State of Oregon
Department of
Environmental
Quality

Application for a

Solid Waste Beneficial Use Determination

DEQ USE ONLY – BUSINESS OFFICE
Date Received: _____
Amount Received: _____
Check No.: _____
Deposit No.: _____
Forward confirmation of fee payment for:
Eastern Region to DEQ, The Dalles
Northwestern Region to DEQ-NWR, Portland
Western Region to DEQ, Salem

DEPT OF ENVIRONMENTAL QUALITY
RECEIVED
OCT 18 2012
NORTHWEST REGION

A. REFERENCE INFORMATION *(Please type or print clearly.)*

TENEX MGMT ?				
Legal name of applicant		Business name of applicant if different		
15540 N. LOMBARD		PORTLAND	OR	97203
Mailing address		City	State	Zip
503-595-0860	503-953-2806			503-595-0863
Phone	Mobile	E-mail		Fax

SAME				
Generator of solid waste (may be same as applicant)				
Mailing address		City	State	Zip
Phone	Mobile	E-mail		Fax

B. TYPE OF BENEFICIAL USE DETERMINATION REQUESTED Beneficial Use Determination applications are categorized based on the type of information and potential amount of work required by DEQ staff to review application materials and render a decision. A tiered review and fee system has been established in rule. The tiers are:

- Tier 1 For a beneficial use of a solid waste that does not contain hazardous substances significantly exceeding the concentration in a comparable raw material or commercial product and that will be used in a manufactured product;
- Tier 2 For a beneficial use of a solid waste that contains hazardous substances significantly exceeding the concentration in a comparable raw material or commercial product, or involves application on the land;
- Tier 3 For a beneficial use of a solid waste that requires research, such as a literature review or risk assessment, or for a demonstration project to demonstrate compliance with this rule.

I am applying for a ☐ Tier 1 ☑ Tier 2 ☐ Tier 3 determination.

C. DOES THIS PROPOSED BENEFICIAL USE INVOLVE LAND APPLICATION OF ANY MATERIAL?
☑ Yes ☐ No

D. SIGNATURE I hereby certify by my signature below that the information contained in this application, and the documents I have attached, are true and correct to the best of my knowledge and belief.

	CLIFFORD WRIGHT	MAINT SUPP.	02/07/12
Signature of legally authorized representative	Print name	Title	Date

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OCT 22 2012
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E. REQUIRED ATTACHMENTS TO THIS APPLICATION *(For an application to be complete, it must provide the required information for each listed item of the tier which is being applied for.)*

Tier 1

- ☑ A description of the material, manner of generation, and estimated quantity to be used each year;
- ☑ A description of the proposed use;
- ☐ N/A A comparison of the chemical and physical characteristics of the material proposed for use with the material it will replace;
- ☑ A demonstration of compliance with the performance criteria in OAR 340-093-0280 based on knowledge of the process that generated the material, properties of the finished product, or testing; and
- ☐ Any other information that DEQ may require to evaluate the proposal.

Tier 2

- ☑ The information required for a Tier 1 application;
- ☑ Sampling and analysis that provides chemical, physical, and biological characterization of the material and that identifies potential contaminants in the material or the end product, as applicable;
- ☑ A risk screening comparing the concentration of hazardous substances in the material to existing, DEQ approved, risk-based screening level values, and demonstrating compliance with acceptable risk levels;
- ☑ Location or type of land use where the material will be applied, consistent with the risk scenarios used to evaluate risk;
- ☑ Contact information of property owner(s) if this is a site-specific land application proposal, including name, address, phone number, e-mail, site address and site coordinates (latitude and longitude); and
- ☑ A description of how the material will be managed to minimize potential adverse impacts to public health, safety, welfare, or the environment.

Tier 3

- ☐ The information required for a Tier 1 & 2 application;
- ☐ A discussion of the justification for the proposal;
- ☐ An estimate of the expected length of time that would be required to complete the project, if it is a demonstration; and
- ☐ If it is a demonstration project, the methods proposed to ensure safe and proper management of the material.

F. PERFORMANCE CRITERIA *(For all tiers - An application for a beneficial use determination must demonstrate satisfactory compliance with the following performance criteria.)*

The use is productive, including:

- There is an identified or reasonably likely use for the material that is not speculative;
- The use is a valuable part of a manufacturing process, an effective substitute for a valuable raw material or commercial product, or otherwise authorized by DEQ, and does not constitute disposal; and
- The use is in accordance with applicable engineering standards, commercial standards, and agricultural or horticultural practices.

