



**Date Submitted:** 09-Jun-15  
**Invoice No.:** A15-04151-ReAssay2  
**Invoice Date:** 23-Oct-15  
**Your Reference:** COOK AREA TILL SAMPLING

MINNESOTA DEPT OF NAT RESOURCES  
500 LAFAYETTE RD BOX 45  
ST PAUL MN 55155-4045  
United States

ATTN: Don Elsenheimer

## CERTIFICATE OF ANALYSIS

138 Soil samples were submitted for analysis.

The following analytical package was requested:

Code 1C-Exp Fire Assay-ICP/MS

REPORT **A15-04151-ReAssay2**

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Notes:

We recommend reanalysis by fire assay Au, Pt, Pd Code 8 if values exceed upper limit.

CERTIFIED BY:

A handwritten signature in black ink, appearing to read "Emmanuel Esemé". The signature is written in a cursive style with some loops and flourishes.

Emmanuel Esemé , Ph.D.  
Quality Control



## Results

Analyte Symbol	Pd	Pt	Au
Unit Symbol	ppb	ppb	ppb
Lower Limit	1	1	2
Method Code	FA-MS	FA-MS	FA-MS
CATS-001	1	2	3
CATS-002	1	1	2
CATS-003	< 1	< 1	< 2
CATS-004	1	2	< 2
CATS-005	< 1	< 1	19
CATS-008	1	1	< 2
CATS-009	< 1	< 1	< 2
CATS-010	< 1	< 1	2
CATS-011	< 1	< 1	2
CATS-013	< 1	< 1	2
CATS-014	< 1	< 1	4
CATS-016	< 1	< 1	2
CATS-017	< 1	< 1	< 2
CATS-018	< 1	< 1	< 2
CATS-019	< 1	< 1	4
CATS-020	< 1	< 1	< 2
CATS-022	< 1	< 1	< 2
CATS-023	< 1	< 1	< 2
CATS-024	< 1	< 1	< 2
CATS-026	< 1	< 1	< 2
CATS-029	< 1	< 1	< 2
CATS-030	< 1	< 1	< 2
CATS-032	< 1	< 1	< 2
CATS-033	< 1	< 1	< 2
CATS-034	< 1	< 1	< 2
CATS-035	< 1	< 1	< 2
CATS-036	< 1	< 1	2
CATS-037	< 1	< 1	< 2
CATS-038	< 1	< 1	< 2
CATS-040	< 1	< 1	< 2
CATS-041	< 1	< 1	2
CATS-042	< 1	< 1	2
CATS-045	< 1	< 1	5
CATS-046	< 1	< 1	< 2
CATS-047	< 1	1	2
CATS-048	1	< 1	2
CATS-049	1	1	3
CATS-050	< 1	< 1	< 2
CATS-052	< 1	< 1	< 2
CATS-053	< 1	< 1	< 2
CATS-057	< 1	< 1	6
CATS-058	< 1	< 1	3
CATS-060	< 1	< 1	14
CATS-064	1	< 1	< 2
CATS-065	< 1	< 1	2
CATS-066	< 1	< 1	2
CATS-068	< 1	< 1	< 2
CATS-069	< 1	< 1	< 2
CATS-070	< 1	< 1	< 2

