date Prepared: 9/19/18
Project: Semi-Annually Sampling (September 2018)

WorkOrder: 1809780
Extraction Method: E625
Analytical Method: E625
Unit: µg/L

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
I-001	1809780-001D	Water	09/19/2018 11:10	GC17 09261824.D	165166

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	0.19	20	09/26/2018 20:45
Acenaphthylene	ND	0.19	20	09/26/2018 20:45
Anthracene	ND	0.19	20	09/26/2018 20:45
Benzidine	ND	96	20	09/26/2018 20:45
Benzo (a) anthracene	ND	0.38	20	09/26/2018 20:45
Benzo (a) pyrene	ND	0.19	20	09/26/2018 20:45
Benzo (b) fluoranthene	ND	0.096	20	09/26/2018 20:45
Benzo (g,h,i) perylene	ND	0.38	20	09/26/2018 20:45
Benzo (k) fluoranthene	ND	0.19	20	09/26/2018 20:45
Benzyl Alcohol	ND	96	20	09/26/2018 20:45
Bis (2-chloroethoxy) Methane	ND	19	20	09/26/2018 20:45
Bis (2-chloroethyl) Ether	ND	0.096	20	09/26/2018 20:45
Bis (2-chloroisopropyl) Ether	ND	0.19	20	09/26/2018 20:45
Bis (2-ethylhexyl) Adipate	ND	57	20	09/26/2018 20:45
Bis (2-ethylhexyl) Phthalate	6.9	0.76	20	09/26/2018 20:45
4-Bromophenyl Phenyl Ether	ND	19	20	09/26/2018 20:45
Butylbenzyl Phthalate	ND	38	20	09/26/2018 20:45
4-Chloroaniline	ND	0.38	20	09/26/2018 20:45
4-Chloro-3-methylphenol	ND	19	20	09/26/2018 20:45
2-Chloronaphthalene	ND	19	20	09/26/2018 20:45
2-Chlorophenol	ND	0.38	20	09/26/2018 20:45
4-Chlorophenyl Phenyl Ether	ND	19	20	09/26/2018 20:45
Chrysene	ND	0.19	20	09/26/2018 20:45
Dibenzo (a,h) anthracene	ND	0.19	20	09/26/2018 20:45
Dibenzofuran	ND	19	20	09/26/2018 20:45
Di-n-butyl Phthalate	ND	0.38	20	09/26/2018 20:45
1,2-Dichlorobenzene	ND	38	20	09/26/2018 20:45
1,3-Dichlorobenzene	ND	38	20	09/26/2018 20:45
1,4-Dichlorobenzene	ND	38	20	09/26/2018 20:45
3,3-Dichlorobenzidine	ND	0.38	20	09/26/2018 20:45
2,4-Dichlorophenol	ND	0.19	20	09/26/2018 20:45
Diethyl Phthalate	ND	0.38	20	09/26/2018 20:45
2,4-Dimethylphenol	ND	19	20	09/26/2018 20:45
Dimethyl Phthalate	ND	0.38	20	09/26/2018 20:45
4,6-Dinitro-2-methylphenol	ND	96	20	09/26/2018 20:45
2,4-Dinitrophenol	ND	9.6	20	09/26/2018 20:45
2,4-Dinitrotoluene	ND	0.48	20	09/26/2018 20:45

(Cont.)



Analytical Report

Client: PG&E Gateway Generating Station
Date Received: 9/19/18 13:45
Date Prepared: 9/19/18
Project: Semi-Annually Sampling (September 2018)

WorkOrder: 1809780
Extraction Method: E625
Analytical Method: E625
Unit: µg/L

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
I-001	1809780-001D	Water	09/19/2018 11:10	GC17 09261824.D	165166
Analytes	Result	RL	DF	Date Analyzed	
2,6-Dinitrotoluene	ND	0.19	20	09/26/2018 20:45	
Di-n-octyl Phthalate	ND	2.4	20	09/26/2018 20:45	
1,2-Diphenylhydrazine	ND	19	20	09/26/2018 20:45	
Fluoranthene	ND	0.19	20	09/26/2018 20:45	
Fluorene	ND	0.19	20	09/26/2018 20:45	
Hexachlorobenzene	ND	0.096	20	09/26/2018 20:45	
Hexachlorobutadiene	ND	0.19	20	09/26/2018 20:45	
Hexachlorocyclopentadiene	ND	96	20	09/26/2018 20:45	
Hexachloroethane	ND	0.19	20	09/26/2018 20:45	
Indeno (1,2,3-cd) pyrene	ND	0.38	20	09/26/2018 20:45	
Isophorone	ND	19	20	09/26/2018 20:45	
2-Methylnaphthalene	ND	0.19	20	09/26/2018 20:45	
2-Methylphenol (o-Cresol)	ND	19	20	09/26/2018 20:45	
3 & 4-Methylphenol (m,p-Cresol)	ND	19	20	09/26/2018 20:45	
Naphthalene	ND	0.19	20	09/26/2018 20:45	
2-Nitroaniline	ND	96	20	09/26/2018 20:45	
3-Nitroaniline	ND	96	20	09/26/2018 20:45	
4-Nitroaniline	ND	96	20	09/26/2018 20:45	
Nitrobenzene	ND	19	20	09/26/2018 20:45	
2-Nitrophenol	ND	96	20	09/26/2018 20:45	
4-Nitrophenol	ND	96	20	09/26/2018 20:45	
N-Nitrosodiphenylamine	ND	19	20	09/26/2018 20:45	
N-Nitrosodi-n-propylamine	ND	19	20	09/26/2018 20:45	
Pentachlorophenol	ND	4.8	20	09/26/2018 20:45	
Phenanthrene	ND	0.38	20	09/26/2018 20:45	
Phenol	0.44	0.38	20	09/26/2018 20:45	
Pyrene	ND	0.38	20	09/26/2018 20:45	
Pyridine	ND	19	20	09/26/2018 20:45	
1,2,4-Trichlorobenzene	ND	19	20	09/26/2018 20:45	
2,4,5-Trichlorophenol	ND	0.96	20	09/26/2018 20:45	
2,4,6-Trichlorophenol	ND	0.96	20	09/26/2018 20:45	
N-Nitrosodimethylamine	ND	96	20	09/26/2018 20:45	

(Cont.)



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Analytical Report

Client: PG&E Gateway Generating Station
Date Received: 9/19/18 13:45
Date Prepared: 9/19/18
Project: Semi-Annually Sampling (September 2018)

WorkOrder: 1809780
Extraction Method: E625
Analytical Method: E625
Unit: µg/L

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
I-001	1809780-001D	Water	09/19/2018 11:10	GC17 09261824.D	165166

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorophenol	38	23-101		09/26/2018 20:45
Phenol-d5	40	27-116		09/26/2018 20:45
Nitrobenzene-d5	44	29-116		09/26/2018 20:45
2-Fluorobiphenyl	61	29-112		09/26/2018 20:45
2,4,6-Tribromophenol	70	34-125		09/26/2018 20:45
Terphenyl-d14	88	23-136		09/26/2018 20:45

Analyst(s): REB



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Analytical Report

Client: PG&E Gateway Generating Station
Date Received: 9/19/18 13:45
Date Prepared: 9/24/18
Project: Semi-Annually Sampling (September 2018)

WorkOrder: 1809780
Extraction Method: SM4500-CN⁻ E
Analytical Method: SM4500-CN⁻ CE
Unit: µg/L

Cyanide, Total

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
I-001	1809780-001A	Water	09/19/2018 11:10	WC_SKALAR 092418A1_25	165431

Analytes	Result	RL	DF	Date Analyzed
Total Cyanide	47	1.0	1	09/24/2018 12:48

Analyst(s): BM



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Analytical Report

Client: PG&E Gateway Generating Station
Date Received: 9/19/18 13:45
Date Prepared: 9/19/18
Project: Semi-Annually Sampling (September 2018)

WorkOrder: 1809780
Extraction Method: E245.2
Analytical Method: E245.2
Unit: µg/L

Mercury by Cold Vapor Atomic Absorption

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
I-001	1809780-001F	Water	09/19/2018 11:10	AA1 _16	165200

Analytes	Result	RL	DF	Date Analyzed
Mercury	ND	0.20	1	09/20/2018 11:20

Analyst(s): JC



Analytical Report

Client: PG&E Gateway Generating Station
Date Received: 9/19/18 13:45
Date Prepared: 9/19/18
Project: Semi-Annually Sampling (September 2018)

WorkOrder: 1809780
Extraction Method: E200.8
Analytical Method: E200.8
Unit: µg/L

Priority Pollutant Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
I-001	1809780-001F	Water	09/19/2018 11:10	ICP-MS1 124SMPL.D	165141

Analytes	Result	RL	DF	Date Analyzed
Antimony	ND	0.50	1	09/21/2018 02:46
Arsenic	0.91	0.50	1	09/21/2018 02:46
Beryllium	ND	0.50	1	09/21/2018 02:46
Cadmium	ND	0.25	1	09/21/2018 02:46
Chromium	ND	0.50	1	09/21/2018 02:46
Copper	4.3	2.0	1	09/21/2018 02:46
Lead	ND	0.50	1	09/21/2018 02:46
Mercury	ND	0.050	1	09/21/2018 02:46
Nickel	1.5	0.50	1	09/21/2018 02:46
Selenium	ND	0.50	1	09/21/2018 02:46
Silver	ND	0.19	1	09/21/2018 02:46
Thallium	ND	0.50	1	09/21/2018 02:46
Zinc	61	15	1	09/21/2018 02:46

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	101	70-130	09/21/2018 02:46

Analyst(s): ND



Quality Control Report

Client: PG&E Gateway Generating Station
Date Prepared: 9/18/18
Date Analyzed: 9/18/18 - 9/19/18
Instrument: GC22
Matrix: Water
Project: Semi-Annually Sampling (September 2018)

WorkOrder: 1809780
BatchID: 165139
Extraction Method: E608/SW3620B
Analytical Method: E608
Unit: µg/L
Sample ID: MB/LCS/LCSD-165139

QC Summary Report for E608 w/ Florisil Clean-up

Analyte	MB Result	MDL	RL	SPK Val	MB SS %REC	MB SS Limits
Aldrin	ND	0.00028	0.0010	-	-	-
a-BHC	ND	0.00031	0.0010	-	-	-
b-BHC	ND	0.00069	0.0010	-	-	-
d-BHC	ND	0.00014	0.0010	-	-	-
g-BHC	ND	0.00045	0.0010	-	-	-
Chlordane (Technical)	ND	0.0023	0.020	-	-	-
a-Chlordane	ND	0.00085	0.0010	-	-	-
g-Chlordane	ND	0.00015	0.0010	-	-	-
p,p-DDD	ND	0.00011	0.0010	-	-	-
p,p-DDE	ND	0.00018	0.0010	-	-	-
p,p-DDT	ND	0.00017	0.0010	-	-	-
Dieldrin	ND	0.00014	0.0010	-	-	-
Endosulfan I	ND	0.00011	0.0010	-	-	-
Endosulfan II	ND	0.00046	0.0010	-	-	-
Endosulfan sulfate	ND	0.00033	0.0020	-	-	-
Endrin	ND	0.00018	0.0010	-	-	-
Endrin aldehyde	ND	0.00053	0.0010	-	-	-
Endrin ketone	ND	0.00026	0.0010	-	-	-
Heptachlor	ND	0.00041	0.0010	-	-	-
Heptachlor epoxide	ND	0.00025	0.0010	-	-	-
Methoxychlor	ND	0.00012	0.0010	-	-	-
Toxaphene	ND	0.0020	0.020	-	-	-
Aroclor1016	ND	0.0019	0.020	-	-	-
Aroclor1221	ND	0.0024	0.020	-	-	-
Aroclor1232	ND	0.0038	0.020	-	-	-
Aroclor1242	ND	0.0028	0.020	-	-	-
Aroclor1248	ND	0.0018	0.020	-	-	-
Aroclor1254	ND	0.0015	0.020	-	-	-
Aroclor1260	ND	0.0028	0.020	-	-	-
PCBs, total	ND	0.020	0.020	-	-	-
Surrogate Recovery						
Decachlorobiphenyl	0.0453			0.050	91	35-113

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Quality Control Report

Client: PG&E Gateway Generating Station
Date Prepared: 9/18/18
Date Analyzed: 9/18/18 - 9/19/18
Instrument: GC22
Matrix: Water
Project: Semi-Annually Sampling (September 2018)

WorkOrder: 1809780
BatchID: 165139
Extraction Method: E608/SW3620B
Analytical Method: E608
Unit: µg/L
Sample ID: MB/LCS/LCSD-165139

QC Summary Report for E608 w/ Florisil Clean-up

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Aldrin	0.0349	0.0338	0.050	70	68	50-103	3.16	20
a-BHC	0.0375	0.0364	0.050	75	73	63-131	2.97	20
b-BHC	0.0327	0.0314	0.050	65	63	56-112	4.24	20
d-BHC	0.0406	0.0400	0.050	81	80	63-132	1.36	20
g-BHC	0.0363	0.0353	0.050	73	71	61-135	2.66	20
a-Chlordane	0.0343	0.0333	0.050	69	67	54-113	2.91	20
g-Chlordane	0.0359	0.0347	0.050	72	69	55-117	3.31	20
p,p-DDD	0.0340	0.0336	0.050	68	67	56-135	1.22	20
p,p-DDE	0.0365	0.0360	0.050	73	72	56-131	1.43	20
p,p-DDT	0.0344	0.0341	0.050	69	68	47-153	0.865	20
Dieldrin	0.0405	0.0396	0.050	81	79	67-152	2.31	20
Endosulfan I	0.0355	0.0344	0.050	71	69	56-137	3.29	20
Endosulfan II	0.0346	0.0338	0.050	69	68	50-113	2.61	20
Endosulfan sulfate	0.0344	0.0336	0.050	69	67	57-121	2.18	20
Endrin	0.0386	0.0377	0.050	77	75	60-150	2.47	20
Endrin aldehyde	0.0308	0.0304	0.050	62	61	47-121	1.07	20
Endrin ketone	0.0334	0.0326	0.050	67	65	48-130	2.44	20
Heptachlor	0.0350	0.0337	0.050	70	67	46-133	3.60	20
Heptachlor epoxide	0.0336	0.0324	0.050	67	65	54-105	3.61	20
Methoxychlor	0.0398	0.0389	0.050	80	78	54-135	2.20	20
Aroclor1016	0.132	0.129	0.15	88	86	54-103	2.44	20
Aroclor1260	0.124	0.125	0.15	83	83	42-121	0	20
Surrogate Recovery								
Decachlorobiphenyl	0.0354	0.0346	0.050	71	69	35-113	2.23	20



Quality Control Report

Client: PG&E Gateway Generating Station
Date Prepared: 9/20/18
Date Analyzed: 9/20/18
Instrument: GC28
Matrix: Water
Project: Semi-Annually Sampling (September 2018)

WorkOrder: 1809780
BatchID: 165341
Extraction Method: E624
Analytical Method: E624
Unit: µg/L
Sample ID: MB/LCS/LCSD-165341

QC Summary Report for E624

Analyte	MB Result	RL	SPK Val	MB SS %REC	MB SS Limits
Acrolein (Propenal)	ND	5.0	-	-	-
Acrylonitrile	ND	2.0	-	-	-
2-Chloroethyl Vinyl Ether	ND	1.0	-	-	-
Surrogate Recovery					
Dibromofluoromethane	31.1		25	124	83-139

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Acrolein (Propenal)	17.0	18.0	20	85	90	70-130	5.69	20
Acrylonitrile	15.9	16.0	20	80	80	70-130	0	20
2-Chloroethyl Vinyl Ether	22.5	22.2	20	112	111	70-130	1.36	20
Surrogate Recovery								
Dibromofluoromethane	30.0	29.8	25	120	119	83-139	0.666	20



Quality Control Report

Client: PG&E Gateway Generating Station
Date Prepared: 9/24/18
Date Analyzed: 9/24/18
Instrument: GC10
Matrix: Water
Project: Semi-Annually Sampling (September 2018)

WorkOrder: 1809780
BatchID: 165451
Extraction Method: E624
Analytical Method: E624
Unit: µg/L
Sample ID: MB/LCS/LCSD-165451

QC Summary Report for E624

Analyte	MB Result	RL	SPK Val	MB SS %REC	MB SS Limits
Benzene	ND	0.20	-	-	-
Bromodichloromethane	ND	0.50	-	-	-
Bromoform	ND	0.50	-	-	-
Bromomethane	ND	0.50	-	-	-
Carbon tetrachloride	ND	0.50	-	-	-
Chlorobenzene	ND	0.50	-	-	-
Chloroethane	ND	0.50	-	-	-
Chloroform	ND	0.50	-	-	-
Chloromethane	ND	0.50	-	-	-
Dibromochloromethane	ND	0.50	-	-	-
1,2-Dibromoethane (EDB)	ND	0.50	-	-	-
1,2-Dichlorobenzene	ND	0.50	-	-	-
1,3-Dichlorobenzene	ND	0.50	-	-	-
1,4-Dichlorobenzene	ND	0.50	-	-	-
1,1-Dichloroethane	ND	0.50	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.50	-	-	-
1,1-Dichloroethene	ND	0.50	-	-	-
trans-1,2-Dichloroethene	ND	0.50	-	-	-
1,2-Dichloropropane	ND	0.50	-	-	-
cis-1,3-Dichloropropene	ND	0.50	-	-	-
trans-1,3-Dichloropropene	ND	0.50	-	-	-
Ethylbenzene	ND	0.50	-	-	-
Methyl-t-butyl ether (MTBE)	ND	0.50	-	-	-
Methylene chloride	6.05	2.0	-	-	-
Styrene	ND	0.50	-	-	-
1,1,2,2-Tetrachloroethane	ND	0.50	-	-	-
Tetrachloroethene	ND	0.50	-	-	-
Toluene	ND	0.50	-	-	-
1,2,4-Trichlorobenzene	ND	0.50	-	-	-
1,1,1-Trichloroethane	ND	0.50	-	-	-
1,1,2-Trichloroethane	ND	0.50	-	-	-
Trichloroethene	ND	0.50	-	-	-
Trichlorofluoromethane	ND	0.50	-	-	-
Vinyl chloride	ND	0.50	-	-	-
m,p-Xylene	ND	0.25	-	-	-
o-Xylene	ND	0.25	-	-	-
Xylenes, Total	ND	0.25	-	-	-

(Cont.)



Quality Control Report

Client:	PG&E Gateway Generating Station	WorkOrder:	1809780
Date Prepared:	9/24/18	BatchID:	165451
Date Analyzed:	9/24/18	Extraction Method:	E624
Instrument:	GC10	Analytical Method:	E624
Matrix:	Water	Unit:	µg/L
Project:	Semi-Annually Sampling (September 2018)	Sample ID:	MB/LCS/LCSD-165451

QC Summary Report for E624

Analyte	MB Result	RL	SPK Val	MB SS %REC	MB SS Limits
Surrogate Recovery					
Dibromofluoromethane	25.0		25	100	83-139
Toluene-d8	23.7		25	95	87-125
4-BFB	2.11		2.5	84	74-133

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Quality Control Report

Client: PG&E Gateway Generating Station
Date Prepared: 9/24/18
Date Analyzed: 9/24/18
Instrument: GC10
Matrix: Water
Project: Semi-Annually Sampling (September 2018)

WorkOrder: 1809780
BatchID: 165451
Extraction Method: E624
Analytical Method: E624
Unit: µg/L
Sample ID: MB/LCS/LCSD-165451

QC Summary Report for E624

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Benzene	9.16	9.35	10	92	93	37-151	2.00	20
Bromodichloromethane	8.12	8.43	10	81	84	35-155	3.65	20
Bromoform	7.56	8.05	10	76	80	45-169	6.33	20
Bromomethane	14.8	14.1	10	148	141	1-242	4.80	20
Carbon tetrachloride	8.54	8.86	10	85	89	70-140	3.70	20
Chlorobenzene	8.85	9.16	10	88	92	37-160	3.40	20
Chloroethane	10.0	9.82	10	100	98	14-230	1.76	20
Chloroform	8.83	9.04	10	88	90	51-138	2.33	20
Chloromethane	5.61	5.68	10	56	57	1-273	1.20	20
Dibromochloromethane	8.09	8.54	10	81	85	53-149	5.37	20
1,2-Dibromoethane (EDB)	8.08	8.55	10	81	86	62-127	5.73	20
1,2-Dichlorobenzene	8.99	9.40	10	90	94	18-190	4.50	20
1,3-Dichlorobenzene	8.55	8.88	10	85	89	59-156	3.84	20
1,4-Dichlorobenzene	8.55	8.88	10	85	89	18-190	3.84	20
1,1-Dichloroethane	8.99	9.29	10	90	93	70-130	3.26	20
1,2-Dichloroethane (1,2-DCA)	7.76	8.03	10	78	80	49-155	3.44	20
1,1-Dichloroethene	9.84	10.0	10	98	100	1-234	2.00	20
trans-1,2-Dichloroethene	9.62	9.82	10	96	98	54-156	2.09	20
1,2-Dichloropropane	8.77	9.03	10	88	90	1-210	2.94	20
cis-1,3-Dichloropropene	8.01	8.42	10	80	84	1-227	4.93	20
trans-1,3-Dichloropropene	8.19	8.70	10	82	87	17-183	6.01	20
Ethylbenzene	9.09	9.45	10	91	94	37-162	3.85	20
Methyl-t-butyl ether (MTBE)	7.58	7.90	10	76	79	70-130	4.21	20
Methylene chloride	8.74	9.12	10	87	91	1-221	4.27	20
Styrene	8.46	8.71	10	85	87	54-135	2.98	20
1,1,2,2-Tetrachloroethane	7.83	8.44	10	78	84	46-157	7.43	20
Tetrachloroethene	9.18	9.52	10	92	95	64-148	3.63	20
Toluene	8.32	8.73	10	83	87	47-150	4.76	20
1,2,4-Trichlorobenzene	9.16	9.49	10	92	95	57-139	3.48	20
1,1,1-Trichloroethane	8.56	8.86	10	86	89	52-162	3.34	20
1,1,2-Trichloroethane	8.14	8.68	10	81	87	52-150	6.41	20
Trichloroethene	9.44	9.55	10	94	96	71-157	1.13	20
Trichlorofluoromethane	8.62	8.85	10	86	89	17-181	2.73	20
Vinyl chloride	9.79	9.68	10	98	97	1-251	1.16	20
m,p-Xylene	17.7	18.2	20	89	91	56-131	2.72	20
o-Xylene	8.76	9.04	10	88	90	62-126	3.10	20
Xylenes, Total	26.5	27.2	30	88	91	59-128	2.84	20

(Cont.)



Quality Control Report

Client: PG&E Gateway Generating Station
Date Prepared: 9/24/18
Date Analyzed: 9/24/18
Instrument: GC10
Matrix: Water
Project: Semi-Annually Sampling (September 2018)

WorkOrder: 1809780
BatchID: 165451
Extraction Method: E624
Analytical Method: E624
Unit: µg/L
Sample ID: MB/LCS/LCSD-165451

QC Summary Report for E624

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Surrogate Recovery								
Dibromofluoromethane	25.0	25.0	25	100	100	83-139	0	20
Toluene-d8	25.1	25.4	25	100	102	87-125	1.23	20
4-BFB	2.26	2.37	2.5	90	95	74-133	4.75	20



Quality Control Report

Client: PG&E Gateway Generating Station
Date Prepared: 9/19/18
Date Analyzed: 9/19/18
Instrument: GC17
Matrix: Water
Project: Semi-Annually Sampling (September 2018)

WorkOrder: 1809780
BatchID: 165166
Extraction Method: E625
Analytical Method: E625
Unit: µg/L
Sample ID: MB/LCS/LCSD-165166

QC Summary Report for E625

Analyte	MB Result	RL	SPK Val	MB SS %REC	MB SS Limits
Acenaphthene	ND	0.010	-	-	-
Acenaphthylene	ND	0.010	-	-	-
Anthracene	ND	0.010	-	-	-
Benzidine	ND	5.0	-	-	-
Benzo (a) anthracene	ND	0.020	-	-	-
Benzo (a) pyrene	ND	0.010	-	-	-
Benzo (b) fluoranthene	ND	0.0050	-	-	-
Benzo (g,h,i) perylene	ND	0.020	-	-	-
Benzo (k) fluoranthene	ND	0.010	-	-	-
Benzyl Alcohol	ND	5.0	-	-	-
Bis (2-chloroethoxy) Methane	ND	1.0	-	-	-
Bis (2-chloroethyl) Ether	ND	0.0050	-	-	-
Bis (2-chloroisopropyl) Ether	ND	0.010	-	-	-
Bis (2-ethylhexyl) Adipate	ND	3.0	-	-	-
Bis (2-ethylhexyl) Phthalate	ND	0.040	-	-	-
4-Bromophenyl Phenyl Ether	ND	1.0	-	-	-
Butylbenzyl Phthalate	ND	2.0	-	-	-
4-Chloroaniline	ND	0.020	-	-	-
4-Chloro-3-methylphenol	ND	1.0	-	-	-
2-Chloronaphthalene	ND	1.0	-	-	-
2-Chlorophenol	ND	0.020	-	-	-
4-Chlorophenyl Phenyl Ether	ND	1.0	-	-	-
Chrysene	ND	0.010	-	-	-
Dibenzo (a,h) anthracene	ND	0.010	-	-	-
Dibenzofuran	ND	1.0	-	-	-
Di-n-butyl Phthalate	ND	0.020	-	-	-
1,2-Dichlorobenzene	ND	2.0	-	-	-
1,3-Dichlorobenzene	ND	2.0	-	-	-
1,4-Dichlorobenzene	ND	2.0	-	-	-
3,3-Dichlorobenzidine	ND	0.020	-	-	-
2,4-Dichlorophenol	ND	0.010	-	-	-
Diethyl Phthalate	ND	0.020	-	-	-
2,4-Dimethylphenol	ND	1.0	-	-	-
Dimethyl Phthalate	ND	0.020	-	-	-
4,6-Dinitro-2-methylphenol	ND	5.0	-	-	-
2,4-Dinitrophenol	ND	0.50	-	-	-
2,4-Dinitrotoluene	ND	0.025	-	-	-
2,6-Dinitrotoluene	ND	0.010	-	-	-

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Quality Control Report

Client: PG&E Gateway Generating Station
Date Prepared: 9/19/18
Date Analyzed: 9/19/18
Instrument: GC17
Matrix: Water
Project: Semi-Annually Sampling (September 2018)

WorkOrder: 1809780
BatchID: 165166
Extraction Method: E625
Analytical Method: E625
Unit: µg/L
Sample ID: MB/LCS/LCSD-165166

QC Summary Report for E625

Analyte	MB Result	RL	SPK Val	MB SS %REC	MB SS Limits
Di-n-octyl Phthalate	ND	0.12	-	-	-
1,2-Diphenylhydrazine	ND	1.0	-	-	-
Fluoranthene	ND	0.010	-	-	-
Fluorene	ND	0.010	-	-	-
Hexachlorobenzene	ND	0.0050	-	-	-
Hexachlorobutadiene	ND	0.010	-	-	-
Hexachlorocyclopentadiene	ND	5.0	-	-	-
Hexachloroethane	ND	0.010	-	-	-
Indeno (1,2,3-cd) pyrene	ND	0.020	-	-	-
Isophorone	ND	1.0	-	-	-
2-Methylnaphthalene	ND	0.010	-	-	-
2-Methylphenol (o-Cresol)	ND	1.0	-	-	-
3 & 4-Methylphenol (m,p-Cresol)	ND	1.0	-	-	-
Naphthalene	ND	0.010	-	-	-
2-Nitroaniline	ND	5.0	-	-	-
3-Nitroaniline	ND	5.0	-	-	-
4-Nitroaniline	ND	5.0	-	-	-
Nitrobenzene	ND	1.0	-	-	-
2-Nitrophenol	ND	5.0	-	-	-
4-Nitrophenol	ND	5.0	-	-	-
N-Nitrosodiphenylamine	ND	1.0	-	-	-
N-Nitrosodi-n-propylamine	ND	1.0	-	-	-
Pentachlorophenol	ND	0.25	-	-	-
Phenanthrene	ND	0.020	-	-	-
Phenol	ND	0.020	-	-	-
Pyrene	ND	0.020	-	-	-
Pyridine	ND	1.0	-	-	-
1,2,4-Trichlorobenzene	ND	1.0	-	-	-
2,4,5-Trichlorophenol	ND	0.050	-	-	-
2,4,6-Trichlorophenol	ND	0.050	-	-	-
N-Nitrosodimethylamine	ND	5.0	-	-	-

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Quality Control Report

Client: PG&E Gateway Generating Station	WorkOrder: 1809780
Date Prepared: 9/19/18	BatchID: 165166
Date Analyzed: 9/19/18	Extraction Method: E625
Instrument: GC17	Analytical Method: E625
Matrix: Water	Unit: µg/L
Project: Semi-Annually Sampling (September 2018)	Sample ID: MB/LCS/LCSD-165166

QC Summary Report for E625

Analyte	MB Result	RL	SPK Val	MB SS %REC	MB SS Limits
Surrogate Recovery					
2-Fluorophenol	5.08		5	102	8-130
Phenol-d5	5.37		5	107	5-130
Nitrobenzene-d5	4.67		5	93	20-140
2-Fluorobiphenyl	4.58		5	92	40-140
2,4,6-Tribromophenol	5.51		5	110	16-180
Terphenyl-d14	4.34		5	87	40-170

(Cont.)



Quality Control Report

Client: PG&E Gateway Generating Station
Date Prepared: 9/19/18
Date Analyzed: 9/19/18
Instrument: GC17
Matrix: Water
Project: Semi-Annually Sampling (September 2018)

WorkOrder: 1809780
BatchID: 165166
Extraction Method: E625
Analytical Method: E625
Unit: µg/L
Sample ID: MB/LCS/LCSD-165166

QC Summary Report for E625

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Acenaphthene	0.217	0.220	0.25	87	88	47-145	1.14	25
Acenaphthylene	0.207	0.212	0.25	83	85	33-145	2.35	25
Anthracene	0.210	0.216	0.25	84	86	27-133	2.92	25
Benzidine	17.0	18.3	25	68	73	43-106	7.53	25
Benzo (a) anthracene	0.197	0.200	0.25	79	80	33-143	1.28	25
Benzo (a) pyrene	0.226	0.222	0.25	90	89	17-163	1.97	25
Benzo (b) fluoranthene	0.231	0.211	0.25	92	84	24-159	9.15	25
Benzo (g,h,i) perylene	0.215	0.213	0.25	86	85	1-219	1.01	25
Benzo (k) fluoranthene	0.207	0.200	0.25	83	80	11-162	3.10	25
Benzyl Alcohol	26.3	23.7	25	105	95	53-117	10.3	25
Bis (2-chloroethoxy) Methane	4.70	4.86	5	94	97	33-184	3.21	25
Bis (2-chloroethyl) Ether	0.254	0.297	0.25	102	119	12-158	15.5	25
Bis (2-chloroisopropyl) Ether	0.270	0.256	0.25	108	102	36-166	5.47	25
Bis (2-ethylhexyl) Adipate	4.08	4.29	5	82	86	55-122	4.99	25
Bis (2-ethylhexyl) Phthalate	0.236	0.241	0.25	95	96	8-158	2.01	25
4-Bromophenyl Phenyl Ether	4.11	4.27	5	82	85	53-127	3.75	25
Butylbenzyl Phthalate	4.99	4.73	5	100	95	1-152	5.38	25
4-Chloroaniline	0.233	0.234	0.25	93	94	63-120	0.618	25
4-Chloro-3-methylphenol	4.55	4.62	5	91	92	22-147	1.54	25
2-Chloronaphthalene	4.62	4.66	5	92	93	60-118	0.892	25
2-Chlorophenol	0.237	0.216	0.25	95	87	23-134	9.26	25
4-Chlorophenyl Phenyl Ether	4.26	4.14	5	85	83	25-158	2.94	25
Chrysene	0.203	0.201	0.25	81	81	17-168	0	25
Dibenzo (a,h) anthracene	0.211	0.210	0.25	84	84	1-227	0	25
Dibenzofuran	4.35	4.38	5	87	88	64-122	0.679	25
Di-n-butyl Phthalate	0.228	0.236	0.25	91	95	1-118	3.69	25
1,2-Dichlorobenzene	4.27	4.02	5	85	80	32-129	6.14	25
1,3-Dichlorobenzene	4.31	4.22	5	86	84	1-172	2.27	25
1,4-Dichlorobenzene	4.48	4.22	5	90	84	20-124	5.99	25
3,3-Dichlorobenzidine	0.217	0.226	0.25	87	90	1-262	3.89	25
2,4-Dichlorophenol	0.243	0.241	0.25	97	96	39-135	1.01	25
Diethyl Phthalate	0.227	0.228	0.25	91	91	1-114	0	25
2,4-Dimethylphenol	4.72	4.85	5	94	97	32-119	2.58	25
Dimethyl Phthalate	0.220	0.223	0.25	88	89	1-112	1.55	25
4,6-Dinitro-2-methylphenol	17.5	18.1	25	70	72	59-123	3.29	25
2,4-Dinitrophenol	0.904	0.891	1.25	72	71	1-191	1.43	25
2,4-Dinitrotoluene	0.197	0.208	0.25	79	83	39-139	5.49	25
2,6-Dinitrotoluene	0.193	0.198	0.25	77	79	50-158	2.65	25

(Cont.)



Quality Control Report

Client: PG&E Gateway Generating Station
Date Prepared: 9/19/18
Date Analyzed: 9/19/18
Instrument: GC17
Matrix: Water
Project: Semi-Annually Sampling (September 2018)

WorkOrder: 1809780
BatchID: 165166
Extraction Method: E625
Analytical Method: E625
Unit: µg/L
Sample ID: MB/LCS/LCSD-165166

QC Summary Report for E625

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Di-n-octyl Phthalate	0.256	0.249	0.25	103	99	4-146	3.11	25
1,2-Diphenylhydrazine	4.44	4.56	5	89	91	66-128	2.57	25
Fluoranthene	0.213	0.219	0.25	85	88	26-137	2.78	25
Fluorene	0.219	0.217	0.25	88	87	59-121	0.827	25
Hexachlorobenzene	0.199	0.207	0.25	79	83	1-152	4.37	25
Hexachlorobutadiene	0.224	0.222	0.25	89	89	24-116	0	25
Hexachlorocyclopentadiene	18.6	18.2	25	74	73	36-109	1.84	25
Hexachloroethane	0.213	0.199	0.25	85	80	40-113	6.69	25
Indeno (1,2,3-cd) pyrene	0.219	0.215	0.25	88	86	1-171	1.95	25
Isophorone	4.56	4.75	5	91	95	21-196	4.01	25
2-Methylnaphthalene	0.249	0.237	0.25	100	95	58-122	5.01	25
2-Methylphenol (o-Cresol)	5.55	5.07	5	111	101	55-121	9.14	25
3 & 4-Methylphenol (m,p-Cresol)	4.91	4.70	5	98	94	58-121	4.41	25
Naphthalene	0.215	0.214	0.25	86	86	21-133	0	25
2-Nitroaniline	23.1	23.7	25	92	95	65-124	2.60	25
3-Nitroaniline	22.1	22.2	25	88	89	67-125	0.295	25
4-Nitroaniline	23.0	22.7	25	92	91	65-124	1.01	25
Nitrobenzene	4.66	4.75	5	93	95	35-180	1.74	25
2-Nitrophenol	22.3	23.3	25	89	93	29-182	4.22	25
4-Nitrophenol	22.5	22.8	25	90	91	1-132	1.23	25
N-Nitrosodiphenylamine	4.15	4.30	5	83	86	67-132	3.56	25
N-Nitrosodi-n-propylamine	4.91	4.70	5	98	94	1-230	4.40	25
Pentachlorophenol	1.12	1.13	1.25	90	91	14-176	1.15	25
Phenanthrene	0.203	0.208	0.25	81	83	54-120	2.76	25
Phenol	0.234	0.221	0.25	93	89	5-112	5.34	25
Pyrene	0.202	0.202	0.25	81	81	52-115	0	25
Pyridine	3.56	3.06	5	71	61	60-140	15.2	25
1,2,4-Trichlorobenzene	4.46	4.53	5	89	91	44-142	1.65	25
2,4,5-Trichlorophenol	0.218	0.226	0.25	87	90	62-124	3.17	25
2,4,6-Trichlorophenol	0.234	0.232	0.25	93	93	37-144	0	25
N-Nitrosodimethylamine	22.6	21.4	25	91	86	45-111	5.63	25

(Cont.)



Quality Control Report

Client:	PG&E Gateway Generating Station	WorkOrder:	1809780
Date Prepared:	9/19/18	BatchID:	165166
Date Analyzed:	9/19/18	Extraction Method:	E625
Instrument:	GC17	Analytical Method:	E625
Matrix:	Water	Unit:	µg/L
Project:	Semi-Annually Sampling (September 2018)	Sample ID:	MB/LCS/LCSD-165166

QC Summary Report for E625

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Surrogate Recovery								
2-Fluorophenol	5.14	4.81	5	103	96	29-140	6.60	25
Phenol-d5	5.67	5.34	5	113	107	38-148	5.94	25
Nitrobenzene-d5	5.20	5.24	5	104	105	31-152	0.775	25
2-Fluorobiphenyl	5.01	5.03	5	100	101	40-140	0.514	25
2,4,6-Tribromophenol	5.49	5.74	5	110	115	39-150	4.33	25
Terphenyl-d14	4.79	4.76	5	96	95	38-147	0.689	25



Quality Control Report

Client: PG&E Gateway Generating Station	WorkOrder: 1809780
Date Prepared: 9/24/18	BatchID: 165431
Date Analyzed: 9/24/18	Extraction Method: SM4500-CN ⁻ E
Instrument: WC_SKALAR	Analytical Method: SM4500-CN ⁻ CE
Matrix: Water	Unit: µg/L
Project: Semi-Annually Sampling (September 2018)	Sample ID: MB/LCS/LCSD-165431

QC Summary Report for SM4500-CN⁻ CE

Analyte	MB Result	RL
Total Cyanide	ND	1.0 - - -

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Total Cyanide	40.5	41.4	40	101	103	80-120	1.99	20



Quality Control Report

Client: PG&E Gateway Generating Station	WorkOrder: 1809780
Date Prepared: 9/19/18	BatchID: 165200
Date Analyzed: 9/20/18	Extraction Method: E245.2
Instrument: AA1	Analytical Method: E245.2
Matrix: Water	Unit: µg/L
Project: Semi-Annually Sampling (September 2018)	Sample ID: MB/LCS/LCSD-165200

QC Summary Report for Mercury

Analyte	MB Result	RL			
Mercury	ND	0.20	-	-	-

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Mercury	1.76	1.76	2	88	88	85-115	0	20



Quality Control Report

Client: PG&E Gateway Generating Station
Date Prepared: 9/18/18
Date Analyzed: 9/19/18
Instrument: ICP-MS2
Matrix: Water
Project: Semi-Annually Sampling (September 2018)

WorkOrder: 1809780
BatchID: 165141
Extraction Method: E200.8
Analytical Method: E200.8
Unit: µg/L
Sample ID: MB/LCS/LCSD-165141

QC Summary Report for Metals

Analyte	MB Result	RL	SPK Val	MB SS %REC	MB SS Limits
Antimony	ND	0.50	-	-	-
Arsenic	ND	0.50	-	-	-
Beryllium	ND	0.50	-	-	-
Cadmium	ND	0.25	-	-	-
Chromium	ND	0.50	-	-	-
Copper	ND	2.0	-	-	-
Lead	ND	0.50	-	-	-
Mercury	ND	0.050	-	-	-
Nickel	ND	0.50	-	-	-
Selenium	ND	0.50	-	-	-
Silver	ND	0.19	-	-	-
Thallium	ND	0.50	-	-	-
Zinc	ND	15	-	-	-

Surrogate Recovery

Terbium	758		750	101	70-130
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Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Antimony	52.6	52.5	50	105	105	85-115	0	20
Arsenic	50.4	49.5	50	101	99	85-115	1.92	20
Beryllium	53.0	52.9	50	106	106	85-115	0	20
Cadmium	51.7	51.5	50	103	103	85-115	0	20
Chromium	51.6	51.3	50	103	103	85-115	0	20
Copper	52.0	51.9	50	104	104	85-115	0	20
Lead	50.1	49.8	50	100	100	85-115	0	20
Mercury	1.20	1.18	1.25	96	94	85-115	2.02	20
Nickel	52.5	51.5	50	105	103	85-115	1.96	20
Selenium	51.7	50.0	50	103	100	85-115	3.36	20
Silver	51.8	51.1	50	104	102	85-115	1.36	20
Thallium	48.0	47.9	50	96	96	85-115	0	20
Zinc	517	515	500	103	103	85-115	0	20

Surrogate Recovery

Terbium	759	758	750	101	101	70-130	0	20
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1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1809780

ClientCode: PGEA

- WaterTrax
 WriteOn
 EDF
 Excel
 EQulS
 Email
 HardCopy
 ThirdParty
 J-flag
 Detection Summary
 Dry-Weight

Report to:

Angel Espiritu
PG&E Gateway Generating Station
3225 Wilbur Avenue
Antioch, CA 94509
(925) 459-7212 FAX:

Email: abe4@pge.com
cc/3rd Party: A1HE@pge.com; J5Ld@pge.com;
PO:
Project: Semi-Annually Sampling (September 2018)

Bill to:

Angel Espiritu
PG&E Gateway Generating Station
3225 Wilbur Avenue
Antioch, CA 94509

**Requested TATs: 15 days;
5 days;**

**Date Received: 09/19/2018
Date Logged: 09/19/2018**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1809780-001	I-001	Water	9/19/2018 11:10	<input type="checkbox"/>	H	E	B	C	D	G	A	F	F			

Test Legend:

1	1613_TCDD_W	2	608_W [J]	3	624_W	4	624ACR+2CEVE_W
5	625_SCSM_W	6	ASBESTOS_E100_1M_WW	7	CN_SM4500CE_W	8	HG_W
9	PP13MS_TTLC_W	10		11		12	

Prepared by: Kena Ponce

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.



WORK ORDER SUMMARY

Client Name: PG&E GATEWAY GENERATING STATION

Project: Semi-Annually Sampling (September 2018)

Work Order: 1809780

Client Contact: Angel Espiritu

QC Level: LEVEL 2

Contact's Email: abe4@pge.com

Comments:

Date Logged: 9/19/2018

WaterTrax WriteOn EDF Excel Fax Email HardCopy ThirdParty J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1809780-001A	I-001	Water	SM4500-CN ⁻ CE (Cyanide, Total)	1	250mL aHDPE w/ NaOH + Na2S2O3	<input type="checkbox"/>	9/19/2018 11:10	5 days	Present	<input type="checkbox"/>	
1809780-001B	I-001	Water	E624 (VOCs)	2	VOA w/ HCl	<input type="checkbox"/>	9/19/2018 11:10	5 days	Present	<input type="checkbox"/>	
				2	VOA w/ HCl	<input type="checkbox"/>					
1809780-001C	I-001	Water	E624 (ACRO, ACRY, & 2-CEVE)	2	VOA, Unpres	<input type="checkbox"/>	9/19/2018 11:10	5 days	Present	<input type="checkbox"/>	
				2	VOA, Unpres	<input type="checkbox"/>					
1809780-001D	I-001	Water	E625 (SVOCs, Low-Level)	1	1LA Narrow Mouth, Unpres	<input type="checkbox"/>	9/19/2018 11:10	5 days	Present	<input type="checkbox"/>	
				2	1LA Narrow Mouth, Unpres	<input type="checkbox"/>					
1809780-001E	I-001	Water	E608 (OC Pesticides+PCBs w/ Florisil Clean-up)	1	1LA Narrow Mouth, Unpres	<input type="checkbox"/>	9/19/2018 11:10	5 days	Present	<input type="checkbox"/>	
1809780-001F	I-001	Water	E200.8 (PP13 Metals)	2	250mL HDPE w/ HNO3	<input type="checkbox"/>	9/19/2018 11:10	5 days	Present	<input type="checkbox"/>	
1809780-001G	I-001	Water	Asbestos - E100.1, modified EPA Protocol (MFL)	3	1LA Narrow Mouth, Unpres	<input type="checkbox"/>	9/19/2018 11:10	5 days	Present	<input type="checkbox"/>	SubOut
1809780-001H	I-001	Water	E1613 (2,3,7,8-TCDD only)	3	1LA Narrow Mouth, Unpres	<input type="checkbox"/>	9/19/2018 11:10	15 days	Present	<input type="checkbox"/>	

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.