The use will not create an adverse impact to public health, safety, welfare, or the environment, including:

- The material is not a hazardous waste under ORS 466.005;
- Until the time the material is used in accordance with a beneficial use determination, the material will be managed, including any storage, transportation, or processing, to prevent releases to the environment or nuisance conditions;
- Hazardous substances in the material do not significantly exceed the concentration in a comparable raw material or commercial product, or do not exceed naturally occurring background concentrations, or do not exceed acceptable risk levels, including evaluation of persistence and potential bioaccumulation, when the material is managed according to a beneficial use determination.

The use will not result in the increase of a hazardous substance in a sensitive environment.

The use will not create objectionable odors, dust, unsightliness, fire, or other nuisance conditions.

The use will comply with all applicable federal, state, and local regulations.

G. FEES *(Must accompany the application for it to be considered complete)*

☐	Tier 1 beneficial use determination	$1,000
☐	Tier 2 beneficial use determination	$2,000
☐	Tier 3 beneficial use determination	$5,000

Make checks out to: **Oregon DEQ**

Total fees included: _____

H. APPLICATION PROCEDURE

Step 1
Contact a DEQ staff person for assistance with the preparation of the application. DEQ staff will help with: 1) Determination of the eligibility for a beneficial use determination of a particular waste or process; and, 2) If eligible, establish the tier of beneficial use determination review required and associated fee to submit with the application.

Step 2
Mail the original signed application, all attachments, including the fee payment plus one extra copy to the appropriate regional office (see listing below.) Note that DEQ review work will not begin until a complete application packet is received. Incomplete applications may be returned. DEQ recommends the applicant keep a full copy of all application materials to guard against possible loss in transit.

Step 3
DEQ will contact the applicant, acknowledging receipt of the application, and will identify the staff person assigned to carryout the review. This staff person will contact the applicant if any additional information is needed.

Region	Counties Served	Address & Phone
Eastern Region	Baker, Crook, Deschutes, Gilliam, Grant, Harney, Hood River, Jefferson, Klamath, Lake, Malheur, Morrow, Sherman, Umatilla, Union, Wallowa, Wasco, and Wheeler	Eastern Region Department of Environmental Quality 400 E Scenic Drive, Ste 2.307 The Dalles, OR 97058 (541) 298-7255 ext. 221
Northwest Region	Clatsop, Clackamas, Columbia, Multnomah, Tillamook, and Washington	Northwest Region DEQ Solid Waste Programs 2020 SW Fourth Ave. Ste 400 Portland, OR 97201 (503) 229-5353
Western Region	Benton, Coos, Curry, Douglas, Jackson, Josephine, Lane, Lincoln, Linn, Marion, Polk, and Yamhill	Western Region DEQ Solid Waste Programs 750 Front St. NE Suite 120 Salem, OR 97301 (503) 378-5047

Tier I

DESCRIPTION OF MATERIAL:
Used or spent silica sand, which was in the making of molds from a steel foundry.

PROPOSED USE:
To mix with Portland cement and crushed new aggregate to form a concrete slurry poured into forms to manufacture Econo Blocks approximately 2' x 5' in size.

CHEMICAL CRITERIA:
N/A simply silica sand.

DEMONSTRATION:
Spent silica sand only from steel foundry.

TIER II

SAMPLING AND TEST RESULTS:
Provided.

RISK SCREENING:
Tests performed, results provided.

LOCATION OF USE:
Our own facility to build bins to contain the ore, which we handle in the warehouse.

CONTACT INFORMATION:
Property owner - Port of Portland
Lessee - Tenex Management
Facility Operator - Millbank Materials USA
Facility Operation - Address - 15540 N. Lombard, Portland, OR, 97203
Office Telephone - 503-595-0860
Maintenance Superintendent - Mr. Clifford Wright Direct line: 503-595-6232
Email - cwright@millbankmat.com

MATERIAL MANAGEMENT:

The spent sand in question is currently stored in a bin in the warehouse; it is no longer in the tanks where it was placed originally.

The sand upon approval from DEQ will be removed from the storage bin in the warehouse, run over a screening system to remove any foreign materials, such as pieces of jumbo bag or small wood particles. From the screen plat the material will be placed into a concrete batch plant mixed to a specific recipe for concrete and poured into forms for Econo Blocks, which will be used on site for bins and partitions in the warehouse.

Apex Labs

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Tuesday, June 22, 2010

Lian Jewell
VIGOR Industrial, LLC
5555 N. Channel Ave.
Portland, OR 97217

RE: S.F. Bldg 73 / 0610-61181001-19

Enclosed are the results of analyses for work order A10F225, which was received by the laboratory on 6/18/2010 at 4:00:00PM.