Analyte Symbol	Pd	Pt	Au
Unit Symbol	ppb	ppb	ppb
Lower Limit	1	1	2
Method Code	FA-MS	FA-MS	FA-MS
CATS-071	< 1	< 1	< 2
CATS-075	< 1	< 1	< 2
CATS-076	< 1	< 1	< 2
CATS-077	< 1	< 1	< 2
CATS-079	< 1	< 1	< 2
CATS-080	< 1	< 1	< 2
CATS-081	< 1	< 1	< 2
CATS-082	< 1	1	2
CATS-083	< 1	< 1	< 2
CATS-084	< 1	< 1	< 2
CATS-085	< 1	< 1	7
CATS-086	< 1	< 1	< 2
CATS-089	< 1	< 1	< 2
CATS-090	< 1	< 1	< 2
CATS-091	< 1	< 1	< 2
CATS-094	< 1	< 1	< 2
CATS-095	< 1	< 1	< 2
CATS-096	< 1	< 1	< 2
CATS-097	< 1	< 1	< 2
CATS-098	< 1	< 1	2
CATS-100	< 1	< 1	3
CATS-101	1	1	< 2
CATS-102	< 1	< 1	< 2
CATS-103	< 1	< 1	< 2
CATS-104	< 1	< 1	< 2
CATS-105	< 1	< 1	< 2
CATS-107	2	1	4
CATS-109	1	< 1	< 2
CATS-110	< 1	< 1	< 2
CATS-111	< 1	< 1	< 2
CATS-114	1	1	7
CATS-115	< 1	< 1	< 2
CATS-116	1	< 1	2
CATS-118	< 1	< 1	2
CATS-301	1	1	2
CATS-302	< 1	< 1	< 2
CATS-303	1	1	4
CATS-304	< 1	< 1	2
CATS-305	< 1	1	10
CATS-307	1	1	4
CATS-308	2	1	2
CATS-309	< 1	< 1	< 2
CATS-310	1	1	2
CATS-312	< 1	< 1	< 2
CATS-313	< 1	< 1	< 2
CATS-318	< 1	< 1	< 2
CATS-319	1	< 1	10
CATS-321	< 1	< 1	< 2
CATS-322	1	1	< 2
CATS-323	1	1	3

Analyte Symbol	Pd	Pt	Au
Unit Symbol	ppb	ppb	ppb
Lower Limit	1	1	2
Method Code	FA-MS	FA-MS	FA-MS
CATS-324	1	1	< 2
CATS-325	2	2	3
CATS-326	1	1	3
CATS-327	< 1	< 1	2
CATS-328	< 1	< 1	2
CATS-329	1	1	12
CATS-332	1	1	4
CATS-334	< 1	< 1	3
CATS-335	< 1	< 1	< 2

## QC

Analyte Symbol	Pd	Pt	Au
Unit Symbol	ppb	ppb	ppb
Lower Limit	1	1	2
Method Code	FA-MS	FA-MS	FA-MS
CDN-PGMS-24 Meas	5020	1110	825
CDN-PGMS-24 Cert	4880.00	1090.00	806.000
CDN-PGMS-24 Meas	5020	1120	825
CDN-PGMS-24 Cert	4880.00	1090.00	806.000
CDN-PGMS-24 Meas	4680	1050	788
CDN-PGMS-24 Cert	4880.00	1090.00	806.000
CDN-PGMS-24 Meas	4660	1050	782
CDN-PGMS-24 Cert	4880.00	1090.00	806.000
CDN-PGMS-25 Meas	1810	415	500
CDN-PGMS-25 Cert	1830	400	483
CDN-PGMS-25 Meas	1940	414	519
CDN-PGMS-25 Cert	1830	400	483
CDN-PGMS-25 Meas	1730	385	482
CDN-PGMS-25 Cert	1830	400	483
CATS-014 Orig	< 1	< 1	3
CATS-014 Dup	< 1	< 1	4
CATS-029 Orig	< 1	< 1	2
CATS-029 Dup	< 1	< 1	< 2
CATS-041 Orig	< 1	< 1	2
CATS-066 Orig	< 1	< 1	2
CATS-066 Dup	< 1	< 1	2
CATS-081 Orig	< 1	< 1	< 2
CATS-081 Dup	< 1	< 1	< 2
CATS-095 Orig	< 1	< 1	< 2
CATS-095 Dup	< 1	< 1	< 2
CATS-115 Orig	< 1	< 1	< 2
CATS-115 Dup	< 1	< 1	< 2
CATS-309 Orig	< 1	< 1	2
CATS-309 Dup	< 1	< 1	< 2
CATS-325 Orig	2	2	2
CATS-325 Dup	2	2	4
CATS-335 Orig	< 1	< 1	< 2
CATS-335 Dup	< 1	< 1	2
Method Blank	< 1	< 1	< 2
Method Blank	< 1	< 1	< 2
Method Blank	< 1	< 1	< 2
Method Blank	< 1	< 1	< 2
Method Blank	< 1	< 1	< 2
Method Blank	< 1	< 1	< 2
Method Blank	< 1	< 1	< 2