Sampling Containers for APPENDIX B

Date:	Time:	# Containers	Container Type	Preservative:	Composite/Grab
9/19/18	11:10	8	Amber Glass 1L	NP	Grab
9/19/18	11:10	2	VOA 40 mL	NP	Grab
9/19/18	11:10	2	VOA 40 mL	HCl	Grab
9/19/18	11:00	2	POLY 250 ml	HNO ₃	Composite
9/19/18	11:10	1	Amber Poly 250 mL (pretreated with sodium thiosulfate)	NaOH	Grab



9/19/18
13:45

9/19/18 13:45

APPENDIX A

District Local Discharge Limits include a parameter called Total Toxic Organics (TTO). The required analytical methods for TTO analysis are listed in 40 CFR Part 136 and include the following EPA methods: 624, 625, 608, and 1613, respectively. Unless specifically required, EPA method 1613 for dioxins is not mandatory for routine TTO analysis. The constituents with concentrations greater than the minimum limit/reporting limit must be added together to determine compliance with the District's Local Discharge Limit for TTO of 2.0 mg/L. The following is a list of the constituents of TTO:

EPA Method 624 Compounds

Acrolein
Acrylonitrile
Benzene
Bromodichloromethane (Dichlorobromomethane)
Bromoform
Bromomethane (Methyl Bromide)
Carbon tetrachloride (Tetrachloromethane)
Chlorobenzene
Chloroethane (Ethyl Chloride)
2-Chloroethyl vinyl ether
Chloroform (trichloromethane)
Chloromethane (Methyl Chloride)
Dibromochloromethane (Chlorodibromomethane)
1, 2-Dichlorobenzene
1, 3-Dichlorobenzene
1, 4-Dichlorobenzene
1, 1-Dichloroethane
1, 2-Dichloroethane
1, 1-Dichloroethene (1, 1-dichloroethylene)
trans-1, 2-Dichloroethene
1, 2-Dichloropropane
cis-1, 3-Dichloropropene
trans-1, 3-Dichloropropene
Ethylbenzene
Methylene Chloride (Dichloromethane)
1, 1, 2, 2-Tetrachloroethane
Tetrachloroethene (PCE)
Toluene
1, 1, 1-Trichloroethane
1, 1, 2-Trichloroethane
Trichloroethene (TCE)
Trichlorofluoromethane
Vinyl chloride (Chloroethylene)

EPA Method 625 Compounds

Acenaphthene
Acenaphthylene
Anthracene
Benzidine
Benzo (a) anthracene
Benzo (a) pyrene
Benzo (b) fluoranthene
Benzo (g, h, i) perylene
Benzo (k) fluoranthene
Benzyl butyl phthalate
bis (2-Chloroethoxy) methane
bis (2-Chloroethyl) ether
bis (2-Chloroisopropyl) ether
bis (2-Ethylhexyl) phthalate
4-Bromophenyl phenyl ether
4-Chloro-3-methylphenol
2-Chloronaphthalene
2-Chlorophenyl
4-Chlorophenyl phenyl ether
Chrysene
Dibenzo (a, h) anthracene
1, 2-Dichlorobenzene
1, 3-Dichlorobenzene
1, 4-Dichlorobenzene
3, 3'-Dichlorobenzidine

2, 4-Dichlorophenol
Diethyl phthalate
2, 4-Dimethylphenol
Dimethylphthalate
Di-n-butylphthalate
2, 4-Dinitrophenol
2, 4-Dinitrotoluene
2, 6-Dinitrotoluene
Di-n-octylphthalate
1, 2-Diphenylhydrazine Azo
Fluoranthene
Fluorene
Hexachlorobenzene
Hexachlorobutadiene
Hexachlorocyclopentadiene
Hexachloroethane
Indeno (1, 2, 3-cd) pyrene
Isophorone
2-Methyl-4, 6-dinitrophenol
Naphthalene
Nitrobenzene
2-Nitrophenol
4-Nitrophenol
N-Nitrosodimethylamine
N-Nitroso-di-n-propylamine
N-Nitrosodiphenylamine
Pentachlorophenol
Phenanthrene
Phenol
Pyrene
1, 2, 4-Trichlorobenzene
2, 4, 6-Trichlorophenol

EPA Method 608 Compounds

Aldrin
alpha-BHC
beta-BHC
delta-BHC
gamma-BHC (Lindane)
Chlordane
4, 4'-DDD
4, 4'-DDE
4, 4' DDT
Dieldrin
Endosulfan I
Endosulfan II
Endosulfan sulfate
Endrin
Endrin aldehyde
Heptachlor
Heptachlor epoxide
PCB 1016
PCB 1221
PCB 1232
PCB 1242
PCB 1248
PCB 1254
PCB 1260
Toxaphene

[Handwritten signatures and dates]
9/19/18 13:45
9/19/18
13:45

APPENDIX B

(for 40 CFR part 423 - 126 Priority Pollutants)

001	Acenaphthene	065	Di-N-Butyl Phthalate
002	Acrolein	066	Di-n-octyl Phthalate
003	Acrylonitrile	067	Diethyl Phthalate
004	Benzene	068	Dimethyl phthalate
005	Benzidine	069	1, 2-benzanthracene (benzo(a)anthracene)
006	Carbon tetrachloride (tetrachloromethane)	070	Benzo(a)pyrene (3, 4-benzo-pyrene)
007	Chlorobenzene	071	3,4-Benzofluoranthene (benzo(b) fluoranthene)
008	1, 2, 4-trichlorobenzene	072	11,12-benzofluoranthene (benzo(b) fluoranthene)
009	Hexachlorobenzene	073	Chrysene
010	1, 2-dichloroethane	074	Acenaphthylene
011	1, 1, 1-trichloroethane	075	Anthracene
012	Hexachloroethane	076	1, 12-benzoperylene (benzo(ghi) perylene)
013	1, 1-dichloroethane	077	Fluorene
014	1, 1, 2-trichloroethane	078	Phenanthrene
015	1, 1, 2, 2-tetrachloroethane	079	1, 2, 5, 6-dibenzanthracene (dibenzo(a,h)anthracene)
016	Chloroethane	080	Indeno (1, 2, 3-cd) pyrene (2, 3-o-phcnylene pyrene)
017	Bis (2-chloroethyl) ether	081	Pyrene
018	2-chloroethyl vinyl ether (mixed)	082	Tetrachloroethylene
019	2-chloronaphthalene	083	Toluene
020	2, 4, 6-trichlorophenol	084	Trichloroethylene
021	Parachlorometa cresol	085	Vinyl chloride (chloroethylene)
022	Chloroform (trichloromethane)	086	Aldrin
023	2-chlorophenol	087	Dieldrin
024	1,2-dichlorobenzene (benzo(b)fluoranthene)	088	Chlordane (technical mixture and metabolites)
025	1,3-dichlorobenzene (benzo(b)fluoranthene)	089	4, 4-DDT
026	1, 4-dichlorobenzene	090	4, 4-DDE (p, p-DDX)
027	3, 3-dichlorobenzidine	091	4, 4-DDD (p, p-TDE)
028	1, 1-dichloroethylene	092	Alpha-endosulfan
029	1, 2-trans-dichloroethylene	093	Beta-endosulfan
030	2, 4-dichlorophenol	094	Endosulfan sulfate
031	1, 2-dichloropropane	095	Endrin
032	1, 2-dichloropropylene (1, 3-dichloropropene)	096	Endrin aldehyde
033	2, 4-dimethylphenol	097	Heptachlor
034	2, 4-dinitrotoluene	098	Heptachlor epoxide (BHC-hexachlorocyclohexane)
035	2, 6-dinitrotoluene	099	Alpha-BHC
036	1, 2-diphenylhydrazine	100	Beta-BHC
037	Ethylbenzene	101	Gamma-BHC (lindane)
038	Fluoranthene	102	Delta-BHC (PCB-polychlorinated bi-phenyls)
039	4-chlorophenyl phenyl ether	103	PCB-1242 (Arochlor 1242)
040	4-bromophenyl phenyl ether	104	PCB-1254 (Arochlor 1254)
041	Bis(2-chloroisopropyl) ether	105	PCB-1221 (Arochlor 1221)
042	Bis(2-chloroethoxy) methane	106	PCB-1232 (Arochlor 1232)
043	Methylene chloride (dichloromethane)	107	PCB-1248 (Arochlor 1248)
044	Methyl chloride (dichloromethane)	108	PCB-1260 (Arochlor 1260)
045	Methyl bromide (bromomethane)	109	PCB-1016 (Arochlor 1016)
046	Bromoform (tribromomethane)	110	Toxaphene
047	Dichlorobromomethane	111	Antimony
048	Chlorodibromomethane	112	Arsenic
049	Hexachlorobutadiene	113	Asbestos
050	Hexachloromyclopentadiene	114	Beryllium
051	Isophorone	115	Cadmium
052	Naphthalene	116	Chromium
053	Nitrobenzene	117	Copper
054	2-Nitrophenol	118	Cyanide, (Total)
055	4-nitrophenol	119	Lead
056	2, 4-dinitrophenol	120	Mercury
057	4, 6-dinitro-o-cresol	121	Nickel
058	N-nitrosodimethylamine	122	Selenium
059	N-nitrosodiphenylamine	123	Silver
060	N-nitrosodi-n-propylamine	124	Thallium
061	Pentachlorophenol	125	Zinc
062	Phenol	126	2,3,7,8-tetrachloro-dibenzo-p-dioxin (TCDD)
063	Bis(2-ethylhexyl) phthalate		
064	Butyl benzyl phthalate		

 9/19/18
 13:45
 9/19/18
 13:45



Sample Receipt Checklist

Client Name: **PG&E Gateway Generating Station**
 Project: **Semi-Annually Sampling (September 2018)**
 WorkOrder No: **1809780** Matrix: Water
 Carrier: Client Drop-In

Date and Time Received: **9/19/2018 13:45**
 Date Logged: **9/19/2018**
 Received by: Tina Perez
 Logged by: Kena Ponce

Chain of Custody (COC) Information

Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample IDs noted by Client on COC?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Date and Time of collection noted by Client on COC?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sampler's name noted on COC?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
COC agrees with Quote?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper containers/bottles?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>
Samples Received on Ice?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	

(Ice Type: WET ICE)

Sample/Temp Blank temperature	Temp: 5.6°C	NA <input type="checkbox"/>	
Water - VOA vials have zero headspace / no bubbles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Sample labels checked for correct preservation?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
pH acceptable upon receipt (Metal: <2; 522: <4; 218.7: >8)?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>

UCMR Samples:

pH tested and acceptable upon receipt (200.8: ≤2; 525.3: ≤4; 530: ≤7; 541: <3; 544: <6.5 & 7.5)?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
--	------------------------------	-----------------------------	--

Free Chlorine tested and acceptable upon receipt (<0.1mg/L)?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
--	------------------------------	-----------------------------	--

Comments:

Attachment 2

Summary of Cyanide Resampling Results

GGG - Summary of Cyanide Resampling Results

Analytical Laboratory	Resample #1: 10/30/2018 - @ Tiger Pit		Resample #2: 11/07/2018 @ Tiger Pit		Resample #3: 11/24/2018 @ Tiger Pit		Resample #4: 12/04/2018 @ Tiger Pit		Resample #5: 12/11/2018 @ Tiger Pit		Resample #6: 12/14/2018 @ Tiger Pit		Resample #7: 12/18/2018 @ Tiger Pit	
	No Preservative	w/ NaOH Preservative	No Preservative	w/ NaOH Preservative	No Preservative	w/ NaOH Preservative	No Preservative	w/ NaOH Preservative	No Preservative	w/ NaOH Preservative	No Preservative	w/ NaOH Preservative	No Preservative	w/ NaOH Preservative
Units: ppb														
Laboratory 1	14.0	21.0	ND (<1.0)	ND (<1.0)										
Laboratory 2	9.7	20.0	ND (J1.1*)	ND (J2.5*)										
Laboratory 3	ND (<10.0)	ND (<10.0)	ND (<10.0)	ND (<10.0)	ND (<10.0)	12.0	32.0	30.0	18.0	13.0	20.0	ND (<10)	28.0	28.0

Note:

* - Non-detect with J Flag: Estimated values below the reporting limit, but above the method detection limit.

Sampler Laboratory	Resample #8 1/10/2019		Resample #9 (1/16/2019)	Resample #10 (2/7/2019)	Resample #11 (2/11/2019)		Resample #12 (2/25/2019)	Resample #13 (2/27/2019)	Resample #14 (2/28/2019)
	No Preservative	No Preservative	No Preservative	No Preservative	No Preservative		No Preservative	No Preservative	No Preservative
	Enthalpy	Doug Welch	Muskan	Muskan	Muskan		Muskan	Doug Welch	Muskan
	Enthalpy	Enthalpy	Enthalpy	Enthalpy	Enthalpy	MAI	Enthalpy	Enthalpy	Enthalpy
Sampling Location	units: ppb								
Tiger Pit	51.0	55.0	ND (<10)	13.0	14.0	29.0	ND (<10)		
HRSO IP A			ND (<10)						
HRSO IP B			ND (<10)						
Phosphate Skid			ND (<10)						
CC Coolong Water			ND (<10)						
Amine Skid			ND (<10)						
E-006 (Storm Outfall)			ND (<10)						
Hammond Tank			26.0	ND (<10)			ND (<10)		
OWS			ND (<10)						
Ammonia Sump			ND (<10)						
Service Water Tank Drain			ND (<10)						
Source Water		ND (<10.0)	ND (<10)	ND (<10)			ND (<10)		
RO Reject					ND (<10)	1.7	ND (<10)		
Compliance Point								ND (<10)	ND (<10)

Attachment 3

Analytical Report on Resampling #1



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1810E56

Report Created for: PG&E Gateway Generating Station

3225 Wilbur Avenue
Antioch, CA 94509

Project Contact: Angel Espiritu
Project P.O.:
Project: Resample 1 (10/30/18)

Project Received: 10/30/2018

Analytical Report reviewed & approved for release on 10/31/2018 by:

Yen Cao
Project Manager

The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.





Glossary of Terms & Qualifier Definitions

Client: PG&E Gateway Generating Station
Project: Resample 1 (10/30/18)
WorkOrder: 1810E56

Glossary Abbreviation

%D	Serial Dilution Percent Difference
95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DLT	Dilution Test (Serial Dilution)
DUP	Duplicate
EDL	Estimated Detection Limit
ERS	External reference sample. Second source calibration verification.
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PDS	Post Digestion Spike
PDSD	Post Digestion Spike Duplicate
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
ST	Sorbent Tube
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)



Analytical Report

Client: PG&E Gateway Generating Station
Date Received: 10/30/18 10:00
Date Prepared: 10/30/18
Project: Resample 1 (10/30/18)

WorkOrder: 1810E56
Extraction Method: SM4500-CN⁻ E
Analytical Method: SM4500-CN⁻ CE
Unit: µg/L

Cyanide, Total

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
Tiger Pit-Amber	1810E56-001A	Water	10/30/2018 07:55	WC_SKALAR 103018A1_35	167499

Analytes	Result	RL	DF	Date Analyzed
Total Cyanide	21	1.0	1	10/30/2018 11:17

Analyst(s): NM

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
Tiger Pit-Clear	1810E56-002A	Water	10/30/2018 07:55	WC_SKALAR 103018A1_36	167499

Analytes	Result	RL	DF	Date Analyzed
Total Cyanide	14	1.0	1	10/30/2018 11:20

Analyst(s): NM



Quality Control Report

Client: PG&E Gateway Generating Station
Date Prepared: 10/30/18
Date Analyzed: 10/30/18
Instrument: WC_SKALAR
Matrix: Water
Project: Resample 1 (10/30/18)

WorkOrder: 1810E56
BatchID: 167499
Extraction Method: SM4500-CN⁻ E
Analytical Method: SM4500-CN⁻ CE
Unit: µg/L
Sample ID: MB/LCS/LCSD-167499

QC Summary Report for SM4500-CN⁻ CE

Analyte	MB Result	RL
Total Cyanide	ND	1.0 - - -

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Total Cyanide	40	40	40	100	99	90-110	0.933	20



1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1810E56

ClientCode: PGEA

- WaterTrax
 WriteOn
 EDF
 Excel
 EQulS
 Email
 HardCopy
 ThirdParty
 J-flag
 Detection Summary
 Dry-Weight

Report to:

Angel Espiritu
PG&E Gateway Generating Station
3225 Wilbur Avenue
Antioch, CA 94509
(925) 459-7212 FAX:

Email: abe4@pge.com
cc/3rd Party: A1HE@pge.com; J5Ld@pge.com; tIWY@p
PO:
Project: Resample 1 (10/30/18)

Bill to:

Angel Espiritu
PG&E Gateway Generating Station
3225 Wilbur Avenue
Antioch, CA 94509

Requested TAT: 1 day;

Date Received: 10/30/2018

Date Logged: 10/30/2018

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
1810E56-001	Tiger Pit-Amber	Water	10/30/2018 07:55	<input type="checkbox"/>	A												
1810E56-002	Tiger Pit-Clear	Water	10/30/2018 07:55	<input type="checkbox"/>	A												

Test Legend:

1	CN_SM4500CE_W	2		3		4	
5		6		7		8	
9		10		11		12	

Prepared by: Agustina Venegas

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.



WORK ORDER SUMMARY

Client Name: PG&E GATEWAY GENERATING STATION

Project: Resample 1 (10/30/18)

Work Order: 1810E56

Client Contact: Angel Espiritu

QC Level: LEVEL 2

Contact's Email: abe4@pge.com

Comments:

Date Logged: 10/30/2018

WaterTrax WriteOn EDF Excel Fax Email HardCopy ThirdParty J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1810E56-001A	Tiger Pit-Amber	Water	SM4500-CN ⁻ CE (Cyanide, Total)	1	250mL aHDPE w/ NaOH + Na2S2O3	<input type="checkbox"/>	10/30/2018 7:55	1 day	None	<input type="checkbox"/>	
1810E56-002A	Tiger Pit-Clear	Water	SM4500-CN ⁻ CE (Cyanide, Total)	1	250mL HDPE w/ Na2S2O3	<input type="checkbox"/>	10/30/2018 7:55	1 day	None	<input type="checkbox"/>	

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.



Sample Receipt Checklist

Client Name: **PG&E Gateway Generating Station**
 Project: **Resample 1 (10/30/18)**
 WorkOrder No: **1810E56** Matrix: Water
 Carrier: Client Drop-In

Date and Time Received: **10/30/2018 10:00**
 Date Logged: **10/30/2018**
 Received by: **Jena Alfaro**
 Logged by: **Agustina Venegas**

Chain of Custody (COC) Information

Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample IDs noted by Client on COC?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Date and Time of collection noted by Client on COC?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sampler's name noted on COC?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
COC agrees with Quote?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper containers/bottles?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>
Samples Received on Ice?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	

(Ice Type: WET ICE)

Sample/Temp Blank temperature	Temp: 5.5°C		NA <input type="checkbox"/>
Water - VOA vials have zero headspace / no bubbles?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>
Sample labels checked for correct preservation?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
pH acceptable upon receipt (Metal: <2; 522: <4; 218.7: >8)?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>

UCMR Samples:

pH tested and acceptable upon receipt (200.8: ≤2; 525.3: ≤4; 530: ≤7; 541: <3; 544: <6.5 & 7.5)?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Free Chlorine tested and acceptable upon receipt (<0.1mg/L)?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>

Comments:



Thursday, November 01, 2018

Angel Espiritu
PG&E Gateway Generating Station
3225 Wilbur Ave
Antioch, CA 94509

Re Lab Order: T101182
Project ID: RESAMPLE 1 (10/30/18)

Collected By: MUSKAN ENVIRONMENTAL
PO/Contract #:

Dear Angel Espiritu:

Enclosed are the analytical results for sample(s) received by the laboratory on Tuesday, October 30, 2018. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

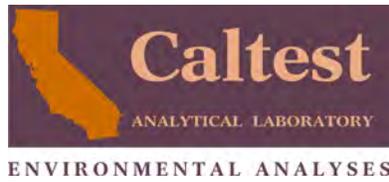
If you have any questions concerning this report, please feel free to contact me.

CC: Daryl Sattelberg, PG&E Gateway Generating Station
David Hammond, PG&E Gateway Generating Station
Tim Wisdom, PG&E Gateway Generating Station

Enclosures

Project Manager: Eli N. Greenwald





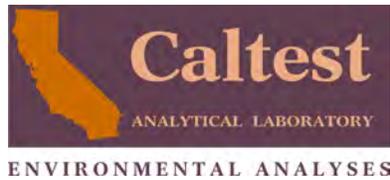
SAMPLE SUMMARY

Lab Order: T101182
 Project ID: RESAMPLE 1 (10/30/18)

Lab ID	Sample ID	Matrix	Date Collected	Date Received
T101182001	TIGER PIT (NAOH PRESERVED)	Water	10/30/2018 07:55	10/30/2018 09:53
T101182002	TIGER PIT (UNPRESERVED)	Water	10/30/2018 07:55	10/30/2018 09:53

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**NARRATIVE**

Lab Order: T101182
Project ID: RESAMPLE 1 (10/30/18)

General Qualifiers and Notes

Caltest authorizes this report to be reproduced only in its entirety. Results are specific to the sample(s) as submitted and only to the parameter(s) reported.

Caltest certifies that all test results for wastewater and hazardous waste analyses meet all applicable NELAC requirements; all microbiology and drinking water testing meet applicable ELAP requirements, unless stated otherwise.

All analyses performed by EPA Methods or Standard Methods.

Dilution Factors (DF) reported greater than '1' have been used to adjust the result, Reporting Limit (RL), and Method Detection Limit (MDL).

All Solid, sludge, and/or biosolids data is reported in Wet Weight, unless otherwise specified.

Filtrations performed at Caltest for dissolved metals (excluding mercury) and/or pH analysis are not performed within the 15 minute holding time as specified by 40CFR 136.3 table II.

Results Qualifiers: Report fields may contain codes and non-numeric data correlating to one or more of the following definitions:

ND - Non Detect - indicates analytical result has not been detected.

RL - Reporting Limit is the quantitation limit at which the laboratory is able to detect an analyte. An analyte not detected at or above the RL is reported as ND unless otherwise noted or qualified. For analyses pertaining to the State Implementation Plan of the California Toxics Rule, the Caltest Reporting Limit (RL) is equivalent to the Minimum Level (ML). A standard is always run at or below the ML. Where Reporting Limits are elevated due to dilution, the ML calibration criteria has been met.

J - reflects estimated analytical result value detected below the Reporting Limit (RL) and above the Method Detection Limit (MDL). The 'J' flag is equivalent to the DNQ Estimated Concentration flag.

E - indicates an estimated analytical result value.

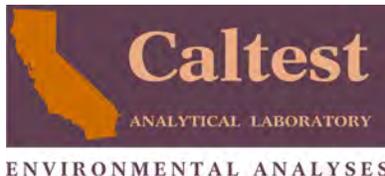
B - indicates the analyte has been detected in the blank associated with the sample.

NC - means not able to be calculated for RPD or Spike Recoveries.

SS - compound is a Surrogate Spike used per laboratory quality assurance manual.

NOTE: This document represents a complete Analytical Report for the samples referenced herein and should be retained as a permanent record thereof.





ANALYTICAL RESULTS

Lab Order: T101182
 Project ID: RESAMPLE 1 (10/30/18)

Lab ID	T101182001	Date Collected	10/30/2018 07:55	Matrix	Water			
Sample ID	TIGER PIT (NAOH PRESERVED)	Date Received	10/30/2018 09:53					
Parameters	Result Units	R. L.	DF Prepared	Batch	Analyzed	Batch	Qual	
Cyanide, Total Analysis	Analytical Method:	SM 4500-CN C/E-99/11			Analyzed by:	BCP		
Cyanide	20 ug/L	3	1		10/30/18 16:12	WCO 14042		

Lab ID	T101182002	Date Collected	10/30/2018 07:55	Matrix	Water			
Sample ID	TIGER PIT (UNPRESERVED)	Date Received	10/30/2018 09:53					
Parameters	Result Units	R. L.	DF Prepared	Batch	Analyzed	Batch	Qual	
Cyanide, Total Analysis	Analytical Method:	SM 4500-CN C/E-99/11			Analyzed by:	BCP		
Cyanide	9.7 ug/L	3	1		10/30/18 16:12	WCO 14042		

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QUALITY CONTROL DATA

Lab Order: T101182
 Project ID: RESAMPLE 1 (10/30/18)

Analysis Description:	Cyanide, Total Analysis	QC Batch:	WCO/14042
Analysis Method:	SM 4500-CN C/E-99/11	QC Batch Method:	SM 4500-CN C/E-99/11

METHOD BLANK: 850434

Parameter	Blank Result	Reporting Limit	Units	Qualifiers
Cyanide	ND	3	ug/L	

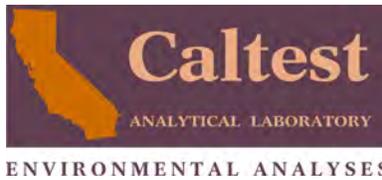
LABORATORY CONTROL SAMPLE: 850435

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% REC Limits	Qualifier
Cyanide	ug/L	20	19.9	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 850436 850437

Parameter	Units	T101182001 Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Cyanide	ug/L	20	40	52.7	58.6	82	97	80-120	11	20	



**QUALITY CONTROL DATA QUALIFIERS**

Lab Order: T101182
Project ID: RESAMPLE 1 (10/30/18)

QUALITY CONTROL PARAMETER QUALIFIERS

Results Qualifiers: Report fields may contain codes and non-numeric data correlating to one or more of the following definitions:

NS - means not spiked and will not have recoveries reported for Analyte Spike Amounts

QC Codes Keys: These descriptors are used to help identify the specific QC samples and clarify the report.

MB - Method Blank

Method Blanks are reported to the same Method Detection Limits (MDLs) or Reporting Limits (RLs) as the analytical samples in the corresponding QC batch.

LCS/LCSD - Laboratory Control Spike / Laboratory Control Spike Duplicate

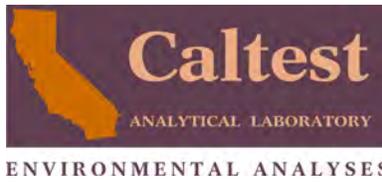
DUP - Duplicate of Original Sample Matrix

MS/MSD - Matrix Spike / Matrix Spike Duplicate

RPD - Relative Percent Difference

%Recovery - Spike Recovery stated as a percentage





QUALITY CONTROL DATA CROSS REFERENCE TABLE

Lab Order: T101182
 Project ID: RESAMPLE 1 (10/30/18)

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
T101182001	TIGER PIT (NAOH)	SM 4500-CN C/E-99/11	WCO/14042		
T101182002	TIGER PIT (UNPRESERVED)	SM 4500-CN C/E-99/11	WCO/14042		

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SAMPLE CHAIN OF CUSTODY

email: abe4@pge.com

PROJECT NAME / PROJECT NUMBER: **Resample 1 (10/30/18)** P.O. NUMBER: _____ LAB ORDER # **T10182**

CLIENT: **PG&E Gateway Generation Station** REPORT ATTN: **Angel Espiritu** ANALYSES REQUESTED: _____

MAILING ADDRESS: **3225 Wilbur Ave.** STATE: **CA** ZIP: **94509**

BILLING ADDRESS: **(Same)** ATTN: **Angel Espiritu**

PHONE NUMBER: **(925)522-7838** FAX PHONE NUMBER: _____ SAMPLER (PRINT & SIGN NAME): **Muskan Environmental Sample**

TURN-AROUND TIME
 STANDARD
 RUSH
 DUE DATE: _____

CALTEST LAB #	DATE SAMPLED	TIME SAMPLED	SAMPLE MATRIX*	CONTAINER TYPE/ AMOUNT**	PRESERVATIVE	SAMPLE IDENTIFICATION / SITE	CLIENT LAB #	COMP. or GRAB	ANALYSES REQUESTED	REMARKS
-1	10/30/18	07:55	Waste Water AQ	500ml POLY	NaOH	Tiger Pit		grab		Samples sent on ICG
-2	10/30/18	07:55	Waste Water AQ	500ml POLY	NaOH preserved	Tiger Pit		grab		

Cyanide (spoil) generated with this sample before sampling by SM 4500 CN-ABCE

RUSH

RELINQUISHED BY	DATE/TIME	RECEIVED BY	RELINQUISHED BY	DATE/TIME	RECEIVED BY
<i>[Signature]</i>	10/30/18 09:03	<i>[Signature]</i>	<i>[Signature]</i>	10/30/18 09:53	<i>[Signature]</i>

FOR LAB USE ONLY	Samples: WC _____ MICRO _____ BIO _____ AA _____ SV _____ VOA _____ pH? Y/N _____ TEMP: 0.6 SEALED: 0/N INTACT: 0/N	COMMENTS: _____	<p>*MATRIX: AQ = Aqueous Nondrinking Water, Digested Metals; FE = Low R.L.s, Aqueous Nondrinking Water, Digested Metals; DW = Drinking Water; SL = Soil Sludge, Solid ; FP = Free Product</p> <p>**CONTAINER TYPES: AL = Amber Liter, AHL = 500 ml Amber, PT = Pint (Plastic); QT = Quart (Plastic); HG = Half Gallon (Plastic); SJ = Soil Jar, B4 = 4oz. BACT; BT = Brass Tube; VOA = 40ml VOA; OTC = Other Type Container</p>
	BD: BIO _____ WC _____ AA _____		
	CC: AA _____ SV _____ VOA _____		
	SIL: HP _____ PT _____ QT _____ VOA _____		
	W/HNO ₃ _____ H ₂ SO ₄ _____ NaOH _____		
PIL: HNO ₃ _____ H ₂ SO ₄ _____ NaOH _____ HCL _____	R _____ PR _____ M _____ F _____		

WRITE - LABORATORY YELLOW - CLIENT COPY TO ACCOMPANY FINAL REPORT PINK - CLIENT COPY AS RECEIPT



ENTHALPY

ANALYTICAL



Enthalpy Analytical

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 304625
ANALYTICAL REPORT

Pacific Gas & Electric
4801 Oakport Street
Oakland, CA 94601

Project : STANDARD
Location : Resample 1 (10/30/18)
Level : II

<u>Sample ID</u>	<u>Lab ID</u>
TIGER PIT	304625-001
TIGER PIT	304625-002

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature which applies to this PDF file as well as any associated electronic data deliverable files. The results contained in this report meet all requirements of NELAP and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: _____

Date: 10/31/2018

Will Rice
Project Manager
will.rice@enthalpy.com
(510) 204-2221 Ext 13102

CA ELAP# 2896, NELAP# 4044-001

CASE NARRATIVE

Laboratory number: 304625
Client: Pacific Gas & Electric
Location: Resample 1 (10/30/18)
Request Date: 10/30/18
Samples Received: 10/30/18

This data package contains sample and QC results for two water samples, requested for the above referenced project on 10/30/18. The samples were received cold and intact.

Total Cyanide (SM4500CN-C,E):

Low recovery was observed for cyanide in the MS for batch 265009; the parent sample was not a project sample, the LCS was within limits, and the associated RPD was within limits. No other analytical problems were encountered.

SAMPLE RECEIPT CHECKLIST



Section 1: Login # 304625 Client: PG+E
 Date Received: _____ Project: _____

Section 2: Samples received in a cooler? Yes, how many? _____ No (skip Section 3 below)
 If no cooler Sample Temp (°C): 9.9 using IR Gun # A, or B
 Samples received on ice directly from the field. Cooling process had begun
 If in cooler: Date Opened 10/30/18 By (print) AC (sign) [Signature]
 Shipping Info (if applicable) _____
 Are custody seals present? No, or Yes. If yes, where? on cooler, on samples, on package
 Date: _____ How many _____ Signature, Initials, None
 Were custody seals intact upon arrival? Yes No N/A

Section 3: **Important : Notify PM if temperature exceeds 6°C or arrive frozen.**

Packing in cooler: (if other, describe) _____
 Bubble Wrap, Foam blocks, Bags, None, Cloth material, Cardboard, Styrofoam, Paper towels
 Samples received on ice directly from the field. Cooling process had begun
 Type of ice used : Wet, Blue/Gel, None Temperature blank(s) included? Yes, No
 Temperature measured using Thermometer ID: _____, or IR Gun # A B
 Cooler Temp (°C): #1: _____, #2: _____, #3: _____, #4: _____, #5: _____, #6: _____, #7: _____

Section 4:	YES	NO	N/A
Were custody papers dry, filled out properly, and the project identifiable	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Were Method 5035 sampling containers present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
If YES, what time were they transferred to freezer? _____			
Did all bottles arrive unbroken/unopened?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are there any missing / extra samples?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Are samples in the appropriate containers for indicated tests?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are sample labels present, in good condition and complete?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the container count match the COC?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do the sample labels agree with custody papers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Was sufficient amount of sample sent for tests requested?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did you change the hold time in LIMS for unpreserved VOAs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Did you change the hold time in LIMS for preserved terracores?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Are bubbles > 6mm absent in VOA samples?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Was the client contacted concerning this sample delivery?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If YES, who was called? _____ By _____ Date: _____			

Section 5:	YES	NO	N/A
Are the samples appropriately preserved? (if N/A, skip the rest of section 5)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Did you check preservatives for all bottles for each sample?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Did you document your preservative check?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

pH strip lot# HCL 31225, pH strip lot# _____, pH strip lot# _____
 Preservative added:
 H2SO4 lot# _____ added to samples _____ on/at _____
 HCL lot# _____ added to samples _____ on/at _____
 HNO3 lot# _____ added to samples _____ on/at _____
 NaOH lot# 164374 added to samples JB on/at 10/30/18 12:57

Section 6:
 Explanations/Comments: _____

Date Logged in 10/30/18 By (print) AC (sign) [Signature]
 Date Labeled 10/30/18 By (print) AC (sign) [Signature]

Detections Summary for 304625

Results for any subcontracted analyses are not included in this summary.

Client : Pacific Gas & Electric
Project : STANDARD
Location : Resample 1 (10/30/18)

Client Sample ID : TIGER PIT Laboratory Sample ID : 304625-001

No Detections

Client Sample ID : TIGER PIT Laboratory Sample ID : 304625-002

No Detections

Total Cyanide			
Lab #:	304625	Location:	Resample 1 (10/30/18)
Client:	Pacific Gas & Electric	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM4500CN-C,E
Analyte:	Cyanide	Batch#:	265009
Field ID:	TIGER PIT	Sampled:	10/30/18
Matrix:	Water	Received:	10/30/18
Units:	mg/L	Prepared:	10/30/18
Diln Fac:	1.000	Analyzed:	10/31/18

Type	Lab ID	Result	RL	MDL
SAMPLE	304625-001	ND	0.010	0.0031
SAMPLE	304625-002	ND	0.010	0.0031
BLANK	QC953688	ND	0.010	0.0031

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Total Cyanide			
Lab #:	304625	Location:	Resample 1 (10/30/18)
Client:	Pacific Gas & Electric	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM4500CN-C,E
Analyte:	Cyanide	Batch#:	265009
Field ID:	ZZZZZZZZZZ	Sampled:	10/24/18
MSS Lab ID:	304494-011	Received:	10/24/18
Matrix:	Water	Prepared:	10/30/18
Units:	mg/L	Analyzed:	10/31/18
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC953689		0.1000	0.08530	85	76-120		
MS	QC953690	<0.01000	0.1000	0.05860	59 *	66-120		
MSD	QC953691		0.1000	0.06700	67	66-120	13	28

*= Value outside of QC limits; see narrative

RPD= Relative Percent Difference

Attachment 4

Analytical Report on Resampling #2



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1811249

Report Created for: PG&E Gateway Generating Station

3225 Wilbur Avenue
Antioch, CA 94509

Project Contact: Angel Espiritu

Project P.O.:

Project: Resample 2 (11/7/18)

Project Received: 11/07/2018

Analytical Report reviewed & approved for release on 11/08/2018 by:

Yen Cao

Project Manager

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Glossary of Terms & Qualifier Definitions

Client: PG&E Gateway Generating Station
Project: Resample 2 (11/7/18)
WorkOrder: 1811249

Glossary Abbreviation

%D	Serial Dilution Percent Difference
95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DLT	Dilution Test (Serial Dilution)
DUP	Duplicate
EDL	Estimated Detection Limit
ERS	External reference sample. Second source calibration verification.
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PDS	Post Digestion Spike
PDSD	Post Digestion Spike Duplicate
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
ST	Sorbent Tube
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)



Analytical Report

Client: PG&E Gateway Generating Station
Date Received: 11/7/18 9:45
Date Prepared: 11/7/18
Project: Resample 2 (11/7/18)

WorkOrder: 1811249
Extraction Method: SM4500-CN⁻ E
Analytical Method: SM4500-CN⁻ CE
Unit: µg/L

Cyanide, Total

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
Tiger Pit-Amber	1811249-001A	Water	11/07/2018 08:06	WC_SKALAR 110718A1_21	167990

Analytes	Result	RL	DF	Date Analyzed
Total Cyanide	ND	1.0	1	11/07/2018 11:36

Analyst(s): NM

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
Tiger Pit-Clear	1811249-002A	Water	11/07/2018 08:06	WC_SKALAR 110718A1_24	167990

Analytes	Result	RL	DF	Date Analyzed
Total Cyanide	ND	1.0	1	11/07/2018 11:47

Analyst(s): NM



Quality Control Report

Client: PG&E Gateway Generating Station
Date Prepared: 11/7/18
Date Analyzed: 11/7/18
Instrument: WC_SKALAR
Matrix: Water
Project: Resample 2 (11/7/18)

WorkOrder: 1811249
BatchID: 167990
Extraction Method: SM4500-CN⁻ E
Analytical Method: SM4500-CN⁻ CE
Unit: µg/L
Sample ID: MB/LCS/LCSD-167990
 1811249-001AMS/MSD

QC Summary Report for SM4500-CN⁻ CE

Analyte	MB Result	RL			
Total Cyanide	ND	1.0	-	-	-

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Total Cyanide	39	40	40	98	99	90-110	1.36	20

Analyte	MS DF	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Total Cyanide	1	41	42	40	ND	102	106	80-120	4.27	20



1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1811249

ClientCode: PGEA

- WaterTrax
 WriteOn
 EDF
 Excel
 EQulS
 Email
 HardCopy
 ThirdParty
 J-flag
 Detection Summary
 Dry-Weight

Report to:

Angel Espiritu
PG&E Gateway Generating Station
3225 Wilbur Avenue
Antioch, CA 94509
(925) 459-7212 FAX:

Email: abe4@pge.com
cc/3rd Party: A1HE@pge.com; J5Ld@pge.com; tIWY@p
PO:
Project: Resample 2 (11/7/18)

Bill to:

Angel Espiritu
PG&E Gateway Generating Station
3225 Wilbur Avenue
Antioch, CA 94509

Requested TAT: 1 day;

Date Received: 11/07/2018

Date Logged: 11/07/2018

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
1811249-001	Tiger Pit-Amber	Water	11/7/2018 08:06	<input type="checkbox"/>	A												
1811249-002	Tiger Pit-Clear	Water	11/7/2018 08:06	<input type="checkbox"/>	A												

Test Legend:

1	CN_SM4500CE_W	2		3		4	
5		6		7		8	
9		10		11		12	

Prepared by: Agustina Venegas

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.



WORK ORDER SUMMARY

Client Name: PG&E GATEWAY GENERATING STATION

Project: Resample 2 (11/7/18)

Work Order: 1811249

Client Contact: Angel Espiritu

QC Level: LEVEL 2

Contact's Email: abe4@pge.com

Comments:

Date Logged: 11/7/2018

WaterTrax WriteOn EDF Excel Fax Email HardCopy ThirdParty J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1811249-001A	Tiger Pit-Amber	Water	SM4500-CN ⁻ CE (Cyanide, Total)	1	250mL aHDPE w/ NaOH + Na2S2O3	<input type="checkbox"/>	11/7/2018 8:06	1 day			<input type="checkbox"/>
1811249-002A	Tiger Pit-Clear	Water	SM4500-CN ⁻ CE (Cyanide, Total)	1	250mL HDPE w/ Na2S2O3	<input type="checkbox"/>	11/7/2018 8:06	1 day	None		<input type="checkbox"/>

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.



Sample Receipt Checklist

Client Name: **PG&E Gateway Generating Station**
Project: **Resample 2 (11/7/18)**
WorkOrder No: **1811249** Matrix: Water
Carrier: Client Drop-In

Date and Time Received **11/7/2018 09:45**
Date Logged: **11/7/2018**
Received by: **Jena Alfaro**
Logged by: **Agustina Venegas**

Chain of Custody (COC) Information

Chain of custody present? Yes No
Chain of custody signed when relinquished and received? Yes No
Chain of custody agrees with sample labels? Yes No
Sample IDs noted by Client on COC? Yes No
Date and Time of collection noted by Client on COC? Yes No
Sampler's name noted on COC? Yes No
COC agrees with Quote? Yes No NA

Sample Receipt Information

Custody seals intact on shipping container/cooler? Yes No NA
Shipping container/cooler in good condition? Yes No
Samples in proper containers/bottles? Yes No
Sample containers intact? Yes No
Sufficient sample volume for indicated test? Yes No

Sample Preservation and Hold Time (HT) Information

All samples received within holding time? Yes No NA
Samples Received on Ice? Yes No

(Ice Type: WET ICE)

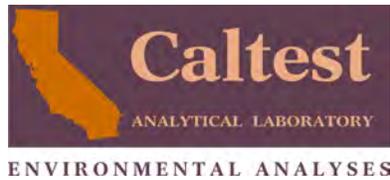
Sample/Temp Blank temperature Temp: 5.6°C NA
Water - VOA vials have zero headspace / no bubbles? Yes No NA
Sample labels checked for correct preservation? Yes No
pH acceptable upon receipt (Metal: <2; 522: <4; 218.7: >8)? Yes No NA

UCMR Samples:

pH tested and acceptable upon receipt (200.8: ≤2; 525.3: ≤4; 530: ≤7; 541: <3; 544: <6.5 & 7.5)? Yes No NA

Free Chlorine tested and acceptable upon receipt (<0.1mg/L)? Yes No NA

Comments:



Friday, November 09, 2018

Angel Espiritu
PG&E Gateway Generating Station
3225 Wilbur Ave
Antioch, CA 94509

Re Lab Order: T110273
Project ID: RESAMPLE 2 (11/7/18)

Collected By: MUSKAN ENV.
PO/Contract #:

Dear Angel Espiritu:

Enclosed are the analytical results for sample(s) received by the laboratory on Wednesday, November 07, 2018. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

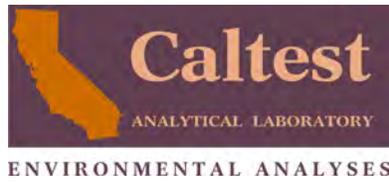
If you have any questions concerning this report, please feel free to contact me.

CC: Daryl Sattelberg, PG&E Gateway Generating Station
David Hammond, PG&E Gateway Generating Station
Tim Wisdom, PG&E Gateway Generating Station

Enclosures

Project Manager: Eli N. Greenwald





SAMPLE SUMMARY

Lab Order: T110273
 Project ID: RESAMPLE 2 (11/7/18)

Lab ID	Sample ID	Matrix	Date Collected	Date Received
T110273001	TIGER PIT (NAOH PRESERVED)	Water	11/07/2018 08:06	11/07/2018 09:58
T110273002	TIGER PIT (UNPRESERVED)	Water	11/07/2018 08:06	11/07/2018 09:58

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NARRATIVE

Lab Order: T110273
Project ID: RESAMPLE 2 (11/7/18)

General Qualifiers and Notes

Caltest authorizes this report to be reproduced only in its entirety. Results are specific to the sample(s) as submitted and only to the parameter(s) reported.

Caltest certifies that all test results for wastewater and hazardous waste analyses meet all applicable NELAC requirements; all microbiology and drinking water testing meet applicable ELAP requirements, unless stated otherwise.

All analyses performed by EPA Methods or Standard Methods.

Dilution Factors (DF) reported greater than '1' have been used to adjust the result, Reporting Limit (RL), and Method Detection Limit (MDL).

All Solid, sludge, and/or biosolids data is reported in Wet Weight, unless otherwise specified.

Filtrations performed at Caltest for dissolved metals (excluding mercury) and/or pH analysis are not performed within the 15 minute holding time as specified by 40CFR 136.3 table II.

Results Qualifiers: Report fields may contain codes and non-numeric data correlating to one or more of the following definitions:

ND - Non Detect - indicates analytical result has not been detected.

RL - Reporting Limit is the quantitation limit at which the laboratory is able to detect an analyte. An analyte not detected at or above the RL is reported as ND unless otherwise noted or qualified. For analyses pertaining to the State Implementation Plan of the California Toxics Rule, the Caltest Reporting Limit (RL) is equivalent to the Minimum Level (ML). A standard is always run at or below the ML. Where Reporting Limits are elevated due to dilution, the ML calibration criteria has been met.

J - reflects estimated analytical result value detected below the Reporting Limit (RL) and above the Method Detection Limit (MDL). The 'J' flag is equivalent to the DNQ Estimated Concentration flag.

E - indicates an estimated analytical result value.

B - indicates the analyte has been detected in the blank associated with the sample.

NC - means not able to be calculated for RPD or Spike Recoveries.

SS - compound is a Surrogate Spike used per laboratory quality assurance manual.

NOTE: This document represents a complete Analytical Report for the samples referenced herein and should be retained as a permanent record thereof.