Thank you for using Apex Labs. We appreciate your business and strive to provide the highest quality services to the environmental industry.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: dthomas@apex-labs.com, or by phone at 503-718-2323.

Apex Labs

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

VIGOR Industrial, LLC 5555 N. Channel Ave. Portland, OR 97217	Project: S.F. Bldg 73 Project Number: 0610-61181001-19 Project Manager: Lian Jewell	Reported: 06/22/10 08:54

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
Weelabrator Dust (A10F225-01)			**Matrix: Soil**		**Batch: 1006322**			
Arsenic	36.5	---	22.4	mg/kg dry	100	06/21/10 15:45	EPA 6020	
Barium	757	---	11.2	"	"	"	"	
Cadmium	107	---	11.2	"	"	"	"	
Chromium	743	---	22.4	"	"	"	"	
Copper	1570	---	44.9	"	"	"	"	
Lead	78.0	---	11.2	"	"	"	"	
Mercury	ND	---	0.898	"	"	"	"	R-04
Selenium	ND	---	22.4	"	"	"	"	R-04
Silver	ND	---	11.2	"	"	"	"	R-04
Zinc	133000	---	2240	"	5000	06/21/10 16:01	"	

DRAFT REPORT

The results provided in this report are PRELIMINARY and are subject to change based on subsequent analysis, QC validation or final data review. Please use these results with the understanding that they may have not been finalized by the laboratory

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VIGOR Industrial, LLC	Project: S.F. Bldg 73	
5555 N. Channel Ave.	Project Number: 0610-61181001-19	Reported:
Portland, OR 97217	Project Manager: Lian Jewell	06/22/10 08:54

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Total Metals by EPA 6020 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1006322 - EPA 3051A							**Soil**					
Blank (1006322-BLK1)					Prepared: 06/21/10 09:55 Analyzed: 06/21/10 15:40							
EPA 6020												
Arsenic	ND	---	2.00	mg/kg wet	10	---	---	---	---	---	---	
Barium	ND	---	1.00	"	"	---	---	---	---	---	---	
Cadmium	ND	---	1.00	"	"	---	---	---	---	---	---	
Chromium	ND	---	2.00	"	"	---	---	---	---	---	---	
Copper	ND	---	4.00	"	"	---	---	---	---	---	---	
Lead	ND	---	1.00	"	"	---	---	---	---	---	---	
Mercury	ND	---	0.0800	"	"	---	---	---	---	---	---	
Selenium	ND	---	2.00	"	"	---	---	---	---	---	---	
Silver	ND	---	1.00	"	"	---	---	---	---	---	---	
Zinc	ND	---	4.00	"	"	---	---	---	---	---	---	B-02
LCS (1006322-BS1)					Prepared: 06/21/10 09:55 Analyzed: 06/21/10 15:43							
EPA 6020												
Arsenic	49.5	---	2.00	mg/kg wet	10	50.0	---	99	80-120%	---	---	
Barium	49.8	---	1.00	"	"	"	---	100	"	---	---	
Cadmium	48.6	---	1.00	"	"	"	---	97	"	---	---	
Chromium	47.7	---	2.00	"	"	"	---	95	"	---	---	
Copper	50.7	---	4.00	"	"	"	---	101	"	---	---	
Lead	45.2	---	1.00	"	"	"	---	90	"	---	---	
Mercury	1.82	---	0.0800	"	"	2.00	---	91	"	---	---	
Selenium	23.2	---	2.00	"	"	24.9	---	93	"	---	---	
Silver	23.3	---	1.00	"	"	"	---	94	"	---	---	
Zinc	50.5	---	4.00	"	"	50.0	---	101	"	---	---	

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503-718-0333 Fax

VIGOR Industrial, LLC	Project: S.F. Bldg 73	
5555 N. Channel Ave.	Project Number: 0610-61181001-19	Reported:
Portland, OR 97217	Project Manager: Lian Jewell	06/22/10 08:54

