



SOUTHEAST ALASKA POWER AGENCY (SEAPA)

Tyee Lake Hydroelectric Project

**SOP**  
**Version 1**  
Effective Date:  
**April 7, 2020**

Rev. Date: 04.07.2020  
Author: SEAPA  
Operations Manager

## **TYEE LAKE INCINERATOR RESIDUAL ASH CLEANOUT**

### **STANDARD OPERATING PROCEDURES (SOP)**



**Manufacturer: Therm-Tec  
Model No. G-6**

SEAPA operates a Therm-Tec G-6 incinerator for the purpose of reducing the amount of waste needing shipped offsite for disposal.

The only types of waste that are authorized to be destroyed in the incinerator are:

- Food scraps
- Solid organic waste

Such materials may consist of up 85% moisture and 5% non-combustible solids.

**ONLY SEAPA GENERATED RESIDENTIAL AND NONHAZARDOUS WASTE WILL BE CONSIDERED FOR INCINERATION.**

When removing residual ash from the incinerator, the following procedure shall be adhered to:

- (1) The unit shall be shut down, allowed to cool, and tagged out as indicated below:
  - a. Incinerator Power Supplies Main Breaker is to be placed in the open position and tagged. Main Breaker is located in the incinerator building. Test fire burner ignition system to confirm burner is disabled.
  - b. As when working with any airborne dust, the residual ash should be sufficiently wetted to minimize airborne nuisance dust.
  - c. When ash removal is complete, clear tagout and place unit back into service ready state.

## Personal Protective Equipment ('PPE')

The following PPE is required when removing residual ash:

- Eye protection (safety goggles designed to protect against airborne dust)
- Hand protection (gloves to protect from splinters, sharp objects)
- Hard hat or bump cap

The employee may wish to consider wearing rain gear or a Tyvek suit to keep ash off the employee's clothing.

## Respiratory Protection

As indicated in the Sampling Report dated April 6, 2020, attached as **Appendix A** and made a part hereof, the current waste stream does not contribute to anything in the ash material that would require respiratory protection aside from a dust mask if desired for comfort.

Pursuant to Appendix D of OSHA 29 CFR 1910.134, an employee may elect to wear a negative pressure respirator when one is not required under the standard. Any employee electing to wear a respirator when one is not required under that stand will be provided a copy of Appendix D below and be required by the employer to comply with the appendix:

### **Appendix D to Sec. 1910.134 (Mandatory) Information for Employees Using Respirators When Not Required Under the Standard**

Respirators are an effective method of protection against designated hazards when properly selected and worn. Respirator use is encouraged, even when exposures are below the exposure limit, to provide an additional level of comfort and protection for workers. However, if a respirator is used improperly or not kept clean, the respirator itself can become a hazard to the worker. Sometimes, workers may wear respirators to avoid exposures to hazards, even if the amount of hazardous substance does not exceed the limits set by OSHA standards. If your employer provides respirators for your voluntary use, or if you provide your own respirator, you need to take certain precautions to be sure that the respirator itself does not present a hazard.

You should do the following:

1. Read and heed all instructions provided by the manufacturer on use, maintenance, cleaning and care, and warnings regarding the respirator's limitations.
2. Choose respirators certified for use to protect against the contaminant of concern. NIOSH, the National Institute for

Occupational Safety and Health of the U.S. Department of Health and Human Services, certifies respirators. A label or statement of certification should appear on the respirator or respirator packaging. It will tell you what the respirator is designed for and how much it will protect you.

3. Do not wear your respirator into atmospheres containing contaminants for which your respirator is not designed to protect against. For example, a respirator designed to filter dust particles will not protect you against gases, vapors, or very small solid particles of fumes or smoke.

4. Keep track of your respirator so that you do not mistakenly use someone else's respirator.

### **Standard Operation Procedure Deviations**

Any deviation from this SOP that may be dictated by conditions, or other circumstances, must be reported by the Tyee Foreman or his designee to SEAPA Management at 907.228.2281, who must be thoroughly briefed in writing, if necessary, and understood by all Tyee Lake Operators.

### **Amendments and Corrections**

- (1) Amendments, additions, deletions, or corrections to this SOP may be initiated by SEAPA Management as conditions warrant.
- (2) This Tyee Lake Incinerator Residual Ash Cleanout SOP supersedes and cancels all previous versions of this SOP that may have been published by SEAPA.
- (3) The SOP Change Table attached as **Appendix B** and made a part hereof shall be maintained and updated with each amendment, addition, deletion, or correction to this SOP and attached to each new version of the SOP issued by SEAPA.