Qualifiers and Compound Notes

- | | |
|---|---|
| 1 | Nitrate and/or Nitrite was detected in the sample. Sample was treated with Sulfamic Acid prior to analysis. |
| 2 | The sample was received unpreserved. At the time of the analysis, the measured pH of the sample was 10. |





ANALYTICAL RESULTS

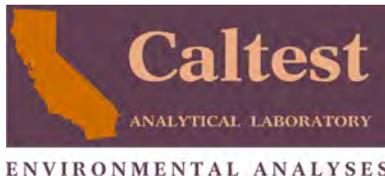
Lab Order: T110273
 Project ID: RESAMPLE 2 (11/7/18)

Lab ID	T110273001	Date Collected	11/7/2018 08:06	Matrix	Water			
Sample ID	TIGER PIT (NAOH PRESERVED)	Date Received	11/7/2018 09:58					
Parameters	Result Units	R. L.	MDL	DF Prepared	Batch	Analyzed	Batch	Qual
Cyanide, Total Analysis	Analytical Method:	SM 4500-CN C/E-99/11				Analyzed by:	BCP	
Cyanide	J2.5 ug/L	3	0.90	1		11/07/18 16:47	WCO 14067	1

Lab ID	T110273002	Date Collected	11/7/2018 08:06	Matrix	Water			
Sample ID	TIGER PIT (UNPRESERVED)	Date Received	11/7/2018 09:58					
Parameters	Result Units	R. L.	MDL	DF Prepared	Batch	Analyzed	Batch	Qual
Cyanide, Total Analysis	Analytical Method:	SM 4500-CN C/E-99/11				Analyzed by:	BCP	
Cyanide	J1.1 ug/L	3	0.90	1		11/07/18 16:47	WCO 14067	1.2

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QUALITY CONTROL DATA

Lab Order: T110273
 Project ID: RESAMPLE 2 (11/7/18)

Analysis Description:	Cyanide, Total Analysis	QC Batch:	WCO/14067
Analysis Method:	SM 4500-CN C/E-99/11	QC Batch Method:	SM 4500-CN C/E-99/11

METHOD BLANK: 851944

Parameter	Blank Result	Reporting Limit	MDL	Units	Qualifiers
Cyanide	ND	3	0.9	ug/L	

LABORATORY CONTROL SAMPLE: 851945

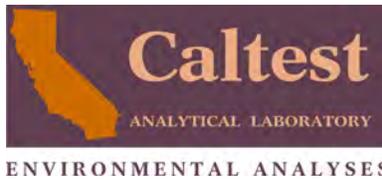
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% REC Limits	Qualifier
Cyanide	ug/L	20	20.2	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 851946 851947

Parameter	Units	T110110002 Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Cyanide	ug/L	1.6	40	40.9	42.9	98	103	80-120	4.8	20	1

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**QUALITY CONTROL DATA QUALIFIERS**

Lab Order: T110273
Project ID: RESAMPLE 2 (11/7/18)

QUALITY CONTROL PARAMETER QUALIFIERS

Results Qualifiers: Report fields may contain codes and non-numeric data correlating to one or more of the following definitions:

NS - means not spiked and will not have recoveries reported for Analyte Spike Amounts

QC Codes Keys: These descriptors are used to help identify the specific QC samples and clarify the report.

MB - Method Blank

Method Blanks are reported to the same Method Detection Limits (MDLs) or Reporting Limits (RLs) as the analytical samples in the corresponding QC batch.

LCS/LCSD - Laboratory Control Spike / Laboratory Control Spike Duplicate

DUP - Duplicate of Original Sample Matrix

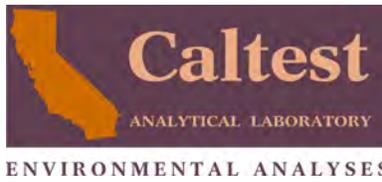
MS/MSD - Matrix Spike / Matrix Spike Duplicate

RPD - Relative Percent Difference

%Recovery - Spike Recovery stated as a percentage

1 Nitrate and/or Nitrite was detected in the sample. Sample was treated with Sulfamic Acid prior to analysis.





QUALITY CONTROL DATA CROSS REFERENCE TABLE

Lab Order: T110273
 Project ID: RESAMPLE 2 (11/7/18)

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
T110273001	TIGER PIT (NAOH)	SM 4500-CN C/E-99/11	WCO/14067		
T110273002	TIGER PIT (UNPRESERVED)	SM 4500-CN C/E-99/11	WCO/14067		

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885 N. KELLY ROAD NAPA, CA 94558 (707) 258-4000 FAX (707) 226-1001

SAMPLE CHAIN OF CUSTODY

PROJECT NAME / PROJECT NUMBER: Resample 2 (11/7/18) P.O. NUMBER: _____

LAB ORDER # T110273

CLIENT: PG&E Gateway Generation Station REPORT ATTN: Angel Espiritu / email: abey@pge.com
 MAILING ADDRESS: 3225 Niber Ave. STATE: CA ZIP: 94509
 BILLING ADDRESS: (Same) ATTN: _____
 PHONE NUMBER: (925) 522-7838 FAX PHONE NUMBER: _____ SAMPLER (PRINT & SIGN NAME): Muskam Environmental Sampling

ANALYSES REQUESTED

TURN-AROUND TIME
 STANDARD
 RUSH
 DUE DATE: _____

CALTEST LAB #	DATE SAMPLED	TIME SAMPLED	SAMPLE MATRIX*	CONTAINER TYPE/AMOUNT**	PRESERVATIVE	SAMPLE IDENTIFICATION / SITE	CLIENT LAB #	COMP. or GRAB	ANALYSES REQUESTED	REMARKS
1	11/7/18	08:06	AQ White Water	500 ml POLY	NaOH	Tiger Pit		Grab		samples sent on <u>ICE</u>
2	11/7/18	08:06	AQ White Water	500 ml POLY	None Preservee	Tiger Pit		Grab		

(analytical) preserved
 with sodium thiosulfate
 before preserving
 by SM 4500-CA-ABCE

RUSH

RELINQUISHED BY	DATE/TIME	RECEIVED BY	RELINQUISHED BY	DATE/TIME	RECEIVED BY
<u>[Signature]</u>	<u>11/7/18/08:47</u>	<u>[Signature]</u>	<u>[Signature]</u>	<u>11/7/18/09:58</u>	<u>[Signature]</u>

FOR LAB USE ONLY	Samples: WC <input checked="" type="checkbox"/> MICRO BIO AA SV VOA pH? Y/N TEMP: <u>2.4</u> SEALED: <input checked="" type="checkbox"/> Y/N INTACT: <input checked="" type="checkbox"/> Y/N	COMMENTS:
	BD: BIO WC AA	
	CC: AA SV VOA	
	SIL: HP PT QT VOA	
	W/HNO ₃ H ₂ SO ₄ NaOH	
PIL: HNO ₃ H ₂ SO ₄ NaOH HCL		

*MATRIX: AQ = Aqueous Nondrinking Water, Digested Metals; FE = Low R.L.s, Aqueous Nondrinking Water, Digested Metals; DW = Drinking Water; SL = Soil Sludge, Solid; FP = Free Product
 **CONTAINER TYPES: AL = Amber Liter; AHL = 500 ml Amber; PT = Pint (Plastic); QT = Quart (Plastic); HG = Half Gallon (Plastic); SJ = Soil Jar; B4 = 4oz. BACT; BT = Brass Tube; VOA = 40mL VOA; OTC - Other Type Container

WHITE - LABORATORY YELLOW - CLIENT COPY TO ACCOMPANY FINAL REPORT PINK - CLIENT COPY AS RECEIPT



ENTHALPY

ANALYTICAL



Enthalpy Analytical

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 304800
ANALYTICAL REPORT

Pacific Gas & Electric
4801 Oakport Street
Oakland, CA 94601

Project : STANDARD
Location : Resample 2 (11/7/18)
Level : II

<u>Sample ID</u>	<u>Lab ID</u>
TIGER PIT	304800-001
TIGER PIT	304800-002

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature which applies to this PDF file as well as any associated electronic data deliverable files. The results contained in this report meet all requirements of NELAP and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: _____

Date: 11/08/2018

Will Rice
Project Manager
will.rice@enthalpy.com
(510) 204-2221 Ext 13102

CA ELAP# 2896, NELAP# 4044-001

CASE NARRATIVE

Laboratory number: 304800
Client: Pacific Gas & Electric
Location: Resample 2 (11/7/18)
Request Date: 11/07/18
Samples Received: 11/07/18

This data package contains sample and QC results for two water samples, requested for the above referenced project on 11/07/18. The samples were received cold and intact.

Total Cyanide (SM4500CN-C,E):

Low recovery was observed for cyanide in the MS for batch 265268; the parent sample was not a project sample, the LCS was within limits, and the associated RPD was within limits. No other analytical problems were encountered.

Enthalpy Analytical

Formerly Curtis & Tompkins
 Analytical Laboratory Since 1878
 2323 Fifth Street
 Berkeley, CA 94710
 (510)486-0900 Phone
 (510)486-0532 Fax

CHAIN OF CUSTODY

Chain of Custody # : _____

Project No: _____

Project Name: Resample 2 (11/7/18)

Rpt Level: II

Turnaround Time: ~~Standard~~ Rush

C&T LOGIN # 304800

Sampler: Muskan Environmental Sample

Report To: Angel Espiritu

Company: PG&E Gateway Generating Station

Telephone: (925) 522-7838

Email: abe4@pge.com

Analytical Request

Cyanide (total) reported with sodium thiosulfate before preserving by SM 4500 CN-1BCE

Lab No.	Sample ID.	Sampling		Matrix				Chemical Preservative				
		Date	Time	Water	Soil	Other	# of Container	HCl	H ₂ SO ₄	HNO ₃	NaOH	None
	Tiger Pit	11/7/18	08:06	X			1				X	
	Tiger Pit	11/7/18	08:06	X			1					X

Notes: Sample sent on ice
 containers:
 500 ml poly
 500 ml pol X

SAMPLE RECEIPT
 Intact Cold
 On Ice Ambient

RELINQUISHED BY:

[Signature] 11/7/18/08:50 DATE/TIME
[Signature] 11/7/18 - 9:47 DATE/TIME
[Signature] 11-7 10:51 DATE/TIME

RECEIVED BY:

[Signature] 11/7/18 - 8:50 AM DATE/TIME
[Signature] 11-7 9:47 DATE/TIME
[Signature] 11/7/18 10:51 DATE/TIME

SAMPLE RECEIPT CHECKLIST



Section 1: Login # 304800
 Date Received: 11/7/18

Client: PGEO
 Project: _____

Section 2: Samples received in a cooler? Yes, how many? _____ No (skip Section 3 below)
 If no cooler Sample Temp (°C): 14.4 using IR Gun # A, or B
 Samples received on ice directly from the field. Cooling process had begun
 If in cooler: Date Opened 11/7/18 By (print) AC (sign) [Signature]
 Shipping info (if applicable) _____
 Are custody seals present? No, or Yes. If yes, where? on cooler, on samples, on package
 Date: _____ How many _____ Signature, Initials, None
 Were custody seals intact upon arrival? Yes No N/A

Section 3: **Important : Notify PM if temperature exceeds 5°C or arrive frozen.**

Packing in cooler: (if other, describe) _____
 Bubble Wrap, Foam blocks, Bags, None, Cloth material, Cardboard, Styrofoam, Paper towels
 Samples received on ice directly from the field. Cooling process had begun
 Type of ice used: Wet, Blue/Gel, None Temperature blank(s) included? Yes, No
 Temperature measured using Thermometer ID: _____, or IR Gun # A B
 Cooler Temp (°C): #1: _____, #2: _____, #3: _____, #4: _____, #5: _____, #6: _____, #7: _____

Section 4:	YES	NO	N/A
Were custody papers dry, filled out properly, and the project identifiable	/		
Were Method 5035 sampling containers present?		/	
If YES, what time were they transferred to freezer? _____			
Did all bottles arrive unbroken/unopened?	/		
Are there any missing / extra samples?		/	
Are samples in the appropriate containers for indicated tests?	/		
Are sample labels present, in good condition and complete?	/		
Does the container count match the COC?	/		
Do the sample labels agree with custody papers?	/		
Was sufficient amount of sample sent for tests requested?	/		
Did you change the hold time in LIMS for unpreserved VOAs?			/
Did you change the hold time in LIMS for preserved terracores?			/
Are bubbles > 6mm absent in VOA samples?			/
Was the client contacted concerning this sample delivery?		/	
If YES, who was called? _____ By _____ Date: _____			

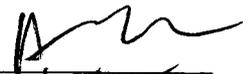
Section 5:	YES	NO	N/A
Are the samples appropriately preserved? (if N/A, skip the rest of section 5)	/		
Did you check preservatives for all bottles for each sample?		/	
Did you document your preservative check? pH strip lot# <u>HCL3725</u> , pH strip lot# _____, pH strip lot# _____	/		
Preservative added:			
<input type="checkbox"/> H2SO4 lot# _____ added to samples _____ on/at _____			
<input type="checkbox"/> HCL lot# _____ added to samples _____ on/at _____			
<input type="checkbox"/> HNO3 lot# _____ added to samples _____ on/at _____			
<input type="checkbox"/> NaOH lot# _____ added to samples _____ on/at _____			

Section 6:
 Explanations/Comments: _____

Date Logged in 11/7/18 By (print) AC (sign) [Signature]
 Date Labeled 11/7/18 By (print) AC (sign) [Signature]

Enthalpy Sample Preservation for 304800

Sample	pH: <2	>9	>12	Other
-001a	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
-002a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

Analyst: 
Date: 11/2/11

Detections Summary for 304800

Results for any subcontracted analyses are not included in this summary.

Client : Pacific Gas & Electric
Project : STANDARD
Location : Resample 2 (11/7/18)

Client Sample ID : TIGER PIT Laboratory Sample ID : 304800-001

No Detections

Client Sample ID : TIGER PIT Laboratory Sample ID : 304800-002

No Detections

Total Cyanide			
Lab #:	304800	Location:	Resample 2 (11/7/18)
Client:	Pacific Gas & Electric	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM4500CN-C,E
Analyte:	Cyanide	Batch#:	265268
Field ID:	TIGER PIT	Sampled:	11/07/18
Matrix:	Water	Received:	11/07/18
Units:	mg/L	Prepared:	11/07/18
Diln Fac:	1.000	Analyzed:	11/08/18

Type	Lab ID	Result	RL
SAMPLE	304800-001	ND	0.010
SAMPLE	304800-002	ND	0.010
BLANK	QC954755	ND	0.010

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Total Cyanide			
Lab #:	304800	Location:	Resample 2 (11/7/18)
Client:	Pacific Gas & Electric	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM4500CN-C,E
Analyte:	Cyanide	Batch#:	265268
Field ID:	ZZZZZZZZZZ	Sampled:	10/29/18
MSS Lab ID:	304646-001	Received:	10/30/18
Matrix:	Water	Prepared:	11/07/18
Units:	mg/L	Analyzed:	11/08/18
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC954756		0.2000	0.1613	81	76-120		
MS	QC954757	<0.01000	0.2000	0.1277	64 *	66-120		
MSD	QC954758		0.2000	0.1492	75	66-120	16	28

*= Value outside of QC limits; see narrative

RPD= Relative Percent Difference

Attachment 5

Analytical Report on Resampling #3



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1811249

Report Created for: PG&E Gateway Generating Station

3225 Wilbur Avenue
Antioch, CA 94509

Project Contact: Angel Espiritu

Project P.O.:

Project: Resample 2 (11/7/18)

Project Received: 11/07/2018

Analytical Report reviewed & approved for release on 11/08/2018 by:

Yen Cao

Project Manager

The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.





Glossary of Terms & Qualifier Definitions

Client: PG&E Gateway Generating Station
Project: Resample 2 (11/7/18)
WorkOrder: 1811249

Glossary Abbreviation

%D	Serial Dilution Percent Difference
95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DLT	Dilution Test (Serial Dilution)
DUP	Duplicate
EDL	Estimated Detection Limit
ERS	External reference sample. Second source calibration verification.
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PDS	Post Digestion Spike
PDSD	Post Digestion Spike Duplicate
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
ST	Sorbent Tube
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)



Analytical Report

Client: PG&E Gateway Generating Station
Date Received: 11/7/18 9:45
Date Prepared: 11/7/18
Project: Resample 2 (11/7/18)

WorkOrder: 1811249
Extraction Method: SM4500-CN⁻ E
Analytical Method: SM4500-CN⁻ CE
Unit: µg/L

Cyanide, Total

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
Tiger Pit-Amber	1811249-001A	Water	11/07/2018 08:06	WC_SKALAR 110718A1_21	167990

Analytes	Result	RL	DF	Date Analyzed
Total Cyanide	ND	1.0	1	11/07/2018 11:36

Analyst(s): NM

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
Tiger Pit-Clear	1811249-002A	Water	11/07/2018 08:06	WC_SKALAR 110718A1_24	167990

Analytes	Result	RL	DF	Date Analyzed
Total Cyanide	ND	1.0	1	11/07/2018 11:47

Analyst(s): NM



Quality Control Report

Client: PG&E Gateway Generating Station
Date Prepared: 11/7/18
Date Analyzed: 11/7/18
Instrument: WC_SKALAR
Matrix: Water
Project: Resample 2 (11/7/18)

WorkOrder: 1811249
BatchID: 167990
Extraction Method: SM4500-CN⁻ E
Analytical Method: SM4500-CN⁻ CE
Unit: µg/L
Sample ID: MB/LCS/LCSD-167990
 1811249-001AMS/MSD

QC Summary Report for SM4500-CN⁻ CE

Analyte	MB Result	RL			
Total Cyanide	ND	1.0	-	-	-

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Total Cyanide	39	40	40	98	99	90-110	1.36	20

Analyte	MS DF	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Total Cyanide	1	41	42	40	ND	102	106	80-120	4.27	20



1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1811249

ClientCode: PGEA

- WaterTrax
 WriteOn
 EDF
 Excel
 EQulS
 Email
 HardCopy
 ThirdParty
 J-flag
 Detection Summary
 Dry-Weight

Report to:

Angel Espiritu
PG&E Gateway Generating Station
3225 Wilbur Avenue
Antioch, CA 94509
(925) 459-7212 FAX:

Email: abe4@pge.com
cc/3rd Party: A1HE@pge.com; J5Ld@pge.com; tIWY@p
PO:
Project: Resample 2 (11/7/18)

Bill to:

Angel Espiritu
PG&E Gateway Generating Station
3225 Wilbur Avenue
Antioch, CA 94509

Requested TAT: 1 day;

Date Received: 11/07/2018

Date Logged: 11/07/2018

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
1811249-001	Tiger Pit-Amber	Water	11/7/2018 08:06	<input type="checkbox"/>	A												
1811249-002	Tiger Pit-Clear	Water	11/7/2018 08:06	<input type="checkbox"/>	A												

Test Legend:

1	CN_SM4500CE_W	2		3		4	
5		6		7		8	
9		10		11		12	

Prepared by: Agustina Venegas

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.



WORK ORDER SUMMARY

Client Name: PG&E GATEWAY GENERATING STATION

Project: Resample 2 (11/7/18)

Work Order: 1811249

Client Contact: Angel Espiritu

QC Level: LEVEL 2

Contact's Email: abe4@pge.com

Comments:

Date Logged: 11/7/2018

WaterTrax WriteOn EDF Excel Fax Email HardCopy ThirdParty J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1811249-001A	Tiger Pit-Amber	Water	SM4500-CN ⁻ CE (Cyanide, Total)	1	250mL aHDPE w/ NaOH + Na2S2O3	<input type="checkbox"/>	11/7/2018 8:06	1 day			<input type="checkbox"/>
1811249-002A	Tiger Pit-Clear	Water	SM4500-CN ⁻ CE (Cyanide, Total)	1	250mL HDPE w/ Na2S2O3	<input type="checkbox"/>	11/7/2018 8:06	1 day	None		<input type="checkbox"/>

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.



Sample Receipt Checklist

Client Name: **PG&E Gateway Generating Station**
Project: **Resample 2 (11/7/18)**
WorkOrder No: **1811249** Matrix: Water
Carrier: Client Drop-In

Date and Time Received **11/7/2018 09:45**
Date Logged: **11/7/2018**
Received by: **Jena Alfaro**
Logged by: **Agustina Venegas**

Chain of Custody (COC) Information

- Chain of custody present? Yes No
- Chain of custody signed when relinquished and received? Yes No
- Chain of custody agrees with sample labels? Yes No
- Sample IDs noted by Client on COC? Yes No
- Date and Time of collection noted by Client on COC? Yes No
- Sampler's name noted on COC? Yes No
- COC agrees with Quote? Yes No NA

Sample Receipt Information

- Custody seals intact on shipping container/cooler? Yes No NA
- Shipping container/cooler in good condition? Yes No
- Samples in proper containers/bottles? Yes No
- Sample containers intact? Yes No
- Sufficient sample volume for indicated test? Yes No

Sample Preservation and Hold Time (HT) Information

- All samples received within holding time? Yes No NA
- Samples Received on Ice? Yes No

(Ice Type: WET ICE)

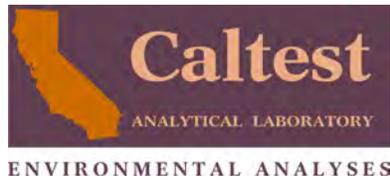
- Sample/Temp Blank temperature Temp: 5.6°C NA
- Water - VOA vials have zero headspace / no bubbles? Yes No NA
- Sample labels checked for correct preservation? Yes No
- pH acceptable upon receipt (Metal: <2; 522: <4; 218.7: >8)? Yes No NA

UCMR Samples:

pH tested and acceptable upon receipt (200.8: ≤2; 525.3: ≤4; 530: ≤7; 541: <3; 544: <6.5 & 7.5)? Yes No NA

Free Chlorine tested and acceptable upon receipt (<0.1mg/L)? Yes No NA

Comments:



Friday, November 09, 2018

Angel Espiritu
PG&E Gateway Generating Station
3225 Wilbur Ave
Antioch, CA 94509

Re Lab Order: T110273
Project ID: RESAMPLE 2 (11/7/18)

Collected By: MUSKAN ENV.
PO/Contract #:

Dear Angel Espiritu:

Enclosed are the analytical results for sample(s) received by the laboratory on Wednesday, November 07, 2018. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

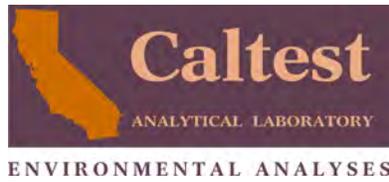
If you have any questions concerning this report, please feel free to contact me.

CC: Daryl Sattelberg, PG&E Gateway Generating Station
David Hammond, PG&E Gateway Generating Station
Tim Wisdom, PG&E Gateway Generating Station

Enclosures

Project Manager: Eli N. Greenwald





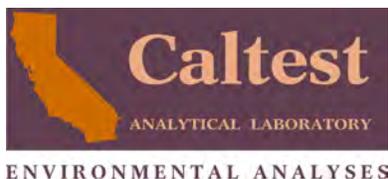
SAMPLE SUMMARY

Lab Order: T110273
 Project ID: RESAMPLE 2 (11/7/18)

Lab ID	Sample ID	Matrix	Date Collected	Date Received
T110273001	TIGER PIT (NAOH PRESERVED)	Water	11/07/2018 08:06	11/07/2018 09:58
T110273002	TIGER PIT (UNPRESERVED)	Water	11/07/2018 08:06	11/07/2018 09:58

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NARRATIVE

Lab Order: T110273
Project ID: RESAMPLE 2 (11/7/18)

General Qualifiers and Notes

Caltest authorizes this report to be reproduced only in its entirety. Results are specific to the sample(s) as submitted and only to the parameter(s) reported.

Caltest certifies that all test results for wastewater and hazardous waste analyses meet all applicable NELAC requirements; all microbiology and drinking water testing meet applicable ELAP requirements, unless stated otherwise.

All analyses performed by EPA Methods or Standard Methods.

Dilution Factors (DF) reported greater than '1' have been used to adjust the result, Reporting Limit (RL), and Method Detection Limit (MDL).

All Solid, sludge, and/or biosolids data is reported in Wet Weight, unless otherwise specified.

Filtrations performed at Caltest for dissolved metals (excluding mercury) and/or pH analysis are not performed within the 15 minute holding time as specified by 40CFR 136.3 table II.

Results Qualifiers: Report fields may contain codes and non-numeric data correlating to one or more of the following definitions:

ND - Non Detect - indicates analytical result has not been detected.

RL - Reporting Limit is the quantitation limit at which the laboratory is able to detect an analyte. An analyte not detected at or above the RL is reported as ND unless otherwise noted or qualified. For analyses pertaining to the State Implementation Plan of the California Toxics Rule, the Caltest Reporting Limit (RL) is equivalent to the Minimum Level (ML). A standard is always run at or below the ML. Where Reporting Limits are elevated due to dilution, the ML calibration criteria has been met.

J - reflects estimated analytical result value detected below the Reporting Limit (RL) and above the Method Detection Limit (MDL). The 'J' flag is equivalent to the DNQ Estimated Concentration flag.

E - indicates an estimated analytical result value.

B - indicates the analyte has been detected in the blank associated with the sample.

NC - means not able to be calculated for RPD or Spike Recoveries.

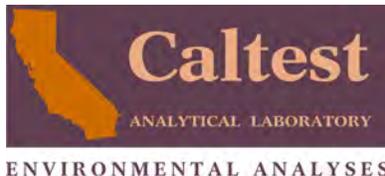
SS - compound is a Surrogate Spike used per laboratory quality assurance manual.

NOTE: This document represents a complete Analytical Report for the samples referenced herein and should be retained as a permanent record thereof.

Qualifiers and Compound Notes

- | | |
|---|---|
| 1 | Nitrate and/or Nitrite was detected in the sample. Sample was treated with Sulfamic Acid prior to analysis. |
| 2 | The sample was received unpreserved. At the time of the analysis, the measured pH of the sample was 10. |





ANALYTICAL RESULTS

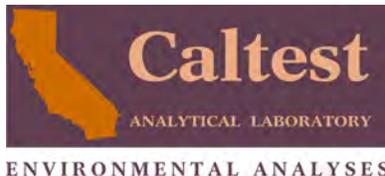
Lab Order: T110273
 Project ID: RESAMPLE 2 (11/7/18)

Lab ID	T110273001	Date Collected	11/7/2018 08:06	Matrix	Water			
Sample ID	TIGER PIT (NAOH PRESERVED)	Date Received	11/7/2018 09:58					
Parameters	Result Units	R. L.	MDL	DF Prepared	Batch	Analyzed	Batch	Qual
Cyanide, Total Analysis	Analytical Method:	SM 4500-CN C/E-99/11				Analyzed by:	BCP	
Cyanide	J2.5 ug/L	3	0.90	1		11/07/18 16:47	WCO 14067	1

Lab ID	T110273002	Date Collected	11/7/2018 08:06	Matrix	Water			
Sample ID	TIGER PIT (UNPRESERVED)	Date Received	11/7/2018 09:58					
Parameters	Result Units	R. L.	MDL	DF Prepared	Batch	Analyzed	Batch	Qual
Cyanide, Total Analysis	Analytical Method:	SM 4500-CN C/E-99/11				Analyzed by:	BCP	
Cyanide	J1.1 ug/L	3	0.90	1		11/07/18 16:47	WCO 14067	1.2

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QUALITY CONTROL DATA

Lab Order: T110273
 Project ID: RESAMPLE 2 (11/7/18)

Analysis Description:	Cyanide, Total Analysis	QC Batch:	WCO/14067
Analysis Method:	SM 4500-CN C/E-99/11	QC Batch Method:	SM 4500-CN C/E-99/11

METHOD BLANK: 851944

Parameter	Blank Result	Reporting Limit	MDL	Units	Qualifiers
Cyanide	ND	3	0.9	ug/L	

LABORATORY CONTROL SAMPLE: 851945

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% REC Limits	Qualifier
Cyanide	ug/L	20	20.2	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 851946 851947

Parameter	Units	T110110002 Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Cyanide	ug/L	1.6	40	40.9	42.9	98	103	80-120	4.8	20	1

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**QUALITY CONTROL DATA QUALIFIERS**

Lab Order: T110273
Project ID: RESAMPLE 2 (11/7/18)

QUALITY CONTROL PARAMETER QUALIFIERS

Results Qualifiers: Report fields may contain codes and non-numeric data correlating to one or more of the following definitions:

NS - means not spiked and will not have recoveries reported for Analyte Spike Amounts

QC Codes Keys: These descriptors are used to help identify the specific QC samples and clarify the report.

MB - Method Blank

Method Blanks are reported to the same Method Detection Limits (MDLs) or Reporting Limits (RLs) as the analytical samples in the corresponding QC batch.

LCS/LCSD - Laboratory Control Spike / Laboratory Control Spike Duplicate

DUP - Duplicate of Original Sample Matrix

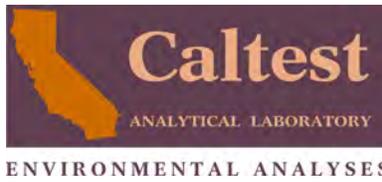
MS/MSD - Matrix Spike / Matrix Spike Duplicate

RPD - Relative Percent Difference

%Recovery - Spike Recovery stated as a percentage

1 Nitrate and/or Nitrite was detected in the sample. Sample was treated with Sulfamic Acid prior to analysis.





QUALITY CONTROL DATA CROSS REFERENCE TABLE

Lab Order: T110273
 Project ID: RESAMPLE 2 (11/7/18)

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
T110273001	TIGER PIT (NAOH)	SM 4500-CN C/E-99/11	WCO/14067		
T110273002	TIGER PIT (UNPRESERVED)	SM 4500-CN C/E-99/11	WCO/14067		

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885 N. KELLY ROAD NAPA, CA 94558 (707) 258-4000 FAX (707) 226-1001

SAMPLE CHAIN OF CUSTODY

PROJECT NAME / PROJECT NUMBER: Resample 2 (11/7/18)

P.O. NUMBER

LAB ORDER # T110273

CLIENT: PG&E Gateway Generation Station REPORT ATTN: Angel Espiritu / email: abey@pge.com

MAILING ADDRESS: 3225 Wiber Ave. STATE: CA ZIP: 94509

BILLING ADDRESS: (Same) ATTN:

PHONE NUMBER: (925) 522-7838 FAX PHONE NUMBER: SAMPLER (PRINT & SIGN NAME): Muskam Environmental Sampling

ANALYSES REQUESTED

TURN-AROUND TIME
 STANDARD
 RUSH
 DUE DATE:

CALTEST LAB #	DATE SAMPLED	TIME SAMPLED	SAMPLE MATRIX*	CONTAINER TYPE/AMOUNT**	PRESERVATIVE	SAMPLE IDENTIFICATION / SITE	CLIENT LAB #	COMP. or GRAB	REMARKS
1	11/7/18	08:06	AQ Waste Water	500 ml Poly	NaOH	Tiger Pit		Grab	Grand total, preserved with sodium thiosulfate before preserving by SM 4500 CA-APCE
2	11/7/18	08:06	AQ Waste Water	500 ml Poly	None Preserve	Tiger Pit		Grab	

RUSH

RELINQUISHED BY	DATE/TIME	RECEIVED BY	RELINQUISHED BY	DATE/TIME	RECEIVED BY
<i>[Signature]</i>	11/7/18/08:47	<i>[Signature]</i>	<i>[Signature]</i>	11/7/18/09:58	<i>[Signature]</i>

Samples:	WC <input checked="" type="checkbox"/>	MICRO	BIO	AA	SV	VOA	pH? <input type="checkbox"/>	Y/N	TEMP: <u>2.4</u>	SEALED: <input checked="" type="checkbox"/>	Y/N	INTACT: <input checked="" type="checkbox"/>	Y/N
BD:	BIO	WC	AA	COMMENTS:									
CC:	AA	SV	VOA										
SIL:	HP	PT	QT	VOA									
	WHNO ₃	H ₂ SO ₄	NaOH										
PIL:	HNO ₃	H ₂ SO ₄	NaOH	HCL									

*MATRIX: AQ = Aqueous Nondrinking Water, Digested Metals; FE = Low R.L.s, Aqueous Nondrinking Water, Digested Metals; DW = Drinking Water; SL = Soil Sludge, Solid; FP = Free Product
 **CONTAINER TYPES: AL = Amber Liter; AHL = 500 ml Amber; PT = Pint (Plastic); QT = Quart (Plastic); HG = Half Gallon (Plastic); SJ = Soil Jar; B4 = 4oz. BACT; BT = Brass Tube; VOA = 40ml VOA; OTC - Other Type Container

R PR M F

WHITE - LABORATORY YELLOW - CLIENT COPY TO ACCOMPANY FINAL REPORT PINK - CLIENT COPY AS RECEIPT



ENTHALPY

ANALYTICAL



Enthalpy Analytical

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 304800
ANALYTICAL REPORT

Pacific Gas & Electric
4801 Oakport Street
Oakland, CA 94601

Project : STANDARD
Location : Resample 2 (11/7/18)
Level : II

<u>Sample ID</u>	<u>Lab ID</u>
TIGER PIT	304800-001
TIGER PIT	304800-002

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature which applies to this PDF file as well as any associated electronic data deliverable files. The results contained in this report meet all requirements of NELAP and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: _____

Date: 11/08/2018

Will Rice
Project Manager
will.rice@enthalpy.com
(510) 204-2221 Ext 13102

CA ELAP# 2896, NELAP# 4044-001

CASE NARRATIVE

Laboratory number: 304800
Client: Pacific Gas & Electric
Location: Resample 2 (11/7/18)
Request Date: 11/07/18
Samples Received: 11/07/18

This data package contains sample and QC results for two water samples, requested for the above referenced project on 11/07/18. The samples were received cold and intact.

Total Cyanide (SM4500CN-C,E):

Low recovery was observed for cyanide in the MS for batch 265268; the parent sample was not a project sample, the LCS was within limits, and the associated RPD was within limits. No other analytical problems were encountered.

Enthalpy Analytical

Formerly Curtis & Tompkins

Analytical Laboratory Since 1878
 2323 Fifth Street
 Berkeley, CA 94710
 (510)486-0900 Phone
 (510)486-0532 Fax

CHAIN OF CUSTODY

Chain of Custody # : _____

Project No: _____

Project Name: Resample 2 (11/7/18)

Rpt Level: II

Turnaround Time: ~~Standard~~ Rush

C&T LOGIN # 304800

Sampler: Muskan Environmental Sample

Report To: Angel Espiritu

Company: PG&E Gateway Generating Station

Telephone: (925) 522-7838

Email: abe4@pge.com

Analytical Request

Cyanide (total) reported with sodium thiocyanate before preserving by SM 4500 CN-1BCE

Lab No.	Sample ID.	Sampling		Matrix				Chemical Preservative				
		Date	Time	Water	Soil	Other	# of Container	HCl	H ₂ SO ₄	HNO ₃	NaOH	None
	Tiger Pit	11/7/18	08:06	X			1				X	
	Tiger Pit	11/7/18	08:06	X			1					X

Notes: Sample sent on ice
 containers:
 500 ml poly
 500 ml pol X

SAMPLE RECEIPT
 Intact Cold
 On Ice Ambient

RELINQUISHED BY:

[Signature] 11/7/18/08:50 DATE/TIME
[Signature] 11/7/18 - 9:47 DATE/TIME
[Signature] 11-7 1051 DATE/TIME

RECEIVED BY:

[Signature] 11/7/18 - 8:50 AM DATE/TIME
[Signature] 11-7 947 DATE/TIME
[Signature] 11/7/18 10:51 DATE/TIME

SAMPLE RECEIPT CHECKLIST



Section 1: Login # 304800
 Date Received: 11/7/18

Client: PGEO
 Project: _____

Section 2: Samples received in a cooler? Yes, how many? _____ No (skip Section 3 below)
 If no cooler Sample Temp (°C): 14.4 using IR Gun # A, or B
 Samples received on ice directly from the field. Cooling process had begun
 If in cooler: Date Opened 11/7/18 By (print) AC (sign) [Signature]
 Shipping info (if applicable) _____
 Are custody seals present? No, or Yes. If yes, where? on cooler, on samples, on package
 Date: _____ How many _____ Signature, Initials, None
 Were custody seals intact upon arrival? Yes No N/A

Section 3: **Important : Notify PM if temperature exceeds 5°C or arrive frozen.**

Packing in cooler: (if other, describe) _____
 Bubble Wrap, Foam blocks, Bags, None, Cloth material, Cardboard, Styrofoam, Paper towels
 Samples received on ice directly from the field. Cooling process had begun
 Type of ice used: Wet, Blue/Gel, None Temperature blank(s) included? Yes, No
 Temperature measured using Thermometer ID: _____, or IR Gun # A B
 Cooler Temp (°C): #1: _____, #2: _____, #3: _____, #4: _____, #5: _____, #6: _____, #7: _____

Section 4:	YES	NO	N/A
Were custody papers dry, filled out properly, and the project identifiable	/		
Were Method 5035 sampling containers present?		/	
If YES, what time were they transferred to freezer? _____			
Did all bottles arrive unbroken/unopened?	/		
Are there any missing / extra samples?		/	
Are samples in the appropriate containers for indicated tests?	/		
Are sample labels present, in good condition and complete?	/		
Does the container count match the COC?	/		
Do the sample labels agree with custody papers?	/		
Was sufficient amount of sample sent for tests requested?	/		
Did you change the hold time in LIMS for unpreserved VOAs?			/
Did you change the hold time in LIMS for preserved terracores?			/
Are bubbles > 6mm absent in VOA samples?			/
Was the client contacted concerning this sample delivery?		/	
If YES, who was called? _____ By _____ Date: _____			

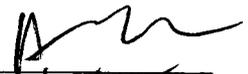
Section 5:	YES	NO	N/A
Are the samples appropriately preserved? (if N/A, skip the rest of section 5)	/		
Did you check preservatives for all bottles for each sample?		/	
Did you document your preservative check? pH strip lot# <u>HCL31225</u> , pH strip lot# _____, pH strip lot# _____	/		
Preservative added:			
<input type="checkbox"/> H2SO4 lot# _____ added to samples _____ on/at _____			
<input type="checkbox"/> HCL lot# _____ added to samples _____ on/at _____			
<input type="checkbox"/> HNO3 lot# _____ added to samples _____ on/at _____			
<input type="checkbox"/> NaOH lot# _____ added to samples _____ on/at _____			

Section 6:
 Explanations/Comments: _____

Date Logged in 11/7/18 By (print) AC (sign) [Signature]
 Date Labeled 11/7/18 By (print) AC (sign) [Signature]

Enthalpy Sample Preservation for 304800

Sample	pH: <2	>9	>12	Other
-001a	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
-002a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

Analyst: 
Date: 11/2/11

Detections Summary for 304800

Results for any subcontracted analyses are not included in this summary.

Client : Pacific Gas & Electric
Project : STANDARD
Location : Resample 2 (11/7/18)

Client Sample ID : TIGER PIT Laboratory Sample ID : 304800-001

No Detections

Client Sample ID : TIGER PIT Laboratory Sample ID : 304800-002

No Detections

Total Cyanide			
Lab #:	304800	Location:	Resample 2 (11/7/18)
Client:	Pacific Gas & Electric	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM4500CN-C,E
Analyte:	Cyanide	Batch#:	265268
Field ID:	TIGER PIT	Sampled:	11/07/18
Matrix:	Water	Received:	11/07/18
Units:	mg/L	Prepared:	11/07/18
Diln Fac:	1.000	Analyzed:	11/08/18

Type	Lab ID	Result	RL
SAMPLE	304800-001	ND	0.010
SAMPLE	304800-002	ND	0.010
BLANK	QC954755	ND	0.010

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Total Cyanide			
Lab #:	304800	Location:	Resample 2 (11/7/18)
Client:	Pacific Gas & Electric	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM4500CN-C,E
Analyte:	Cyanide	Batch#:	265268
Field ID:	ZZZZZZZZZZ	Sampled:	10/29/18
MSS Lab ID:	304646-001	Received:	10/30/18
Matrix:	Water	Prepared:	11/07/18
Units:	mg/L	Analyzed:	11/08/18
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC954756		0.2000	0.1613	81	76-120		
MS	QC954757	<0.01000	0.2000	0.1277	64 *	66-120		
MSD	QC954758		0.2000	0.1492	75	66-120	16	28

*= Value outside of QC limits; see narrative

RPD= Relative Percent Difference

Attachment 6

Analytical Report on Resampling #4



ENTHALPY

ANALYTICAL



Enthalpy Analytical

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 305544
ANALYTICAL REPORT

Pacific Gas & Electric
4801 Oakport Street
Oakland, CA 94601

Project : STANDARD
Location : Tiger Pit
Level : II

<u>Sample ID</u>	<u>Lab ID</u>
TIGERT PIT	305544-001
TIGERT PIT	305544-002

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature which applies to this PDF file as well as any associated electronic data deliverable files. The results contained in this report meet all requirements of NELAP and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: _____

Date: 12/06/2018

Will Rice
Project Manager
will.rice@enthalpy.com
(510) 204-2221 Ext 13102

CA ELAP# 2896, NELAP# 4044-001

CASE NARRATIVE

Laboratory number: 305544
Client: Pacific Gas & Electric
Location: Tiger Pit
Request Date: 12/04/18
Samples Received: 12/04/18

This data package contains sample and QC results for two water samples, requested for the above referenced project on 12/04/18. The samples were received cold and intact.

Total Cyanide (SM4500CN-C,E):

No analytical problems were encountered.

Enthalpy Analytical

Formerly Curtis & Tompkins

Analytical Laboratory Since 1878

2323 Fifth Street

Berkeley, CA 94710

(510)486-0900 Phone

(510)486-0532 Fax

CHAIN OF CUSTODY

Chain of Custody # :

Analytical Request

C&T LOGIN # 305544

Project No: _____

Project Name: Resample 4 (12/4/18)

Rpt Level: II

Turnaround Time: ~~Standard~~ RUSH

Sampler: Muskogean Environmental Sampling

Report To: Angel Espiritu

Company: PG&E Gateway Generating Station

Telephone: (925) 522-7838

Email: abe4@pge.com

Lab No.	Sample ID.	Sampling		Matrix				Chemical Preservative				
		Date	Time	Water	Soil	Other	# of Container	HCl	H ₂ SO ₄	HNO ₃	NaOH	None
	<u>Tiger Pit</u>	<u>12/4/18</u>	<u>08:35</u>	<u>X</u>			<u>1</u>				<u>X</u>	
	<u>Tiger Pit</u>	<u>12/4/18</u>	<u>08:35</u>	<u>X</u>			<u>1</u>					<u>X</u>

Sample (total) pretreated with sodium thiosulfate before perserving by SM 4500 CN-ABCE

Notes: Sample sent on ICE
 Container
 Poly 250ml
 Poly 250ml

SAMPLE RECEIPT
 Intact Cold
 On Ice Ambient

RELINQUISHED BY:
[Signature] 12/4/18/09:50 DATE/TIME
 DATE/TIME
 DATE/TIME

RECEIVED BY:
[Signature] 12-4-18 9:50 DATE/TIME
 DATE/TIME
 DATE/TIME

SAMPLE RECEIPT CHECKLIST

Section 1: Login # 305544
 Date Received: 12/4/18

Client: PGE Gateway Generating
 Project: _____



Section 2: Samples received in a cooler? Yes, how many? _____ No (skip Section 3 below)
 If no cooler Sample Temp (°C): 3.1 using IR Gun # A, or B
 Samples received on ice directly from the field. Cooling process had begun
 If in cooler: Date Opened 12/4/18 By (print) AC (sign) [Signature]
 Shipping info (if applicable) _____
 Are custody seals present? No, or Yes. If yes, where? on cooler, on samples, on package
 Date: _____ How many _____ Signature, Initials, None
 Were custody seals intact upon arrival? Yes No N/A

Section 3: **Important: Notify PM if temperature exceeds 6°C or arrive frozen.**
 Packing in cooler: (if other, describe) _____
 Bubble Wrap, Foam blocks, Bags, None, Cloth material, Cardboard, Styrofoam, Paper towels
 Samples received on ice directly from the field. Cooling process had begun
 Type of ice used: Wet, Blue/Gel, None Temperature blank(s) included? Yes, No
 Temperature measured using Thermometer ID: _____, or IR Gun # A B
 Cooler Temp (°C): #1: _____, #2: _____, #3: _____, #4: _____, #5: _____, #6: _____, #7: _____

Section 4:	YES	NO	N/A
Were custody papers dry, filled out properly, and the project identifiable	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Were Method 5035 sampling containers present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
If YES, what time were they transferred to freezer?			
Did all bottles arrive unbroken/unopened?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are there any missing / extra samples?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Are samples in the appropriate containers for indicated tests?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are sample labels present, in good condition and complete?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the container count match the COC?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do the sample labels agree with custody papers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Was sufficient amount of sample sent for tests requested?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did you change the hold time in LIMS for unpreserved VOAs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Did you change the hold time in LIMS for preserved terracores?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Are bubbles > 6mm absent in VOA samples?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Was the client contacted concerning this sample delivery?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
If YES, who was called? _____ By _____ Date: _____			

Section 5:

	YES	NO	N/A
Are the samples appropriately preserved? (if N/A, skip the rest of section 5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did you check preservatives for all bottles for each sample?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Did you document your preservative check?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

pH strip lot# HCL31225, pH strip lot# _____, pH strip lot# _____
 Preservative added:
 H2SO4 lot# _____ added to samples _____ on/at _____
 HCL lot# _____ added to samples _____ on/at _____
 HNO3 lot# _____ added to samples _____ on/at _____
 NaOH lot# _____ added to samples _____ on/at _____

Section 6:
 Explanations/Comments: _____

Date Logged in 12/4/18 By (print) AC (sign) [Signature]
 Date Labeled 12/4/18 By (print) AC (sign) [Signature]

Detections Summary for 305544

Results for any subcontracted analyses are not included in this summary.