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: TCLP Metals by EPA 6020 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1006320 - EPA 1311/3015							**Soil**					
Blank (1006320-BLK1)					Prepared: 06/21/10 09:11 Analyzed: 06/21/10 14:55							
EPA 1311/6020												
Arsenic	ND	---	0.100	mg/L	5	---	---	---	---	---	---	
Barium	ND	---	0.500	"	"	---	---	---	---	---	---	
Cadmium	ND	---	0.0500	"	"	---	---	---	---	---	---	
Chromium	ND	---	0.100	"	"	---	---	---	---	---	---	
Lead	ND	---	0.0500	"	"	---	---	---	---	---	---	
Mercury	ND	---	0.00500	"	"	---	---	---	---	---	---	
Selenium	ND	---	0.100	"	"	---	---	---	---	---	---	
Silver	ND	---	0.0500	"	"	---	---	---	---	---	---	
LCS (1006320-BS1)					Prepared: 06/21/10 09:11 Analyzed: 06/21/10 15:28							
EPA 1311/6020												
Arsenic	2.63	---	0.100	mg/L	5	2.50	---	105	80-120%	---	---	
Barium	2.68	---	0.500	"	"	"	---	107	"	---	---	
Cadmium	2.54	---	0.0500	"	"	"	---	101	"	---	---	
Chromium	2.52	---	0.100	"	"	"	---	101	"	---	---	
Lead	2.49	---	0.0500	"	"	"	---	100	"	---	---	
Mercury	0.101	---	0.00500	"	"	0.100	---	101	"	---	---	
Selenium	1.28	---	0.100	"	"	1.25	---	103	"	---	---	
Silver	1.24	---	0.0500	"	"	"	---	100	"	---	---	
Matrix Spike (1006320-MS1)					Prepared: 06/21/10 09:11 Analyzed: 06/21/10 15:01							
QC Source Sample: Weelabrator Dust (A10F225-01)												
EPA 1311/6020												
Arsenic	2.62	---	0.100	mg/L	5	2.50	ND	105	50-150%	---	---	
Barium	3.81	---	0.500	"	"	"	1.24	103	"	---	---	
Cadmium	2.56	---	0.0500	"	"	"	ND	102	"	---	---	
Chromium	2.50	---	0.100	"	"	"	ND	100	"	---	---	
Lead	2.44	---	0.0500	"	"	"	ND	97	"	---	---	
Mercury	0.0970	---	0.00500	"	"	0.100	ND	97	"	---	---	
Selenium	1.30	---	0.100	"	"	1.25	ND	104	"	---	---	
Silver	1.23	---	0.0500	"	"	"	ND	98	"	---	---	

DRAFT REPORT

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Notes and Definitions

Qualifiers:

B-02	Analyte detected in an associated blank at a level between one-half the MRL and the MRL. (See Notes and Conventions below.)
R-04	Reporting levels elevated due to dilution necessary for analysis.

Notes and Conventions:

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis. Results listed as 'wet' or without 'dry'designation are not dry weight corrected.
RPD	Relative Percent Difference
MDL	If MDL is not listed, data has been evaluated to the Method Reporting Limit only.
WMSC	Water Miscible Solvent Correction has been applied to Results and MRLs for volatiles soil samples per EPA 8000C.
Batch QC	Unless specifically requested, this report contains only results for Batch QC derived from client samples included in this report. All analyses were performed with the appropriate Batch QC (including Sample Duplicates, Matrix Spikes and/or Matrix Spike Duplicates) in order to meet or exceed method and regulatory requirements. Any exceptions to this will be qualified in this report. Complete Batch QC results are available upon request. In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) is analyzed to demonstrate accuracy and precision of the extraction and analysis.
Blank Policy	Apex assesses blank data for potential high bias down to a level equal to ½ the method reporting limit (MRL), except for conventional chemistry and HCID analyses which are assessed only to the MRL. Sample results flagged with a B or B-02 qualifier are potentially biased high if they are less than ten times the level found in the blank for inorganic analyses or less than five times the level found in the blank for organic analyses. For accurate comparison of volatile results to the level found in the blank; water sample results should be divided by the dilution factor, and soil sample results should be divided by 1/50 of the sample dilution to account for the sample prep factor. Results qualified as reported below the MRL may include a potential high bias if associated with a B or B-02 qualified blank. B and B-02 qualifications are not applied to J qualified results reported below the MRL.