Environment Testing  
TestAmerica

## ANALYTICAL REPORT

Eurofins TestAmerica, Seattle  
5755 8th Street East  
Tacoma, WA 98424  
Tel: (253)922-2310

Laboratory Job ID: 580-93623-1  
Client Project/Site: Tyee Lake Incinerator

For:  
Southeast Alaska Power Agency  
1900 First Ave  
Suite 318  
Ketchikan, Alaska 99901

Attn: Clay Hammer

*Kristine D. Allen*

Authorized for release by:  
4/6/2020 1:53:22 PM

Kristine Allen, Client Service Manager  
(253)248-4970  
[kristine.allen@testamericainc.com](mailto:kristine.allen@testamericainc.com)

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:  
[www.testamericainc.com](http://www.testamericainc.com)

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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## Case Narrative

Client: Southeast Alaska Power Agency  
Project/Site: Tyee Lake Incinerator

Job ID: 580-93623-1

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**Job ID: 580-93623-1**

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**Laboratory: Eurofins TestAmerica, Seattle**

### Narrative

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**Job Narrative**  
**580-93623-1**

### Comments

No additional comments.

### Receipt

The sample was received on 3/21/2020 12:00 PM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 18.4° C.

### Receipt Exceptions

The Chain-of-Custody (COC) was incomplete as received and/or improperly completed. The COC lacks a relinquishment signature.

### Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

### General Chemistry

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

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## Definitions/Glossary

Client: Southeast Alaska Power Agency  
Project/Site: Tyee Lake Incinerator

Job ID: 580-93623-1

## Qualifiers

## General Chemistry

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F2	MS/MSD RPD exceeds control limits

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

## Client Sample Results

Client: Southeast Alaska Power Agency  
Project/Site: Tye Lake Incinerator

Job ID: 580-93623-1

Client Sample ID: Tye Sample #1

Lab Sample ID: 580-93623-1

Date Collected: 03/11/20 10:00

Matrix: Solid

Date Received: 03/21/20 12:00

## Method: 6010D - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.060		mg/L		03/24/20 10:45	03/25/20 18:18	1
<b>Barium</b>	<b>0.39</b>		0.020		mg/L		03/24/20 10:45	03/25/20 18:18	1
Cadmium	ND		0.020		mg/L		03/24/20 10:45	03/25/20 18:18	1
<b>Chromium</b>	<b>0.036</b>		0.025		mg/L		03/24/20 10:45	03/25/20 18:18	1
Lead	ND		0.030		mg/L		03/24/20 10:45	03/25/20 18:18	1
Selenium	ND		0.10		mg/L		03/24/20 10:45	03/25/20 18:18	1
Silver	ND		0.050		mg/L		03/24/20 10:45	03/25/20 18:18	1

## Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00030		mg/L		03/24/20 10:48	03/25/20 17:44	1

## General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Percent Solids</b>	<b>95.1</b>		0.1		%			03/24/20 10:21	1
<b>Percent Moisture</b>	<b>4.9</b>		0.1		%			03/24/20 10:21	1



### Client Sample Results

Client: Southeast Alaska Power Agency  
 Project/Site: Tye Lake Incinerator

Job ID: 580-93623-1

**Client Sample ID: Tye Sample #1**

**Lab Sample ID: 580-93623-1**

Date Collected: 03/11/20 10:00

Matrix: Solid

Date Received: 03/21/20 12:00

Percent Solids: 95.1

**General Chemistry - Soluble**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	3000	F2	2100		mg/Kg	☼		04/02/20 19:36	100

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## QC Sample Results

Client: Southeast Alaska Power Agency  
Project/Site: Tye Lake Incinerator

Job ID: 580-93623-1

## Method: 6010D - Metals (ICP)

Lab Sample ID: MB 580-325416/1-B

Matrix: Solid

Analysis Batch: 325665

Client Sample ID: Method Blank

Prep Type: TCLP

Prep Batch: 325468

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	ND		0.060		mg/L		03/24/20 10:45	03/25/20 17:53	1
Barium	ND		0.020		mg/L		03/24/20 10:45	03/25/20 17:53	1
Cadmium	ND		0.020		mg/L		03/24/20 10:45	03/25/20 17:53	1
Chromium	ND		0.025		mg/L		03/24/20 10:45	03/25/20 17:53	1
Lead	ND		0.030		mg/L		03/24/20 10:45	03/25/20 17:53	1
Selenium	ND		0.10		mg/L		03/24/20 10:45	03/25/20 17:53	1
Silver	ND		0.050		mg/L		03/24/20 10:45	03/25/20 17:53	1

Lab Sample ID: LCS 580-325416/2-B

Matrix: Solid

Analysis Batch: 325665

Client Sample ID: Lab Control Sample

Prep Type: TCLP

Prep Batch: 325468

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Barium	1.00	0.805		mg/L		81	80 - 120
Cadmium	1.00	0.992		mg/L		99	80 - 120
Chromium	1.00	0.958		mg/L		96	80 - 120
Lead	1.00	0.972		mg/L		97	80 - 120
Selenium	1.00	1.01		mg/L		101	80 - 120
Silver	1.00	0.924		mg/L		92	80 - 120