Client : Pacific Gas & Electric
 Project : STANDARD
 Location : Tiger Pit

Client Sample ID : TIGERT PIT Laboratory Sample ID : 305544-001

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Cyanide	0.030		0.010	mg/L	TOTAL	1.000	SM4500CN-C,E	METHOD

Client Sample ID : TIGERT PIT Laboratory Sample ID : 305544-002

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Cyanide	0.032		0.010	mg/L	TOTAL	1.000	SM4500CN-C,E	METHOD

Total Cyanide			
Lab #:	305544	Location:	Tiger Pit
Client:	Pacific Gas & Electric	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM4500CN-C,E
Analyte:	Cyanide	Batch#:	265928
Field ID:	TIGERT PIT	Sampled:	12/04/18
Matrix:	Water	Received:	12/04/18
Units:	mg/L	Analyzed:	12/05/18
Diln Fac:	1.000		

Type	Lab ID	Result	RL
SAMPLE	305544-001	0.030	0.010
SAMPLE	305544-002	0.032	0.010
BLANK	QC957389	ND	0.010

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Total Cyanide			
Lab #:	305544	Location:	Tiger Pit
Client:	Pacific Gas & Electric	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM4500CN-C,E
Analyte:	Cyanide	Diln Fac:	1.000
Field ID:	TIGERT PIT	Batch#:	265928
MSS Lab ID:	305544-001	Sampled:	12/04/18
Matrix:	Water	Received:	12/04/18
Units:	mg/L	Analyzed:	12/05/18

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC957390		0.2000	0.1831	92	76-120		
MS	QC957391	0.02970	0.2000	0.2115	91	66-120		
MSD	QC957392		0.2000	0.2052	88	66-120	3	28

RPD= Relative Percent Difference

Attachment 7

Analytical Report on Resampling #5



ENTHALPY

ANALYTICAL



Enthalpy Analytical

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 305713
ANALYTICAL REPORT

Pacific Gas & Electric
4801 Oakport Street
Oakland, CA 94601

Project : STANDARD
Location : Resample 5 (12/11/18)
Level : II

<u>Sample ID</u>	<u>Lab ID</u>
TIGER PIT	305713-001
TIGER PIT	305713-002

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature which applies to this PDF file as well as any associated electronic data deliverable files. The results contained in this report meet all requirements of NELAP and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: _____

Date: 12/12/2018

Will Rice
Project Manager
will.rice@enthalpy.com
(510) 204-2221 Ext 13102

CA ELAP# 2896, NELAP# 4044-001

CASE NARRATIVE

Laboratory number: 305713
Client: Pacific Gas & Electric
Location: Resample 5 (12/11/18)
Request Date: 12/11/18
Samples Received: 12/11/18

This data package contains sample and QC results for two water samples, requested for the above referenced project on 12/11/18. The samples were received cold and intact.

Total Cyanide (SM4500CN-C,E):

No analytical problems were encountered.

SAMPLE RECEIPT CHECKLIST



Section 1: Login # 305-713
 Date Received: 12-11-18

Client: PG&E
 Project: resample 5 (12/11/18)

Section 2: Samples received in a cooler? Yes, how many? _____ No (skip Section 3 below)

If no cooler Sample Temp (°C): 4.1 using IR Gun # A, or B

Samples received on ice directly from the field. Cooling process had begun

If in cooler: Date Opened 12-11-18 By (print) SH (sign) [Signature]

Shipping info (if applicable) _____

Are custody seals present? No, or Yes. If yes, where? on cooler, on samples, on package

Date: _____ How many _____ Signature, Initials, None

Were custody seals intact upon arrival? Yes No N/A

Section 3:

Important: Notify PM if temperature exceeds 6°C or arrive frozen.

Packing in cooler: (if other, describe) _____

Bubble Wrap, Foam blocks, Bags, None, Cloth material, Cardboard, Styrofoam, Paper towels

Samples received on ice directly from the field. Cooling process had begun

Type of ice used: Wet, Blue/Gel, None Temperature blank(s) included? Yes, No

Temperature measured using Thermometer ID: _____, or IR Gun # A B

Cooler Temp (°C): #1: _____, #2: _____, #3: _____, #4: _____, #5: _____, #6: _____, #7: _____

Section 4:

	YES	NO	N/A
Were custody papers dry, filled out properly, and the project identifiable	/		
Were Method 5035 sampling containers present?		/	
If YES, what time were they transferred to freezer? _____			
Did all bottles arrive unbroken/unopened?	/		
Are there any missing / extra samples?	/		
Are samples in the appropriate containers for indicated tests?	/		
Are sample labels present, in good condition and complete?	/		
Does the container count match the COC?	/		
Do the sample labels agree with custody papers?	/		
Was sufficient amount of sample sent for tests requested?	/		
Did you change the hold time in LIMS for unpreserved VOAs?			/
Did you change the hold time in LIMS for preserved terracores?			/
Are bubbles > 6mm absent in VOA samples?			/
Was the client contacted concerning this sample delivery?		/	
If YES, who was called? _____ By _____ Date: _____			

Section 5:

	YES	NO	N/A
Are the samples appropriately preserved? (if N/A, skip the rest of section 5)	/		
Did you check preservatives for all bottles for each sample?	/		
Did you document your preservative check?	/		
pH strip lot# <u>H057770</u> , pH strip lot# _____, pH strip lot# _____			
Preservative added:			
<input type="checkbox"/> H2SO4 lot# _____ added to samples _____ on/at _____			
<input type="checkbox"/> HCL lot# _____ added to samples _____ on/at _____			
<input type="checkbox"/> HNO3 lot# _____ added to samples _____ on/at _____			
<input type="checkbox"/> NaOH lot# _____ added to samples _____ on/at _____			

Section 6:

Explanations/Comments: _____

Date Logged in 12-11-18 By (print) SH (sign) [Signature]
 Date Labeled 12-11-18 By (print) SH (sign) [Signature]

Enthalpy Sample Preservation for 305713

<u>Sample</u>	<u>pH:</u>	<u><2</u>	<u>>9</u>	<u>>12</u>	<u>Other</u>
-001a		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
-002a		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

Analyst: SLJ

Date: 12-10-18

Detections Summary for 305713

Results for any subcontracted analyses are not included in this summary.

Client : Pacific Gas & Electric
 Project : STANDARD
 Location : Resample 5 (12/11/18)

Client Sample ID : TIGER PIT Laboratory Sample ID : 305713-001

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Cyanide	0.013		0.010	mg/L	TOTAL	1.000	SM4500CN-C,E	METHOD

Client Sample ID : TIGER PIT Laboratory Sample ID : 305713-002

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Cyanide	0.018		0.010	mg/L	TOTAL	1.000	SM4500CN-C,E	METHOD

Total Cyanide			
Lab #:	305713	Location:	Resample 5 (12/11/18)
Client:	Pacific Gas & Electric	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM4500CN-C,E
Analyte:	Cyanide	Batch#:	266103
Field ID:	TIGER PIT	Sampled:	12/11/18
Matrix:	Water	Received:	12/11/18
Units:	mg/L	Analyzed:	12/12/18
Diln Fac:	1.000		

Type	Lab ID	Result	RL
SAMPLE	305713-001	0.013	0.010
SAMPLE	305713-002	0.018	0.010
BLANK	QC958095	ND	0.010

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Total Cyanide			
Lab #:	305713	Location:	Resample 5 (12/11/18)
Client:	Pacific Gas & Electric	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM4500CN-C,E
Analyte:	Cyanide	Diln Fac:	1.000
Field ID:	TIGER PIT	Batch#:	266103
MSS Lab ID:	305713-001	Sampled:	12/11/18
Matrix:	Water	Received:	12/11/18
Units:	mg/L	Analyzed:	12/12/18

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC958096		0.2000	0.1850	93	76-120		
MS	QC958097	0.01250	0.2000	0.1922	90	66-120		
MSD	QC958098		0.2000	0.1538	71	66-120	22	28

RPD= Relative Percent Difference

Attachment 8

Analytical Report on Resampling #6



ENTHALPY

ANALYTICAL



Enthalpy Analytical

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 305805
ANALYTICAL REPORT

Pacific Gas & Electric
4801 Oakport Street
Oakland, CA 94601

Project : STANDARD
Location : Resample 6 (12/14/18)
Level : II

<u>Sample ID</u>	<u>Lab ID</u>
TIGER PIT-P	305805-001
TIGER PIT-UP	305805-002

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature which applies to this PDF file as well as any associated electronic data deliverable files. The results contained in this report meet all requirements of NELAP and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: _____

Date: 12/17/2018

Will Rice
Project Manager
will.rice@enthalpy.com
(510) 204-2221 Ext 13102

CA ELAP# 2896, NELAP# 4044-001

CASE NARRATIVE

Laboratory number: 305805
Client: Pacific Gas & Electric
Location: Resample 6 (12/14/18)
Request Date: 12/14/18
Samples Received: 12/14/18

This data package contains sample and QC results for two water samples, requested for the above referenced project on 12/14/18. The samples were received cold and intact.

Total Cyanide (SM4500CN-C,E):

No analytical problems were encountered.

SAMPLE RECEIPT CHECKLIST



Section 1: Login # 305805
Date Received: 12/14/18

Client: Page Catering
Project: Resample 6 (12/14/18)

Section 2: Samples received in a cooler? Yes, how many? _____ No (skip Section 3 below)

If no cooler Sample Temp (°C): 4-2 using IR Gun # A, or B

Samples received on ice directly from the field. Cooling process had begun

If in cooler: Date Opened _____ By (print) _____ (sign) _____

Shipping Info (If applicable) _____

Are custody seals present? No, or Yes. If yes, where? on cooler, on samples, on package

Date: _____ How many _____ Signature, Initials, None

Were custody seals intact upon arrival? Yes No N/A

Section 3:

Important: Notify PM if temperature exceeds 6°C or arrive frozen.

Packing in cooler: (if other, describe) _____

Bubble Wrap, Foam blocks, Bags, None, Cloth material, Cardboard, Styrofoam, Paper towels

Samples received on ice directly from the field. Cooling process had begun

Type of ice used: Wet, Blue/Gel, None

Temperature blank(s) included? Yes, No

Temperature measured using Thermometer ID: _____, or IR Gun # A B

Cooler Temp (°C): #1: _____, #2: _____, #3: _____, #4: _____, #5: _____, #6: _____, #7: _____

Section 4:

	YES	NO	N/A
Were custody papers dry, filled out properly, and the project identifiable	X		
Were Method 5035 sampling containers present?		X	
If YES, what time were they transferred to freezer?			
Did all bottles arrive unbroken/unopened?	X		
Are there any missing / extra samples?		X	
Are samples in the appropriate containers for indicated tests?	X		
Are sample labels present, in good condition and complete?	X		
Does the container count match the COC?	X		
Do the sample labels agree with custody papers?	X		
Was sufficient amount of sample sent for tests requested?	X		
Did you change the hold time in LIMS for unpreserved VOAs?			X
Did you change the hold time in LIMS for preserved terracores?			X
Are bubbles > 6mm absent in VOA samples?			X
Was the client contacted concerning this sample delivery?		X	
If YES, who was called? _____ By _____ Date: _____			

Section 5:

	YES	NO	N/A
Are the samples appropriately preserved? (if N/A, skip the rest of section 5)	X		
Did you check preservatives for all bottles for each sample?	X		
Did you document your preservative check?	X		
pH strip lot# <u>A6547TD</u> , pH strip lot# _____, pH strip lot# _____			
Preservative added:			
<input type="checkbox"/> H2SO4 lot# _____ added to samples _____ on/at _____			
<input type="checkbox"/> HCL lot# _____ added to samples _____ on/at _____			
<input type="checkbox"/> HNO3 lot# _____ added to samples _____ on/at _____			
<input type="checkbox"/> NaOH lot# _____ added to samples _____ on/at _____			

Section 6:

Explanations/Comments: _____

Date Logged In 12/14/18

By (print) VCS (sign) VCS

Date Labeled ↓

By (print) ↓ (sign) ↓

Detections Summary for 305805

Results for any subcontracted analyses are not included in this summary.

Client : Pacific Gas & Electric
 Project : STANDARD
 Location : Resample 6 (12/14/18)

Client Sample ID : TIGER PIT-P Laboratory Sample ID : 305805-001

No Detections

Client Sample ID : TIGER PIT-UP Laboratory Sample ID : 305805-002

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Cyanide	0.020		0.010	mg/L	TOTAL	1.000	SM4500CN-C,E	METHOD

Total Cyanide			
Lab #:	305805	Location:	Resample 6 (12/14/18)
Client:	Pacific Gas & Electric	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM4500CN-C,E
Analyte:	Cyanide	Sampled:	12/14/18
Matrix:	Water	Received:	12/14/18
Units:	mg/L	Prepared:	12/14/18
Diln Fac:	1.000	Analyzed:	12/17/18
Batch#:	266229		

Field ID	Type	Lab ID	Result	RL
TIGER PIT-P	SAMPLE	305805-001	ND	0.010
TIGER PIT-UP	SAMPLE	305805-002	0.020	0.010
	BLANK	QC958630	ND	0.010

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Total Cyanide			
Lab #:	305805	Location:	Resample 6 (12/14/18)
Client:	Pacific Gas & Electric	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM4500CN-C,E
Analyte:	Cyanide	Batch#:	266229
Field ID:	TIGER PIT-P	Sampled:	12/14/18
MSS Lab ID:	305805-001	Received:	12/14/18
Matrix:	Water	Prepared:	12/14/18
Units:	mg/L	Analyzed:	12/17/18
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC958631		0.2000	0.1687	84	76-120		
MS	QC958632	<0.01000	0.2000	0.1396	70	66-120		
MSD	QC958633		0.2000	0.1404	70	66-120	1	28

RPD= Relative Percent Difference

Attachment 9

Analytical Report on Resampling #7



ENTHALPY

ANALYTICAL



Enthalpy Analytical

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 305902
ANALYTICAL REPORT

Pacific Gas & Electric
4801 Oakport Street
Oakland, CA 94601

Project : STANDARD
Location : Resample 7 (1218/18)
Level : II

<u>Sample ID</u>	<u>Lab ID</u>
TIGER PIT-P	305902-001
TIGER PIT-UP	305902-002

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature which applies to this PDF file as well as any associated electronic data deliverable files. The results contained in this report meet all requirements of NELAP and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: _____

Date: 12/19/2018

Will Rice
Project Manager
will.rice@enthalpy.com
(510) 204-2221 Ext 13102

CA ELAP# 2896, NELAP# 4044-001

CASE NARRATIVE

Laboratory number: 305902
Client: Pacific Gas & Electric
Location: Resample 7 (1218/18)
Request Date: 12/18/18
Samples Received: 12/18/18

This data package contains sample and QC results for two water samples, requested for the above referenced project on 12/18/18. The samples were received cold and intact.

Total Cyanide (SM4500CN-C,E):

Low recoveries were observed for cyanide in the MS/MSD of TIGER PIT-P (lab # 305902-001); the LCS was within limits, and the associated RPD was within limits. No other analytical problems were encountered.

SAMPLE RECEIPT CHECKLIST



Section 1: Login # 305902
Date Received: 12/18/18

Client: PGEO
Project: _____

Section 2: Samples received in a cooler? Yes, how many? _____ No (skip Section 3 below)

If no cooler Sample Temp (°C): 1.3 using IR Gun # A, or B

Samples received on ice directly from the field. Cooling process had begun

If in cooler: Date Opened 12/18/18 By (print) AC (sign) [Signature]

Shipping info (if applicable) _____

Are custody seals present? No, or Yes. If yes, where? on cooler, on samples, on package

Date: _____ How many _____ Signature, Initials, None

Were custody seals intact upon arrival? Yes No N/A

Section 3: **Important : Notify PM if temperature exceeds 6°C or arrive frozen.**

Packing in cooler: (if other, describe) _____

Bubble Wrap, Foam blocks, Bags, None, Cloth material, Cardboard, Styrofoam, Paper towels

Samples received on ice directly from the field. Cooling process had begun

Type of ice used: Wet, Blue/Gel, None Temperature blank(s) included? Yes, No

Temperature measured using Thermometer ID: _____, or IR Gun # A B

Cooler Temp (°C): #1: _____, #2: _____, #3: _____, #4: _____, #5: _____, #6: _____, #7: _____

Section 4:	YES	NO	N/A
Were custody papers dry, filled out properly, and the project identifiable	/		
Were Method 5035 sampling containers present?		/	
If YES, what time were they transferred to freezer?			
Did all bottles arrive unbroken/unopened?	/		
Are there any missing / extra samples?		/	
Are samples in the appropriate containers for indicated tests?	/		
Are sample labels present, in good condition and complete?	/		
Does the container count match the COC?	/		
Do the sample labels agree with custody papers?	/		
Was sufficient amount of sample sent for tests requested?	/		
Did you change the hold time in LIMS for unpreserved VOAs?			/
Did you change the hold time in LIMS for preserved terracores?			/
Are bubbles > 6mm absent in VOA samples?			/
Was the client contacted concerning this sample delivery?			
If YES, who was called? _____ By _____ Date: _____			

Section 5:	YES	NO	N/A
Are the samples appropriately preserved? (if N/A, skip the rest of section 5)	/		
Did you check preservatives for all bottles for each sample?		/	
Did you document your preservative check?	/		

pH strip lot# HCL131225, pH strip lot# _____, pH strip lot# _____

Preservative added:

H2SO4 lot# _____ added to samples _____ on/at _____

HCL lot# _____ added to samples _____ on/at _____

HNO3 lot# _____ added to samples _____ on/at _____

NaOH lot# _____ added to samples _____ on/at _____

Section 6:
Explanations/Comments: _____

Date Logged in 12/18/18 By (print) AC (sign) [Signature]
Date Labeled 12/18/18 By (print) AC (sign) [Signature]

Enthalpy Sample Preservation for 305902

Sample	pH: <2	>9	>12	Other
-001a	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
-002a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

Analyst: ALC
Date: 12/18/18

Detections Summary for 305902

Results for any subcontracted analyses are not included in this summary.

Client : Pacific Gas & Electric
 Project : STANDARD
 Location : Resample 7 (1218/18)

Client Sample ID : TIGER PIT-P Laboratory Sample ID : 305902-001

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Cyanide	0.028		0.010	mg/L	TOTAL	1.000	SM4500CN-C,E	METHOD

Client Sample ID : TIGER PIT-UP Laboratory Sample ID : 305902-002

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Cyanide	0.028		0.010	mg/L	TOTAL	1.000	SM4500CN-C,E	METHOD

Total Cyanide			
Lab #:	305902	Location:	Resample 7 (1218/18)
Client:	Pacific Gas & Electric	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM4500CN-C,E
Analyte:	Cyanide	Sampled:	12/18/18
Matrix:	Water	Received:	12/18/18
Units:	mg/L	Prepared:	12/18/18
Diln Fac:	1.000	Analyzed:	12/19/18
Batch#:	266298		

Field ID	Type	Lab ID	Result	RL
TIGER PIT-P	SAMPLE	305902-001	0.028	0.010
TIGER PIT-UP	SAMPLE	305902-002	0.028	0.010
	BLANK	QC958894	ND	0.010

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Total Cyanide			
Lab #:	305902	Location:	Resample 7 (1218/18)
Client:	Pacific Gas & Electric	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM4500CN-C,E
Analyte:	Cyanide	Batch#:	266298
Field ID:	TIGER PIT-P	Sampled:	12/18/18
MSS Lab ID:	305902-001	Received:	12/18/18
Matrix:	Water	Prepared:	12/18/18
Units:	mg/L	Analyzed:	12/19/18
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC958895		0.2000	0.1834	92	76-120		
MS	QC958896	0.02790	0.2000	0.1537	63 *	66-120		
MSD	QC958897		0.2000	0.1539	63 *	66-120	0	28

*= Value outside of QC limits; see narrative

RPD= Relative Percent Difference

Attachment 10

Analytical Report on Resampling #8



ENTHALPY

ANALYTICAL



Enthalpy Analytical

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 306316
ANALYTICAL REPORT

Pacific Gas & Electric
4801 Oakport Street
Oakland, CA 94601

Project : STANDARD
Location : Resample 8-DW-01102019
Level : II

<u>Sample ID</u>	<u>Lab ID</u>
TIGER PIT-UP-DW	306316-001
SOURCE-UP-DW	306316-002

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature which applies to this PDF file as well as any associated electronic data deliverable files. The results contained in this report meet all requirements of NELAP and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: _____

Date: 01/11/2019

Will Rice
Project Manager
will.rice@enthalpy.com
(510) 204-2221 Ext 13102

CA ELAP# 2896, NELAP# 4044-001

CASE NARRATIVE

Laboratory number: 306316
Client: Pacific Gas & Electric
Location: Resample 8-DW-01102019
Request Date: 01/10/19
Samples Received: 01/10/19

This data package contains sample and QC results for two water samples, requested for the above referenced project on 01/10/19. The samples were received cold and intact.

Total Cyanide (SM4500CN-C,E):

No analytical problems were encountered.

SAMPLE RECEIPT CHECKLIST



Section 1: Login # 304316
Date Received: 1.10.19

Client: PG&E
Project: _____

Section 2: Samples received in a cooler? Yes, how many? 1 No (skip Section 3 below)
If no cooler Sample Temp (°C): _____ using IR Gun # A, or B
 Samples received on ice directly from the field. Cooling process had begun
If in cooler: Date Opened 1.10.19 By (print) SH (sign) [Signature]
Shipping info (if applicable) _____
Are custody seals present? No, or Yes. If yes, where? on cooler, on samples, on package
 Date: _____ How many _____ Signature, Initials, None
Were custody seals intact upon arrival? Yes No N/A

Section 3: **Important: Notify PM if temperature exceeds 6°C or arrive frozen.**
Packing in cooler: (if other, describe) _____
 Bubble Wrap, Foam blocks, Bags, None, Cloth material, Cardboard, Styrofoam, Paper towels
 Samples received on ice directly from the field. Cooling process had begun
Type of ice used: Wet, Blue/Gel, None Temperature blank(s) included? Yes, No
Temperature measured using Thermometer ID: _____, or IR Gun # A B
Cooler Temp (°C): #1: 3.3, #2: _____, #3: _____, #4: _____, #5: _____, #6: _____, #7: _____

Section 4:	YES	NO	N/A
Were custody papers dry, filled out properly, and the project identifiable	—		
Were Method 5035 sampling containers present?		—	
If YES, what time were they transferred to freezer?			
Did all bottles arrive unbroken/unopened?	—		
Are there any missing / extra samples?		—	
Are samples in the appropriate containers for indicated tests?	—		
Are sample labels present, in good condition and complete?	—		
Does the container count match the COC?	—		
Do the sample labels agree with custody papers?	—		
Was sufficient amount of sample sent for tests requested?	—		
Did you change the hold time in LIMS for unpreserved VOAs?			—
Did you change the hold time in LIMS for preserved terracores?			—
Are bubbles > 6mm absent in VOA samples?			—
Was the client contacted concerning this sample delivery?			—
If YES, who was called? _____ By _____ Date: _____			—

Section 5:

	YES	NO	N/A
Are the samples appropriately preserved? (if N/A, skip the rest of section 5)			—
Did you check preservatives for all bottles for each sample?			—
Did you document your preservative check? pH strip lot# _____, pH strip lot# _____, pH strip lot# _____			—

Preservative added:

<input type="checkbox"/> H2SO4 lot# _____ added to samples _____	on/at _____
<input type="checkbox"/> HCL lot# _____ added to samples _____	on/at _____
<input type="checkbox"/> HNO3 lot# _____ added to samples _____	on/at _____
<input type="checkbox"/> NaOH lot# _____ added to samples _____	on/at _____

Section 6:
Explanations/Comments: _____

Date Logged in 1/10/19 By (print) AL (sign) [Signature]
Date Labeled 1/10/19 By (print) AL (sign) [Signature]

Detections Summary for 306316

Results for any subcontracted analyses are not included in this summary.

Client : Pacific Gas & Electric
 Project : STANDARD
 Location : Resample 8-DW-01102019

Client Sample ID : TIGER PIT-UP-DW Laboratory Sample ID : 306316-001

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Cyanide	0.055		0.010	mg/L	TOTAL	1.000	SM4500CN-C,E	METHOD

Client Sample ID : SOURCE-UP-DW Laboratory Sample ID : 306316-002

No Detections

Total Cyanide			
Lab #:	306316	Location:	Resample 8-DW-01102019
Client:	Pacific Gas & Electric	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM4500CN-C,E
Analyte:	Cyanide	Sampled:	01/10/19
Matrix:	Water	Received:	01/10/19
Units:	mg/L	Prepared:	01/10/19
Diln Fac:	1.000	Analyzed:	01/11/19
Batch#:	266844		

Field ID	Type	Lab ID	Result	RL
TIGER PIT-UP-DW	SAMPLE	306316-001	0.055	0.010
SOURCE-UP-DW	SAMPLE	306316-002	ND	0.010
	BLANK	QC960973	ND	0.010

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Total Cyanide			
Lab #:	306316	Location:	Resample 8-DW-01102019
Client:	Pacific Gas & Electric	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM4500CN-C,E
Analyte:	Cyanide	Batch#:	266844
Field ID:	ZZZZZZZZZZ	Sampled:	01/07/19
MSS Lab ID:	306233-001	Received:	01/07/19
Matrix:	Water	Prepared:	01/10/19
Units:	mg/L	Analyzed:	01/11/19
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC960974		0.2000	0.1686	84	75-120		
MS	QC960975	<0.01000	0.2000	0.1710	86	56-120		
MSD	QC960976		0.2000	0.1580	79	56-120	8	25

RPD= Relative Percent Difference



ENTHALPY

ANALYTICAL



Enthalpy Analytical

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 306317
ANALYTICAL REPORT

Pacific Gas & Electric
4801 Oakport Street
Oakland, CA 94601

Project : STANDARD
Location : Resample 8-ENT-01102019
Level : II

Sample ID
TIGER PIT-UP

Lab ID
306317-001

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature which applies to this PDF file as well as any associated electronic data deliverable files. The results contained in this report meet all requirements of NELAP and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: _____

Date: 01/11/2019

Will Rice
Project Manager
will.rice@enthalpy.com
(510) 204-2221 Ext 13102

CA ELAP# 2896, NELAP# 4044-001

CASE NARRATIVE

Laboratory number: 306317
Client: Pacific Gas & Electric
Location: Resample 8-ENT-01102019
Request Date: 01/10/19
Samples Received: 01/10/19

This data package contains sample and QC results for one water sample, requested for the above referenced project on 01/10/19. The sample was received cold and intact.

Total Cyanide (SM4500CN-C,E):

No analytical problems were encountered.

SAMPLE RECEIPT CHECKLIST



Section 1: Login # 306317
Date Received: 1.10.19

Client: PG&E
Project: _____

Section 2: Samples received in a cooler? Yes, how many? 1 No (skip Section 3 below)

If no cooler Sample Temp (°C): _____ using IR Gun # A, or B

Samples received on ice directly from the field. Cooling process had begun

If in cooler: Date Opened 1.10.19 By (print) SH (sign) [Signature]

Shipping Info (if applicable) _____

Are custody seals present? No, or Yes. If yes, where? on cooler, on samples, on package

Date: _____ How many _____ Signature, Initials, None

Were custody seals intact upon arrival? Yes No N/A

Section 3: **Important: Notify PM if temperature exceeds 6°C or arrive frozen.**

Packing in cooler: (if other, describe) _____

Bubble Wrap, Foam blocks, Bags, None, Cloth material, Cardboard, Styrofoam, Paper towels

Samples received on ice directly from the field. Cooling process had begun

Type of ice used: Wet, Blue/Gel, None Temperature blank(s) included? Yes, No

Temperature measured using Thermometer ID: _____ or IR Gun # A B

Cooler Temp (°C): #1: 3.3, #2: _____, #3: _____, #4: _____, #5: _____, #6: _____, #7: _____

Section 4:	YES	NO	N/A
Were custody papers dry, filled out properly, and the project identifiable	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Were Method 5035 sampling containers present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
If YES, what time were they transferred to freezer?			
Did all bottles arrive unbroken/unopened?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are there any missing / extra samples?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Are samples in the appropriate containers for indicated tests?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are sample labels present, in good condition and complete?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the container count match the COC?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do the sample labels agree with custody papers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Was sufficient amount of sample sent for tests requested?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did you change the hold time in LIMS for unpreserved VOAs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Did you change the hold time in LIMS for preserved terracores?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Are bubbles > 6mm absent in VOA samples?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Was the client contacted concerning this sample delivery?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
If YES, who was called? _____ By _____ Date: _____			

Section 5:	YES	NO	N/A
Are the samples appropriately preserved? (if N/A, skip the rest of section 5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Did you check preservatives for all bottles for each sample?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Did you document your preservative check?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
pH strip lot# _____, pH strip lot# _____, pH strip lot# _____			
Preservative added:			
<input type="checkbox"/> H2SO4 lot# _____ added to samples _____ on/at _____			
<input type="checkbox"/> HCL lot# _____ added to samples _____ on/at _____			
<input type="checkbox"/> HNO3 lot# _____ added to samples _____ on/at _____			
<input type="checkbox"/> NaOH lot# _____ added to samples _____ on/at _____			

Section 6: Explanations/Comments: _____

Date Logged in 1/10/19 By (print) AC (sign) [Signature]
 Date Labeled 1/10/19 By (print) AC (sign) [Signature]

Detections Summary for 306317

Results for any subcontracted analyses are not included in this summary.

Client : Pacific Gas & Electric
 Project : STANDARD
 Location : Resample 8-ENT-01102019

Client Sample ID : TIGER PIT-UP Laboratory Sample ID : 306317-001

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Cyanide	0.051		0.010	mg/L	TOTAL	1.000	SM4500CN-C,E	METHOD

Total Cyanide			
Lab #:	306317	Location:	Resample 8-ENT-01102019
Client:	Pacific Gas & Electric	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM4500CN-C,E
Analyte:	Cyanide	Batch#:	266844
Field ID:	TIGER PIT-UP	Sampled:	01/10/19
Matrix:	Water	Received:	01/10/19
Units:	mg/L	Prepared:	01/10/19
Diln Fac:	1.000	Analyzed:	01/11/19

Type	Lab ID	Result	RL
SAMPLE	306317-001	0.051	0.010
BLANK	QC960973	ND	0.010

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Total Cyanide			
Lab #:	306317	Location:	Resample 8-ENT-01102019
Client:	Pacific Gas & Electric	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM4500CN-C,E
Analyte:	Cyanide	Batch#:	266844
Field ID:	ZZZZZZZZZZ	Sampled:	01/07/19
MSS Lab ID:	306233-001	Received:	01/07/19
Matrix:	Water	Prepared:	01/10/19
Units:	mg/L	Analyzed:	01/11/19
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC960974		0.2000	0.1686	84	75-120		
MS	QC960975	<0.01000	0.2000	0.1710	86	56-120		
MSD	QC960976		0.2000	0.1580	79	56-120	8	25

RPD= Relative Percent Difference

Attachment 11

Analytical Report on Resampling #9



ENTHALPY

ANALYTICAL



Enthalpy Analytical

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 306446
ANALYTICAL REPORT

Pacific Gas & Electric
4801 Oakport Street
Oakland, CA 94601

Project : STANDARD
Location : Resample 9 (1/16/19)
Level : II

<u>Sample ID</u>	<u>Lab ID</u>
UP TIGER PIT	306446-001
UP HRSG IP A	306446-002
UP HRSG IP B	306446-003
UP PHOSPHATE	306446-004
UP CC COOLING WATER	306446-005
UP AMINE	306446-006
UP E-006	306446-007
UP HAMMOND TANK	306446-008
UP OWS	306446-009
UP AMMONIA SUMP	306446-010
UP SERVICE WATER	306446-011
UP SOURCE WATER	306446-012

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature which applies to this PDF file as well as any associated electronic data deliverable files. The results contained in this report meet all requirements of NELAP and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: _____

Date: 01/17/2019

Will Rice
Project Manager
will.rice@enthalpy.com
(510) 204-2221 Ext 13102

CA ELAP# 2896, NELAP# 4044-001

CASE NARRATIVE

Laboratory number: 306446
Client: Pacific Gas & Electric
Location: Resample 9 (1/16/19)
Request Date: 01/16/19
Samples Received: 01/16/19

This data package contains sample and QC results for twelve water samples, requested for the above referenced project on 01/16/19. The samples were received cold and intact.

Total Cyanide (SM4500CN-C,E):

Low recoveries were observed for cyanide in the MS/MSD of UP TIGER PIT (lab # 306446-001); the LCS was within limits. No other analytical problems were encountered.

SAMPLE RECEIPT CHECKLIST



Section 1: Login # 356446
 Date Received: 1/16/19

Client: PG + E
 Project: _____

Section 2: Samples received in a cooler? Yes, how many? 1 No (skip Section 3 below)

If no cooler Sample Temp (°C): _____ using IR Gun # A, or B

Samples received on ice directly from the field. Cooling process had begun

If in cooler: Date Opened 1/16/19 By (print) AC (sign) [Signature]

Shipping Info (if applicable) _____

Are custody seals present? No, or Yes. If yes, where? on cooler, on samples, on package

Date: _____ How many _____ Signature, Initials, None

Were custody seals intact upon arrival? Yes No N/A

Section 3:

Important: Notify PM if temperature exceeds 6°C or arrive frozen.

Packing in cooler: (if other, describe) _____

Bubble Wrap, Foam blocks, Bags, None, Cloth material, Cardboard, Styrofoam, Paper towels

Samples received on ice directly from the field. Cooling process had begun

Type of ice used: Wet, Blue/Gel, None Temperature blank(s) included? Yes, No

Temperature measured using Thermometer ID: _____, or IR Gun # A B

Cooler Temp (°C): #1: 1.6, #2: _____, #3: _____, #4: _____, #5: _____, #6: _____, #7: _____

Section 4:

	YES	NO	N/A
Were custody papers dry, filled out properly, and the project identifiable	—		
Were Method 5035 sampling containers present?			
If YES, what time were they transferred to freezer?			
Did all bottles arrive unbroken/unopened?	—		
Are there any missing / extra samples?		—	
Are samples in the appropriate containers for indicated tests?	—		
Are sample labels present, in good condition and complete?	—		
Does the container count match the COC?	—		
Do the sample labels agree with custody papers?	—		
Was sufficient amount of sample sent for tests requested?	—		
Did you change the hold time in LIMS for unpreserved VOAs?			—
Did you change the hold time in LIMS for preserved terracores?			—
Are bubbles > 6mm absent in VOA samples?			—
Was the client contacted concerning this sample delivery?			—
If YES, who was called? _____ By _____ Date: _____			—

Section 5:

	YES	NO	N/A
Are the samples appropriately preserved? (if N/A, skip the rest of section 5)			—
Did you check preservatives for all bottles for each sample?			
Did you document your preservative check?			

pH strip lot# _____, pH strip lot# _____, pH strip lot# _____

Preservative added:

- H2SO4 lot# _____ added to samples _____ on/at _____
- HCL lot# _____ added to samples _____ on/at _____
- HNO3 lot# _____ added to samples _____ on/at _____
- NaOH lot# _____ added to samples _____ on/at _____

Section 6:

Explanations/Comments: _____

Date Logged In 1/16/19 By (print) AC (sign) [Signature]
 Date Labeled 1/16/19 By (print) AC (sign) [Signature]

Detections Summary for 306446

Results for any subcontracted analyses are not included in this summary.

Client : Pacific Gas & Electric
 Project : STANDARD
 Location : Resample 9 (1/16/19)

Client Sample ID : UP TIGER PIT Laboratory Sample ID : 306446-001

No Detections

Client Sample ID : UP HRSG IP A Laboratory Sample ID : 306446-002

No Detections

Client Sample ID : UP HRSG IP B Laboratory Sample ID : 306446-003

No Detections

Client Sample ID : UP PHOSPHATE Laboratory Sample ID : 306446-004

No Detections

Client Sample ID : UP CC COOLING WATER Laboratory Sample ID : 306446-005

No Detections

Client Sample ID : UP AMINE Laboratory Sample ID : 306446-006

No Detections

Client Sample ID : UP E-006 Laboratory Sample ID : 306446-007

No Detections

Client Sample ID : UP HAMMOND TANK Laboratory Sample ID : 306446-008

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Cyanide	0.026		0.010	mg/L	TOTAL	1.000	SM4500CN-C,E	METHOD

Client Sample ID : UP OWS	Laboratory Sample ID :	306446-009
No Detections		
Client Sample ID : UP AMMONIA SUMP	Laboratory Sample ID :	306446-010
No Detections		
Client Sample ID : UP SERVICE WATER	Laboratory Sample ID :	306446-011
No Detections		
Client Sample ID : UP SOURCE WATER	Laboratory Sample ID :	306446-012
No Detections		

Total Cyanide			
Lab #:	306446	Location:	Resample 9 (1/16/19)
Client:	Pacific Gas & Electric	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM4500CN-C,E
Analyte:	Cyanide	Sampled:	01/16/19
Matrix:	Water	Received:	01/16/19
Units:	mg/L	Prepared:	01/16/19
Diln Fac:	1.000	Analyzed:	01/17/19
Batch#:	266990		

Field ID	Type	Lab ID	Result	RL
UP TIGER PIT	SAMPLE	306446-001	ND	0.010
UP HRSG IP A	SAMPLE	306446-002	ND	0.010
UP HRSG IP B	SAMPLE	306446-003	ND	0.010
UP PHOSPHATE	SAMPLE	306446-004	ND	0.010
UP CC COOLING WATER	SAMPLE	306446-005	ND	0.010
UP AMINE	SAMPLE	306446-006	ND	0.010
UP E-006	SAMPLE	306446-007	ND	0.010
UP HAMMOND TANK	SAMPLE	306446-008	0.026	0.010
UP OWS	SAMPLE	306446-009	ND	0.010
UP AMMONIA SUMP	SAMPLE	306446-010	ND	0.010
UP SERVICE WATER	SAMPLE	306446-011	ND	0.010
UP SOURCE WATER	SAMPLE	306446-012	ND	0.010
	BLANK	QC961536	ND	0.010

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Total Cyanide			
Lab #:	306446	Location:	Resample 9 (1/16/19)
Client:	Pacific Gas & Electric	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM4500CN-C,E
Analyte:	Cyanide	Batch#:	266990
Field ID:	UP TIGER PIT	Sampled:	01/16/19
MSS Lab ID:	306446-001	Received:	01/16/19
Matrix:	Water	Prepared:	01/16/19
Units:	mg/L	Analyzed:	01/17/19
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC961537		0.2000	0.1742	87	75-120		
MS	QC961538	<0.01000	0.2000	<0.01000	0 *	56-120		
MSD	QC961539		0.2000	<0.01000	0 *	56-120	NC	25

*= Value outside of QC limits; see narrative

NC= Not Calculated

RPD= Relative Percent Difference

Attachment 12

Analytical Report on Resampling #10



ENTHALPY

ANALYTICAL



Enthalpy Analytical

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 307019
ANALYTICAL REPORT

Pacific Gas & Electric
4801 Oakport Street
Oakland, CA 94601

Project : STANDARD
Location : Resample 10 (2/7/19)
Level : II

<u>Sample ID</u>	<u>Lab ID</u>
UP HAMMOND TANK	307019-001
UP TIGER PIT	307019-002
UP SOURCE WATER	307019-003

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Signature: _____

Haley Campbell
Project Manager
haley.campbell@enthalpy.com

Date: 02/08/2019

CA ELAP# 2896, NELAP# 4044-001

CASE NARRATIVE

Laboratory number: 307019
Client: Pacific Gas & Electric
Location: Resample 10 (2/7/19)
Request Date: 02/07/19
Samples Received: 02/07/19

This data package contains sample and QC results for three water samples, requested for the above referenced project on 02/07/19. The samples were received cold and intact.

Total Cyanide (SM4500CN-C,E):

No analytical problems were encountered.

SAMPLE RECEIPT CHECKLIST



Section 1: Login # 307019
 Date Received: 2/7/19

Client: TXEO
 Project: _____

Section 2: Samples received in a cooler? Yes, how many? _____ No (skip Section 3 below)
 If no cooler Sample Temp (°C): 2-3 using IR Gun # A, or B
 Samples received on ice directly from the field. Cooling process had begun
 If in cooler: Date Opened 2/7/19 By (print) AC (sign) _____
 Shipping Info (if applicable) _____
 Are custody seals present? No, or Yes. If yes, where? on cooler, on samples, on package
 Date: _____ How many _____ Signature, Initials, None
 Were custody seals intact upon arrival? Yes No N/A

Section 3: **Important: Notify PM if temperature exceeds 6°C or arrive frozen.**
 Packing in cooler: (if other, describe) _____
 Bubble Wrap, Foam blocks, Bags, None, Cloth material, Cardboard, Styrofoam, Paper towels
 Samples received on ice directly from the field. Cooling process had begun
 Type of ice used: Wet, Blue/Gel, None Temperature blank(s) included? Yes, No
 Temperature measured using Thermometer ID: _____, or IR Gun # A B
 Cooler Temp (°C): #1: _____, #2: _____, #3: _____, #4: _____, #5: _____, #6: _____, #7: _____

Section 4:	YES	NO	N/A
Were custody papers dry, filled out properly, and the project identifiable	/		
Were Method 5035 sampling containers present?		/	
If YES, what time were they transferred to freezer?			
Did all bottles arrive unbroken/unopened?	/		
Are there any missing / extra samples?		/	
Are samples in the appropriate containers for indicated tests?	/		
Are sample labels present, in good condition and complete?	/		
Does the container count match the COC?	/		
Do the sample labels agree with custody papers?	/		
Was sufficient amount of sample sent for tests requested?	/		
Did you change the hold time in LIMS for unpreserved VOAs?			/
Did you change the hold time in LIMS for preserved terracores?			/
Are bubbles > 6mm absent in VOA samples?			/
Was the client contacted concerning this sample delivery?		/	
If YES, who was called? _____ By _____ Date: _____			

Section 5:

	YES	NO	N/A
Are the samples appropriately preserved? (if N/A, skip the rest of section 5)			/
Did you check preservatives for all bottles for each sample?			/
Did you document your preservative check?			/
pH strip lot# _____, pH strip lot# _____, pH strip lot# _____			
Preservative added:			
<input type="checkbox"/> H2SO4 lot# _____ added to samples _____ on/at _____			
<input type="checkbox"/> HCL lot# _____ added to samples _____ on/at _____			
<input type="checkbox"/> HNO3 lot# _____ added to samples _____ on/at _____			
<input type="checkbox"/> NaOH lot# _____ added to samples _____ on/at _____			

Section 6:
 Explanations/Comments: _____

Date Logged in 2/7/19 By (print) AC (sign) _____
 Date Labeled 2/7/19 By (print) AC (sign) _____

Detections Summary for 307019

Results for any subcontracted analyses are not included in this summary.

Client : Pacific Gas & Electric
 Project : STANDARD
 Location : Resample 10 (2/7/19)

Client Sample ID : UP HAMMOND TANK Laboratory Sample ID : 307019-001

No Detections

Client Sample ID : UP TIGER PIT Laboratory Sample ID : 307019-002

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Cyanide	0.013		0.010	mg/L	TOTAL	1.000	SM4500CN-C,E	METHOD

Client Sample ID : UP SOURCE WATER Laboratory Sample ID : 307019-003

No Detections

Total Cyanide			
Lab #:	307019	Location:	Resample 10 (2/7/19)
Client:	Pacific Gas & Electric	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM4500CN-C,E
Analyte:	Cyanide	Sampled:	02/07/19
Matrix:	Water	Received:	02/07/19
Units:	mg/L	Prepared:	02/07/19
Diln Fac:	1.000	Analyzed:	02/08/19
Batch#:	267621		

Field ID	Type	Lab ID	Result	RL
UP HAMMOND TANK	SAMPLE	307019-001	ND	0.010
UP TIGER PIT	SAMPLE	307019-002	0.013	0.010
UP SOURCE WATER	SAMPLE	307019-003	ND	0.010
	BLANK	QC964159	ND	0.010

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Total Cyanide			
Lab #:	307019	Location:	Resample 10 (2/7/19)
Client:	Pacific Gas & Electric	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM4500CN-C,E
Analyte:	Cyanide	Batch#:	267621
Field ID:	UP SOURCE WATER	Sampled:	02/07/19
MSS Lab ID:	307019-003	Received:	02/07/19
Matrix:	Water	Prepared:	02/07/19
Units:	mg/L	Analyzed:	02/08/19
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC964160		0.2000	0.1579	79	75-120		
MS	QC964161	<0.01000	0.2000	0.1211	61	56-120		
MSD	QC964162		0.2000	0.1513	76	56-120	22	25

RPD= Relative Percent Difference

Attachment 13

Analytical Report on Resampling #11



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1902474

Report Created for: PG&E Gateway Generating Station

3225 Wilbur Avenue
Antioch, CA 94509

Project Contact: Angel Espiritu

Project P.O.:

Project: Resample II (2/11/19)

Project Received: 02/11/2019

Analytical Report reviewed & approved for release on 02/12/2019 by:

Christine Askari
Project Manager

The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.