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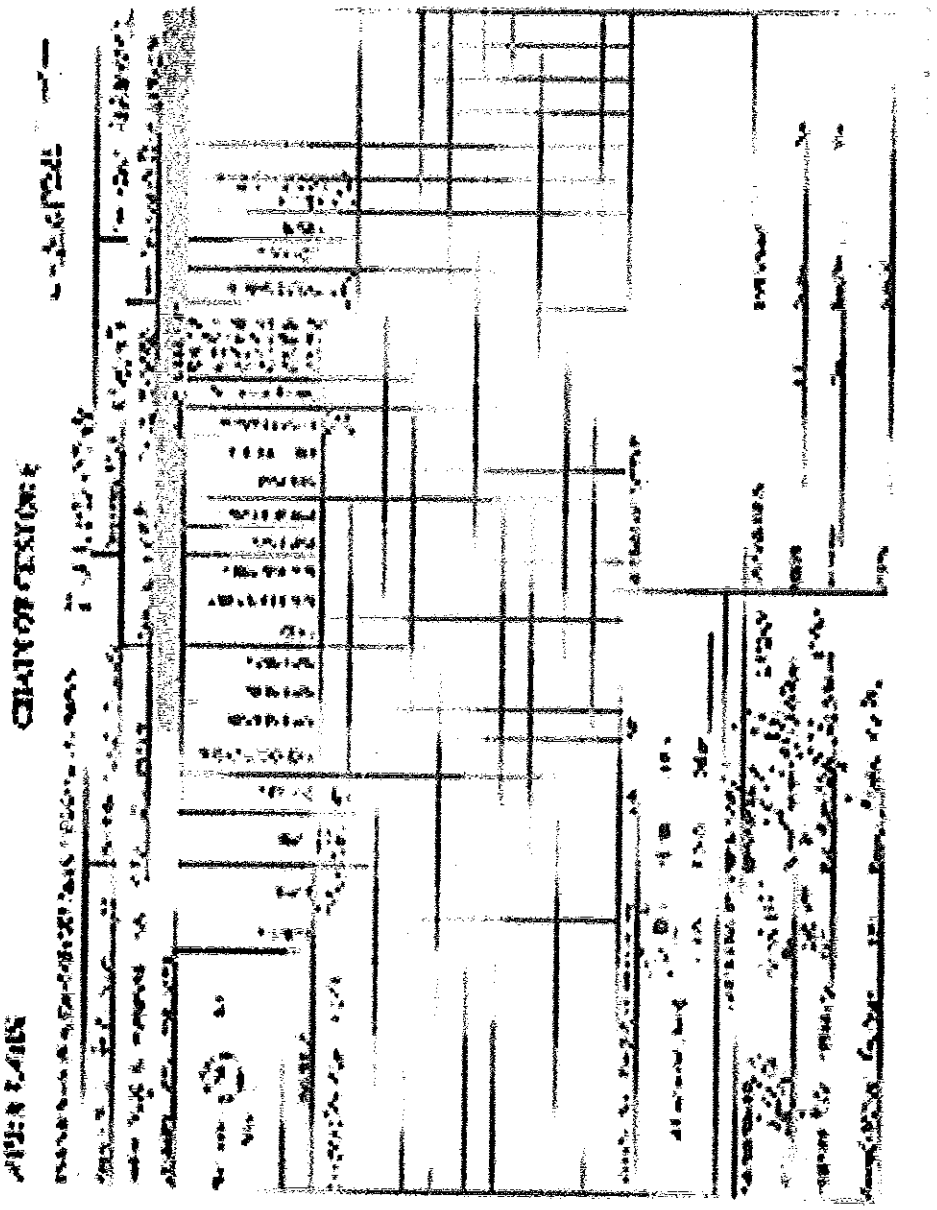
VIGOR Industrial, LLC 5555 N. Channel Ave. Portland, OR 97217	Project: S.F. Bldg 73 Project Number: 0610-61181001-19 Project Manager: Lian Jewell	Reported: 06/22/10 08:54



Specialty Analytical

11711 SE Capps Road
Clackamas, OR 97015
(503) 607-1331
Fax (503) 607-1336

August 30, 2010

Bruce Goetz
Thompson Metal Fab, Inc.
3000 SE Hidden Way
Vancouver, WA 98661

TEL: 1(360)696-0811
FAX

RE: Sand Blast Grit

Dear Bruce Goetz:

Order No.: 1008146

Specialty Analytical received 2 samples on 8/25/2010 for the analyses presented in the following report.

There were no problems with the analysis and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative, or as qualified with flags. Results apply only to the samples analyzed. Without approval of the laboratory, the reproduction of this report is only permitted in its entirety.

If you have any questions regarding these tests, please feel free to call.

Sincerely,

Cindy Hillyard
Project Manager

Technical Review

Specialty Analytical

Date: *30-Aug-10*

CLIENT: Thompson Metal Fab, Inc. **Lab Order:** 1008146
Project: Sand Blast Grit

Lab ID: 1008146-01 **Collection Date:** 8/25/2010 11:00:00 AM
Client Sample ID: Sand Blast Grit Garnet **Matrix:** SAND

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
TCLP METALS		**E1311/6010**				Analyst: **cz**
Arsenic, TCLP	ND	0.100		mg/L	1	8/26/2010 6:17:49 PM
Barium, TCLP	0.610	0.0500		mg/L	1	8/26/2010 6:17:49 PM
Cadmium, TCLP	ND	0.00500		mg/L	1	8/26/2010 6:17:49 PM
Chromium, TCLP	0.217	0.0250		mg/L	1	8/26/2010 6:17:49 PM
Lead, TCLP	ND	0.100		mg/L	1	8/26/2010 6:17:49 PM
Selenium, TCLP	ND	0.100		mg/L	1	8/26/2010 6:17:49 PM
Silver, TCLP	ND	0.0500		mg/L	1	8/26/2010 6:17:49 PM
TCLP MERCURY		**1311/7000**				Analyst: **cz**
Mercury, TCLP	ND	0.000100		mg/L	1	8/28/2010