Lab Sample ID: LCSD 580-325416/3-B

Matrix: Solid

Analysis Batch: 325665

Client Sample ID: Lab Control Sample Dup

Prep Type: TCLP

Prep Batch: 325468

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	
								RPD	Limit
Arsenic	1.00	0.964		mg/L		96	80 - 120	0	20
Barium	1.00	0.812		mg/L		81	80 - 120	1	20
Cadmium	1.00	0.988		mg/L		99	80 - 120	0	20
Chromium	1.00	0.954		mg/L		95	80 - 120	0	20
Lead	1.00	0.974		mg/L		97	80 - 120	0	20
Selenium	1.00	0.995		mg/L		100	80 - 120	1	20
Silver	1.00	0.920		mg/L		92	80 - 120	0	20

## Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 580-325469/8-A

Matrix: Solid

Analysis Batch: 325557

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 325469

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	ND		0.00030		mg/L		03/24/20 10:48	03/25/20 17:23	1

Lab Sample ID: LCS 580-325469/9-A

Matrix: Solid

Analysis Batch: 325557

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 325469

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits

Eurofins TestAmerica, Seattle

## QC Sample Results

Client: Southeast Alaska Power Agency  
Project/Site: Tye Lake Incinerator

Job ID: 580-93623-1

## Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: LCSD 580-325469/10-A

Matrix: Solid

Analysis Batch: 325557

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 325469

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.00200	0.00204		mg/L		102	80 - 120	1	20

## Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 580-326054/1-A

Matrix: Solid

Analysis Batch: 326151

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	ND		20		mg/Kg			04/02/20 19:01	1

Lab Sample ID: LCS 580-326054/2-A

Matrix: Solid

Analysis Batch: 326151

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	500	498		mg/Kg		100	90 - 110		

Lab Sample ID: LCSD 580-326054/3-A

Matrix: Solid

Analysis Batch: 326151

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	500	491		mg/Kg		98	90 - 110	2	15

Lab Sample ID: 580-93623-1 MS

Matrix: Solid

Analysis Batch: 326151

Client Sample ID: Tye Sample #1

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	3000	F2	522	3750	4	mg/Kg	✱	135	90 - 110		

Lab Sample ID: 580-93623-1 MSD

Matrix: Solid

Analysis Batch: 326151

Client Sample ID: Tye Sample #1

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	3000	F2	525	4600	4 F2	mg/Kg	✱	296	90 - 110	20	15

Lab Sample ID: 580-93623-1 DU

Matrix: Solid

Analysis Batch: 326151

Client Sample ID: Tye Sample #1

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	DU Result	DU Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	3000	F2	525	3070		mg/Kg	✱			0.8	10

Eurofins TestAmerica, Seattle

## Lab Chronicle

Client: Southeast Alaska Power Agency  
Project/Site: Tye Lake Incinerator

Job ID: 580-93623-1

Client Sample ID: Tye Sample #1

Lab Sample ID: 580-93623-1

Date Collected: 03/11/20 10:00

Matrix: Solid

Date Received: 03/21/20 12:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			325416	03/23/20 14:52	TMH	TAL SEA
TCLP	Prep	3010A			325468	03/24/20 10:45	ART	TAL SEA
TCLP	Analysis	6010D		1	325665	03/25/20 18:18	TMH	TAL SEA
TCLP	Leach	1311			325416	03/23/20 14:52	TMH	TAL SEA
TCLP	Prep	7470A			325469	03/24/20 10:48	ART	TAL SEA
TCLP	Analysis	7470A		1	325557	03/25/20 17:44	TMH	TAL SEA
Total/NA	Analysis	2540G		1	325466	03/24/20 10:21	HBP	TAL SEA

Client Sample ID: Tye Sample #1

Lab Sample ID: 580-93623-1

Date Collected: 03/11/20 10:00

Matrix: Solid

Date Received: 03/21/20 12:00

Percent Solids: 95.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			326054	04/02/20 12:19	AAC	TAL SEA
Soluble	Analysis	300.0		100	326151	04/02/20 19:36	AAC	TAL SEA

## Laboratory References:

TAL SEA = Eurofins TestAmerica, Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Client: Southeast Alaska Power Agency  
 Project/Site: Tye Lake Incinerator

Job ID: 580-93623-1

**Laboratory: Eurofins TestAmerica, Seattle**

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-024	01-14-22
ANAB	Dept. of Defense ELAP	L2236	01-19-22
ANAB	ISO/IEC 17025	L2236	01-20-23
California	State	2901	11-05-20
Montana (UST)	State	NA	04-13-21
Oregon	NELAP	WA100007	11-06-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	US Federal Programs	P330-20-00031	02-10-23
Washington	State	C553	02-18-21



### Sample Summary

Client: Southeast Alaska Power Agency  
Project/Site: Tyee Lake Incinerator

Job ID: 580-93623-1

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Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
580-93623-1	Tyee Sample #1	Solid	03/11/20 10:00	03/21/20 12:00	

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## Login Sample Receipt Checklist

Client: Southeast Alaska Power Agency

Job Number: 580-93623-1

Login Number: 93623

List Source: Eurofins TestAmerica, Seattle

List Number: 1

Creator: Blankinship, Tom X

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	False	Refer to Job Narrative for details.
Cooler Temperature is acceptable.	False	Refer to Job Narrative for details.
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	False	COC not relinquished.
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