Glossary of Terms & Qualifier Definitions

Client: PG&E Gateway Generating Station
Project: Resample II (2/11/19)
WorkOrder: 1902474

Glossary Abbreviation

%D	Serial Dilution Percent Difference
95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DLT	Dilution Test (Serial Dilution)
DUP	Duplicate
EDL	Estimated Detection Limit
ERS	External reference sample. Second source calibration verification.
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PDS	Post Digestion Spike
PDSD	Post Digestion Spike Duplicate
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
ST	Sorbent Tube
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
TZA	TimeZone Net Adjustment for sample collected outside of MAI's UTC.
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)



Analytical Report

Client: PG&E Gateway Generating Station
Date Received: 2/11/19 10:05
Date Prepared: 2/12/19
Project: Resample II (2/11/19)

WorkOrder: 1902474
Extraction Method: SM4500-CN⁻ E
Analytical Method: SM4500-CN⁻ CE
Unit: µg/L

Cyanide, Total

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
UP Tiger Pit	1902474-001A	Water	02/11/2019 08:30	WC_SKALAR 021219A1_29	172888

Analytes	Result	RL	DF	Date Analyzed
Total Cyanide	29	1.0	1	02/12/2019 11:55

Analyst(s): NM

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
UP RO	1902474-002A	Water	02/11/2019 09:25	WC_SKALAR 021219A1_32	172888

Analytes	Result	RL	DF	Date Analyzed
Total Cyanide	1.7	1.0	1	02/12/2019 12:03

Analyst(s): NM



Quality Control Report

Client: PG&E Gateway Generating Station
Date Prepared: 2/12/19
Date Analyzed: 2/12/19
Instrument: WC_SKALAR
Matrix: Water
Project: Resample II (2/11/19)

WorkOrder: 1902474
BatchID: 172888
Extraction Method: SM4500-CN⁻ E
Analytical Method: SM4500-CN⁻ CE
Unit: µg/L
Sample ID: MB/LCS/LCSD-172888

QC Summary Report for SM4500-CN⁻ CE

Analyte	MB Result	MDL	RL			
Total Cyanide	ND	0.84	1.0	-	-	-

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Total Cyanide	41	40	40	102	101	80-120	1.19	20

McC Campbell Analytical, Inc.



1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

WaterTrax WriteOn EDF

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1902474

ClientCode: PGEA

Excel EQuIS Email HardCopy ThirdParty J-flag
 Detection Summary Dry-Weight

Report to:

Angel Espiritu
PG&E Gateway Generating Station
3225 Wilbur Avenue
Antioch, CA 94509
(925) 459-7212 FAX:

Email: abe4@pge.com
cc/3rd Party:
PO:
Project: Resample II (2/11/19)

Bill to:

Angel Espiritu
PG&E Gateway Generating Station
3225 Wilbur Avenue
Antioch, CA 94509

Requested TAT: 1 day;

Date Received: 02/11/2019

Date Logged: 02/11/2019

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
1902474-001	UP Tiger Pit	Water	2/11/2019 08:30	<input type="checkbox"/>	A												
1902474-002	UP RO	Water	2/11/2019 09:25	<input type="checkbox"/>	A												

Test Legend:

1	CN_SM4500CE_W	2		3		4	
5		6		7		8	
9		10		11		12	

Prepared by: Agustina Venegas

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.



WORK ORDER SUMMARY

Client Name: PG&E GATEWAY GENERATING STATION

Project: Resample II (2/11/19)

Work Order: 1902474

Client Contact: Angel Espiritu

QC Level: LEVEL 2

Contact's Email: abe4@pge.com

Comments:

Date Logged: 2/11/2019

WaterTrax WriteOn EDF Excel EQUIS Email HardCopy ThirdParty J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1902474-001A	UP Tiger Pit	Water	SM4500-CN ⁻ CE (Cyanide, Total)	1	500mL aHDPE w/ NaOH + Na2S2O3	<input type="checkbox"/>	2/11/2019 8:30	1 day	None	<input type="checkbox"/>	
1902474-002A	UP RO	Water	SM4500-CN ⁻ CE (Cyanide, Total)	1	500mL HDPE w/ Na2S2O3	<input type="checkbox"/>	2/11/2019 9:25	1 day	Present	<input type="checkbox"/>	

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.



Sample Receipt Checklist

Client Name: **PG&E Gateway Generating Station**
 Project: **Resample II (2/11/19)**
 WorkOrder No: **1902474** Matrix: Water
 Carrier: Client Drop-In

Date and Time Received: **2/11/2019 10:05**
 Date Logged: **2/11/2019**
 Received by: **Julia Danielsson**
 Logged by: **Agustina Venegas**

Chain of Custody (COC) Information

Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample IDs noted by Client on COC?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Date and Time of collection noted by Client on COC?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sampler's name noted on COC?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
COC agrees with Quote?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper containers/bottles?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>
Samples Received on Ice?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	

(Ice Type: WET ICE)

Sample/Temp Blank temperature		Temp: 4.4°C	NA <input type="checkbox"/>
Water - VOA vials have zero headspace / no bubbles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Sample labels checked for correct preservation?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
pH acceptable upon receipt (Metal: <2; Nitrate 353.2/4500NO3: <2; 522: <4; 218.7: >8)?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>

UCMR Samples:

pH tested and acceptable upon receipt (200.8: ≤2; 525.3: ≤4; 530: ≤7; 541: <3; 544: <6.5 & 7.5)?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Free Chlorine tested and acceptable upon receipt (<0.1mg/L)?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>

 Comments:



ENTHALPY

ANALYTICAL



Enthalpy Analytical

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 307128
ANALYTICAL REPORT

Pacific Gas & Electric
4801 Oakport Street
Oakland, CA 94601

Project : STANDARD
Location : Resample 11 (2/11/19)
Level : II

<u>Sample ID</u>	<u>Lab ID</u>
UP TIGER PIT	307128-001
UP RO	307128-002

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Signature: _____

Haley Campbell
Project Manager
haley.campbell@enthalpy.com

Date: 02/12/2019

CA ELAP# 2896, NELAP# 4044-001

CASE NARRATIVE

Laboratory number: 307128
Client: Pacific Gas & Electric
Location: Resample 11 (2/11/19)
Request Date: 02/11/19
Samples Received: 02/11/19

This data package contains sample and QC results for two water samples, requested for the above referenced project on 02/11/19. The samples were received on ice and intact, directly from the field.

Total Cyanide (SM4500CN-C,E):

No analytical problems were encountered.

SAMPLE RECEIPT CHECKLIST



Section 1: Login # 307128
 Date Received: 2/11/19

Client: MUSkan Environmental
 Project: Resample 11

Section 2: Samples received in a cooler? Yes, how many? _____ No (skip Section 3 below)
 If no cooler Sample Temp (°C): 3.5 using IR Gun # A, or B
 Samples received on ice directly from the field. Cooling process had begun
 If in cooler: Date Opened _____ By (print) _____ (sign) _____
 Shipping Info (if applicable) _____
 Are custody seals present? No, or Yes. If yes, where? on cooler, on samples, on package
 Date: _____ How many _____ Signature, Initials, None
 Were custody seals intact upon arrival? Yes No N/A

Section 3: **Important: Notify PM if temperature exceeds 6°C or arrive frozen.**
 Packing in cooler: (if other, describe) _____
 Bubble Wrap, Foam blocks, Bags, None, Cloth material, Cardboard, Styrofoam, Paper towels
 Samples received on ice directly from the field. Cooling process had begun
 Type of ice used: Wet, Blue/Gel, None Temperature blank(s) included? Yes, No
 Temperature measured using Thermometer ID: _____, or IR Gun # A B
 Cooler Temp (°C): #1: 3.5, #2: _____, #3: _____, #4: _____, #5: _____, #6: _____, #7: _____

Section 4:	YES	NO	N/A
Were custody papers dry, filled out properly, and the project identifiable	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Were Method 5035 sampling containers present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
If YES, what time were they transferred to freezer?			
Did all bottles arrive unbroken/unopened?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are there any missing / extra samples?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Are samples in the appropriate containers for indicated tests?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are sample labels present, in good condition and complete?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the container count match the COC?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do the sample labels agree with custody papers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Was sufficient amount of sample sent for tests requested?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did you change the hold time in LIMS for unpreserved VOAs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Did you change the hold time in LIMS for preserved terracores?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Are bubbles > 6mm absent in VOA samples?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Was the client contacted concerning this sample delivery?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
If YES, who was called? _____ By _____ Date: _____			

Section 5:

	YES	NO	N/A
Are the samples appropriately preserved? (If N/A, skip the rest of section 5)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Did you check preservatives for all bottles for each sample?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Did you document your preservative check?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
pH strip lot# _____, pH strip lot# _____, pH strip lot# _____			
Preservative added:			
<input type="checkbox"/> H2SO4 lot# _____	added to samples	_____	on/at _____
<input type="checkbox"/> HCL lot# _____	added to samples	_____	on/at _____
<input type="checkbox"/> HNO3 lot# _____	added to samples	_____	on/at _____
<input type="checkbox"/> NaOH lot# _____	added to samples	_____	on/at _____

Section 6:
 Explanations/Comments: _____

Date Logged in 2/11/19 By (print) af (sign) af
 Date Labeled 2/11/19 By (print) af (sign) af

Detections Summary for 307128

Results for any subcontracted analyses are not included in this summary.

Client : Pacific Gas & Electric
 Project : STANDARD
 Location : Resample 11 (2/11/19)

Client Sample ID : UP TIGER PIT Laboratory Sample ID : 307128-001

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Cyanide	0.014		0.010	mg/L	TOTAL	1.000	SM4500CN-C,E	METHOD

Client Sample ID : UP RO Laboratory Sample ID : 307128-002

No Detections

Total Cyanide			
Lab #:	307128	Location:	Resample 11 (2/11/19)
Client:	Pacific Gas & Electric	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM4500CN-C,E
Analyte:	Cyanide	Sampled:	02/11/19
Matrix:	Water	Received:	02/11/19
Units:	mg/L	Prepared:	02/11/19
Diln Fac:	1.000	Analyzed:	02/12/19
Batch#:	267700		

Field ID	Type	Lab ID	Result	RL
UP TIGER PIT	SAMPLE	307128-001	0.014	0.010
UP RO	SAMPLE	307128-002	ND	0.010
	BLANK	QC964476	ND	0.010

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Total Cyanide			
Lab #:	307128	Location:	Resample 11 (2/11/19)
Client:	Pacific Gas & Electric	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM4500CN-C,E
Analyte:	Cyanide	Batch#:	267700
Field ID:	UP TIGER PIT	Sampled:	02/11/19
MSS Lab ID:	307128-001	Received:	02/11/19
Matrix:	Water	Prepared:	02/11/19
Units:	mg/L	Analyzed:	02/12/19
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC964477		0.2000	0.1665	83	75-120		
MS	QC964478	0.01390	0.2000	0.1986	92	56-120		
MSD	QC964479		0.2000	0.1985	92	56-120	0	25

RPD= Relative Percent Difference

Attachment 14

Analytical Report on Resampling #12



ENTHALPY

ANALYTICAL



Enthalpy Analytical

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 307577
ANALYTICAL REPORT

Pacific Gas & Electric
4801 Oakport Street
Oakland, CA 94601

Project : STANDARD

Level : II

<u>Sample ID</u>	<u>Lab ID</u>
UP HAMMOND TAND	307577-001
UP RO REJECT	307577-002
UP TIGER PIT	307577-003
UP SOURCE WATER	307577-004

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature which applies to this PDF file as well as any associated electronic data deliverable files. The results contained in this report meet all requirements of NELAP and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: _____

Haley Campbell
Project Manager
haley.campbell@enthalpy.com

Date: 02/26/2019

CA ELAP# 2896, NELAP# 4044-001

CASE NARRATIVE

Laboratory number: 307577
Client: Pacific Gas & Electric
Request Date: 02/25/19
Samples Received: 02/25/19

This data package contains sample and QC results for four water samples, requested for the above referenced project on 02/25/19. The samples were received cold and intact.

Total Cyanide (SM4500CN-C,E):

No analytical problems were encountered.

SAMPLE RECEIPT CHECKLIST



Section 1: Login # 307577 Client: PG+E
 Date Received: 2-25-19 Project: _____

Section 2: Samples received in a cooler? Yes, how many? _____ No (skip Section 3 below)
 If no cooler Sample Temp (°C): 3.0 C using IR Gun # A, or B
 Samples received on ice directly from the field. Cooling process had begun
 If in cooler: Date Opened 2-25-19 By (print) af (sign) af
 Shipping Info (if applicable) _____
 Are custody seals present? No, or Yes. If yes, where? on cooler, on samples, on package
 Date: _____ How many _____ Signature, Initials, None
 Were custody seals intact upon arrival? Yes No N/A

Section 3: **Important : Notify PM if temperature exceeds 6°C or arrive frozen.**

Packing in cooler: (if other, describe) _____
 Bubble Wrap, Foam blocks, Bags, None, Cloth material, Cardboard, Styrofoam, Paper towels
 Samples received on ice directly from the field. Cooling process had begun
 Type of ice used : Wet, Blue/Gel, None Temperature blank(s) included? Yes, No
 Temperature measured using Thermometer ID: _____, or IR Gun # A B
 Cooler Temp (°C): #1: _____, #2: _____, #3: _____, #4: _____, #5: _____, #6: _____, #7: _____

Section 4:	YES	NO	N/A
Were custody papers dry, filled out properly, and the project identifiable	/		
Were Method 5035 sampling containers present?		/	
if YES, what time were they transferred to freezer?			
Did all bottles arrive unbroken/unopened?	/		
Are there any missing / extra samples?		/	
Are samples in the appropriate containers for indicated tests?	/		
Are sample labels present, in good condition and complete?	/		
Does the container count match the COC?	/		
Do the sample labels agree with custody papers?	/		
Was sufficient amount of sample sent for tests requested?	/		
Did you change the hold time in LIMS for unpreserved VOAs?			/
Did you change the hold time in LIMS for preserved terracores?			/
Are bubbles > 6mm absent in VOA samples?			/
Was the client contacted concerning this sample delivery?			/
if YES, who was called? _____ By _____ Date: _____			

Section 5:

	YES	NO	N/A
Are the samples appropriately preserved? (if N/A, skip the rest of section 5)			/
Did you check preservatives for all bottles for each sample?			
Did you document your preservative check?			
pH strip lot# _____, pH strip lot# _____, pH strip lot# _____			

Preservative added:

<input type="checkbox"/> H2SO4 lot# _____	added to samples _____	on/at _____
<input type="checkbox"/> HCL lot# _____	added to samples _____	on/at _____
<input type="checkbox"/> HNO3 lot# _____	added to samples _____	on/at _____
<input type="checkbox"/> NaOH lot# _____	added to samples _____	on/at _____

Section 6:
 Explanations/Comments: _____

Date Logged in 2-25-19 By (print) af (sign) af
 Date Labeled 2-25-19 By (print) af (sign) af

Detections Summary for 307577

Results for any subcontracted analyses are not included in this summary.

Client : Pacific Gas & Electric
Project : STANDARD
Location :

Client Sample ID : UP HAMMOND TAND Laboratory Sample ID : 307577-001

No Detections

Client Sample ID : UP RO REJECT Laboratory Sample ID : 307577-002

No Detections

Client Sample ID : UP TIGER PIT Laboratory Sample ID : 307577-003

No Detections

Client Sample ID : UP SOURCE WATER Laboratory Sample ID : 307577-004

No Detections

Total Cyanide			
Lab #:	307577	Prep:	METHOD
Client:	Pacific Gas & Electric	Analysis:	SM4500CN-C,E
Project#:	STANDARD		
Analyte:	Cyanide	Sampled:	02/25/19
Matrix:	Water	Received:	02/25/19
Units:	mg/L	Prepared:	02/25/19
Diln Fac:	1.000	Analyzed:	02/26/19
Batch#:	268093		

Field ID	Type	Lab ID	Result	RL
UP HAMMOND TAND	SAMPLE	307577-001	ND	0.010
UP RO REJECT	SAMPLE	307577-002	ND	0.010
UP TIGER PIT	SAMPLE	307577-003	ND	0.010
UP SOURCE WATER	SAMPLE	307577-004	ND	0.010
	BLANK	QC966128	ND	0.010

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Total Cyanide			
Lab #:	307577	Prep:	METHOD
Client:	Pacific Gas & Electric	Analysis:	SM4500CN-C,E
Project#:	STANDARD		
Analyte:	Cyanide	Batch#:	268093
Field ID:	ZZZZZZZZZZ	Sampled:	02/14/19
MSS Lab ID:	307279-002	Received:	02/15/19
Matrix:	Water	Prepared:	02/25/19
Units:	mg/L	Analyzed:	02/26/19
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC966129		0.2000	0.1828	91	75-120		
MS	QC966130	<0.01000	0.2000	0.1470	74	56-120		
MSD	QC966131		0.2000	0.1472	74	56-120	0	25

RPD= Relative Percent Difference

Attachment 15

Analytical Report on Resampling #13



ENTHALPY

ANALYTICAL



Enthalpy Analytical

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 307679
ANALYTICAL REPORT

Pacific Gas & Electric
4801 Oakport Street
Oakland, CA 94601

Project : STANDARD
Location : Resample Compliance-2/27/19
Level : II

Sample ID
UP-I-001

Lab ID
307679-001

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature which applies to this PDF file as well as any associated electronic data deliverable files. The results contained in this report meet all requirements of NELAP and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: _____

Haley Campbell
Project Manager
haley.campbell@enthalpy.com

Date: 03/01/2019

CA ELAP# 2896, NELAP# 4044-001

CASE NARRATIVE

Laboratory number: 307679
Client: Pacific Gas & Electric
Location: Resample Compliance-2/27/19
Request Date: 02/27/19
Samples Received: 02/27/19

This data package contains sample and QC results for one water sample, requested for the above referenced project on 02/27/19. The sample was received cold and intact.

Total Cyanide (SM4500CN-C,E):

Low recoveries were observed for cyanide in the MS/MSD for batch 268177; the parent sample was not a project sample, the LCS was within limits, and the associated RPD was within limits. No other analytical problems were encountered.

SAMPLE RECEIPT CHECKLIST



Section 1: Login # 357679 Client: Pge0
 Date Received: 2/27/19 Project: _____

Section 2: Samples received in a cooler? Yes, how many? 1 No (skip Section 3 below)
 If no cooler Sample Temp (°C): _____ using IR Gun # A, or B
 Samples received on ice directly from the field. Cooling process had begun
 If in cooler: Date Opened 2/27/19 By (print) AC (sign) _____
 Shipping info (if applicable) _____
 Are custody seals present? No, or Yes. If yes, where? on cooler, on samples, on package
 Date: _____ How many _____ Signature, Initials, None
 Were custody seals intact upon arrival? Yes No N/A

Section 3: **Important : Notify PM if temperature exceeds 6°C or arrive frozen.**

Packing in cooler: (if other, describe) _____
 Bubble Wrap, Foam blocks, Bags, None, Cloth material, Cardboard, Styrofoam, Paper towels
 Samples received on ice directly from the field. Cooling process had begun
 Type of ice used: Wet, Blue/Gel, None Temperature blank(s) included? Yes, No
 Temperature measured using Thermometer ID: _____, or IR Gun # A B
 Cooler Temp (°C): #1: 5.7, #2: _____, #3: _____, #4: _____, #5: _____, #6: _____, #7: _____

Section 4:	YES	NO	N/A
Were custody papers dry, filled out properly, and the project identifiable	—		
Were Method 5035 sampling containers present?			
if YES, what time were they transferred to freezer?			
Did all bottles arrive unbroken/unopened?	—		
Are there any missing / extra samples?		—	
Are samples in the appropriate containers for indicated tests?	—		
Are sample labels present, in good condition and complete?	—		
Does the container count match the COC?	—		
Do the sample labels agree with custody papers?	—		
Was sufficient amount of sample sent for tests requested?	—		
Did you change the hold time in LIMS for unpreserved VOAs?			—
Did you change the hold time in LIMS for preserved terracores?			—
Are bubbles > 6mm absent in VOA samples?			—
Was the client contacted concerning this sample delivery?			—
if YES, who was called? _____ By _____ Date: _____			

Section 5: **YES NO N/A**

Are the samples appropriately preserved? (if N/A, skip the rest of section 5) YES NO N/A

Did you check preservatives for all bottles for each sample? YES NO N/A

Did you document your preservative check?
 pH strip lot# _____, pH strip lot# _____, pH strip lot# _____

Preservative added:

H2SO4 lot# _____ added to samples _____ on/at _____

HCL lot# _____ added to samples _____ on/at _____

HNO3 lot# _____ added to samples _____ on/at _____

NaOH lot# _____ added to samples _____ on/at _____

Section 6:
 Explanations/Comments: _____

Date Logged In 2/27/19 By (print) AC (sign) _____
 Date Labeled 2/27/19 By (print) AC (sign) _____

Detections Summary for 307679

Results for any subcontracted analyses are not included in this summary.

Client : Pacific Gas & Electric
Project : STANDARD
Location : Resample Compliance-2/27/19

Client Sample ID : UP-I-001

Laboratory Sample ID :

307679-001

No Detections

Total Cyanide			
Lab #:	307679	Location:	Resample Compliance-2/27/19
Client:	Pacific Gas & Electric	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM4500CN-C,E
Analyte:	Cyanide	Batch#:	268177
Field ID:	UP-I-001	Sampled:	02/27/19
Matrix:	Water	Received:	02/27/19
Units:	mg/L	Prepared:	02/27/19
Diln Fac:	1.000	Analyzed:	02/28/19

Type	Lab ID	Result	RL
SAMPLE	307679-001	ND	0.010
BLANK	QC966472	ND	0.010

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Total Cyanide			
Lab #:	307679	Location:	Resample Compliance-2/27/19
Client:	Pacific Gas & Electric	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM4500CN-C,E
Analyte:	Cyanide	Batch#:	268177
Field ID:	ZZZZZZZZZZ	Sampled:	02/27/19
MSS Lab ID:	307710-001	Received:	02/27/19
Matrix:	Water	Prepared:	02/27/19
Units:	mg/L	Analyzed:	02/28/19
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC966473		0.2000	0.1816	91	75-120		
MS	QC966474	<0.01000	0.2000	0.1003	50 *	56-120		
MSD	QC966475		0.2000	0.1001	50 *	56-120	0	25

*= Value outside of QC limits; see narrative

RPD= Relative Percent Difference

Attachment 16

Analytical Report on Resampling #14



ENTHALPY

ANALYTICAL



Enthalpy Analytical

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 307726
ANALYTICAL REPORT

Pacific Gas & Electric 4801 Oakport Street Oakland, CA 94601	Project : STANDARD Location : Resample Compliance (2/28/19) Level : II
--	--

<u>Sample ID</u>	<u>Lab ID</u>
UP I-001	307726-001

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature which applies to this PDF file as well as any associated electronic data deliverable files. The results contained in this report meet all requirements of NELAP and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: _____

Haley Campbell
Project Manager
haley.campbell@enthalpy.com

Date: 03/01/2019

CA ELAP# 2896, NELAP# 4044-001

CASE NARRATIVE

Laboratory number: 307726
Client: Pacific Gas & Electric
Location: Resample Compliance (2/28/19)
Request Date: 02/28/19
Samples Received: 02/28/19

This data package contains sample and QC results for one water sample, requested for the above referenced project on 02/28/19. The sample was received cold and intact.

Total Cyanide (SM4500CN-C,E):

Low recoveries were observed for cyanide in the MS/MSD for batch 268177; the parent sample was not a project sample, the LCS was within limits, and the associated RPD was within limits. No other analytical problems were encountered.

SAMPLE RECEIPT CHECKLIST



Section 1: Login # 307726 Client: PEEO
 Date Received: 2/28/19 Project: _____

Section 2: Samples received in a cooler? Yes, how many? _____ No (skip Section 3 below)
 If no cooler Sample Temp (°C): 4.0 using IR Gun # A, or B
 Samples received on ice directly from the field. Cooling process had begun
 If in cooler: Date Opened 2/28/19 By (print) AC (sign) _____
 Shipping Info (if applicable) _____
 Are custody seals present? No, or Yes. If yes, where? on cooler, on samples, on package
 Date: _____ How many _____ Signature, Initials, None
 Were custody seals intact upon arrival? Yes No N/A

Section 3: **Important: Notify PM if temperature exceeds 6°C or arrive frozen.**
 Packing in cooler: (if other, describe) _____
 Bubble Wrap, Foam blocks, Bags, None, Cloth material, Cardboard, Styrofoam, Paper towels
 Samples received on ice directly from the field. Cooling process had begun
 Type of ice used: Wet, Blue/Gel, None Temperature blank(s) included? Yes, No
 Temperature measured using Thermometer ID: _____, or IR Gun # A B
 Cooler Temp (°C): #1: _____, #2: _____, #3: _____, #4: _____, #5: _____, #6: _____, #7: _____

Section 4:	YES	NO	N/A
Were custody papers dry, filled out properly, and the project identifiable	/		
Were Method 5035 sampling containers present?		/	
If YES, what time were they transferred to freezer?			
Did all bottles arrive unbroken/unopened?	/		
Are there any missing / extra samples?		/	
Are samples in the appropriate containers for indicated tests?	/		
Are sample labels present, in good condition and complete?	/		
Does the container count match the COC?	/		
Do the sample labels agree with custody papers?	/		
Was sufficient amount of sample sent for tests requested?	/		
Did you change the hold time in LIMS for unpreserved VOAs?			/
Did you change the hold time in LIMS for preserved terracores?			/
Are bubbles > 6mm absent in VOA samples?			/
Was the client contacted concerning this sample delivery?			/
If YES, who was called? _____ By _____ Date: _____			

Section 5: **YES NO N/A**
 Are the samples appropriately preserved? (If N/A, skip the rest of section 5)
 Did you check preservatives for all bottles for each sample?
 Did you document your preservative check?
 pH strip lot# _____, pH strip lot# _____, pH strip lot# _____
 Preservative added:
 H2SO4 lot# _____ added to samples _____ on/at _____
 HCl lot# _____ added to samples _____ on/at _____
 HNO3 lot# _____ added to samples _____ on/at _____
 NaOH lot# _____ added to samples _____ on/at _____

Section 6:
 Explanations/Comments: _____

Date Logged in 2/28/19 By (print) AC (sign) _____
 Date Labeled 2/28/19 By (print) AC (sign) _____

Detections Summary for 307726

Results for any subcontracted analyses are not included in this summary.

Client : Pacific Gas & Electric
Project : STANDARD
Location : Resample Compliance (2/28/19)

Client Sample ID : UP I-001 Laboratory Sample ID : 307726-001

No Detections

Total Cyanide		
Lab #:	307726	Location: Resample Compliance (2/28/19)
Client:	Pacific Gas & Electric	Prep: METHOD
Project#:	STANDARD	Analysis: SM4500CN-C,E
Analyte:	Cyanide	Batch#: 268177
Field ID:	UP I-001	Sampled: 02/28/19
Matrix:	Water	Received: 02/28/19
Units:	mg/L	Analyzed: 02/28/19
Diln Fac:	1.000	

Type	Lab ID	Result	RL	Prepared
SAMPLE	307726-001	ND	0.010	02/28/19
BLANK	QC966472	ND	0.010	02/27/19

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Total Cyanide			
Lab #:	307726	Location:	Resample Compliance (2/28/19)
Client:	Pacific Gas & Electric	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM4500CN-C,E
Analyte:	Cyanide	Batch#:	268177
Field ID:	ZZZZZZZZZZ	Sampled:	02/27/19
MSS Lab ID:	307710-001	Received:	02/27/19
Matrix:	Water	Prepared:	02/27/19
Units:	mg/L	Analyzed:	02/28/19
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC966473		0.2000	0.1816	91	75-120		
MS	QC966474	<0.01000	0.2000	0.1003	50 *	56-120		
MSD	QC966475		0.2000	0.1001	50 *	56-120	0	25

*= Value outside of QC limits; see narrative

RPD= Relative Percent Difference

Gateway Generating Station
(00-AFC-1C)

Annual Compliance Report No. 10

Exhibit 4b
Notice of Violation/Corrective Action
(Condition of Certification SOIL&WATER-4)

There was no NOV issued to PG&E GGS during RY 2018.

Gateway Generating Station
(00-AFC-1C)

Annual Compliance Report No. 10

Exhibit 5
HAZ-1 Appendix C: Table 8.12-4
(Condition of Certification HAZ-1), and
Hazardous Materials Inventory as submitted to
CUPA through CERS

HAZ-1 Appendix C

Table 8.12-4

Hazardous Materials to be Added at Gateway Generating Station During the Operational Phase

Material	CAS Number	Purpose	Location	Container	Hazardous Characteristics	Maximum Quantity On-Site	Unit	Regulatory Thresholds (lbs.)			
								Cal-ARP	Federal RQ	Federal TPQ	Federal TQ
Aqueous Ammonia (29%)	7664-41-7	SCR	Ammonia Storage Facility	Storage Tank (20,000 gal)	Corrosive	285,000	lbs.	500	100	500	20,000
Trisodium Phosphate (or Pre-blended Phosphate/Caustic)	7601-54-9 1310-73-2	pH/Corrosion Control	Northeast Corner of Admin Building	Bulk Returnable Container (Tote) with Hose Connections	Corrosive/Toxic	1,000	lbs.				
Carbohydrazide	487-18-7	Oxygen Scavenger (Oxygen removal/metal passivation)	Between ST and ACC	Bulk Returnable Container (Tote) with Hose Connections	Toxic	500	gals.				
Aqueous Ammonia (19.4%) (or ammonia monoethanolamine blend) *	7664-41-7 141-43-5	Boiler Feed pH adjustment/corrosion control	Between ST and ACC (Northwest corner of ACC)	Bulk Returnable Container (Tote) with Hose Connections	Corrosive	330	gals.	500			
Sodium Bisulfite	7631-90-5	Water treatment feedwater dechlorination	Fire Water Pump Enclosure	Bulk Returnable Container (Tote) with Hose Connections	Toxic	500	gals.				
Stabilized Bromine/Sodium Hydroxide	1310-73-2	Bacteria control for feedwater tank/WSAC cooling water biocide	Fire Water Pump Enclosure	Bulk Returnable Container (Tote) with Hose Connections	Corrosive/Toxic	400	gals.				
Sulfuric Acid *	7664-93-9	WSAC water pH adjustment	Between ACC and WSAC and Warehouse (Storage)	Bulk Returnable Container (Tote) with Hose Connections	Corrosive	50	gals.	1,000			
Corrosion/Scale Inhibitor/Sodium Hydroxide	1310-73-2	Scale and corrosion inhibitor for closed loop cooling	Fire Water Pump Enclosure	Drum	Toxic	55	gals.				
Scale Inhibitor/Sulfuric Acid	7664-93-9	Scale and corrosion inhibitor evaporative cooling system (WSAC)	Between ACC and WSAC	Bulk Returnable Container (Tote) with Hose Connections	Toxic	500	gals.				
Sodium Hypochlorite	7681-52-9	Evaporative Cooling (WSAC) biocide	Between ACC and WSAC	Bulk Returnable Container (Tote) with Hose Connections	Corrosive/Toxic	500	gals.				
Hydrogen Gas	1333-74-0	Heat transfer medium for generators	Storage (South of ACC), In Process (CT1, CT2, ST)	Bulk Returnable Container (Tube Trailer) & In Process	Flammable	1,029	lbs.				10,000
Propylene Glycol	00057-55-6	Heat transfer fluid (Anti-freeze)	Power Block	Bulk Returnable Container (Tube Trailer) & In Process	Flammable (HMS Flam-1)	3,326	gals.				
Monoethanolamine (30%-60%) *	141-43-5	Corrosion Inhibitor	Between ST and ACC (Northwest corner of ACC)	Bulk Returnable Container (SS Metal Tote) with Hose Connections	Corrosive/Toxic/Combustable	400	gals.				
Ammonium Hydroxide (15%) & Monoethanolamine (8%)	1336-21-6 141-43-5	Corrosion Inhibitor	Between ST and ACC (Northwest corner of ACC)	Bulk Returnable Container (SS Metal Tote) with Hose Connections	Corrosive, Toxic	400	gals.				
Aluminum chloride hydroxide sulfate (10-30%)	39290-78-3	Flocculant	Storm Water Treatment System and Warehouse (Storage)	Bulk Returnable Container (Tote) with Hose Connections	Corrosive	550	gals.				
Sodium Hydroxide (10-50%)	1310-73-2	Precipitate Transition (for Iron)	Storm Water Treatment System	Bulk Returnable Container with Hose Connections	Corrosive	80	gals.				

* The aqueous ammonia (or ammonia monoethanolamine blend) and sulfuric acid are stored in catchments sized to meet all applicable codes.

Updated

3/21/2018

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. PG&E Facility Name PG&E GATEWAY GENERATING STATION 3225 Wilbur Ave, Antioch 94509	Chemical Location Air Cooled Condenser Gear Boxes	CERS ID 10018894 Facility ID 07-000-773723 Status Submitted on 2/28/2019 10:54 PM
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DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS CAS No.
Combustible Liquid, Class III-B	Lubricating Oil	Gallons	432	12	432			1-DECENE, HOMOPOLYMER, HYDROGENATED	95 %	68037-01-4
	Map: Figure 2 Grid: C3	State Liquid	Storage Container Other	Type Mixture	Days on Site: 365	Pressue Ambient	Waste Code			

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. PG&E Facility Name PG&E GATEWAY GENERATING STATION 3225 Wilbur Ave, Antioch 94509	Chemical Location Alternate Feed Transformer	CERS ID 10018894 Facility ID 07-000-773723 Status Submitted on 2/28/2019 10:54 PM
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DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS CAS No.
Combustible Liquid, Class III-B	Mineral Oil	Gallons	656	656	656			Dielectric Oil (Highly Refined Petro 100 % Oil)		
	CAS No	State	Storage Container		Pressue					
	Map: Figure 2 Grid: D6	Liquid	Other		Ambient					
		Type			Temperature					
		Mixture	Days on Site: 365		> Ambient					

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. PG&E	Chemical Location	CERS ID 10018894
Facility Name PG&E GATEWAY GENERATING STATION	Ammonia and Scavenger Feed Skid	Facility ID 07-000-773723
3225 Wilbur Ave, Antioch 94509		Status Submitted on 2/28/2019 10:54 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS CAS No.
Corrosive	NALCO 5711	Gallons	400	400	400		- Physical	AMMONIA	15 %	
	<u>CAS No</u>	<u>State</u>	<u>Storage Container</u>		<u>Pressue</u>	<u>Waste Code</u>	Corrosive To	MEA	8 %	
		Liquid	Plastic/Non-metalic Drum		Ambient		Metal			
	Map: Figure 2 Grid: C4	<u>Type</u>	Mixture	Days on Site: 365	<u>Temperature</u>		- Health Skin			
					Ambient		Corrosion			
							Irritation			
							- Health			
							Respiratory Skin			
							Sensitization			
							- Health Serious			
							Eye Damage Eye			
							Irritation			

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. PG&E	Chemical Location Aqueous Ammonia Storage Tank	CERS ID 10018894
Facility Name PG&E GATEWAY GENERATING STATION 3225 Wilbur Ave, Antioch 94509		Facility ID 07-000-773723
		Status Submitted on 2/28/2019 10:54 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS CAS No.
DOT: 8 - Corrosives (Liquids and Solids)	Aqua Ammonia (29%)	Gallons	18020	18020	18020		- Health Acute Toxicity	Ammonia	30 %	✓ 7664-41-7
Corrosive	CAS No 1336-21-6 Map: Figure 2 Grid: A6	State Liquid	Storage Container Aboveground Tank		Pressue Ambient	Waste Code	- Health Skin Corrosion Irritation			
		Type Mixture	Days on Site: 365		Temperature Ambient		- Health Serious Eye Damage Eye Irritation			
							- Health Specific Target Organ Toxicity			
							- Health Hazard Not Otherwise Classified			

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. PG&E Facility Name PG&E GATEWAY GENERATING STATION 3225 Wilbur Ave, Antioch 94509	Chemical Location Behind (East of) Plant Service Building and Shop Annex	CERS ID 10018894 Facility ID 07-000-773723 Status Submitted on 2/28/2019 10:54 PM
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DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS CAS No.
DOT: 2.1 - Flammable Gases	Acetylene, Compressed	Cu. Feet	1740	145	1740		- Physical	Acetylene	100 %	74-86-2
Flammable Gas	CAS No 74-86-2 Map: Figure 2 Grid: B4	State Gas Type Pure	Storage Container Cylinder Days on Site: 365		Pressue > Ambient Temperature Ambient	Waste Code Flammable - Physical Gas Under Pressure - Health Simple Asphyxiant - Health Hazard Not Otherwise Classified				
DOT: 2.1 - Flammable Gases	Propane, Compressed	Gallons	111	9.6	74		- Physical	Propane	100 %	74-98-6
Flammable Gas	CAS No 74-98-6 Map: Figure 2 Grid: B4	State Liquid Type Pure	Storage Container Cylinder Days on Site: 365		Pressue > Ambient Temperature Ambient	Waste Code Flammable - Physical Gas Under Pressure - Health Simple Asphyxiant - Health Hazard Not Otherwise Classified				
Combustible Liquid, Class III-B	Shell Turbo Oil DR46	Gallons	110	55	110			Highly Refined Petroleum Oil Proprietary Additives	99 % 1 %	
	CAS No Map: Figure 2 Grid: C4	State Liquid Type Mixture	Storage Container Steel Drum Days on Site: 365		Pressue Ambient Temperature Ambient	Waste Code Ambient				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. PG&E Facility Name PG&E GATEWAY GENERATING STATION 3225 Wilbur Ave, Antioch 94509	Chemical Location Carbon Dioxide Bulk Storage	CERS ID 10018894 Facility ID 07-000-773723 Status Submitted on 2/28/2019 10:54 PM
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DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS CAS No.
DOT: 2.2 - Nonflammable Gases	Carbon Dioxide, Liquid	Gallons	2326	2326	2326		- Physical Gas	Carbon Dioxide	100 %	124-38-9
	<u>CAS No</u> 124-38-9	<u>State</u> Liquid	<u>Storage Container</u> Aboveground Tank		<u>Pressue</u> > Ambient	<u>Waste Code</u>	Under Pressure			
	Map: Figure 2 Grid: D2	<u>Type</u> Pure	Days on Site: 365		<u>Temperature</u> Ambient		Asphyxiant			
							- Health Hazard			
							Not Otherwise Classified			

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. PG&E Facility Name PG&E GATEWAY GENERATING STATION 3225 Wilbur Ave, Antioch 94509	Chemical Location Combustion Turbine-A	CERS ID 10018894 Facility ID 07-000-773723 Status Submitted on 2/28/2019 10:54 PM
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DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS CAS No.
DOT: 2.2 - Nonflammable Gases	Carbon Dioxide, Liquid	Gallons	2326	2326	2326		- Physical Gas Under Pressure	Carbon Dioxide	100 %	124-38-9
	<u>CAS No</u> 124-38-9	<u>State</u> Liquid	<u>Storage Container</u> Aboveground Tank		<u>Pressue</u> > Ambient	<u>Waste Code</u>	- Health Simple Asphyxiant			
	Map: Figure 2 Grid: B5	<u>Type</u> Pure	Days on Site: 365		<u>Temperature</u> Ambient		- Health Hazard Not Otherwise Classified			

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. PG&E	Chemical Location Combustion Turbine-A Lube Oil Reservoir	CERS ID 10018894
Facility Name PG&E GATEWAY GENERATING STATION 3225 Wilbur Ave, Antioch 94509		Facility ID 07-000-773723
		Status Submitted on 2/28/2019 10:54 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS CAS No.
Combustible Liquid, Class III-B	Shell Turbo Oil T 32	Gallons	6000	6000	6000			Highly Refined Petroleum Oil	99 %	
	<u>CAS No</u>	<u>State</u>	<u>Storage Container</u>		<u>Pressure</u>	<u>Waste Code</u>		Proprietary Additives	5 %	
		Liquid	Other		Ambient					
	Map: Figure 2 Grid: C6	<u>Type</u>			<u>Temperature</u>					
		Mixture	Days on Site: 365		> Ambient					

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. PG&E Facility Name PG&E GATEWAY GENERATING STATION 3225 Wilbur Ave, Antioch 94509	Chemical Location Combustion Turbine-B	CERS ID 10018894 Facility ID 07-000-773723 Status Submitted on 2/28/2019 10:54 PM
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DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS CAS No.
DOT: 2.2 - Nonflammable Gases	Carbon Dioxide, Liquid	Gallons	2326	2326	2326		- Physical Gas Under Pressure	Carbon Dioxide	100 %	124-38-9
	<u>CAS No</u> 124-38-9	<u>State</u> Liquid	<u>Storage Container</u> Aboveground Tank		<u>Pressue</u> > Ambient	<u>Waste Code</u>	- Health Simple Asphyxiant			
	Map: Figure 2 Grid: B5	<u>Type</u> Pure	Days on Site: 365		<u>Temperature</u> Ambient		- Health Hazard Not Otherwise Classified			

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. PG&E	Chemical Location Combustion Turbine-B Lube Oil Reservoir	CERS ID 10018894
Facility Name PG&E GATEWAY GENERATING STATION 3225 Wilbur Ave, Antioch 94509		Facility ID 07-000-773723
		Status Submitted on 2/28/2019 10:54 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS CAS No.
Combustible Liquid, Class III-B	Shell Turbo Oil T 32	Gallons	6000	6000	6000			Highly Refined Petroleum Oil	99 %	
	<u>CAS No</u>	<u>State</u>	<u>Storage Container</u>		<u>Pressure</u>	<u>Waste Code</u>		Proprietary Additives	5 %	
		Liquid	Other		Ambient					
	Map: Figure 2 Grid: C5	<u>Type</u>			<u>Temperature</u>					
		Mixture	Days on Site: 365		> Ambient					

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. PG&E Facility Name PG&E GATEWAY GENERATING STATION 3225 Wilbur Ave, Antioch 94509	Chemical Location Construction Power Transformer	CERS ID 10018894 Facility ID 07-000-773723 Status Submitted on 2/28/2019 10:54 PM
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DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS CAS No.
Combustible Liquid, Class III-B	Mineral Oil	Gallons	390	390	390			Dielectric Oil (highly refined petroleum oil)	100 %	
	CAS No	State	Storage Container	Pressue						
	Map: Figure 2 Grid: B6	Liquid	Other	Ambient						
		Type	Days on Site: 365	Temperature						
		Mixture		> Ambient						

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. PG&E Facility Name PG&E GATEWAY GENERATING STATION 3225 Wilbur Ave, Antioch 94509	Chemical Location Construction Trailer Transformer	CERS ID 10018894 Facility ID 07-000-773723 Status Submitted on 2/28/2019 10:54 PM
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DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS CAS No.
Combustible Liquid, Class III-B	Mineral Oil	Gallons	402	402	402			Dielectric Oil (highly refined petroleum oil)	100 %	
	CAS No	State	Storage Container	Pressue	Waste Code					
	Map: Figure 2 Grid: C8	Liquid	Other	Ambient						
		Type	Days on Site: 365	Temperature						
		Mixture		> Ambient						

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. PG&E	Chemical Location CT A - PEEC and CT B - PEEC	CERS ID 10018894
Facility Name PG&E GATEWAY GENERATING STATION 3225 Wilbur Ave, Antioch 94509		Facility ID 07-000-773723
		Status Submitted on 2/28/2019 10:54 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS CAS No.
DOT: 8 - Corrosives (Liquids and Solids)	AlphaCell OPzS Stationary Flooded Tubular Lead Acid	Gallons	357	3	357		- Physical Explosive	Lead, Lead Compounds	62 %	7439-92-1
Corrosive, Water Reactive, Class 2	Battery						- Physical Corrosive To Metal - Health Carcinogenicity - Health Acute Toxicity - Health Reproductive Toxicity - Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Serious Eye Damage Eye Irritation - Health Specific Target Organ Toxicity	Sulfuric Acid	7 %	✓ 7664-93-9
	CAS No	Mixture	Days on Site: 365							
	Map: Figure 2 Grid: C6, C5									

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. PG&E Facility Name PG&E GATEWAY GENERATING STATION 3225 Wilbur Ave, Antioch 94509	Chemical Location CT-A Auxiliary Transformer	CERS ID 10018894 Facility ID 07-000-773723 Status Submitted on 2/28/2019 10:54 PM
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DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS CAS No.
Combustible Liquid, Class III-B	Mineral Oil	Gallons	6155	6155	6155			Dielectric Oil (highly refined petroleum oil)	100 %	
	CAS No.....	State	Storage Container		Pressue					
	Map: Figure 2 Grid: C6	Liquid	Other		Ambient		Waste Code			
		Type			Temperature					
		Mixture	Days on Site: 365		> Ambient					

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. PG&E Facility Name PG&E GATEWAY GENERATING STATION 3225 Wilbur Ave, Antioch 94509	Chemical Location CT-A Excitation Transformer	CERS ID 10018894 Facility ID 07-000-773723 Status Submitted on 2/28/2019 10:54 PM
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DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS CAS No.
Combustible Liquid, Class III-B	Mineral Oil	Gallons	414	414	414			Dielectric Oil (highly refined petroleum oil)	100 %	
	CAS No	State	Storage Container	Pressue	Waste Code					
	Map: Figure 2 Grid: C6	Liquid	Other	Ambient						
		Type	Days on Site: 365	Temperature						
		Mixture		> Ambient						

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. PG&E	Chemical Location	CERS ID 10018894
Facility Name PG&E GATEWAY GENERATING STATION	CT-A Isolation Transformer	Facility ID 07-000-773723
3225 Wilbur Ave, Antioch 94509		Status Submitted on 2/28/2019 10:54 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS CAS No.
Combustible Liquid, Class III-B	Mineral Oil	Gallons	1413	1413	1413			Dielectric Oil (highly refined petroleum oil)	100 %	
	CAS No	State	Storage Container	Pressue	Waste Code					
	Map: Figure 2 Grid: C6	Liquid	Other	Ambient						
		Type	Days on Site: 365	Temperature						
		Mixture		> Ambient						