Lab ID: 1008146-02 **Collection Date:** 8/25/2010 11:00:00 AM
Client Sample ID: Sand Blast Grit Slag **Matrix:** SAND

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
TCLP METALS		**E1311/6010**				Analyst: **cz**
Arsenic, TCLP	ND	0.100		mg/L	1	8/26/2010 6:22:54 PM
Barium, TCLP	0.0990	0.0500		mg/L	1	8/26/2010 6:22:54 PM
Cadmium, TCLP	ND	0.00500		mg/L	1	8/26/2010 6:22:54 PM
Chromium, TCLP	0.0535	0.0250		mg/L	1	8/26/2010 6:22:54 PM
Lead, TCLP	ND	0.100		mg/L	1	8/26/2010 6:22:54 PM
Selenium, TCLP	ND	0.100		mg/L	1	8/26/2010 6:22:54 PM
Silver, TCLP	ND	0.0500		mg/L	1	8/26/2010 6:22:54 PM
TCLP MERCURY		**1311/7000**				Analyst: **cz**
Mercury, TCLP	ND	0.000100		mg/L	1	8/28/2010

CLIENT: Thompson Metal Fab, Inc.
Work Order: 1008146
Project: Sand Blast Grit

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_TCLP

Sample ID: MBLK-26373	SampType: MBLK	TestCode: 6010_TCLP	Units: mg/L	Prep Date: 8/26/2010	Run ID: TJA IRIS_100826A
Client ID: ZZZZZ	Batch ID: 26373	TestNo: E1311/6010		Analysis Date: 8/26/2010	SeqNo: 693183

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, TCLP	ND	0.0200									
Barium, TCLP	ND	0.0100									
Cadmium, TCLP	ND	0.00100									
Chromium, TCLP	0.0008	0.00500									J
Lead, TCLP	ND	0.0200									
Selenium, TCLP	ND	0.0200									
Silver, TCLP	ND	0.0100									

Sample ID: LCS-26373	SampType: LCS	TestCode: 6010_TCLP	Units: mg/L	Prep Date: 8/26/2010	Run ID: TJA IRIS_100826A
Client ID: ZZZZZ	Batch ID: 26373	TestNo: E1311/6010		Analysis Date: 8/26/2010	SeqNo: 693184

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, TCLP	1.037	0.0200	1	0	104	93.8	107	0	0		
Barium, TCLP	0.5436	0.0100	0.5	0	109	95	111	0	0		
Cadmium, TCLP	0.052	0.00100	0.05	0	104	91.8	110	0	0		
Chromium, TCLP	0.265	0.00500	0.25	0	106	93.6	113	0	0		
Lead, TCLP	1.067	0.0200	1	0	107	93.1	112	0	0		
Selenium, TCLP	1.043	0.0200	1	0	104	93.9	111	0	0		
Silver, TCLP	0.4718	0.0100	0.5	0	94.4	90.6	115	0	0		

Sample ID: 1008148-01AMS	SampType: MS	TestCode: 6010_TCLP	Units: mg/L	Prep Date: 8/26/2010	Run ID: TJA IRIS_100826A
Client ID: ZZZZZ	Batch ID: 26373	TestNo: E1311/6010		Analysis Date: 8/26/2010	SeqNo: 693187

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, TCLP	5.255	0.100	5	0	105	90.1	110	0	0		
Barium, TCLP	4.277	0.0500	2.5	1.403	115	90.7	112	0	0		S,RP
Cadmium, TCLP	0.305	0.00500	0.25	0.036	108	93.4	110	0	0		
Chromium, TCLP	1.34	0.0250	1.25	0.039	104	93.4	112	0	0		
Lead, TCLP	6.74	0.100	5	1.306	109	91.9	112	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Thompson Metal Fab, Inc.
Work Order: 1008146
Project: Sand Blast Grit

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_TCLP

Sample ID: 1008148-01AMS	SampType: MS	TestCode: 6010_TCLP	Units: mg/L	Prep Date: 8/26/2010	Run ID: TJA IRIS_100826A
Client ID: ZZZZZ	Batch ID: 26373	TestNo: E1311/6010		Analysis Date: 8/26/2010	SeqNo: 693187