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. PG&E Facility Name PG&E GATEWAY GENERATING STATION 3225 Wilbur Ave, Antioch 94509	Chemical Location CT-A Main Step-Up Transformer	CERS ID 10018894 Facility ID 07-000-773723 Status Submitted on 2/28/2019 10:54 PM
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DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS CAS No.
Combustible Liquid, Class III-B	Mineral Oil	Gallons	12800	12800	12800			Dielectric Oil (highly refined petroleum oil)	100 %	
	CAS No.....	State	Storage Container		Pressue					
	Map: Figure 2 Grid: C6	Liquid	Other		Ambient		Waste Code			
		Type			Temperature					
		Mixture	Days on Site: 365		> Ambient					

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. PG&E Facility Name PG&E GATEWAY GENERATING STATION 3225 Wilbur Ave, Antioch 94509	Chemical Location CT-B Auxiliary Transformer	CERS ID 10018894 Facility ID 07-000-773723 Status Submitted on 2/28/2019 10:54 PM
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DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS CAS No.
Combustible Liquid, Class III-B	Mineral Oil	Gallons	6155	6155	6155			Dielectric Oil (highly refined petroleum oil)	100 %	
	CAS No.....	State	Storage Container		Pressue					
	Map: Figure 2 Grid: C5	Liquid	Other		Ambient					
		Type			Temperature					
		Mixture	Days on Site: 365		> Ambient					

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. PG&E Facility Name PG&E GATEWAY GENERATING STATION 3225 Wilbur Ave, Antioch 94509	Chemical Location CT-B Excitation Transformer	CERS ID 10018894 Facility ID 07-000-773723 Status Submitted on 2/28/2019 10:54 PM
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DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS CAS No.
Combustible Liquid, Class III-B	Mineral Oil	Gallons	414	414	414			Dielectric Oil (highly refined petroleum oil)	100 %	
	CAS No	State	Storage Container	Pressue	Waste Code					
	Map: Figure 2 Grid: C5	Liquid	Other	Ambient						
		Type	Days on Site: 365	Temperature						
		Mixture		> Ambient						

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. PG&E Facility Name PG&E GATEWAY GENERATING STATION 3225 Wilbur Ave, Antioch 94509	Chemical Location CT-B Isolation Transformer	CERS ID 10018894 Facility ID 07-000-773723 Status Submitted on 2/28/2019 10:54 PM
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DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS CAS No.
Combustible Liquid, Class III-B	Mineral Oil	Gallons	1413	1413	1413			Dielectric Oil (highly refined petroleum oil)	100 %	
	CAS No.....	State	Storage Container		Pressue					
	Map: Figure 2 Grid: C5	Liquid	Other		Ambient					
		Type			Temperature					
		Mixture	Days on Site: 365		> Ambient					

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. PG&E	Chemical Location	CERS ID 10018894
Facility Name PG&E GATEWAY GENERATING STATION	CT-B Main Step-Up Transformer	Facility ID 07-000-773723
3225 Wilbur Ave, Antioch 94509		Status Submitted on 2/28/2019 10:54 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS CAS No.
Combustible Liquid, Class III-B	Mineral Oil	Gallons	12800	12800	12800			Dielectric Oil (highly refined petroleum oil)	100 %	
	CAS No	State	Storage Container	Pressue						
	Map: Figure 2 Grid: C5	Liquid	Other	Ambient						
		Type	Days on Site: 365	Temperature						
		Mixture		> Ambient						

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. PG&E	Chemical Location Gas Conditioning Station	CERS ID 10018894
Facility Name PG&E GATEWAY GENERATING STATION 3225 Wilbur Ave, Antioch 94509		Facility ID 07-000-773723
		Status Submitted on 2/28/2019 10:54 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS CAS No.
DOT: 2.2 - Nonflammable Gases	Helium, Compressed	Cu. Feet	1168	292	1168		- Physical Gas Under Pressure	Helium	100 %	7440-59-7
	<u>CAS No</u> 7440-59-7	<u>State</u> Gas	<u>Storage Container</u> Cylinder		<u>Pressue</u> > Ambient	<u>Waste Code</u>	- Health Simple Asphyxiant			
	Map: Figure 2 Grid: D4	<u>Type</u> Pure	Days on Site: 365		<u>Temperature</u> Ambient		- Health Hazard Not Otherwise Classified			

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. PG&E Facility Name PG&E GATEWAY GENERATING STATION 3225 Wilbur Ave, Antioch 94509	Chemical Location Hazardous Mat/Waste Storage Area	CERS ID 10018894 Facility ID 07-000-773723 Status Submitted on 2/28/2019 10:54 PM
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DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS CAS No.
	Non-RCRA Mixed Oil	Gallons	55	55	37	110		Oil		
	<u>CAS No</u>	<u>State</u>	<u>Storage Container</u>		<u>Pressure</u>	<u>Waste Code</u>				
		Liquid	Steel Drum		Ambient	221				
	Map: Figure 2 Grid: B8, C3	<u>Type</u>			<u>Temperature</u>					
		Waste	Days on Site: 90		Ambient					
	Non-RCRA Solids (Oily Debris)	Pounds	3035	500	1742	3035				
	<u>CAS No</u>	<u>State</u>	<u>Storage Container</u>		<u>Pressure</u>	<u>Waste Code</u>				
		Solid	Steel Drum		Ambient	223				
	Map: Figure 2 Grid: B8, C3	<u>Type</u>			<u>Temperature</u>					
		Waste	Days on Site: 90		Ambient					
	RCRA Liquid Lab Bench Waste	Gallons	60	30	30	80	- Health Skin Corrosion	Sulfuric Acid		
	<u>CAS No</u>	<u>State</u>	<u>Storage Container</u>		<u>Pressure</u>	<u>Waste Code</u>	Irritation			
		Liquid	Plastic/Non-metalic Drum		Ambient	791	- Health Serious			
	Map: Figure 2 Grid: B8, C3	<u>Type</u>			<u>Temperature</u>		Eye Damage Eye			
		Waste	Days on Site: 90		Ambient		Irritation			

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. PG&E Facility Name PG&E GATEWAY GENERATING STATION 3225 Wilbur Ave, Antioch 94509	Chemical Location HRSGs (Heat Recovery Steam Generators) - A and B	CERS ID 10018894 Facility ID 07-000-773723 Status Submitted on 2/28/2019 10:54 PM
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DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS CAS No.
DOT: 2.2 - Nonflammable Gases	Argon, Compressed Gas CAS No _____ Map: Figure 2 Grid: B5	Cu. Feet	1344	336	1344		- Physical Gas Under Pressure - Health Simple Asphyxiant - Health Hazard Not Otherwise Classified	Argon	100 %	
		<u>State</u>	<u>Storage Container</u>		<u>Pressue</u>	<u>Waste Code</u>				
		Gas	Cylinder		> Ambient					
		<u>Type</u>		Days on Site: 365	<u>Temperature</u>					
		Pure			Ambient					
DOT: 2.2 - Nonflammable Gases	EPA Protocol Gas (Carbon Monoxide/Nitrogen Mixture) CAS No _____ Map: Figure 2 Grid: B5	Cu. Feet	1440	144	1440		- Physical Gas Under Pressure - Health Simple Asphyxiant	Nitrogen Carbon Monoxide	88 % 13 %	7727-37-9 630-08-0
		<u>State</u>	<u>Storage Container</u>		<u>Pressue</u>	<u>Waste Code</u>				
		Gas	Cylinder		> Ambient					
		<u>Type</u>		Days on Site: 365	<u>Temperature</u>					
		Mixture			Ambient					
DOT: 2.2 - Nonflammable Gases	EPA Protocol Gas Carbon Monoxide 11/Nitric/Nitrogen Mixture CAS No _____ Map: Figure 2 Grid: B5	Cu. Feet	864	144	864		- Physical Gas Under Pressure - Health Simple Asphyxiant	Nitrogen Nitric Oxide Carbon Monoxide	99 % 1 % 10 %	7727-37-9 10102-43-9 630-08-0
		<u>State</u>	<u>Storage Container</u>		<u>Pressue</u>	<u>Waste Code</u>				
		Gas	Cylinder		> Ambient					
		<u>Type</u>		Days on Site: 365	<u>Temperature</u>					
		Mixture			Ambient					
DOT: 2.2 - Nonflammable Gases	EPA Protocol Gas Carbon Monoxide 660/Nitric/Nitrogen Mixture CAS No _____ Map: Figure 2 Grid: B5	Cu. Feet	864	144	864		- Physical Gas Under Pressure - Health Simple Asphyxiant	Nitrogen Nitric Oxide Carbon Monoxide	99 % 1 % 20 %	7727-37-9 10102-43-9 630-08-0
		<u>State</u>	<u>Storage Container</u>		<u>Pressue</u>	<u>Waste Code</u>				
		Gas	Cylinder		> Ambient					
		<u>Type</u>		Days on Site: 365	<u>Temperature</u>					
		Mixture			Ambient					
DOT: 2.2 - Nonflammable Gases	EPA Protocol Gas Nitric/Nitrogen Mixture CAS No _____ Map: Figure 2 Grid: B5	Cu. Feet	576	144	576		- Physical Gas Under Pressure - Health Simple Asphyxiant	Nitrogen Nitric Oxide	99 % 2 %	7727-37-9 10102-43-9
		<u>State</u>	<u>Storage Container</u>		<u>Pressue</u>	<u>Waste Code</u>				
		Gas	Cylinder		> Ambient					
		<u>Type</u>		Days on Site: 365	<u>Temperature</u>					
		Mixture			Ambient					
DOT: 2.2 - Nonflammable Gases	EPA Protocol Gas Nitrogen/Oxygen Mixture CAS No _____ Map: Figure 2 Grid: B5	Cu. Feet	1152	144	1152		- Physical Gas Under Pressure - Health Simple Asphyxiant	Nitrogen Oxygen	99 % 20 %	7727-37-9 7782-44-7
		<u>State</u>	<u>Storage Container</u>		<u>Pressue</u>	<u>Waste Code</u>				
		Gas	Cylinder		> Ambient					
		<u>Type</u>		Days on Site: 365	<u>Temperature</u>					
		Mixture			Ambient					
DOT: 2.2 - Nonflammable Gases	Helium, Compressed CAS No 7440-59-7 Map: Figure 2 Grid: B5	Cu. Feet	1344	336	1344		- Physical Gas Under Pressure - Health Simple Asphyxiant - Health Hazard Not Otherwise Classified	Helium	100 %	7440-59-7
		<u>State</u>	<u>Storage Container</u>		<u>Pressue</u>	<u>Waste Code</u>				
		Gas	Cylinder		> Ambient					
		<u>Type</u>		Days on Site: 365	<u>Temperature</u>					
		Pure			Ambient					

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. PG&E Facility Name PG&E GATEWAY GENERATING STATION 3225 Wilbur Ave, Antioch 94509	Chemical Location HRSGs (Heat Recovery Steam Generators) - A and B	CERS ID 10018894 Facility ID 07-000-773723 Status Submitted on 2/28/2019 10:54 PM
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DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS CAS No.
DOT: 2.2 - Nonflammable Gases	Oxygen, Compressed	Cu. Feet	1124	281	1124		- Physical Gas	Oxygen	100 %	7782-44-7
Oxidizing Gas, Gaseous	<u>CAS No.</u> 7782-44-7 Map: Figure 2 Grid: B3, B5	<u>State</u> Gas <u>Type</u> Pure	<u>Storage Container</u> Cylinder Days on Site: 365			<u>Pressue</u> > Ambient <u>Temperature</u> Ambient	<u>Waste Code</u> - Physical Gas - Physical Oxidizer - Health Hazard Not Otherwise Classified			

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. PG&E	Chemical Location HRSGs (Heat Recovery Steam Generators) - A and B, Attached to Transformers	CERS ID 10018894
Facility Name PG&E GATEWAY GENERATING STATION 3225 Wilbur Ave, Antioch 94509		Facility ID 07-000-773723
		Status Submitted on 2/28/2019 10:54 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS CAS No.
DOT: 2.2 - Nonflammable Gases	Nitrogen, Compressed	Cu. Feet	3263	251	3263		- Physical Gas Under Pressure	Nitrogen	100 %	7727-37-9
	<u>CAS No</u> 7727-37-9	<u>State</u> Gas	<u>Storage Container</u> Cylinder		<u>Pressue</u> > Ambient	<u>Waste Code</u>	- Health Simple Asphyxiant			
	Map: Figure 2 Grid: B5,C4,C5,C6	<u>Type</u> Pure	Days on Site: 365		<u>Temperature</u> Ambient		- Health Hazard Not Otherwise Classified			

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. PG&E Facility Name PG&E GATEWAY GENERATING STATION 3225 Wilbur Ave, Antioch 94509	Chemical Location Hydrogen Bulk Storage	CERS ID 10018894 Facility ID 07-000-773723 Status Submitted on 2/28/2019 10:54 PM
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DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS CAS No.
DOT: 2.1 - Flammable Gases	Hydrogen Six Pack, Compressed	Cu. Feet	4704	196	4704		- Physical	Hydrogen	100 %	1333-74-0
Flammable Gas	<u>CAS No</u> Map: Figure 2 Grid: D2	<u>State</u> Gas <u>Type</u> Pure	<u>Storage Container</u> Cylinder Days on Site: 365		<u>Pressue</u> > Ambient <u>Temperature</u> Ambient	<u>Waste Code</u> Flammable - Physical Gas Under Pressure - Health Simple Asphyxiant - Health Hazard Not Otherwise Classified				
DOT: 2.1 - Flammable Gases	Hydrogen, Compressed	Cu. Feet	134000	134000	134000		- Physical	Hydrogen	100 %	1333-74-0
Flammable Gas	<u>CAS No</u> 1333-74-0 Map: Figure 2 Grid: D1	<u>State</u> Gas <u>Type</u> Pure	<u>Storage Container</u> Other Days on Site: 365		<u>Pressue</u> > Ambient <u>Temperature</u> Ambient	<u>Waste Code</u> Flammable - Physical Gas Under Pressure - Health Simple Asphyxiant - Health Hazard Not Otherwise Classified				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. PG&E	Chemical Location Nitrogen Bulk Storage	CERS ID 10018894
Facility Name PG&E GATEWAY GENERATING STATION 3225 Wilbur Ave, Antioch 94509		Facility ID 07-000-773723
		Status Submitted on 2/28/2019 10:54 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS CAS No.
DOT: 2.2 - Nonflammable Gases	Nitrogen, Compressed	Cu. Feet	10944	304	10944		- Physical Gas Under Pressure	Nitrogen	100 %	7727-37-9
	<u>CAS No</u> 7727-37-9	<u>State</u> Gas	<u>Storage Container</u> Cylinder		<u>Pressue</u> > Ambient	<u>Waste Code</u>	- Health Simple Asphyxiant			
	Map: Figure 2 Grid: D2	<u>Type</u> Pure	Days on Site: 365		<u>Temperature</u> Ambient		- Health Hazard Not Otherwise Classified			

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. PG&E Facility Name PG&E GATEWAY GENERATING STATION 3225 Wilbur Ave, Antioch 94509	Chemical Location Phosphate Feed Skid	CERS ID 10018894 Facility ID 07-000-773723 Status Submitted on 2/28/2019 10:54 PM
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DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS CAS No.
	NALCO BT-3400	Gallons	400	400	400		- Health Skin	Sodium Hydroxide	5 %	1310-73-2
	<u>CAS No</u>	<u>State</u>	<u>Storage Container</u>			<u>Waste Code</u>	Corrosion	Proprietary	99 %	
	<u>Map: Figure 2 Grid: B4</u>	<u>Liquid</u>	Tote Bin				Irritation			
		<u>Type</u>					- Health Serious			
		<u>Mixture</u>	Days on Site: 365				Eye Damage Eye Irritation			

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. PG&E	Chemical Location	CERS ID 10018894
Facility Name PG&E GATEWAY GENERATING STATION	Plant Services Building	Facility ID 07-000-773723
3225 Wilbur Ave, Antioch 94509		Status Submitted on 2/28/2019 10:54 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS CAS No.
DOT: 8 - Corrosives (Liquids and Solids)	GNB Flooded HCT 37 Lead Acid Battery	Gallons	834	14	834		- Physical	Lead	52 %	7439-92-1
		<u>State</u>	<u>Storage Container</u>		<u>Pressure</u>		Explosive			
Corrosive, Water Reactive, Class 2		Liquid	Other		Ambient	<u>Waste Code</u>	- Physical	Sulfuric Acid	44 %	✓ 7664-93-9
		<u>CAS No</u>	<u>Type</u>		<u>Temperature</u>		Corrosive To Metal	Lead Dioxide	21 %	1309-60-0
	Map: Figure 2 Grid: B4	Mixture	Days on Site: 365		Ambient		- Health			
							Carcinogenicity			
							- Health Acute			
							Toxicity			
							- Health			
							Reproductive			
							Toxicity			
							- Health Skin			
							Corrosion			
							Irritation			
							- Health			
							Respiratory Skin			
							Sensitization			
							- Health Serious			
							Eye Damage Eye			
							Irritation			
							- Health Specific			
							Target Organ			
							Toxicity			

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. PG&E Facility Name PG&E GATEWAY GENERATING STATION 3225 Wilbur Ave, Antioch 94509	Chemical Location RO Water Treatment	CERS ID 10018894 Facility ID 07-000-773723 Status Submitted on 2/28/2019 10:54 PM
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DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS CAS No.
	Sodium Bisulfite	Gallons	50	50	50		- Health Skin Corrosion Irritation	Sodium Bisulfite	20 %	763-90-5
	<u>CAS No</u>	<u>State</u>	<u>Storage Container</u>		<u>Pressue</u>	<u>Waste Code</u>	- Health Serious Eye Damage Eye Irritation - Health Specific Target Organ Toxicity			
	Map: Figure 2 Grid: C2	<u>Liquid</u>	Tank Inside Building		<u>Ambient</u>					
		<u>Type</u>	Days on Site: 365		<u>Temperature</u>					
		<u>Mixture</u>			<u>Ambient</u>					
Corrosive	Sodium Hydroxide	Gallons	75	75	75		- Physical Corrosive To Metal - Health Skin Corrosion Irritation - Health Serious Eye Damage Eye Irritation	SODIUM HYDROXIDE	100 %	1310-73-2
	<u>CAS No</u>	<u>State</u>	<u>Storage Container</u>		<u>Pressue</u>	<u>Waste Code</u>				
	Map: Figure 2 Grid: C2	<u>Liquid</u>	Aboveground Tank		<u>Ambient</u>					
		<u>Pure</u>	Days on Site: 365		<u>Ambient</u>					

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. PG&E Facility Name PG&E GATEWAY GENERATING STATION 3225 Wilbur Ave, Antioch 94509	Chemical Location Sodium Hexafluoride (Elect Equipment) Breakers	CERS ID 10018894 Facility ID 07-000-773723 Status Submitted on 2/28/2019 10:54 PM
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DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS CAS No.
DOT: 2.2 - Nonflammable Gases	SF6	Cu. Feet	2043	639	2043		- Physical Gas	Sulfur Hexafluoride	100 %	2551-62-4
	<u>CAS No</u> 2551-62-4	<u>State</u> Gas	<u>Storage Container</u> Other		<u>Pressue</u> > Ambient	<u>Waste Code</u>	Under Pressure			
	Map: Figure 2 Grid: C5,C6,D4,D5,D6	<u>Type</u> Pure	Days on Site: 365		<u>Temperature</u> Ambient		- Health Simple Asphyxiant - Health Hazard Not Otherwise Classified			

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. PG&E Facility Name PG&E GATEWAY GENERATING STATION 3225 Wilbur Ave, Antioch 94509	Chemical Location ST Electro-Hydraulic Control System	CERS ID 10018894 Facility ID 07-000-773723 Status Submitted on 2/28/2019 10:54 PM
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DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS CAS No.
Combustible Liquid, Class III-B	Hydraulic Oil	Gallons	130	130	130			Highly refined mineral oil (C15 - C50)	99 %	
	CAS No Map: Figure 2 Grid: C4	State Liquid Other	Storage Container Other	Pressue Ambient	Waste Code Temperature > Ambient					

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. PG&E Facility Name PG&E GATEWAY GENERATING STATION 3225 Wilbur Ave, Antioch 94509	Chemical Location ST Excitation Transformer	CERS ID 10018894 Facility ID 07-000-773723 Status Submitted on 2/28/2019 10:54 PM
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DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS CAS No.
Combustible Liquid, Class III-B	Mineral Oil	Gallons	414	414	414			Dielectric Oil (highly refined petroleum oil)	100 %	
	CAS No.....	State	Storage Container		Pressue		Waste Code			
	Map: Figure 2 Grid: C4	Liquid	Other		Ambient					
		Type			Temperature					
		Mixture	Days on Site: 365		> Ambient					

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. PG&E Facility Name PG&E GATEWAY GENERATING STATION 3225 Wilbur Ave, Antioch 94509	Chemical Location ST Main Step-Up Transformer	CERS ID 10018894 Facility ID 07-000-773723 Status Submitted on 2/28/2019 10:54 PM
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DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS CAS No.
Combustible Liquid, Class III-B	Mineral Oil	Gallons	14143	14143	14143			Dielectric Oil (highly refined petroleum oil)	100 %	
	CAS No.....	State	Storage Container		Pressue					
	Map: Figure 2 Grid: C4	Liquid	Other		Ambient					
		Type			Temperature					
		Mixture	Days on Site: 365		> Ambient					

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. PG&E Facility Name PG&E GATEWAY GENERATING STATION 3225 Wilbur Ave, Antioch 94509	Chemical Location Steam Turbine Lube Oil Reservoir	CERS ID 10018894 Facility ID 07-000-773723 Status Submitted on 2/28/2019 10:54 PM
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DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS CAS No.
Combustible Liquid, Class III-B	Refined Petroleum Oil	Gallons	4800	4800	4800			Highly Refined Petroleum Oil	99 %	
	<u>CAS No</u>	<u>State</u>	<u>Storage Container</u>		<u>Pressure</u>	<u>Waste Code</u>		Proprietary Additives	5 %	
		Liquid	Other		Ambient					
	Map: Figure 2 Grid: C4	<u>Type</u>			<u>Temperature</u>					
		Mixture	Days on Site: 365		> Ambient					

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. PG&E	Chemical Location Stormwater Treatment System	CERS ID 10018894
Facility Name PG&E GATEWAY GENERATING STATION 3225 Wilbur Ave, Antioch 94509		Facility ID 07-000-773723
		Status Submitted on 2/28/2019 10:54 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS CAS No.
Corrosive	HaloKlear BHR-50	Gallons	275	275	275		- Physical	Aluminum chloride hydroxide	30 %	39290-78-3
	<u>CAS No</u>	<u>State</u>	<u>Storage Container</u>		<u>Pressue</u>		Corrosive To	sulfate		
		Liquid	Tote Bin		Ambient	<u>Waste Code</u>	Metal			
	Map: Figure 2 Grid: C9	<u>Type</u>	Mixture	Days on Site: 365	Ambient		- Health Serious Eye Damage Eye Irritation			

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. PG&E	Chemical Location Switchyard	CERS ID 10018894
Facility Name PG&E GATEWAY GENERATING STATION 3225 Wilbur Ave, Antioch 94509		Facility ID 07-000-773723
		Status Submitted on 2/28/2019 10:54 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS CAS No.
DOT: 8 - Corrosives (Liquids and Solids)	KCR-7 Lead Calcium Batteries	Gallons	90	1.5	90		- Physical Explosive	Lead Calcium	52 %	7439-92-1
Corrosive, Water Reactive, Class 2	CAS No Map: Figure 2 Grid: D4	State Liquid	Storage Container Other		Pressure Ambient	Waste Code	- Physical Corrosive To Metal	Sulfuric Acid Lead Dioxide	44 % 21 %	✓ 7664-93-9 1309-60-0
		Type Mixture	Days on Site: 365		Temperature Ambient		- Health Carcinogenicity - Health Acute Toxicity - Health Reproductive Toxicity - Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Serious Eye Damage Eye Irritation - Health Specific Target Organ Toxicity			

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. PG&E Facility Name PG&E GATEWAY GENERATING STATION 3225 Wilbur Ave, Antioch 94509	Chemical Location Warehouse	CERS ID 10018894 Facility ID 07-000-773723 Status Submitted on 2/28/2019 10:54 PM
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DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS CAS No.
	Gas Turbine Compressor Cleaning Fluid	Gallons	264	264	264			Cleaning Fluid		
	<u>CAS No</u>	<u>State</u>	<u>Storage Container</u>		<u>Pressure</u>	<u>Waste Code</u>				
		Liquid	Tote Bin		Ambient					
	<u>Type</u>				<u>Temperature</u>					
	Map: Figure 2 Grid: B8-9	Mixture	Days on Site: 365		Ambient					
Corrosive	HaloKlear BHR-50	Gallons	275	275	275		- Physical Corrosive To Metal	Aluminum chloride hydroxide sulfate	30 %	39290-78-3
	<u>CAS No</u>	<u>State</u>	<u>Storage Container</u>		<u>Pressure</u>	<u>Waste Code</u>				
		Liquid	Tote Bin		Ambient					
	<u>Type</u>				<u>Temperature</u>					
	Map: Figure 2 Grid: B8-9	Mixture	Days on Site: 365		Ambient		- Health Serious Eye Damage Eye Irritation			
	NALCO BT-3400	Gallons	55	55	55		- Health Skin Corrosion	Sodium Hydroxide Proprietary	5 % 99 %	1310-73-2
	<u>CAS No</u>	<u>State</u>	<u>Storage Container</u>		<u>Pressure</u>	<u>Waste Code</u>				
		Liquid	Plastic/Non-metalic Drum		Ambient					
	<u>Type</u>				<u>Temperature</u>					
	Map: Figure 2 Grid: B8-9	Mixture	Days on Site: 365		Ambient		- Health Serious Eye Damage Eye Irritation			
Combustible Liquid, Class III-B	Petroleum Distillate	Gallons	55	55	55			Severely Hydrotreated Naphtenic Petroleum Oil	100 %	64742-53-6
	<u>CAS No</u>	<u>State</u>	<u>Storage Container</u>		<u>Pressure</u>	<u>Waste Code</u>				
		Liquid	Steel Drum		Ambient			BHT	0 %	128-37-0
	<u>Type</u>				<u>Temperature</u>					
	Map: Figure 2 Grid: B8-9	Mixture	Days on Site: 365		Ambient					
Combustible Liquid, Class III-B	Shell Tellus Oil 32	Gallons	550	55	55			Highly refined mineral oils and additives		
	<u>CAS No</u>	<u>State</u>	<u>Storage Container</u>		<u>Pressure</u>	<u>Waste Code</u>				
		Liquid	Steel Drum		Ambient					
	<u>Type</u>				<u>Temperature</u>					
	Map: Figure 2 Grid: B8-9	Mixture	Days on Site: 365		Ambient					
Combustible Liquid, Class III-B	Shell Turbo Oil DR46	Gallons	55	55	55			Highly Refined Petroleum Oil Proprietary Additives	99 % 1 %	
	<u>CAS No</u>	<u>State</u>	<u>Storage Container</u>		<u>Pressure</u>	<u>Waste Code</u>				
		Liquid	Steel Drum		Ambient					
	<u>Type</u>				<u>Temperature</u>					
	Map: Figure 2 Grid: B8-9	Mixture	Days on Site: 365		Ambient					

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. PG&E Facility Name PG&E GATEWAY GENERATING STATION 3225 Wilbur Ave, Antioch 94509	Chemical Location Warehouse - Hazardous Mat/Waste Storage	CERS ID 10018894 Facility ID 07-000-773723 Status Submitted on 2/28/2019 10:54 PM
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DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS CAS No.
	NALCO Trac107	Gallons	55	55	55		- Health Skin	Sodium Hydroxide	1 %	1310-73-2
	<u>CAS No</u>	<u>State</u>	<u>Storage Container</u>		<u>Pressue</u>	<u>Waste Code</u>	Corrosion	Inorganic Salt	5 %	
	Map: Figure 2 Grid: B8	<u>Liquid</u>	Plastic/Non-metalic Drum		<u>Ambient</u>		Irritation	Proprietary	99 %	
		<u>Type</u>			<u>Temperature</u>		- Health Serious			
		<u>Mixture</u>	Days on Site: 365		<u>Ambient</u>		Eye Damage Eye Irritation			
	RCRA Waste Paint, Liquids	Gallons	55	55	37	7		Waste Paint, Liquids		
	<u>CAS No</u>	<u>State</u>	<u>Storage Container</u>		<u>Pressue</u>	<u>Waste Code</u>				
	Map: Figure 2 Grid: B8, C3	<u>Liquid</u>	Steel Drum		<u>Ambient</u>	352				
		<u>Type</u>			<u>Temperature</u>					
		<u>Waste</u>	Days on Site: 90		<u>Ambient</u>					
	Universal Waste - eWaste	Pounds	1230	500	500	1230				
	<u>CAS No</u>	<u>State</u>	<u>Storage Container</u>		<u>Pressue</u>	<u>Waste Code</u>				
	Map: Figure 2 Grid: B8, C3	<u>Solid</u>	Steel Drum		<u>Ambient</u>	181				
		<u>Type</u>			<u>Temperature</u>					
		<u>Waste</u>	Days on Site: 90		<u>Ambient</u>					
	WASTE AMMONIA AND WATER LESS THAN 1%	Gallons	55	55	37	44		AMMONIUM HYDROXIDE	1 %	1336-21-6
	<u>CAS No</u>	<u>State</u>	<u>Storage Container</u>		<u>Pressue</u>	<u>Waste Code</u>				
	Map: Figure 2 Grid: B8, C3	<u>Liquid</u>	Steel Drum		<u>Ambient</u>	135				
		<u>Type</u>			<u>Temperature</u>					
		<u>Waste</u>	Days on Site: 365		<u>Ambient</u>					
	WASTE RCRA Ethanolamine Soution	Gallons	275	275	151	245		MONOETHANOLAMINE		141-43-5
	<u>CAS No</u>	<u>State</u>	<u>Storage Container</u>		<u>Pressue</u>	<u>Waste Code</u>		PROPRIETARY INGREDIENTS		
	Map: Figure 2 Grid: B8, C3	<u>Liquid</u>	Tote Bin		<u>Ambient</u>	331				
		<u>Type</u>			<u>Temperature</u>					
		<u>Waste</u>	Days on Site: 365		<u>Ambient</u>					
	WASTE SAND BLAST SAND NON-RCRA	Pounds	1600	500	1056	1600				
	<u>CAS No</u>	<u>State</u>	<u>Storage Container</u>		<u>Pressue</u>	<u>Waste Code</u>				
	Map: Figure 2 Grid: B8, C3	<u>Solid</u>	Steel Drum		<u>Ambient</u>	181				
		<u>Type</u>			<u>Temperature</u>					
		<u>Waste</u>	Days on Site: 365		<u>Ambient</u>					

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. PG&E Facility Name PG&E GATEWAY GENERATING STATION 3225 Wilbur Ave, Antioch 94509	Chemical Location Warehouse, Behind (East of) Plant Service Building and Shop Annex Flammable Cabinet	CERS ID 10018894 Facility ID 07-000-773723 Status Submitted on 2/28/2019 10:54 PM
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DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS CAS No.
Combustible Liquid, Class III-B	Shell S3 BA 150	Gallons	100	5	67			HIGHLY REFINED BASE OILS	99 %	64742-54-7
	<u>CAS No</u>	<u>State</u>	<u>Storage Container</u>		<u>Pressue</u>	<u>Waste Code</u>				
	Map: Figure 2 Grid: C4, B8-9	Liquid	Plastic Bottle or Jug		Ambient					
		<u>Type</u>			<u>Temperature</u>					
		Mixture	Days on Site: 365		Ambient					
Combustible Liquid, Class III-B	Shell T68	Gallons	50	5	33			HIGHLY REFINED BASE OILS	99 %	64742-54-7
	<u>CAS No</u>	<u>State</u>	<u>Storage Container</u>		<u>Pressue</u>	<u>Waste Code</u>				
	Map: Figure 2 Grid: C4, B8-9	Liquid	Plastic Bottle or Jug		Ambient					
		<u>Type</u>			<u>Temperature</u>					
		Mixture	Days on Site: 365		Ambient					
Combustible Liquid, Class III-B	Shell Tellus Oil 32	Gallons	50	5	33			Highly refined mineral oils and additives		
	<u>CAS No</u>	<u>State</u>	<u>Storage Container</u>		<u>Pressue</u>	<u>Waste Code</u>				
	Map: Figure 2 Grid: C4, B8-9	Liquid	Plastic Bottle or Jug		Ambient					
		<u>Type</u>			<u>Temperature</u>					
		Mixture	Days on Site: 365		Ambient					
Combustible Liquid, Class III-B	Shell Turbo Oil T 46	Gallons	50	5	33			HIGHLY REFINED BASE OIL	90 %	64741-97-5
	<u>CAS No</u>	<u>State</u>	<u>Storage Container</u>		<u>Pressue</u>	<u>Waste Code</u>				
	Map: Figure 2 Grid: C4, B8-9	Liquid	Plastic Bottle or Jug		Ambient					
		<u>Type</u>			<u>Temperature</u>					
		Mixture	Days on Site: 365		Ambient					

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. PG&E	Chemical Location Warehouse, Behind Plant Services Building	CERS ID 10018894
Facility Name PG&E GATEWAY GENERATING STATION 3225 Wilbur Ave, Antioch 94509		Facility ID 07-000-773723
		Status Submitted on 2/28/2019 10:54 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS CAS No.
	Gear Lubricant (Shell Omala S4 GX 320)	Gallons	170	5	170			Highly Refined Petroleum Oil	99 %	
	<u>CAS No</u>	<u>State</u>	<u>Storage Container</u>		<u>Pressure</u>	<u>Waste Code</u>		Proprietary Additives	1 %	
	<u>Map: Figure 2 Grid: B8-9, C4</u>	<u>Liquid</u>	Plastic/Non-metalic Drum		Ambient					
		<u>Type</u>			<u>Temperature</u>					
		Mixture	Days on Site: 365		Ambient					

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. PG&E	Chemical Location Warehouse, Stormwater Treatment System	CERS ID 10018894
Facility Name PG&E GATEWAY GENERATING STATION 3225 Wilbur Ave, Antioch 94509		Facility ID 07-000-773723
		Status Submitted on 2/28/2019 10:54 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS CAS No.
Corrosive	Sodium Hydroxide (10-50%)	Gallons	30	15	15		- Physical	SODIUM HYDROXIDE	50 %	1310-73-2
	<u>CAS No</u>	<u>State</u>	<u>Storage Container</u>			<u>Pressue</u>	<u>Waste Code</u>	Corrosive To		
		Liquid	Plastic Bottle or Jug			Ambient		Metal		
	Map: Figure 2 Grid: C9, B8-9	<u>Type</u>	Mixture	Days on Site: 365		Ambient		- Health Skin		
								Corrosion		
								Irritation		
								- Health Serious		
								Eye Damage Eye		
								Irritation		

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. PG&E Facility Name PG&E GATEWAY GENERATING STATION 3225 Wilbur Ave, Antioch 94509	Chemical Location Water Treatment Building / Fire Water Pump House	CERS ID 10018894 Facility ID 07-000-773723 Status Submitted on 2/28/2019 10:54 PM
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DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS CAS No.
Combustible Liquid, Class II	Diesel Fuel	Gallons	500	500	500		- Physical	Diesel Fuel	100 %	
	CAS No 68476-34-6 Map: Figure 2 Grid: C1	State Liquid Type Mixture	Storage Container Tank Inside Building Days on Site: 365	Pressue Ambient Temperature Ambient	Waste Code Flammable - Health Carcinogenicity - Health Acute Toxicity - Health Skin Corrosion Irritation - Health Specific Target Organ Toxicity - Health Aspiration Hazard					
DOT: 8 - Corrosives (Liquids and Solids) Corrosive, Water Reactive, Class 2	Interstate Workaholic Lead Acid Battery	Gallons	9	4.5	9		- Physical	Sulfuric Acid	35 %	✓ 7439-92-1
	CAS No Map: Figure 2 Grid: C1	State Liquid Type Mixture	Storage Container Other Days on Site: 365	Pressue Ambient Temperature Ambient	Waste Code Explosive - Physical Corrosive To Metal - Health Carcinogenicity - Health Acute Toxicity - Health Reproductive Toxicity - Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Serious Eye Damage Eye Irritation - Health Specific Target Organ Toxicity					

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. PG&E Facility Name PG&E GATEWAY GENERATING STATION 3225 Wilbur Ave, Antioch 94509	Chemical Location Water Treatment Chemical Storage	CERS ID 10018894 Facility ID 07-000-773723 Status Submitted on 2/28/2019 10:54 PM
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DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS CAS No.
	NALCO 7408	Gallons	65	65	65		- Health Skin	Sodium Bisulfite	60 %	7631-90-5
	<u>CAS No</u>	<u>State</u>	<u>Storage Container</u>		<u>Pressue</u>	<u>Waste Code</u>	Corrosion	Proprietary	70 %	
	Map: Figure 2 Grid: C2	<u>Liquid</u>	Plastic/Non-metalic Drum		<u>Ambient</u>		Irritation			
		<u>Type</u>			<u>Temperature</u>		- Health			
		<u>Mixture</u>	Days on Site: 365		<u>Ambient</u>		Respiratory Skin			
							Sensitization			
							- Health Serious			
							Eye Damage Eye			
							Irritation			
	NALCO Stabrex ST20	Gallons	65	65	65		- Physical	Sodium Hydroxide	5 %	1310-73-2
Corrosive	<u>CAS No</u>	<u>State</u>	<u>Storage Container</u>		<u>Pressue</u>	<u>Waste Code</u>	Corrosive To	Proprietary	99 %	
	Map: Figure 2 Grid: C2	<u>Liquid</u>	Plastic/Non-metalic Drum		<u>Ambient</u>		Metal			
		<u>Type</u>			<u>Temperature</u>		- Health Skin			
		<u>Mixture</u>	Days on Site: 365		<u>Ambient</u>		Corrosion			
							Irritation			
							- Health			
							Respiratory Skin			
							Sensitization			
							- Health Serious			
							Eye Damage Eye			
							Irritation			

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. PG&E	Chemical Location	CERS ID 10018894
Facility Name PG&E GATEWAY GENERATING STATION	WSAC Chem Feed Skid	Facility ID 07-000-773723
3225 Wilbur Ave, Antioch 94509		Status Submitted on 2/28/2019 10:54 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS CAS No.
DOT: 8 - Corrosives (Liquids and Solids)	NALCO 3D TRASAR 3DT447	Gallons	110	110	110		- Health Skin Corrosion	Phosphoric Acid	5 %	7664-38-2
Corrosive	CAS No	State	Storage Container		Pressure		Irritation	Sulfuric Acid	5 %	✓ 7664-93-9
	Map: Figure 2 Grid: C3	Liquid	Plastic/Non-metalic Drum		Ambient	Waste Code		Tolyltriazole	5 %	29385-43-1
		Type			Temperature					
		Mixture	Days on Site: 365		Ambient					

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. PG&E	Chemical Location	CERS ID 10018894
Facility Name PG&E GATEWAY GENERATING STATION 3225 Wilbur Ave, Antioch 94509	WSAC Chemical Feed Skid	Facility ID 07-000-773723 Status Submitted on 2/28/2019 10:54 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS CAS No.
	NALCO Stabrex ST70	Gallons	110	110	110		- Physical	Sodium Hydroxide	5 %	1310-73-2
	<u>CAS No</u>	<u>State</u>	<u>Storage Container</u>		<u>Pressure</u>	<u>Waste Code</u>	Corrosive To	Proprietary	99 %	
	<u>Map: Figure 2 Grid: C3</u>	<u>Liquid</u>	Plastic/Non-metalic Drum		<u>Ambient</u>		Metal			
		<u>Mixture</u>	Days on Site: 365		<u>Ambient</u>		- Health Acute			
							- Health Skin			
							Toxicity			
							- Health Skin			
							Corrosion			
							Irritation			
							- Health			
							Respiratory Skin			
							Sensitization			
							- Health Serious			
							Eye Damage Eye			
							Irritation			

Gateway Generating Station
(00-AFC-1C)

Annual Compliance Report No. 10

Exhibit 6

Copy of Notice of Intent (NOI) and Revised
SWPPP (October 2018) to comply with the
requirements of Industrial General Permit
(SOIL & WATER-3)



State Water Resources Control Board
NOTICE OF INTENT

GENERAL PERMIT TO DISCHARGE STORM WATER
ASSOCIATED WITH INDUSTRIAL ACTIVITY (WQ ORDER No. 2014-0057-DWQ)
(Excluding Construction Activities)



EDMUND G. BROWN JR.
GOVERNOR



MATTHEW RODRIQUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

WDID: 5S071021950

Status: Active

Operator Information

Type: Private Business

Name: Pacific Gas Electric Company

Contact Name: Tim Wisdom

Address: PO Box 770000

Title: Plant Manager

Address 2: _____

Phone Number: 925-522-7812

City/State/Zip: San Francisco CA 94177

Email Address: T1WY@pge.com

Federal Tax ID: _____

Facility Information

Level: _____

Contact Name: Diana Furman

Title: Environmental Compliance Manager

Site Name: Gateway Generating Station

Address: 3225 Wilbur Ave

City/State/Zip: Antioch CA 94509

Site Phone #: 925-522-7838

County: Contra Costa

Email Address: dmwr@PGE.com

Latitude: 38.01228 Longitude: -121.75859

Site Size: 32.5 Acres

Industrial Area Exposed to Storm Water: 22 Acres

Percent of Site Impervious (Including Rooftops): 28 %

SIC Code Information

1. 4911 Electric Services

2. _____

3. _____

Additional Information

Receiving Water: San Joaquin River Flow: Indirectly

Storm Drain System: _____

Compliance Group: _____

RWQCB Jurisdiction: Region 5S - Sacramento

Phone: 916-464-3291

Email: r5s_stormwater@waterboards.ca.gov

Certification

Name: Alvin Thoma

Date: October 12, 2016

Title: Senior Plant Manager

Stormwater Pollution Prevention Plan

Gateway Generating Station

WDID#: 5S07I021950

Facility Address: 3225 Wilbur Avenue, Antioch, CA 94509

Facility Contact:

Angel B. Espiritu, Environmental Compliance Manager
Pacific Gas & Electric Company
(925) 522-7838

Prepared for



Storm Water Quality Group
3401 Crow Canyon Road, San Ramon, CA
Jeremy Laurin, Storm Water Work Supervisor
(925) 719-4466

Initial Preparation Date: December 2014
Revision Date: October 2018

EXECUTIVE SUMMARY

This storm water pollution prevention plan (SWPPP) was prepared in accordance with the requirements of the California State Water Resources Control Board (SWRCB) Industrial Storm Water Permit for Discharges Associated with Industrial Activity (Order No. 2014-0057-DWQ) which was adopted on April 1, 2014. This permit replaces Order No. 97-03-DWQ which had been in effect from August 1, 1997 through June 30, 2015.

This SWPPP identifies and evaluates all sources of pollutants that may affect the quality of industrial storm water discharges and authorized non-storm water discharges, identifies and describes the minimum best management practices (BMPs) and any advanced BMPs implemented to reduce or prevent pollutants in industrial storm water discharges and authorized non-storm water discharges.

Pacific Gas and Electric Company shall fully implement this SWPPP by July 1, 2015. The SWPPP will be revised whenever necessary and will be certified and submitted electronically to the SWRCB via the Storm Water Multi-Application and Report Tracking System (SMARTS).

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APPENDIX B – Permit Registration Documents

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APPENDIX E – Industrial Storm Water Facility Inspection and Visual Observation Form

- Annual Evaluation Form

- Sampling Log

**APPENDIX F – General Permit Attachment H “Sample Collection and Handling Instructions” and
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ACRONYMS AND ABBREVIATIONS

AST	Aboveground Storage Tank
BMP	Best Management Practice
CFR	Code of Federal Regulations
COC	Chain of Custody
CWA	Clean Water Act
DDT	Dichlorodiphenyltrichloroethane
ECM	Environmental Compliance Manager
ELAP	Environmental Laboratory Accreditation Program
ELG	Effluent Limitation Guideline
ERA	Exceedance Response Action
General Permit	Industrial Storm Water Permit for Discharges Associated with Industrial Activity
HMBP	Hazardous Materials Business Plan
LRP	Legally Responsible Person
mg/L	Milligrams per liter
NAL	Numeric Action Level
NEC	No Exposure Certification
NOI	Notice of Intent
NOT	Notice of Termination
NPDES	National Pollutant Discharge Elimination System
NSWD	Non-Storm Water Discharge
OSHA	Occupational Health and Safety Administration
PG&E	Pacific Gas and Electric Company
PPT	Pollution Prevention Team
PRDs	Permit Registration Documents
QISP	Qualified Industrial Storm Water Practitioner
QSE	Qualifying Storm Event
RWQCB	Regional Water Quality Control Board
SIC	Standard Industrial Classification
SMARTS	Storm Water Multi-Application and Report Tracking System
SPCC	Spill Prevention Control and Countermeasure
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
WDID	Waste Discharge Identification

STORM WATER POLLUTION PREVENTION PLAN SIGNATURE AND CERTIFICATION

I am duly authorized to sign reports required by the California State Water Resources Control Board Industrial Storm Water Permit for Discharges Associated with Industrial Activity. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Tim Wisdom
Tim Wisdom, Sr. Plant Manager

Feb-10, 2017
Date

1. INTRODUCTION

This industrial storm water pollution prevention plan (SWPPP) for Pacific Gas and Electric Company's (PG&E) Gateway Generating Station (facility) was prepared in accordance with the requirements of the California State Water Resources Control Board Industrial Storm Water Permit for Discharges Associated with Industrial Activity ("General Permit," Order NPDES No. CAS000001). A copy of the General Permit (Order No. 2014-0057-DWQ) dated April 1, 2014, is attached as Appendix A.

This SWPPP will be modified whenever there is a change in operation, maintenance or construction which may affect the discharge of pollutants to surface water. It will also be amended if it is found ineffective in achieving the stated objectives listed in the General Permit.

1.1 Background and Requirements

The Federal Clean Water Act (CWA) prohibits discharges from point sources to waters of the United States, unless the discharges are in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. In 1987, the CWA was amended to establish a framework for regulating municipal storm water discharges and discharges associated with industrial activity under the NPDES program. Industrial storm water discharges are regulated pursuant to CWA section 402(p)(3)(A). This provision requires NPDES permits for industrial storm water discharges to comply with technology-based effluent limitations and water quality-based limitations, as well as implement best management practices (BMPs).

On April 17, 1997, the California State Water Resources Control Board (SWRCB) issued NPDES General Permit for Industrial Storm Water Discharges, Excluding Construction Activities, Water Quality Order 97-03-DWQ (previous permit). The current General Permit, Order 2014-0057-DWQ, rescinds the previous permit and serves as the statewide general permit for industrial storm water discharges. The General Permit requires dischargers to:

- Eliminate unauthorized non-storm water discharges (NSWDs);
- Develop and implement SWPPPs that include BMPs;
- Implement minimum BMPs, and advanced BMPs as necessary, to achieve compliance with the effluent and receiving water limitations of this General Permit;
- Conduct monitoring, including visual observations and analytical storm water monitoring for indicator parameters;
- Compare monitoring results for monitored parameters to applicable numeric action levels (NALs) derived from the U.S. EPA 2008 Multi-Sector General Permit for Storm Water Discharges Associated with Industrial Activity (2008 MSGP) and other industrial storm water discharge monitoring data collected in California;
- Perform the appropriate Exceedance Response Actions (ERAs) when there are exceedances of the NALs; and
- Certify and submit all permit-related compliance documents via the Storm Water Multiple Application and Report Tracking System (SMARTS). Dischargers shall certify and submit these documents which include, but are not limited to, Permit Registration Documents (PRDs) including Notices of Intent (NOIs), No Exposure Certifications (NECs), and SWPPPs, as well as Annual Reports, Notices of Termination (NOTs), Level 1 ERA Reports, and Level 2 ERA Technical Reports.

Copies of all PRDs are included in Appendix B.

1.2 SWPPP Performance Standards

This SWPPP identifies and evaluates all sources of pollutants from the facility that may affect the quality of industrial storm water discharges and authorized NSWDs. Additionally, this SWPPP identifies and describes the minimum BMPs and any advanced BMPs implemented to reduce or prevent pollutants in industrial storm water discharges and authorized NSWDs. BMPs will be selected to achieve compliance with this General Permit and will identify and describe conditions or circumstances which may require future revisions to be made to the SWPPP. A copy of the SWPPP shall be maintained at the facility.

1.3 SWPPP Implementation and Revisions

PG&E shall fully implement this SWPPP by July 1, 2015. The SWPPP shall be revised whenever necessary and will be certified and submitted electronically to the SWRCB via SMARTS within 30 days whenever the SWPPP contains significant revisions. Minor revisions are not required to be entered into SMARTS more than once every three months within a given reporting year. A log of all SWPPP revisions is included in Appendix C.

1.4 General Facility Information

Facility Name: Gateway Generating Station

Facility Address: 3225 Wilbur Avenue, Antioch CA 94509

Telephone Number: (925) 522-7838

Standard Industrial Classification (SIC) Code: 4911 (Electric Power Generating Facility)

Waste Discharge Identification (WDID) Number: 5S07I021950

Scheduled Facility Operating Hours: 24 hours/7 days (2 shifts)

Size of Facility: Approximately 32.5 acres

The facility is located in unincorporated Contra Costa County (within the City of Antioch's Sphere of Influence), on Wilbur Avenue, 1 mile northeast of Antioch, on the southern shore of the San Joaquin River (Figure 1). The operating portion of the site area is approximately 22 acres. The facility is a natural gas-fired, combined cycle, combustion turbine power plant with a nominal generation capacity of 530 megawatts. The facility includes the following building structures and areas:

- Two Combustion Turbine Electrical Generators;
- Steam Powered Electrical Generator;
- Wet Surface Air Cooler (Wet SAC);
- Fin Fan (Close-loop Cooling System);
- Air Cooled Condenser;
- Plant Services Building;
- Laydown Area for Equipment/Parts Staging;
- Warehouse;

- Hazardous Materials Storage Shed;
- Hazardous Waste Accumulation Storage Shed; AND
- Water Treatment Building.

Percent Impervious: ~28%

Facility Contact:

Name: Angel Espiritu
 Title: Environmental Compliance Manager
 Company: Pacific Gas and Electric Company
 Phone: (925)522-7838
 Email: ABE4@pge.com
 Street Address: 3225 Wilbur Ave
 City: Antioch
 State: California
 Zip Code: 94509

1.5 Pollution Prevention Team

PG&E has identified a Pollution Prevention Team responsible for assisting with the implementation of this SWPPP and for conducting all monitoring required under the General Permit. The specific individuals (and job title) that are responsible for developing, implementing, and revising this SWPPP and conducting monitoring are identified in the Table I.

Table I Pollution Prevention Team

Name of Person	Title/Position	Responsibilities, Duties, and Activities
Jeremy Laurin	Water Quality Subject Matter Expert	Supervise SWPPP development and implementation; provide support and training to the ECM and Plant Manager; review of any documents uploaded to SMARTS; interface with the Regional and/or State Water Quality Control Boards when necessary.
Angel Espiritu	Environmental Compliance Manager (ECM)	Facility lead for storm water permit compliance, monitoring, and reporting; conduct employee training; supervise and/or conduct inspections and sampling, record and report maintenance; record and report spills and leaks; file documents in SMARTS; BMP Implementation, emergency response coordinator, spill cleanup coordination.
Name of Person	Title/Position	Responsibilities, Duties, and Activities
Steve Royall	Director, Fossil Generation	Legally Responsible Party (LRP); responsible for certification of Notice of Intent (NOI) within SMARTS.
Tim Wisdom	Sr. Plant Manager	Duly Authorized Representative (DAR); responsible for certification of documents within SMARTS.
Aman Singh	Maintenance Supervisor	BMP Implementation and maintenance.
David J. Hammond	Operations Supervisor	BMP Implementation and maintenance.

David Thurston	Plant Engineer	Engineering guidance, supervision and review of BMPs.
Doug Welch or available on-shift Power Plant Technician	Plant Chemist or available on shift power plant technician	Storm water inspections and sampling.

In the event that the Environmental Compliance Manager or other positions responsible for SWPPP implementation are temporarily unavailable to conduct storm water activities due to vacation, illness, out of town business or other absences, backup personnel will implement the SWPPP and conduct required monitoring. PG&E will train all backup personnel so they are familiar with storm water requirements.

The Environmental Compliance Manager, through the Operations or Maintenance Supervisor, will notify the backup PPT member of any expected absences. If the backup PPT member is unavailable, a tertiary individual will be selected and trained to perform the tasks necessary during the primary and secondary PPT member's absence. The backup PPT member has been trained to complete Environment Compliance Manager's tasks when the ECM is unexpectedly absent.

PG&E will ensure that this SWPPP is implemented and revised as necessary to be consistent with applicable municipal, state, and federal requirements that pertain to the requirements in the General Permit.

2. SITE LAYOUT AND EXISTING FACILITY PLANS (PERMIT SECTION X.E)

PG&E has prepared three figures illustrating the information required by the General Permit. These include Figure 1 Site Location Map, Figure 2 Facility Details Map, and the Figure 3 Storm Water Flow and BMP Map. The maps present the following information where applicable:

- Site location;
- North arrow;
- Facility boundary;
- Drainage areas;
- Portions of any drainage area impacted by discharges from surrounding areas;
- Direction of flow within each drainage area;
- On-facility surface water bodies;
- Areas of soil erosion;
- Nearby water bodies (e.g., rivers, lakes, wetlands);
- Municipal storm drain inlets;
- Location of storm water collection and conveyance systems;
- Points of discharge;
- Sampling locations;
- Structural control measures;
- Impervious areas;
- Locations of directly exposed materials;
- Locations of significant spills and leaks;
- Areas of industrial activity;
- Industrial storage areas/storage tanks;
- Shipping and receiving areas;
- Fueling areas;
- Vehicle and equipment storage/maintenance areas;
- Material handling/processing areas;
- Waste treatment and disposal areas;
- Dust or particulate generating areas;
- Cleaning and material reuse areas; and
- Other areas of industrial activity.

Storm water in Drainage Area A is generally conveyed from the south to the north. Surface run-off travels to drain inlets and/or rock-lined ditches which connect to a covered drainage conveyance into a concrete structure with flow valves. The valves on the outlet structure are typically left open to allow the discharge of stormwater in the wet season. The valves are typically left closed in the dry season to

provide an additional measure to capture potential pollutants if a spill occurred. Stormwater in Drainage Area B is contained in a depression centrally located in the drainage area and does not discharge. Additionally, there is no industrial activity in Drainage Area B. The facility details are shown on Figure 2.

3. LIST OF INDUSTRIAL MATERIALS (PERMIT SECTION X.F)

3.1 List of Industrial Materials Handled at the Facility

The following table lists the industrial materials stored or handled at the facility (as detailed in the Hazardous Materials Business Plan):

Table II Industrial Materials Handled at the Facility

Material	How Stored	Receiving/Shipping and Handling Frequency	Storage Location	Typical Quantities
Aqueous Ammonia (29%)	Aboveground Storage Tank (AST)	Weekly	Aqueous Ammonia Storage Area	18,000 gallons
Pre-blended Phosphate/Caustic (Soap)	Tote	Daily	Plant Services Building	460 gallons
Sodium Bisulfite	Tote	Monthly	Water Treatment Building	50 gallons
Stabilized Bromine/Sodium Hydroxide	Tote	Monthly	Water Treatment Building and Wet SAC	110 gallons
Sulfuric Acid	Tote	Semi-annual	Wet SAC	35 gallons
Corrosion/Scale Inhibitor/Sodium Hydroxide	Tote	Semi-annual	Wet SAC	110 gallons
Chlorine Scavenger	Tote	Monthly	Water Treatment Building	65 gallons
Mineral Oil	Transformers	As needed	Transformers (throughout the site) and the inlet chiller	58,000 gallons
Diesel Fuel No. 2	AST	Weekly	Water Treatment Building	500 gallons
Turbine Oil	Within Turbines / Drums	As needed	Combustion Turbines, Steam Turbine, Hazardous Materials / Waste Storage Shed	17,000 gallon

Material	How Stored	Receiving/Shipping and Handling Frequency	Storage Location	Typical Quantities
Mixed Oil	Drum	As needed	Hazardous Materials / Waste Storage Shed	55 gallon
Hydraulic Oil	Steam Turbine	As needed	Steam Turbine	130 gallons
Liquid Carbon Dioxide	Cylinder	As needed	Combustion Generators and CO2 Bulk Storage	36,000 gallons
Argon	Cylinder	As needed	Combustion Turbines	1,344 cubic feet
EPA Protocol Gases (Carbon Monoxide / Nitrogen / Oxygen / Nitric Oxide)	Cylinder	As needed	Combustion Turbines	4,896 cubic feet
Helium	Cylinder	As needed	Combustion Turbines and Gas Conditioning Station	2,200 cubic feet
Oxygen	Cylinder	As needed	Combustion Turbines	1,124 cubic feet
Hydrogen	Cylinder	As needed	Tube Trailer and Gas Conditioning Station	134,200 cubic feet
Nitrogen	Cylinder	As needed	Combustion Turbines, Steam Turbine, Inlet Chiller	8,735 cubic feet
Propane	Cylinder	As needed	Combustion Turbines and Plant Services Building	60 pounds
Acetylene	Cylinder	As needed	Plant Services Building	1,700 cubic feet
Petroleum Distillates	Within Transformer	As needed	Spare GSU Transformer	14,000 gallon
Refined Petroleum Oil	Drum	As needed	Spare GSU Transformer	55 gallons

Material	How Stored	Receiving/Shipping and Handling Frequency	Storage Location	Typical Quantities
Dielectric Fluid	Transformer housing	As needed	Plant Services Building Transformers, Water Treatment Building, Combustion Turbines, Main Electrical Control Enclosure and Inlet Chiller	4,800 gallons
Gear Lubricant	Gear Boxes (36) and Drums	As needed	Air Cooled Condenser Gear Boxes (36), Warehouse and Hazardous Materials / Waste Storage Shed	540 gallons
Lead Acid Batteries	Within Electrical Equipment	As needed	Combustion Turbines	48,000 pounds
Lead Calcium Batteries	Within Electrical Equipment	As needed	Switchyard	90 gallons
Sulfur Hexafluoride	Internally within breakers	As needed	Sulfur Hexafluoride Breakers	774 pounds
Carbon Dioxide, Gas	Cylinders	As needed	Stormwater Treatment System	6,620 cubic feet
HaloKlear BHR-50	Plastic Tote	As needed	Stormwater Treatment System	275 gallons
Yardney 3660 Media Filter (glass media beads)	Within Equipment	As needed	Stormwater Treatment System	6,300 pounds
Sodium Hydroxide	Plastic Container	As needed	Stormwater Treatment System	30 gallons
Non-hazardous trash	In enclosed dumpster	Daily	Laydown in roofed area	3 yards
Metal scraps for recycling	Roll-off bin with tarp cover	Weekly	Laydown area	20 yards

Material	How Stored	Receiving/Shipping and Handling Frequency	Storage Location	Typical Quantities
Wood Pallets	Outside	Daily	Laydown	50 to 100 total
Plastics	In enclosed dumpster	Daily	Laydown in roofed area	3 yards
Recyclables	In enclosed dumpster	Daily	Laydown in roofed area	3 yards
Cardboard	In enclosed cardboard compactor	Daily	Laydown in roofed area	3 yards
RCRA Waste (i.e., waste absorbent)	In secondary-contained drums within covered waste storage area	As needed	Hazardous Materials / Waste Storage Sheds	55 gallons
Non-RCRA Waste (i.e. oily debris)	In secondary-contained drums within covered waste storage area	As needed	Hazardous Materials / Waste Storage Sheds	55 gallons
Universal Waste (i.e., batteries and fluorescent light bulbs)	Bins	As needed	Hazardous Materials / Waste Storage Sheds	5 pounds
Monoethanolamine (30%-60%)	Tote	As needed	Northeast corner of Air Cooled Condenser (ACC)	400 gallons
Cooling Water Inhibitor (3DTRASAR)	Tote	As needed	Water Treatment Building	110 gallons
Antiscalant (Avista Vitec)	Drum	As needed	Water Treatment Building	60 gallons
Antifungal/bacteria/slime (Stabrex)	Tote	As needed	Water Treatment Building	110 gallons
Simple Green	2.5 gallon Containers	As needed	East of the Plant Services Building	10 gallons
Reclaimed water	Tanks	Daily	East of the Water Treatment Building	140,000 gallons
Wastewater	Tank	Daily	East of the Water Treatment Building	40,000 gallons

Material	How Stored	Receiving/Shipping and Handling Frequency	Storage Location	Typical Quantities
Turbine Cleaning Fluid	Tote	As needed	Parts and Miscellaneous Storage Building	250 gallons
Various solvents, degreasers, paints, adhesives, etc.	Fire Cabinet	As needed	East of the Plant Service Building	Typically less than 1 gallon each

4. DESCRIPTION OF POTENTIAL POLLUTANT SOURCES (PERMIT SECTION X.F AND G)

4.1 Industrial Processes

Gateway Generating Station facility manufactures electricity through the use of two natural gas fired combustion turbines and a steam powered generator. The industrial materials utilized throughout the facility are detailed in Table II. All industrial processes associated with manufacturing occur at locations denoted on Figure 2.

Industrial materials imported to the site are imported directly into the warehouse, directly to aqueous ammonia storage tank, the water treatment plant and the wet surface air cooler. Handling, shipping and receiving of hazardous materials including waste occurs at the frequencies denoted in Table II above. Storage areas identified in Table II are also denoted in Figure 2. These areas are further described as follows.

The aqueous ammonia is stored in an area that houses two 20,000 gallon capacity tanks. These tanks sit above grade within a secondary containment unit and a sump. This area has sufficient storage capacity to meet the facility's Risk Management Plan requirements. Storm water that collects in this sump is discharged to the sanitary sewer per a separate permit. This storage area has its own loading ramp that drains to the secondary containment sump below the tanks.

The hazardous materials storage shed, hazardous waste storage shed and hazardous materials accumulation shed are all covered sheds with secondary containment that meets the facilities hazardous materials business plan (HMBP) and SPCC plan requirements. The various oils the facility uses are stored within these sheds in 55 gallon drums. In addition to those drums universal waste and used absorbent is also stored within these sheds. Materials and wastes are moved using services vehicles.

All hazardous materials associated with the water treatment plant including the diesel fuel used for the emergency fire water system are housed in a roofed water treatment building. Secondary containment for these materials is provided. All of the ASTs within this area are filled by bulk delivery.

There are various transformers throughout the facility. These transformers are filled with dielectric oil and are housed in secondary containment that meets the facility's SPCC plan requirements.

Various hazardous materials are stored adjacent to the wet surface air cooler. These materials are all stored in sealed tanks within secondary containment. These tanks are filled by bulk delivery.

Trash, recyclable materials, and cardboard are accumulated in three separate dumpsters. The dumpsters have lids which are closed when the dumpsters are not actively used. To further isolate the dumpsters from exposure to storm water, they are housed under a roof.

Metals for recycling are accumulated in a roll off bin or bins and are covered when not actively in-use.

Various pressurized gases are stored throughout the facility for various uses. These pressurized gases are stored according to all applicable HMBP requirements.

Various batteries are stored throughout the facility for various uses. These batteries are stored in roofed buildings and according to all applicable HMBP requirements.

4.2 Material Receiving, Shipping, and Handling

Receiving

The facility receives regular deliveries of the materials listed in Table II. The materials stored in larger tanks are delivered by service trucks and are directly loaded into the respective vessels. Receiving and loading of materials (e.g., fuels, fuel additives, oils, and ammonia) is performed at the respective material storage areas. Other sources include smaller quantities of oils used in transformers, sulfuric acid used in batteries, and oils used in miscellaneous equipment and machines which are delivered to their various storage locations throughout the facility, including but not limited to the warehouse, plant services building, parts and miscellaneous storage building, and the water treatment building.

Material Handling

The primary function of the power plant facility is to generate electricity through a combined-cycle process utilizing natural gas as fuel. The potential pollutants at the facility are used in ancillary functions such as lubricants, aqueous ammonia for emissions control, and other various maintenance fluids. Most materials and wastes are transported via on-site pipe networks. For example, potable water is piped to the facility from a municipal water purveyor to the water treatment area and then transferred from the treatment plant to the boilers and other heat exchange equipment. Used water is conveyed to the sanitary sewer. Small quantities of other materials and wastes, typically for maintenance activities, are moved using services vehicles. There is a seldom used parts cleaning machine that is located outdoors, immediately east of the plant services building.

Waste

General trash is accumulated in dumpsters located north of the inlet chiller. The waste dumpster area is equipped with a storm resistant shelter. Trash is transferred to a collection facility by a service vendor.

Metals for recycling are accumulated in two dumpsters that are equipped with lids. One metal disposal dumpster is located near the trash dumpsters and the other is located east of the parts and miscellaneous storage building. Occasionally, roll-off dumpsters are placed near the warehouse during maintenance and repair operations.

Hazardous waste is temporarily stored onsite in storage sheds located east of the plant service building and the south-east corner of the warehouse. The majority of hazardous waste produced at the facility is waste oil sludge and used lubricating oil. Hazardous waste is picked up by a waste disposal vendor as necessary, though typically picked up more frequently; the hazardous waste vendor is on 90-day maximum schedule. An industrial service vendor visits the site weekly to perform a required weekly inspection and schedule waste pick-up.

The water-side effluent from the oil/water separator is conveyed to the sanitary sewer along with other waste water generated from plant operation. The oily sludge effluent is transported offsite for proper disposal.

Portable toilets are commonly placed onsite in various locations for construction and maintenance projects and are serviced regularly by a service vendor.

Shipping

The industrial product produced at the facility is electricity and therefore shipping of industrial products does not occur at this facility. The electricity generated at the facility is transmitted through the substation located west of the facility.

4.3 Dust and Particle Generating Activities

PG&E does not conduct any activities that generate dust and/or particles. The vents located on the combustion turbines are designed only for heat dissipation. The active areas of the site are paved or covered in gravel to prevent dusting.

4.4 Significant Spills and Leaks

Significant spills and leaks include any toxic chemicals identified in 40 Code of Federal Regulations (CFR) Section 302 that are discharged into the facilities' storm water conveyance system as reported on U.S. EPA Form R, as well as spills or leaks of oil and hazardous substances in excess of reportable quantities (40 CFR §§ 110, 117, and 302). PG&E contracts with a service vendor to respond to any significant spills of fuels, oil or other materials. During the routine monthly inspections, PG&E will evaluate the facility in areas where spills and leaks could potentially occur during material delivery, unloading, loading, transport, storage/containment, or use. There have not been any significant spills or leaks of industrial materials at this facility in the last five years that had potential to be discharged from the facility.

In accordance with the facility SPCC Plan and the General Permit, in the event that significant spills or leaks occur in the future, for each potential discharge PG&E will record and document the following information: the location, characteristics, and approximate quantity of the materials spilled or leaked; approximate quantity of the materials discharged from the facility's storm water conveyance system; the cleanup or remedial actions that have occurred or are planned; the approximate remaining quantity of materials that have the potential to be discharged; and the preventive measures taken to ensure spills or leaks of the material do not reoccur.

4.5 Non-Storm Water Discharges

A NSW is any water discharged at the Facility which is not the direct result of a rain event. Examples include process water, cooling water, wash water, and sanitary wastewater. Certain limited categories of NSWs are considered to be authorized by the General Permit (as long as they are not in violation of any Basin Plan, municipal agency ordinance, or other statewide water quality control plans or policy requirements), including: fire hydrant flushing; potable water sources; drinking fountain water; refrigeration, air conditioning, and compressor condensate; irrigation drainage and landscape watering; uncontaminated natural springs, groundwater, and foundation/footing drainage; seawater infiltration; and incidental windblown mist from cooling towers.

Authorized NSWs at the Gateway Generating Station facility are expected to be prevented or minimized and would occur at an unknown frequency if they arise with the exception of the fire system flushing. The fire system is flushed annually and the quantity of water would be equal to the amount in the system or necessary to flush the system. Expected authorized NSWs include:

- Fire system flushing water;
- Irrigation water;
- Eye wash system flushing and testing water; and
- Air conditioning or compressor condensate.

The NSWDs listed above are authorized by the General Permit if all of the following conditions are met:

- The NSWDs are in compliance with Regional Water Quality Control Board (RWQCB) requirements;
- The NSWDs are in compliance with local agency ordinances and/or requirements;
- BMPs are specifically included in the SWPPP to (1) prevent or reduce the contact of NSWDs with significant materials or equipment and (2) minimize, to the extent practicable, the flow or volume of NSWDs;
- The NSWDs do not contain significant quantities of pollutants;
- The monitoring program includes quarterly visual observations of each NSWD and its sources to ensure that BMPs are being implemented and are effective; and
- The NSWDs are reported and described annually as part of the Annual Report.

As part of the routine monthly site inspections, PG&E will conduct an evaluation of the facility to identify any NSWDs, sources, and drainage areas. The inspection will include an evaluation of all storm drain inlets to identify connections to the storm water conveyance system; and a description of any NSWDs and how any which have occurred and have been eliminated. In the event that NSWDs are discovered, they will be described on the inspection form located in Appendix E of the SWPPP. This description will include the source, quantity, frequency, and characteristics of the NSWDs, associated drainage area, and whether it is an authorized or unauthorized NSWD.

Potential unauthorized NSWDs at the Gateway Generating Station Facility include:

- Secondary containment failure;
- Pipeline leak, rupture, or failure;
- Contaminated water in sumps;
- Leaks or spills from portable restrooms; and
- Leaks or spills from service vehicles or portable equipment.

Unauthorized NSWDs have been eliminated or prevented through the use of sumps, secondary containment structures, an oil/water separator, drains that convey waste to the oil/water separator, controlled site access, and the placement and maintenance of numerous spill clean-up kits throughout the facility.

4.6 Erodible Surfaces

There are three vegetated areas (Figure 3) that may be considered erodible surfaces at the facility. The only unpaved areas within the active facility exposed to storm water are flat gravel-capped surfaces between structures and adjacent to roadways, and three vegetated surfaces on the northeastern edge of the property.

The southern portion of the facility is inactive and self-contained, with a berm which surrounds the entire perimeter. This area has also been graded into a depression and decompacted to help increase infiltration of any storm water that lands within the area.

5. ASSESSMENT OF POTENTIAL POLLUTANT SOURCES (PERMIT SECTION X.G.2)

5.1 Narrative Assessment of Likely Pollutants Present in Storm Water Discharges

PG&E conducts frequent preventive maintenance to ensure that plant machinery, equipment and storage vessels are in good working order. The most likely potential pollutants in storm water discharges are the materials listed in Table II. Approximately 28 storm water catch basins drain the site and are located throughout the facility and in proximity to material storage areas. PG&E has implemented BMPs to control the offsite migration of potential pollutants by following good housekeeping, requiring immediate cleanup of spills, and by installing filter screens (Dandy Pops®) in storm water catch basins on the site, as appropriate. The filter screens are cleaned and/or replaced as needed.

5.2 Identification of Additional BMPs

In the event that conditions change or monitoring results indicate a need, PG&E will consider identifying additional BMPs to address the changed conditions or constituents of concern.

5.3 Identification of Drainage Areas with No Exposure

There is one drainage area at the facility with no exposure, as indicated on Figure 2. The southern area meets the requirements for no exposure, as there are no industrial activities occurring within it.

5.4 Identification of Additional Parameters

In addition to the standard parameters required for all industrial facilities (pH, oil & grease, and total suspended solids), PG&E will continue to analyze for total iron, as per the SIC code 4911 requirements of Table 1 and Attachment A of the General Permit.

The facility drains to the Delta Waterways (western portion) which is in the HUC 10 watershed of the site. The 303(d) listed impairments for the Delta include: Chlordane; Chlorpyrifos; Dichlorodiphenyltrichloroethane (DDT); Diazinon; Dieldrin; Dioxin; Dioxin compounds (including 2,3,7,8-TCDD); Disulfoton; Electrical Conductivity; Escherichia coli (E. coli); Furan Compounds; Group A Pesticides; Invasive Species; Mercury; Organic Enrichment/Low Dissolved Oxygen; Oxygen, Dissolved; Low Dissolved Oxygen; Pathogens; PCBs (Polychlorinated biphenyls) (dioxin-like); PCBs (Polychlorinated biphenyls); Selenium; and Unknown Toxicity. The sources of the impairments listed are primarily caused by agricultural sources or mineral resource extraction and the Gateway Generating Station does not have the potential to discharge most of the pollutants; however, electrical conductivity may be an exception.

Electrical Conductivity is a measure of the ability of water to pass an electrical current. Conductivity in water is affected by the presence of inorganic dissolved solids such as chloride, nitrate, sulfate, and phosphate anions (ions that carry a negative charge) or sodium, magnesium, calcium, iron, an aluminum cations (ions that carry a positive charge). Though the General Permit does not have a Numeric Action Level for electrical conductivity, the facility has the potential to discharge inorganic dissolved solids and analytical results may be beneficial as an indicator of other pollutant concerns; therefore, the facility will also collect and analyze samples for electrical conductance.

6. STORM WATER BEST MANAGEMENT PRACTICES (PERMIT SECTION X.H)

This section describes the BMPs implemented and maintained as a result of the activities assessment in Section 4. The current BMPs, when properly maintained, are effective for the operations at the facility. BMPs are divided into minimum and advanced measures.

6.1 Minimum BMPs (PERMIT SECTION X.H.1)

6.1.1 Good Housekeeping

- **Monthly Visual Inspections.** Once per calendar month, PG&E inspects all outdoor areas associated with industrial activity, including storm water discharge locations, drainage areas, conveyance systems, waste handling/disposal areas, and perimeter areas impacted by off-facility materials or storm water run-on to determine housekeeping needs. Any identified debris, waste, spills, tracked materials, or leaked materials identified during the inspections are cleaned and disposed of properly.
- **Tracking Control.** Although there is low potential for tracking of sediment at the facility, paved surfaces are swept on a monthly basis. Additionally sweeping will occur as needed.
- **Dust Control.** PG&E's power generation process does not generate dust, and the surface of the site is either paved, has a gravel cap, or is vegetated. Therefore, there is no need to implement dust control at this facility.
- **Cleaning Areas Impacted by Rinse/Wash Waters.** No washing or rinsing of equipment is performed at the facility. Parts are washed within an enclosed parts washer, within the roofed Plant Services building.
- **Industrial Materials Storage Control.** The facility stores all materials and performs all activities that involve hazardous materials under roofed areas (buildings or storage containers), within secondary containment, or during dry weather, if possible.
- **Control of Non-Solid Industrial Materials/Wastes.** The facility contains all stored non-solid industrial materials or wastes (e.g., fuel, waste oil) that can be transported or dispersed by wind or contact with storm water. Spill kits are maintained appropriately and allow for immediate response to spills. In addition, all materials are stored within secondary containment to prevent any spilled or leaked material from being transported by storm water. Numerous secondary containment structures have been designed and constructed throughout the facility to contain spills, leaks, or ruptures from various tanks and oil filled equipment. The secondary containment structures have been designed per SPCC requirements to contain the capacity of either 100 percent of the largest tank or 10 percent of all tanks or containers stored within the containment. Additional material and waste control information is included in the facility's Spill Prevention Control and Countermeasure (SPCC) Plan.
- **Control of Rinse/Wash Water Disposal.** No washing or rinsing is performed at the facility. The facility prevents the disposal of any industrial materials into the storm water conveyance system by maintaining spill kits appropriately and immediately responding to spills.
- **Minimize Storm Water Discharges from Non-Industrial Areas.** A non-industrial area exists within the facility, as denoted on Figure 2. This area is self-contained, with a berm surrounding the entire perimeter of this portion. This area has also been graded into a

depression and decompacted to help increase infiltration of any storm water that lands within the area, as described in Section 4.5.

- **Minimize Authorized NSWs from Non-Industrial Areas.** A non-industrial area exists within the facility and no authorized NSWs occur from it.

6.1.2 Spill and Leak Spill and Leak Prevention

The facility implements the following preventative maintenance measures:

- PG&E has identified the following outdoor equipment at the Facility which may spill or leak pollutants, as follows:
 - Containment areas, tanks and containers storing hazardous materials or wastes
 - Oil-filled electrical equipment and oil-filled operating equipment in the Radiator Area, and Transformer Yard
 - Service vehicles (when transporting materials such as drums of waste oil)
- Monthly observations of containment areas, tanks, equipment and systems are conducted to detect leaks, or identify conditions that may result in the development of leaks.
- The facility maintains a schedule for conducting routine maintenance of identified equipment and systems. There is a daily inspection of all equipment at the facility, monthly preventative maintenance and periodic servicing. Daily inspections are informal visual inspections by operators, and are not documented. Service vehicles are not washed on site.
- The facility has defined procedures for prompt maintenance and repair of equipment, and maintenance of systems when conditions exist that may result in the development of spills or leaks.
- The facility utilizes forklifts and golf carts that are loaned to the facility from PG&E Fleet. Fleet vehicles are repaired and maintained by the Fleet group.
- The manufacturer of the power generation equipment requires maintenance of equipment after a specified number of operating hours and therefore the facility conducts two shut-downs per year to maintain the facility's power generation equipment.

6.1.3 Spill and Leak Response

PG&E has established the following protocols to respond to spills and leaks:

- The facility has developed procedures to minimize spills and leaks. The facility has a SPCC Plan that addresses storage of materials and wastes.
- The facility has established spill and leak response procedures to prevent industrial materials from discharging through the storm water conveyance system. Spilled or leaked industrial materials are cleaned up promptly and disposed of properly.
- The facility has identified and described all necessary and appropriate spill and leak response equipment, locations of spill and leak response equipment, and spill/leak response equipment maintenance procedures, in the facility's HMBP and SPCC plans. Spill kits are maintained throughout the facility and denoted in maps located in the facility's HMBP.

- The facility has designated and trained appropriate spill and leak response personnel, identified as the PPT in Table 1 above. Spill and leak response personnel are trained annually, at a minimum. Plant operations personnel are responsible for spill cleanup; an outside vendor is used to respond to significant spills. Spill response personnel receive OSHA hazard communication training and spill training consistent with the hazardous materials business plan and SPCC plan.
- Powered industrial truck maintenance shall be performed on tarps or other impervious materials to capture spills.

6.1.4 Material Handling and Waste Management

PG&E has a robust program for addressing material handling and waste management, as follows:

- The facility minimizes the handling of industrial materials or wastes that can be readily mobilized by contact with storm water during storm events through the use of awnings at loading docks.
- The facility appropriately contains stored non-solid industrial materials or wastes (e.g., lubricant oil) that can be transported or dispersed by the wind or contact with storm water by storing these materials in secondary containment with water tight lids.
- Industrial waste disposal containers (dumpsters and metal waste recycling bins) and industrial material storage containers that contain industrial materials are covered with lids or plastic tarps when not in use.
- Site run-on and storm water generated from within the facility is diverted away from material storage areas.
- Spills of industrial materials or wastes that occur during handling are cleaned up in accordance with the spill response procedures.
- Outdoor material or waste handling equipment or containers that can be contaminated by contact with industrial materials or wastes are inspected and cleaned, as appropriate.

6.1.5 Erosion and Sediment Controls

Erosion is not a significant issue at the site because approximately 28 percent is paved and the remainder is covered with a gravel cap or is vegetated (Figure 3). Therefore, erosion is not a problem at the site, and the facility does not implement erosion and sediment controls.

6.1.6 Employee Training Program

PG&E employees responsible for implementing the storm water program at the Facility will receive annual storm water training. The facility has identified which personnel require training (per Section 1.5), their responsibilities, and the type of training they will receive, and will prepare or acquire appropriate training materials and establish a schedule for providing the training. All participants will sign a Training Log that will be kept in Appendix D. This documentation will be maintained with the SWPPP. Annual training is required once every calendar year. At a minimum, training will cover the following topics:

- BMP implementation;
- BMP effectiveness evaluations;
- Visual observations; and

- Monitoring activities.

In the event the Facility enters Level 1 status (see Section 9), appropriate team members will be trained by a Qualified Industrial SWPPP Practitioner (QISP). A QISP must complete a SWRCB-approved training course and assist in the preparation of ERAs for Level 1 and 2 status designations which are described in further detail in Section 9 of this SWPPP.

6.1.7 Quality Assurance and Record-Keeping

PG&E has done [and will continue to perform] the following to retain proper quality assurance and record-keeping:

- The facility has developed and implemented management procedures to ensure that appropriate staff implements all elements of the SWPPP, including the Monitoring Implementation Plan;
- The facility has developed a method of tracking and recording the implementation of BMPs identified in the SWPPP, through the monthly inspection process; and
- The facility will maintain the BMP implementation records, training records and records related to any spills and clean-up related response activities for a minimum of five years.

6.2 Advanced BMPs (Permit Section X.H.2)

In addition to the minimum BMPs described above in Section 6.1 and in Section X.H.1 of the General Permit, the facility will, to the extent feasible, implement and maintain any advanced BMPs necessary to reduce or prevent discharges of pollutants in its storm water discharge in a manner that reflects best industry practice considering technological availability and economic practicability and achievability.

6.2.1 Exposure Minimization BMPs

The facility has installed permanent storm resistant shelters to prevent contact of storm water with certain kinds of materials. These areas include the hazardous materials/waste storage sheds, and the Laydown area (e.g., for waste and recycling dumpsters).

6.2.2 Storm Water Containment and Discharge Reduction BMPs

These BMPs include structures that divert, infiltrate, reuse, contain, retain, or reduce the volume of storm water runoff. As described in Section 4.5, the facility includes gravel caps to areas that haven't been paved or are not roofed which may increase infiltration at the site and prevent erosion. Additional BMPs will be explored and implemented as needed.

6.2.3 Treatment Control BMPs

- **Oil/Water Separator.** The site is equipped with an oil/water separator; however, since the effluent from the oil/water separator is conveyed to the municipal sanitary sewer (which is permitted through the publicly owned treatment works), this water is not considered storm water discharge. The oil (if any) is separated and sent offsite for proper disposal. The coalescer packs are inspected regularly and cleaned if indicated by inspection.

- **Parts Cleaner.** The site is equipped with a parts cleaner that is located outdoors on the east side of the maintenance shop. The manufacturer inspects the washer and replaces the solvent as necessary.
- **Drain Inlet Filters.** Filter screens (Dandy Pops®) are installed in storm water catch basins on the site, as appropriate, to capture sediment. The filter screens are cleaned and/or replaced as needed.
- **Stormwater Chemical Treatment/Filtration System.** The site is equipped with a standard chemical treatment and filtration system for the stormwater prior to discharge. The treatment system is located immediately adjacent to the existing outfall, E-006, to allow treatment of all of Gateway Generating Station's stormwater prior to discharge into the river. The system is expected to reduce the total iron content of the storm water effluent to less than or equal to 1 ppm.

Design of the system was precluded by volume-based calculations to meet the provisions of the IGP (see memo dated October 12, 2016 found in Appendix H). The volume of runoff produced from an 85th percentile 24-hour storm event and 85th Percentile Hourly Rainfall Intensity per the IGP, as determined from local, historical rainfall records produces a maximum of 229,562 gallons. The design volume processing rate of the treatment system is 468,895 gallons, both meeting and exceeding the volume-based calculations of the IGP.

Treatment steps for the treatment system are as follows:

1. The storm water is pH adjusted to allow the iron to precipitate out of the stormwater,
2. A chemical flocculating agent is added to clump the iron particles together,
3. The stormwater is settled and pumped over a series of small weirs to capture the solids,
4. Stormwater is then passed through the media filters for finer particulate removal,
5. The water is monitored real-time to assure it meets discharge criteria, if it does not meet pH or turbidity criteria, it is recirculated, and,
6. The treated stormwater is discharged into the San Joaquin River.

6.2.4 Other Advanced BMPs

At this time, the Facility does not implement other advanced BMPs. In the event that conditions change or monitoring results indicate a need, PG&E will consider additional advanced BMPs to address the changed conditions or constituents of concern.

7. TEMPORARY SUSPENSION OF ACTIVITIES (PERMIT SECTION X.H.3)

PG&E's Gateway Generating Station operates two shifts, seven days a week. The facility does not have any plans to suspend industrial activities for ten or more consecutive calendar days in any given year. Therefore, this section of the General Permit is not applicable.

8. BMP SUMMARY (PERMIT SECTIONS X.H.4 AND 5)

The following table summarizes each identified area of industrial activity, the associated industrial pollutant sources, the industrial pollutants, and the BMPs implemented. The approximate boundaries of Drainage Areas A and B are shown on Figure 2. The PPT identified in Section 1.5 is responsible for implementing all BMPs at the site. Some of the BMPs described below require the use of mechanical equipment, such as forklifts, in order to perform maintenance activities on the BMPs. PPT members are authorized to use the required equipment or to obtain the help of other facility staff to maintain the BMPs onsite. The facility mechanics are responsible for maintaining the mechanical equipment throughout the facility.

To retain effectiveness during and after significant weather conditions, certain BMPs need to be inspected more frequently than monthly. These BMPs will be informally inspected by PPT members during large rain events or following rain events.

Table III BMP Summary

Drainage Area	BMPs Implemented	Associated Industrial Pollutant Sources	Potential Industrial Pollutants	Frequency of BMP Implementation
Combustion turbines	Spill kit	Oil Filled Equipment (Transformers)	Petroleum hydrocarbons, heavy metals	As needed
	Secondary containment	Aqueous Ammonia for exhaust system	Aqueous Ammonia	As needed
	Check dams	All facility pollutants	Suspended Sediment	As needed
Oil and Universal Waste Storage Used Oil / Hazardous Waste Storage	Spill kits	Truck access	Petroleum hydrocarbons, heavy metals	As needed
	Parts Cleaner	Part Cleaning	Solvents, lubricants, metals	As needed
	Spill kits and secondary containment	Spills during shipping and receiving	Petroleum hydrocarbons, heavy metals	As needed
	Covered forklift parking	Forklift	Vehicle related pollutants	Daily
Water Treatment Plant	Spill kit	Truck access	Petroleum hydrocarbons, heavy metals	As needed
	Spill kits and secondary containment	Spills during shipping and receiving	Diesel, various chemicals	As needed
	Fueling Sump	Fuel	Petroleum	Permanent
Trash and Scrap Metal Dumpsters	Dumpsters have lids, roll offs are tarped	Spills during shipping and receiving	Metals and non-petroleum waste	Cover daily when not in use
	Storm resistant shelter	Waste	Metals, oils, suspended solids	Permanent

Warehouse	Run-on diversions	Run-on from neighboring facilities	Iron	Permanent
Discharge Location	Valves and Concrete Containment	All facility pollutants	All potential pollutants	Permanent
	Treatment and filtration			As needed
All Drainage Areas	Drain inlet filters	All pollutant sources	All potential pollutants	Permanent
	Rock-lined ditches	All pollutant sources	Suspended solids	Permanent
	Site has access control and security 24 hours a day, 7 days a week	All pollutant sources	All potential pollutants	As needed
	Oil/Water Separator	All pollutants	Oils and Grease	Daily
	Oil absorbent socks around various drain inlets	All pollutant sources	Oils and Grease	Daily
	Powder coated drain inlet grates	Rusting grates	Iron	Permanent
	“No Dumping, Drains to Delta Signs”	Illicit dumping	All potential pollutants	Permanent

9. MONITORING IMPLEMENTATION PLAN (PERMIT SECTION X.I)

As described above in Section 1.5, PG&E has assembled a PPT that includes members assigned to conduct storm water monitoring. The facility has one industrial discharge location which is also the sampling location. The discharge location (Sample Location E-006) is located at the northern perimeter of the facility. Analytical monitoring and visual observations will be conducted at the sampling location shown on Figure 2.

Procedures for Monthly Visual Observations

PG&E will conduct visual observations within the drainage area at the facility at least once per calendar month, which will include an evaluation of:

- Presence or indications of prior, current, or potential unauthorized NSWDS and their sources;
- Authorized NSWDS, sources, and associated BMPs; and
- Outdoor industrial equipment and storage areas, outdoor industrial activities areas, BMPs, and all other potential source of industrial pollutants.

Monthly visual observations will be conducted during daylight hours of scheduled facility operating hours and on days without precipitation. Visual observations will be recorded on the form provided in Appendix E. Information to be recorded will include the date, approximate time, locations observed, presence and probable source of any observed pollutants, name of person(s) that conducted the observations, and any response actions and/or additional SWPPP revisions necessary in response to the visual observations. To ensure adequate documentation of response action completion, a PPT member will initial and date the documented response action when the action is complete. If a monthly visual observation is not conducted, PG&E will provide an explanation in the Annual Report.

Procedures for Sampling Event Visual Observations

PG&E will conduct visual observations at the same time sampling occurs at a discharge location. At each discharge location where a sample is obtained, PG&E will observe the discharge of storm water associated with industrial activity and record these observations on the form provided in Appendix E. The same types of information will be recorded as for the monthly inspections. The following items will be observed and recorded:

- The appearance of storm water discharged from containment sources (e.g., secondary containment or sumps) at the time that the discharge is sampled;
- The presence or absence of floating and suspended materials, oil and grease, discolorations, turbidity, odors, trash/debris, and source(s) of any discharged pollutants.

In the event that a discharge location is not visually observed during a sampling event, PG&E will record which discharge locations were not observed during sampling or that there was no discharge from the discharge location and will provide an explanation in the Annual Report for uncompleted sampling event visual observations. PG&E will revise BMPs as necessary if the visual observations indicate pollutant sources have not been adequately addressed in the SWPPP. If any response actions are noted during Sampling Event Visual Observations, a PPT member will initial and date the documented response action when the action is complete.

Sampling and Analysis

Samples will be collected during Qualifying Storm Events (QSE). A QSE is defined as a precipitation event that produces a discharge for at least one drainage area and is preceded by 48 hours with no discharge from any Facility drainage area. PG&E will collect and analyze storm water samples from two QSEs within the first half of each reporting year (July 1 to December 31), and two QSEs within the second half of each reporting year (January 1 to June 30). Samples will be collected within four hours of the start of discharge at the E006 discharge/sampling location shown on Figure 2. The sampling point at E006 is upstream from the actual discharge into the San Joaquin River (Outfall), due to the comingling of our discharge with the neighboring industrial facility just after E006 and prior to Outfall.