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium, TCLP	5.34	0.100	5	0	107	93.5	113	0	0		
Silver, TCLP	2.384	0.0500	2.5	0	95.3	90.1	113	0	0		

Sample ID: 1008148-01AMSD	SampType: MSD	TestCode: 6010_TCLP	Units: mg/L	Prep Date: 8/26/2010	Run ID: TJA IRIS_100826A
Client ID: ZZZZZ	Batch ID: 26373	TestNo: E1311/6010		Analysis Date: 8/26/2010	SeqNo: 693188

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, TCLP	5.19	0.100	5	0	104	90.1	110	5.255	1.24	20	
Barium, TCLP	4.228	0.0500	2.5	1.403	113	90.7	112	4.277	1.15	20	S,RP
Cadmium, TCLP	0.303	0.00500	0.25	0.036	107	93.4	110	0.305	0.658	20	
Chromium, TCLP	1.312	0.0250	1.25	0.039	102	93.4	112	1.34	2.15	20	
Lead, TCLP	6.66	0.100	5	1.306	107	91.9	112	6.74	1.19	20	
Selenium, TCLP	5.255	0.100	5	0	105	93.5	113	5.34	1.60	20	
Silver, TCLP	2.344	0.0500	2.5	0	93.7	90.1	113	2.384	1.69	20	

Sample ID: 1008148-01ADUP	SampType: DUP	TestCode: 6010_TCLP	Units: mg/L	Prep Date: 8/26/2010	Run ID: TJA IRIS_100826A
Client ID: ZZZZZ	Batch ID: 26373	TestNo: E1311/6010		Analysis Date: 8/26/2010	SeqNo: 693186

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, TCLP	ND	0.100	0	0	0	0	0	0	0	20	
Barium, TCLP	1.464	0.0500	0	0	0	0	0	1.403	4.29	20	
Cadmium, TCLP	0.037	0.00500	0	0	0	0	0	0.036	2.74	20	
Chromium, TCLP	0.045	0.0250	0	0	0	0	0	0.039	14.3	20	
Lead, TCLP	1.36	0.100	0	0	0	0	0	1.306	4.05	20	
Selenium, TCLP	ND	0.100	0	0	0	0	0	0	0	20	
Silver, TCLP	ND	0.0500	0	0	0	0	0	0	0	20	

Sample ID: CCV	SampType: CCV	TestCode: 6010_TCLP	Units: mg/L	Prep Date:	Run ID: TJA IRIS_100826A
Client ID: ZZZZZ	Batch ID: 26373	TestNo: E1311/6010		Analysis Date: 8/26/2010	SeqNo: 693192

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Thompson Metal Fab, Inc.
Work Order: 1008146
Project: Sand Blast Grit

ANALYTICAL QC SUMMARY REPORT

TestCode: HG_TCLP

Sample ID: MB-26374	SampType: MBLK	TestCode: HG_TCLP	Units: mg/L	Prep Date: 8/26/2010	Run ID: CVAA_100826A
Client ID: ZZZZZ	Batch ID: 26374	TestNo: 1311/7000		Analysis Date: 8/26/2010	SeqNo: 693173

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury, TCLP	ND	0.000100									

Sample ID: LCS-26374	SampType: LCS	TestCode: HG_TCLP	Units: mg/L	Prep Date: 8/26/2010	Run ID: CVAA_100826A
Client ID: ZZZZZ	Batch ID: 26374	TestNo: 1311/7000		Analysis Date: 8/26/2010	SeqNo: 693172

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury, TCLP	0.004166	0.000100	0.004	0	104	85.4	116	0	0		

Sample ID: 1008148-01AMS	SampType: MS	TestCode: HG_TCLP	Units: mg/L	Prep Date: 8/26/2010	Run ID: CVAA_100826A
Client ID: ZZZZZ	Batch ID: 26374	TestNo: 1311/7000		Analysis Date: 8/26/2010	SeqNo: 693169

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury, TCLP	0.004452	0.000100	0.004	0.0000139	111	69.5	125	0	0		

Sample ID: 1008148-01AMSD	SampType: MSD	TestCode: HG_TCLP	Units: mg/L	Prep Date: 8/26/2010	Run ID: CVAA_100826A
Client ID: ZZZZZ	Batch ID: 26374	TestNo: 1311/7000		Analysis Date: 8/26/2010	SeqNo: 693170

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury, TCLP	0.004422	0.000100	0.004	0.0000139	110	69.5	125	0.004452	0.676	20	