Sampling will be performed in accordance with requirements of the General Permit. Use caution when collecting samples at night and do not collect samples without sufficient lighting. Samples will be collected and analyzed for pH, oil and grease, total suspended solids, and total iron (based on the facility's SIC code listed in Table 1 of the General Permit for additional analytical parameters). Sampling results will be compared to two types of NAL values based on the specific parameter to determine whether either type of NAL has been exceeded for each applicable parameter. Annual NAL exceedances are based on analytical results for the entire facility for the reporting year, while Instantaneous NAL exceedances are based on analytical results from each distinct sample. The table below describes test methods, reporting units, and NAL values:

Table IV NAL Values

Parameter	Test Method	Reporting Units	Annual NAL	Instantaneous Maximum NAL
pH	Portable instrument*	pH units	N/A	<6.0 or >9.0
Oil and Grease	EPA 1664A	mg/L	15	25
Total Suspended Solids	SM 2540-D	mg/L	100	400
Total Iron	EPA 200.7	mg/L	1.0	--
Electrical Conductivity			N/A	N/A

*The pH screen will be performed as soon as practicable, but no later than 15 minutes after the sample is collected and will be analyzed using a calibrated portable instrument for pH.

All instruments used for pH measurement will be properly calibrated in accordance with the manufacturer's instructions and recommended frequency, and copies of the calibration records will be maintained onsite. Samples for total iron, total suspended solids, oil and grease, and electrical conductivity will be analyzed by an analytical laboratory that is Environmental Laboratory Accreditation Program (ELAP)-certified. All samples will be collected in accordance with Attachment H of the General Permit ("Sample Collection and Handling Instructions") and handled under proper Chain-of-Custody (COC) protocols. General Permit Attachment H and an example COC are included in Appendix F.

Though there are Effluent Limitation Guidelines (ELGs) for Electric Power Generation facilities, which require copper and chlorine analysis, the regulation only applies to runoff from coal storage piles and therefore the ELGs for Electric Power Generation do not apply to this facility because coal is not stored or used at the facility.

Exceedance Response Actions

ERAs are required when an NAL exceedance occurs for any parameter. At the beginning of NOI coverage, PG&E will enter as a Baseline status for all parameters designated in Table IV above. If sampling results indicate an NAL exceedance [either annual or instantaneous] for any parameter listed in Table IV, the status will move up to Level 1 for that parameter on July 1st following the reporting year during which the exceedance occurred (i.e., if there was an instantaneous exceedance on September 30, 2015, Level 1 would begin on July 1, 2016). Moving to Level 1 status triggers two actions: a Level 1 ERA Evaluation and a Level 1 ERA Report, both prepared with assistance of a QISP.

- A Level 1 ERA Evaluation, due by October 1 following commencement of Level 1 status, consists of completing an evaluation of the industrial pollutant sources at the facility that may be related to the NAL exceedance and evaluate all BMPs to determine if revisions are necessary to prevent future NAL exceedances.
- A Level 1 ERA Report, due by January 1 following commencement of Level 1 status, is prepared after the Level 1 ERA Evaluation and consists of revising the SWPPP as necessary to implement any additional BMPs identified in the Evaluation and submitting via SMARTS the Level 1 ERA Report with details regarding SWPPP revisions and the results of the Evaluation.

A Level 1 status for any exceeded parameter will return to Baseline status once the Level 1 ERA Report has been completed, additional BMPs have been implemented, and results from four consecutive QSEs indicate no additional NAL exceedances for that parameter.

The status for any exceeded parameter will change to Level 2 if sampling results indicate an NAL exceedance for that same parameter while in Level 1 (i.e., if Level 1 was implemented on July 1, 2015 and an exceedance occurred on December 1, 2015, Level 2 would be triggered on July 1, 2016). Moving to Level 2 status triggers two actions: a Level 2 ERA Action Plan and a Level 2 ERA Technical Report, both prepared with assistance of a QISP.

- A Level 2 ERA Action Plan, due by January 1 following the reporting year during which the NAL exceedance occurred, consists of a schedule and description of implementing a particular demonstration, as described in the Level 2 Technical Report, in response to the NAL exceedance.
- A Level 2 ERA Technical Report, due by January 1 of the reporting year following the submittal of the Level 2 ERA Action Plan, describes one or more of the demonstrations in response to the NAL exceedance: Industrial Activity BMPs Demonstration, Non-Industrial Pollutant Source Demonstration, and/or Natural Background Pollutant Source Demonstration (as described in the General Permit Section XII.D.2).
- A Level 2 ERA Technical Report may be prepared and submitted at any time, whether or not the Facility is required to submit such a report.

A new Level 2 NAL exceedance is any Level 2 NAL exceedance for 1) a new parameter in any drainage area, or 2) the same parameter that is being addressed in an existing Level 2 ERA Action Plan in a different drainage area.

NAL exceedances, in and of themselves, are not violations of the General Permit. Failure to comply with the Level 1 status and/or Level 2 status ERA requirements is in violation of the General Permit.

PG&E Gateway Generation Station ERA Status

<i>Reporting Year</i>	<i>ERA Level Status</i>	<i>Parameter</i>	<i>Level 1 ERA Evaluation Completion Date</i>	<i>Level 1 ERA Report Submittal Date</i>	<i>Level 2 ERA Action Plan Submittal Date</i>	<i>Level 2 ERA Technical Report Submittal Date</i>

2015-2016	Baseline	N/A	N/A	N/A	N/A	N/A
2016-2017	Level 1	Iron, Total	09/27/2016	12/30/2016	N/A	N/A

See Appendix H for the ERA Evaluation(s) and Report(s)

Reporting

PG&E will submit all sampling and analytical results via SMARTS within 30 days of obtaining all results for each sampling event. In the event a sample's analytical result is reported by the laboratory as non-detect or less than the method detection limit, the method detection limit will be provided. A value of zero will not be reported.

PG&E will provide the sample analytical results reported by the laboratory as below the minimum level (often referred to as the reporting limit) but above the method detection limit. Reported analytical results from multiple discharge points will be averaged automatically by SMARTS. For any calculations required by this General Permit, SMARTS will assign a value of zero for all results less than the minimum level as reported by the laboratory.

10. ANNUAL REPORTING (PERMIT SECTIONS XV AND XVI)

PG&E will conduct an Annual Comprehensive Facility Compliance Evaluation (Annual Evaluation) each reporting year (July 1 to June 30). If the Annual Evaluation is conducted fewer than eight months, or more than sixteen months, after the previous Annual Evaluation, the facility will document the justification for doing so. Within 90 days of the Annual Evaluation, PG&E will revise the SWPPP, as appropriate, and implement the revisions. At a minimum, the Annual Evaluation will cover the following:

- Review of all sampling, visual observation, and inspection records conducted during the previous reporting year;
- Inspection of all areas of industrial activity and associated potential pollutant sources for evidence of, or the potential for, pollutants entering the storm water conveyance system;
- Inspection of all drainage areas previously identified as having no exposure to industrial activities and materials in accordance with the definitions in Section XVII;
- Inspection of equipment needed to implement the BMPs;
- Inspection of all site BMPs;
- Review and effectiveness assessment of all BMPs for each area of industrial activity and associated potential pollutant sources to determine if the BMPs are properly designed, implemented, and are effective in reducing and preventing pollutants in industrial storm water discharges and authorized NSWDS; and
- Assessment of any other factors needed to comply with the requirements in Section XVI.B.

Information gathered during the Annual Evaluation will be recorded on the form provided in Appendix E.

Annual Report

PG&E will certify and submit via SMARTS an Annual Report no later than July 15th following each year. The Annual Report will be created by the Environmental Compliance Manager, reviewed by the Subject Matter Expert, and certified by the Legally Responsible Party. The Annual Report will include the following:

- A Compliance Checklist that indicates compliance with all applicable requirements of the General Permit;
- An explanation for any non-compliance of requirements within the reporting year;
- Identification of all revisions made to the SWPPP within the reporting year; and
- The date of the Annual Evaluation.

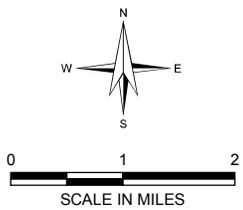
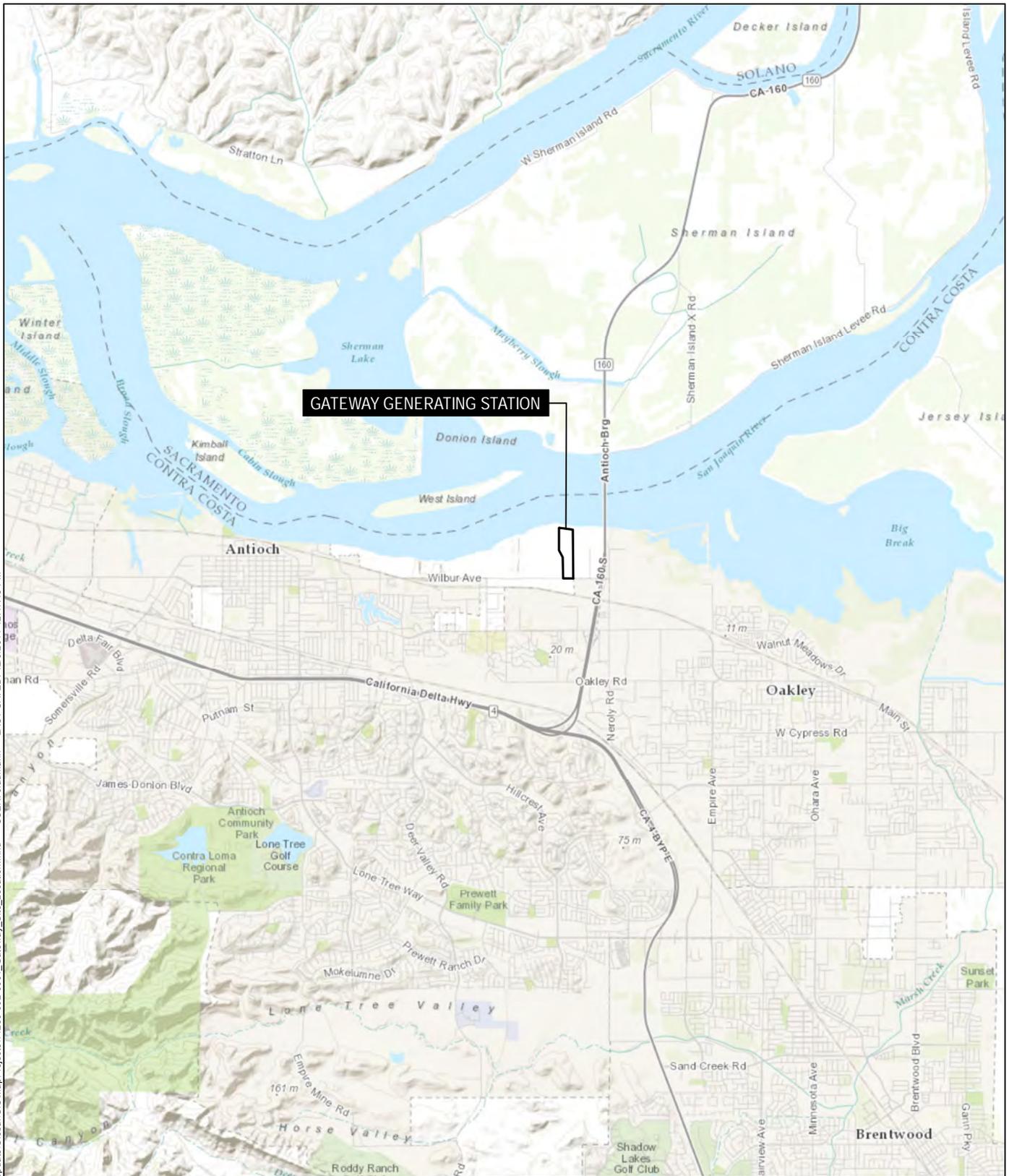
Copies of the Annual Report are included in Appendix G.

REFERENCES

1. California State Water Resources Control Board. Industrial Storm Water Permit for Discharges Associated with Industrial Activity (Order No. 2014-0057-DWQ). 2014.
2. Excerpts from Gateway Generating Facility Hazardous Materials Business Plan.
3. Spill Prevention, Control, and Countermeasures Plan for Gateway Generating Station, initially prepared by CH2MHill January 12, 2009 and revised August 2, 2013.

FIGURES

GIS FILE PATH: G:\1230_PGE_IGP_SWPPP_Update\Global\GIS\MapProjects\1230-002-0001_Gateway_Site_Location.mxd — USER: craumann — LAST SAVED: 12/3/2014 12:47:48 PM



BASE-MAP SOURCE: ESRI

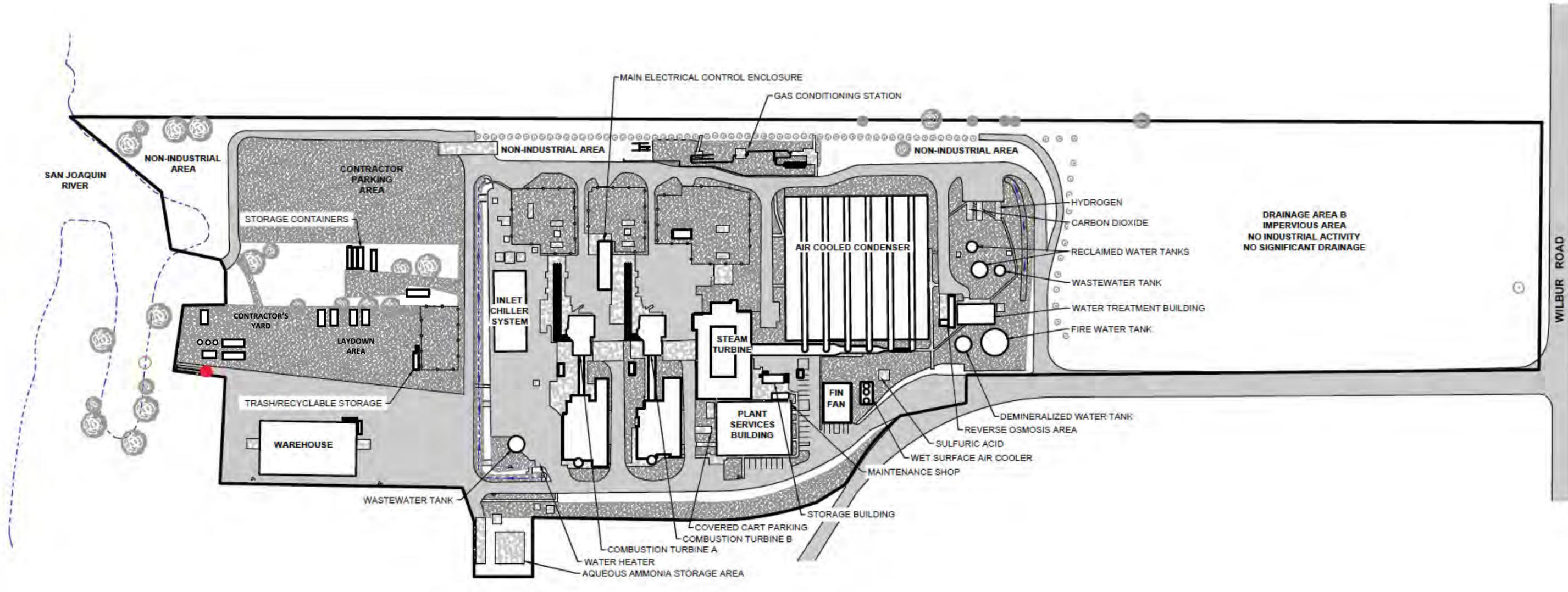


PACIFIC GAS AND ELECTRIC COMPANY
 GATEWAY GENERATING STATION
 ANTIOCH, CALIFORNIA

SITE LOCATION

DECEMBER 2014

FIGURE 1

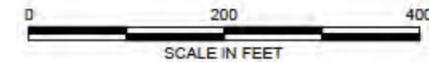
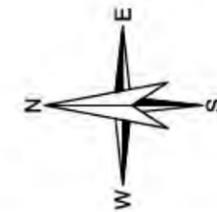


LEGEND

- STORM WATER DISCHARGE/SAMPLING POINT
- FACILITY BOUNDARY
- CO-MINGLED OUTFALL POINT
- ASPHALT CONCRETE
- CONCRETE
- GRAVEL
- TREE/VEGETATION

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.

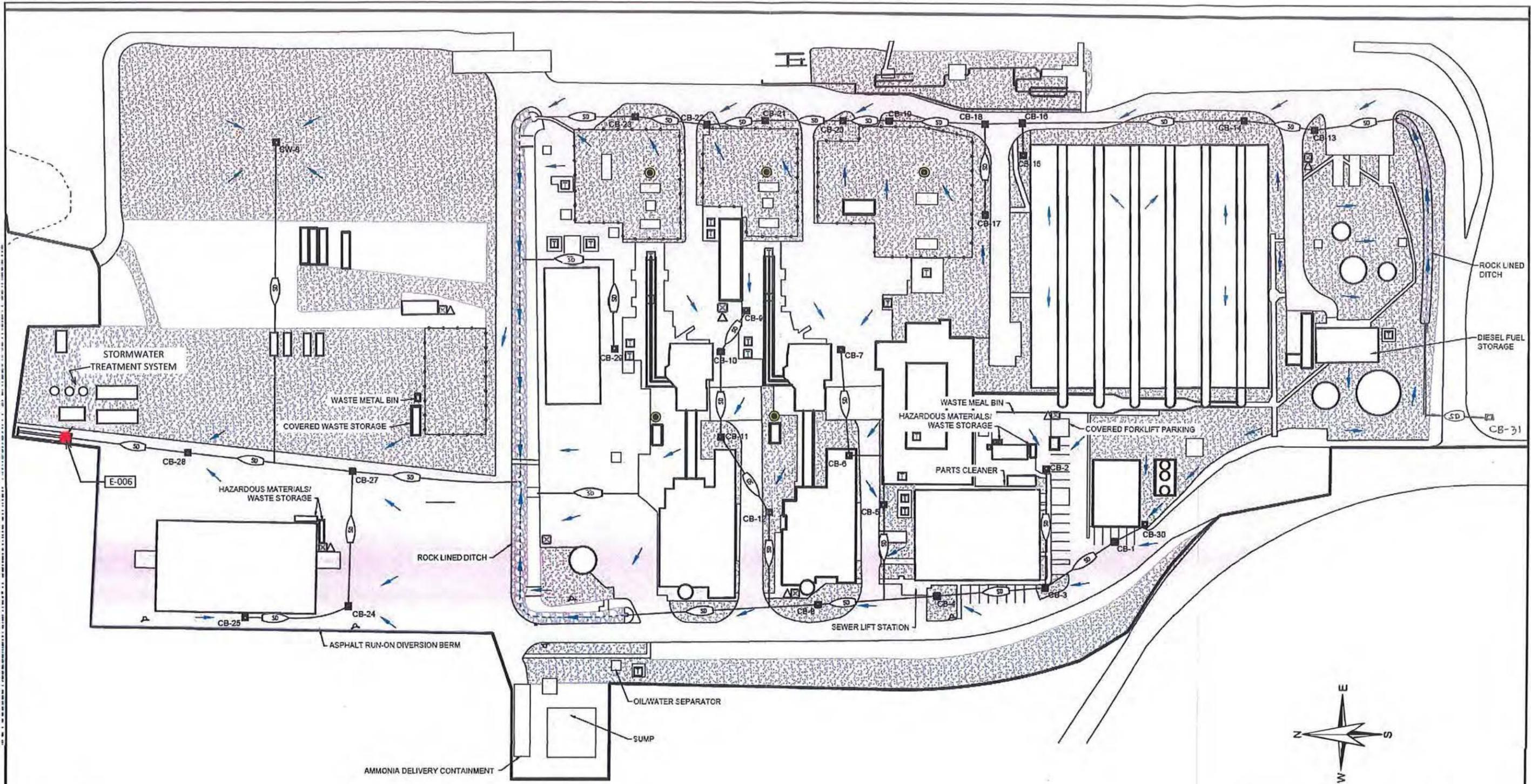


PG&E PACIFIC GAS AND ELECTRIC COMPANY (PG&E)
 GATEWAY GENERATING STATION
 ANTIOCH, CALIFORNIA

FACILITY DETAILS

SCALE: AS SHOWN
 FEBRUARY 2017

FIGURE 2

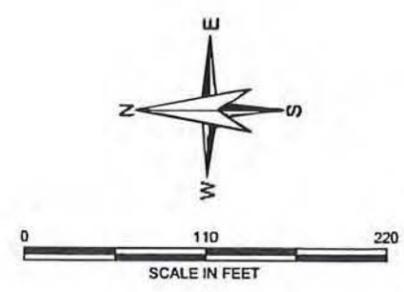


LEGEND

- | | | | |
|--|--------------------------------------|--|------------------|
| | DRAIN INLET WITH SEDIMENT FILTER | | TRANSFORMER |
| | STORM WATER DISCHARGE/SAMPLING POINT | | ASPHALT CONCRETE |
| | FACILITY BOUNDARY | | CONCRETE |
| | PORTABLE RESTROOM | | GRAVEL |
| | HANDWASH STATION | | |
| | SULFUR HEXAFLUORIDE BREAKER | | |

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. AREA SHOWN IS DRAINAGE AREA A WHICH DRAINS TO E006



PG&E PACIFIC GAS AND ELECTRIC COMPANY (PG&E)
 GATEWAY GENERATING STATION
 ANTIOCH, CALIFORNIA

STORM WATER FLOW AND BMPs

SCALE: AS SHOWN
 OCTOBER 2018

FIGURE 3

APPENDIX A

**General Permit for Storm Water Discharges Associated with Industrial Activities
(State Water Resources Control Board Order 2014-0057-DWQ)**

APPENDIX B

Permit Registration Documents



State Water Resources Control Board
NOTICE OF INTENT

GENERAL PERMIT TO DISCHARGE STORM WATER
ASSOCIATED WITH INDUSTRIAL ACTIVITY (WQ ORDER No. 2014-0057-DWQ)
(Excluding Construction Activities)



GAVIN NEWSOM
GOVERNOR



JARED BLUMENFELD
SECRETARY FOR
ENVIRONMENTAL PROTECTION

WDID: 5S071021950

Status: Active

Operator Information

Type: Private Business

Name: Pacific Gas Electric Company

Contact Name: Tim Wisdom

Address: PO Box 770000

Title: Plant Manager

Address 2: _____

Phone Number: 925-522-7812

City/State/Zip: San Francisco CA 94177

Email Address: T1WY@pge.com

Federal Tax ID: _____

Facility Information

Level: _____

Contact Name: Angel Espiritu

Title: Environmental Compliance Manager

Site Name: Gateway Generating Station

Address: 3225 Wilbur Ave

City/State/Zip: Antioch CA 94509

Site Phone #: 925-522-7838

County: Contra Costa

Email Address: abe4@PGE.com

Latitude: 38.01228 Longitude: -121.75859

Site Size: 32.5 Acres

Industrial Area Exposed to Storm Water: 22 Acres

Percent of Site Impervious (Including Rooftops): 28 %

SIC Code Information

1. 4911 Electric Services

2. _____

3. _____

Additional Information

Receiving Water: San Joaquin River Flow: Indirectly

Storm Drain System: _____

Compliance Group: _____

RWQCB Jurisdiction: Region 5S - Sacramento

Phone: 916-464-3291

Email: r5s_stormwater@waterboards.ca.gov

Certification

Name: stephen royall

Date: June 14, 2017

Title: Senior Plant Manager



State Water Resources Control Board
NOTICE OF INTENT

GENERAL PERMIT TO DISCHARGE STORM WATER
ASSOCIATED WITH INDUSTRIAL ACTIVITIES (WQ ORDER No. 2014-0057-DWQ)
(Excluding Construction Activities)



EDMUND G. BROWN JR.
GOVERNOR



MATTHEW RODRIGUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

WDID: 5S07I021950

Status: Active

Operator Information

Type: Private Business

Name: Pacific Gas Electric Company

Contact Name: Benjamin Stanley

Address: PO Box 770000

Title: Senior Plant Manager

Address 2:

Phone #: 925-522-7812

City/State/Zip: San Francisco CA 94177

Email: BESN@pge.com

Federal Tax ID: 94-0742640

Facility Information

Level:

Site Name: Gateway Generating Station

Contact Name: Angel Espiritu

Address: 3225 Wilbur Ave

Title: Environmental Compliance Manag

City/State/Zip: Antioch CA 94509

Site Phone #: 925-522-7838

County: Contra Costa

Email: ABE4@PGE.com

Latitude: 38.01228

Longitude: -121.75859

Emergency:

Total Site Size: 32.5 Acres

Percent of Site Impervious (including rooftops): 28 %

Industrial Area exposed to Storm Water: 22 Acres

SIC Code(s)

Primary SIC: 4911

Electric Services

Secondary SIC:

Tertiary SIC:

Additional Information

Receiving Water: San Joaquin River

Water Flow: Indirectly

Storm drain system:

Compliance Group:

RWQCB Jurisdiction: Region 5S - Sacramento

Phone: 916-464-3291

Email: r5s_stormwater@waterboards.ca.gov

Certification

Name Benjamin Stanley

Date: June 03, 2015

Title: Senior Plant Manager

Attachments Meta Data Information:

Attachment ID	File Name	File Description	File Hash	File Size	Date Attached	Attachment Type
1393445	14-15 AR & Recert Reminder Letter	14-15 AR & Recert Reminder Letter	e4101d3683ba9ccd e463ee75ce71789 3ca19ad7dfa27b69 cde4b24692d959	199940	2015-05-04 07:10:34.0	Other

APPENDIX C

SWPPP Amendment Form

APPENDIX D

Training Log, including training material

APPENDIX E

**Industrial Storm Water Facility Inspection and Visual Observation Form
Annual Evaluation Form
Sampling Log**

BMP Control Measures

- Number the structural storm water control measures identified in your SWPPP below (add as many control measures as are implemented on-site).
- Describe corrective actions initiated, date completed, and note the person that completed the work.

	Structural Control Measure	Control Measure is Operating Effectively?	If No, In Need of Maintenance, Repair, or Replacement?	Corrective Action Needed and Notes (identify needed maintenance and repairs, or any failed control measures that need replacement)	Date Corrective Action Completed	Initials of Person Responsible for the Correction Action
1	Drain Inlets	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Maintenance <input type="checkbox"/> Repair <input type="checkbox"/> Replacement			
2	Secondary Containment: Transformers	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Maintenance <input type="checkbox"/> Repair <input type="checkbox"/> Replacement			
3	Secondary Containment: Turbines/Oil-filled Equipment	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Maintenance <input type="checkbox"/> Repair <input type="checkbox"/> Replacement			
4	Secondary Containment: Firewater Pump Bldg	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Maintenance <input type="checkbox"/> Repair <input type="checkbox"/> Replacement			
5	Secondary Containment: Hazardous Material/Waste Sheds	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Maintenance <input type="checkbox"/> Repair <input type="checkbox"/> Replacement			
6	Trash/Scrap Dumpsters	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Maintenance <input type="checkbox"/> Repair <input type="checkbox"/> Replacement			
7	Oil/Used Oil Storage	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Maintenance <input type="checkbox"/> Repair <input type="checkbox"/> Replacement			
8	Ditches/Outfall	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Maintenance <input type="checkbox"/> Repair <input type="checkbox"/> Replacement			
9	Iron Treatment System	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Maintenance <input type="checkbox"/> Repair <input type="checkbox"/> Replacement			
10		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Maintenance <input type="checkbox"/> Repair <input type="checkbox"/> Replacement			

Areas of Industrial Materials or Activities exposed to storm water

Below is a list of areas that should be assessed during routine inspections. Customize this list as needed for the specific types of industrial materials or activities at your facility.

	Area/Activity	Inspected?	Controls Adequate (appropriate, effective, and operating)?	Corrective Action Needed and Notes	Date Corrective Action Completed	Initials of Person Responsible for the Correction Action
1	Material loading/unloading and storage areas	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No			
2	Equipment operations and maintenance areas	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No			
3	Fueling areas	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No			
4	Outdoor vehicle and equipment washing areas	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No			
5	Waste handling and disposal areas	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No			
6	Erodible areas/construction	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No			
7	Non-storm water/ illicit connections*	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No			
8	Dust generation and vehicle tracking	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No			
9	General Housekeeping	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No			
10		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No			

*Include a description of the source, quantity, frequency, and characteristics of the non-storm water discharges, associated drainage area, and whether it is an authorized or unauthorized non-storm water discharge.

BMP Implementation Tracking and Recording

<p>Describe all BMP implementation and/or maintenance that occurred since the last inspection here.</p>

Non-Compliance

Describe any incidents of non-compliance observed and not described above:

Additional Control Measures**

Describe any additional control measures needed to comply with the permit requirements:

****Additional Control Measures include the following categories as described in the General Permit:**

Minimum BMPs: *Good Housekeeping; Preventative Maintenance; Spill and Leak Protection; Material Handling and Waste Management; Erosion and Sediment Controls; Employee Training; and Quality Assurance and Record Keeping*

Advanced BMPs: *Exposure Minimization; Storm Water Containment and Discharge Reduction; and Treatment Control*

Notes

Use this space for any additional notes or observations from the inspection:



Annual Compliance Evaluation Form

General Information			
Facility Name:		Evaluation Date:	
Facility Location:		WDID#:	
Is the SWPPP Onsite?	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	Is the NOI Onsite?	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
Document Review Information			
Have all sampling records from the previous reporting year been reviewed?		Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	
Document any trends, concerns, or notable information about sampling records here.			
Have all visual observation and inspection records from the previous reporting year been reviewed?		Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	
Document any trends, concerns, or notable information about inspection records here.			
Have all industrial activity areas and associated potential pollutant sources been inspected for evidence of or the potential for, pollutants entering the storm water conveyance system?		Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	
Document any trends, concerns, or notable information about industrial areas and pollutants here.			
Have all drainage areas previously identified as having no exposure to industrial activities and materials been inspected?		Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	
Document any trends, concerns, or notable information about no exposure areas here.			
Has all equipment needed to implement BMPs been inspected?		Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	
Document any trends, concerns, or notable information about BMP implementation equipment here.			



Annual Compliance Evaluation Form

Have all BMPs been inspected?	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
Document any trends, concerns, or notable information about BMPs here.	
Has a review and effectiveness assessment of all BMPs been conducted for each area of industrial activity and associated pollutant potential sources to determine if the BMPs are properly designed, implemented, and are effective in reducing and preventing pollutants in industrial storm water discharges and authorized non-stormwater discharges?	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
Document any trends, concerns, or notable information about BMP effectiveness here.	
Has the SWPPP been reviewed to ensure the information within is accurate for current operations and personnel?	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
Document any trends, concerns, or notable information about SWPPP revisions here.	
Have any other factors needed to comply with the requirements of the General Permit been assessed?	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
Document any other trends, concerns, or notable information here.	
Inspector Information	
Evaluator Name:	Evaluator Title:
Signature:	Report Date:



General Information			
Facility Name:			
Date:		Event Start Time:	
Sampler:		Rainfall Amount:	<input type="checkbox"/> Today <input type="checkbox"/> Storm
Sampling Event Type:	<input type="checkbox"/> Storm Water	<input type="checkbox"/> Non-storm water	<input type="checkbox"/> Storm Water & NSW
pH Sampling Information			
Method:	<input type="checkbox"/> Litmus Paper <input type="checkbox"/> Test Kit <input type="checkbox"/> Portable Instrument	Portable Instrument Calibration Date/Time:	
Field pH and Turbidity Measurements			
Were field dupliates taken?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Discharge Location	% Total Daily Flow	pH	Time
Sum % Flow (Must = 100)	0		
pH Calculated Average:		#NUM!	
Other Parameters (check those collected)			
Oil and Grease	<input type="checkbox"/>	Other: _____	<input type="checkbox"/>
Total Suspended Solids (TSS)	<input type="checkbox"/>	Other: _____	<input type="checkbox"/>
Other: _____	<input type="checkbox"/>	Other: _____	<input type="checkbox"/>
Other: _____	<input type="checkbox"/>	Other: _____	<input type="checkbox"/>
Was a chain of custody completed?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Additional Sampling Notes/Exception Documentation			
Estimated Event End:			

APPENDIX F

**General Permit Attachment H “Sample Collection and Handling Instructions” and
Example Chain of Custody Form**

ATTACHMENT H

SAMPLE COLLECTION AND HANDLING INSTRUCTIONS

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT FOR STORM WATER DISCHARGES
ASSOCIATED WITH INDUSTRIAL ACTIVITIES
(GENERAL PERMIT)

For more detailed guidance, Dischargers should refer to the U.S. EPA's "Industrial Stormwater Monitoring and Sampling Guide," dated March 2009, available at: http://www.epa.gov/npdes/pubs/msgp_monitoring_guide.pdf and the "NPDES Storm Water Sampling Guidance Document," dated July 1992, available at: <http://www.epa.gov/npdes/pubs/owm0093.pdf>.

1. Identify the sampling parameters required to be tested and the number of storm water discharge points that will be sampled. Request the analytical testing laboratory to provide the appropriate number and type of sample containers, sample container labels, blank chain of custody forms, and sample preservation instructions.
2. Determine how samples will be transported to the laboratory. The testing laboratory should receive samples within 48 hours of the physical sampling (unless otherwise required by the laboratory). The Discharger may either deliver the samples to the laboratory, arrange for the laboratory to pick up the samples, or overnight ship the samples to the laboratory. All sample analysis shall be done in accordance with 40 Code of Federal Regulations part 136. Samples for pH have a holding time of 15 minutes.¹
3. Qualified Combined Samples shall be combined by the laboratory and not by the Discharger. Sample bottles must be appropriately labeled to instruct the laboratory on which samples to combine.
4. Unless the Discharger can provide flow weighted information, all combined samples shall be volume weighted.
5. For grab samples, use only the sample containers provided by the laboratory to collect and store samples. Use of any other type of containers may contaminate samples.
6. For automatic samplers that are not compatible with bottles provided by the laboratory, the Discharger is required to send the sample container included with the automatic sampler to the laboratory for analysis.

¹ 40 C.F.R. section 136.3, Table II - Required Containers, Preservation Techniques, and Holding Times.

SAMPLE COLLECTION AND HANDLING INSTRUCTIONS

7. The Discharger can only use automatic sampling device to sample parameters that the device is designed to. For pH, Dischargers can only use automatic sampling devices with the ability to read pH within 15 minutes of sample collection.
8. The Discharger is prohibited from using an automatic sampling device for Oil and Grease, unless the automatic sampling device is specifically designed to sample for Oil and Grease.
9. To prevent contamination, do not touch inside of sample container or cap or put anything into the sample containers before collecting storm water samples.
10. Do not overfill sample containers. Overfilling can change the analytical results.
11. Tightly screw on the cap of each sample container without stripping the threads of the cap.
12. Complete and attach a label for each sample container. The label shall identify the date and time of sample collection, the person taking the sample, and the sample collection location or discharge point. The label should also identify any sample containers that have been preserved.
13. Carefully pack sample containers into an ice chest or refrigerator to prevent breakage and maintain temperature during shipment. Remember to place frozen ice packs into shipping containers. Samples should be kept as close to 4 degrees Celsius (39 degrees Fahrenheit) as possible until arriving to the laboratory. Do not freeze samples.
14. Complete a Chain of Custody form for each set of samples. The Chain of Custody form shall include the Discharger's name, address, and phone number, identification of each sample container and sample collection point, person collecting the samples, the date and time each sample container was filled, and the analysis that is required for each sample container.
15. Upon shipping/delivering the sample containers, obtain both the signatures of the persons relinquishing and receiving the sample containers.
16. Dischargers shall designate and train personnel to collect, maintain, and ship samples in accordance with the sample protocols and laboratory practices.
17. Refer to Table 1 in the General Permit for test methods, detection limits, and reporting units.
18. All sampling and sample preservation shall be in accordance with 40 Code of Federal Regulations part 136 and the current edition of "Standard Methods for

SAMPLE COLLECTION AND HANDLING INSTRUCTIONS

the Examination of Water and Wastewater” (American Public Health Association). All monitoring instruments and equipment (including Discharger field instruments for measuring pH or specific conductance if identified as an additional sampling parameter) shall be calibrated and maintained in accordance with manufacturers’ specifications to ensure accurate measurements. All laboratory analyses shall be conducted according to approved test procedures under 40 Code of Federal Regulations part 136, unless other test procedures have been specified by the Regional Water Quality Control Board. All metals shall be reported as total metals. Dischargers may conduct their own field analysis of pH (or specific conductance if identified as an additional sampling parameter) if the Discharger has sufficient capability (qualified and trained employees, properly calibrated and maintained field instruments, etc.) to adequately perform the field analysis. With the exception of field analysis conducted by Dischargers for pH (or specific conductance if identified as an additional sampling parameter), all analyses shall be sent to and conducted at a laboratory certified for such analyses by the California Department of Public Health. Dischargers are required to report to the Water Board any sampling data collected more frequently than required in this General Permit (Section XXI.J.2)

APPENDIX G

Annual Reports

APPENDIX H

ERA Evaluations and Reports

APPENDIX I

**Advanced Treatment System (Chemical & Filtration) Operating Manual,
including the Gateway Generation Station Quick Operations Guide and Operating Log**

Gateway Generating Station (00-AFC-1C)

Annual Compliance Report No. 10

Exhibit 7 Biological Record Summaries (BIO-2)

Gateway Generating Station, California Energy Commission Annual Compliance Report, Biology Section, 2018

PREPARED FOR: Angel Espiritu/PG&E Gateway Generating Station Compliance Manager

PREPARED BY: Gateway Generating Station Designated Biologist
Richard Crowe/Jacobs

COPIES: Jerry Salamy/Jacobs Project Manager
Laura Burkholder Co-Designated Biologist/PG&E

DATE: March 6, 2019

Introduction

This Gateway Generating Station (GGS) Annual 2018 Biological Resources Compliance Report fulfills the California Energy Commission (CEC) requirement of Condition of Certification (COC) BIO-2. Condition BIO-2 Verification states; "During project operation, the Designated Biologist shall submit record summaries in the Annual Compliance Report."

On December 19, 2006, Pacific Gas and Electric Company (PG&E) filed a petition (TN 38720) with the CEC requesting to amend the Energy Commission Decision to eliminate the use of San Joaquin River water as the cooling source for the GGS Project (formerly known as the Contra Costa Power Plant Unit 8 Project). The petition also proposed ten associated project design changes at the project site. The 530-megawatt project was originally certified by the Energy Commission on May 30, 2001. Construction of the facility started late in 2001 and was suspended in February of 2002 due to financial difficulties, with approximately 7 percent of construction completed. On July 19, 2006, the Energy Commission approved¹ the addition of PG&E as co-owner of the project with Mirant Delta, LLC. On December 4, 2006, PG&E filed a petition² to remove Mirant as a co-owner and change the name of the facility to the Gateway Generating Station. Construction was restarted in January 2007 with PG&E as the project proponent.

After PG&E became the project owner/operator, the project was re-designed to avoid biological resource impacts to the extent feasible through development of mitigation and protection measures for the new design. These mitigation and protection measures reduced biological resource impacts so that no agency permits were required. These changes resulted in Conditions BIO-7, 10 and 11 being eliminated; also, additional minor changes were made to Conditions 5, 6 and 9.³

GGS construction, including restoration activities, was completed in June 2009.

¹ <http://docketpublic.energy.ca.gov/PublicDocuments/Compliance/00-AFC-1C/2006/Jul/TN%2037478%2007-19-06%20Filing%20of%20Notice%20of%20Decision%20in%20compliance%20with%20Public%20Resources%20Code%20Section%2021080.5%20and%20Title%2020%20Ca%20.pdf>

² <http://docketpublic.energy.ca.gov/PublicDocuments/Compliance/00-AFC-1C/2006/Dec/TN%2038529%2012-04-06%20PG-E's%20Petition%20for%20Minor%20Amendment%20to%20Clarify%20it%20is%20the%20Sole%20Owner.pdf>

³ <http://docketpublic.energy.ca.gov/PublicDocuments/Compliance/00-AFC-1C/2007/Aug/TN%2041809%2008-01-07%20Order%20Amending%20the%20CEC%20Decision%20to%20Eliminate%20the%20Use%20of%20San%20Joaquin%20River%20Water%20for%20Cooling.pdf>

2018 Monitored Activities and Wildlife Interaction

PG&E has complied with the biological resource COCs, including having the Designated Biologists (DB) or an alternative Biologist perform pre-disturbance surveys, and when necessary, evaluate/demarcate nesting bird activity within the facility. All new employees and contract workers employed at the site received the CEC-approved Worker Environmental Awareness Program training (WEAP) via video or lecture and daily tailgate training with the DB or the PG&E GGS Compliance Manager Angel Espiritu (CM). The DB remained on-call throughout 2018.

The on-call monitoring and compliance efforts for 2018 are documented in chronological order below and within Appendix A, Site Photos;

January 17th, the DB received an e-mail from the CM stating an April 2017 revised WEAP pamphlet was approved by the CEC Compliance Manager, Anwar Ali. The revised WEAP pamphlet was given to all new contractors and PG&E employees prior to working on the GGS site.

February 6th, the DB received an e-mail from the CM concerning a dead pigeon (*Columba livia domestica*) observed on the ground just south of the fin-fan chiller (Photo 1). The CM stated that it appeared that the pigeon had been dead for several days. The DB documented the report of the pigeon and instructed the CM to dispose of the carcass in the trash.

March 21st, the DB received an e-mail from the CM concerning a hummingbird nest observed on a valve associated with the Combustion turbine (CT) A generator (Photo 2). The DB instructed the CM to erect an exclusion zone around the nest and alert staff of the nest's location, so it can be avoided (Photo 3). According to the CM, no work was scheduled in the nest area but if work was scheduled the CM would notify the DB.

April 9th, the DB received an e-mail from the CM concerning the need to work within the hummingbird nest exclusion zone. The GGS Co-Designated Biologist, PG&E Biologist Laura Burkholder (Co-DB) responded that she would check on the nesting hummingbirds on the 10th to determine if the young had fledged.

April 10th, the Co-DB surveyed the hummingbird nest and determined the young had fledged the nest (Photo 4) based on the nest appearing flattened and fecal pellets observed in and around the nest. These are indications of a nest that has recently fledged young (i.e., young fly from nest). Nests typically become flattened as the chicks grow to juvenile size. The observations support the conclusion that the two chicks observed a few weeks ago likely successfully fledged from the nest. The barrier tape was removed, and the work scheduled in the valve area was completed.

April 30th, the DB received an e-mail from the CM concerning the request to remove some volunteer sprouts from several old oak tree stumps (Photos 5 and 6). The volunteer sprouts were located along the inside of the eastern site perimeter fencing. Based on the photographs provided to the DB, the DB recommended that the contractor removing the volunteer sprouts receive WEAP training and follow the nesting bird guidelines in BRMIMP.

May 14th, the DB received an e-mail from the CM and the PG&E Co-DB concerning the planned mowing of the ruderal vegetation around the GGS site. The Co-DB informed the DB that she was available to conduct a pre-disturbance survey of the areas scheduled for mowing.

May 16th, the Co-DB conducted a pre-disturbance survey of the areas scheduled to be mowed. Photo 7 shows in detail the areas of vegetation scheduled for mowing. The Co-DB walked meandering transects of the areas to be disturbed focusing on nesting birds, burrowing owls or their sign (Photos 8 and 9). The areas are vegetated with ruderal grasses and some bare ground. The Co-DB did not observe any nesting birds or sign of burrowing owls during the survey.

May 30th, the CM contacted the DB concerning a dead California ground squirrel (*Otospermophilus beecheyi*) observed in the waste water holding tank (Photo 10). The DB documented the report and advised the CM to dispose of the ground squirrel.

September 27th, the DB received a phone call from the GGS Maintenance Manager Doug Welch (GGS MM) concerning the removal of diseased eucalyptus trees in the northern portion of the GGS. The diseased trees had been dropping limbs near several electrical transformers, potentially causing hazardous conditions. The DB responded that the trees are invasive nuisance tree and were not covered in the Contra Costa Tree Ordinance. The DB determined that since it was well past the nesting bird season, no pre-disturbance/nesting bird survey was necessary. The DB requested from the GGS MM before and after photos of the tree removal.

October 16th, the DB received several pictures of the diseased eucalyptus trees prior to removal (Photos 11 and 12).

November 7th and 8th, the diseased eucalyptus trees were removed, and photographic documentation was provided by the GGS MM (Photos 13 and 14).

Conclusion

The Gateway Generating Station was in compliance with all biological mitigation and protection measures covered in the BRMIMP that are applicable to this operating facility during the year 2018.

Appendix A

Site Photos



Photo 1, of dead pigeon as observed on south side of fin-fan chiller, 2-6-18.



Photo 2, of hummingbird nest as reported by CM, 3-21-18.



Photo 3, of nesting hummingbird exclusion area with flagging in place, 3-21-18.



Photo 4, of empty flattened hummingbird nest as observed, 4-10-18.



Photo 5, of dead scrub oak stump volunteer sprouts prior to removal, 4-30-18.



Photo 6, of live scrub oak volunteer stump sprouts prior to removal, 4-30-18.



Pre-mowing survey area, Gateway Generating Station, 5-16-18

Photo 7, of areas surveyed prior to site mowing, 5-16-18.



South field

Photo 8, of southern most areas prior to mowing, 5-16-18.



Roadside and road berm

Photo 9, of roadside and road berm areas prior to mowing, 5-16-18.



Photo 10, of dead California ground squirrel as observed within underground waste water tank, 5-30-18.



Photo 11, of diseased or dead eucalyptus trees to be removed, 10-16-18.



Photo 12, of additional diseased eucalyptus to be removed, 10-16-18.



Photo 13, of diseased eucalyptus tree area after tree removal, 11-7-18.



Photo 14, of single diseased eucalyptus area after tree removal, 11-7-18.