Sample ID: 1008148-01ADUP	SampType: DUP	TestCode: HG_TCLP	Units: mg/L	Prep Date: 8/26/2010	Run ID: CVAA_100826A
Client ID: ZZZZZ	Batch ID: 26374	TestNo: 1311/7000		Analysis Date: 8/26/2010	SeqNo: 693168

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury, TCLP	0.0000123	0.000100	0	0	0	0	0	0.0000139	0	20	J

Sample ID: CCV	SampType: CCV	TestCode: HG_TCLP	Units: mg/L	Prep Date: 8/26/2010	Run ID: CVAA_100826A
Client ID: ZZZZZ	Batch ID: 26374	TestNo: 1311/7000		Analysis Date: 8/26/2010	SeqNo: 693174

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

KEY TO FLAGS

Rev. May 12, 2010

A	This sample contains a Gasoline Range Organic not identified as a specific hydrocarbon product. The result was quantified against gasoline calibration standards
A1	This sample contains a Diesel Range Organic not identified as a specific hydrocarbon product. The result was quantified against diesel calibration standards.
A2	This sample contains a Lube Oil Range Organic not identified as a specific hydrocarbon product. The result was quantified against a lube oil calibration standard.
A3	The result was determined to be Non-Detect based on hydrocarbon pattern recognition. The product was carry-over from another hydrocarbon type.
A4	The product appears to be aged or degraded diesel.
B	The blank exhibited a positive result great than the reporting limit for this compound.
CN	See Case Narrative.
D	Result is based from a dilution.
E	Result exceeds the calibration range for this compound. The result should be considered as estimate.
F	The positive result for this hydrocarbon is due to single component contamination. The product does not match any hydrocarbon in the fuels library.
G	Result may be biased high due to biogenic interferences. Clean up is recommended.
H	Sample was analyzed outside recommended holding time.
HT	At clients request, samples was analyzed outside of recommended holding time.
J	The result for this analyte is between the MDL and the PQL and should be considered as estimated concentration.
K	Diesel result is biased high due to amount of Oil contained in the sample.
L	Diesel result is biased high due to amount of Gasoline contained in the sample.
M	Oil result is biased high due to amount of Diesel contained in the sample.
MC	Sample concentration is greater than 4x the spiked value, the spiked value is considered insignificant.
MI	Result is outside control limits due to matrix interference.
MSA	Value determined by Method of Standard Addition.
O	Laboratory Control Standard (LCS) exceeded laboratory control limits, but meets CCV criteria. Data meets EPA requirements.
Q	Detection levels elevated due to sample matrix.
R	RPD control limits were exceeded.
RF	Duplicate failed due to result being at or near the method-reporting limit.
RP	Matrix spike values exceed established QC limits; post digestion spike is in control.
S	Recovery is outside control limits.
SC	Closing CCV or LCS exceeded high recovery control limits, but associated samples are non-detect. Data meets EPA requirements.
*	The result for this parameter was greater that the maximum contaminant level of the TCLP regulatory limit.

CHAIN OF CUSTODY RECORD

Page ___ of ___

Specialty Analytical
11711 SE Capps Road
Clackamas, OR 97015
Phone: 503-607-1331
Fax: 503-607-1336

Contact Person/Project Manager: Bruce Goetz
Company: Thompson Metal Fab INC.
Address: 3000 SE Hidden WAY
VANCOUVER WA 98
Phone: _____ Fax: _____
Project No.: _____ Project Name: _____
Project Site Location OR: _____ WA: _____ Other: _____
Invoice To: _____ P.O. No.: _____

Collected By:
Signature: _____
Printed: Bruce Goetz

Signature: _____
Printed: _____

Turn Around Time
~~☐ Normal~~ 5-7 Business Days
☐ Rush _____
Specify
Rush Analyses Must Be Scheduled With The Lab In Advance

For Laboratory Use
Lab Job No. 1008146
Shipped Via Client
Air Bill No. _____
Temperature On Receipt _____ °C
Specialty Analytical Containers? Y / N
Specialty Analytical Trip Blanks? Y / N

Date	Time	Sample I.D.	Matrix	No. of Containers	Analyses: TCLP	Comments	Lab I.D.
25/Aug	1100 am	Sand Blast grit Garnet	Sand	1	X		
25/Aug	1100 am	Sand Blast grit Slag	Sand	1	X		

Relinquished By:	Date	Time	Received By:	Relinquished By:	Date	Time
Company: TMF	25 Aug 08	12:15	Company:	Company:		

Unless Reclaimed, Samples Will Be Disposed of 60 Days After Receipt.
Samples held beyond 60 days subject to storage fee(s)

Received For Lab By: _____ Date: 8/25/08 Time: 12:15

Copies: White-Original Yellow-Project File Pink-Customer Copy