Matrix: Water	Client: ARCADIS	Collector: Client	
Sampled: 10/11/2012 15:00	Site:	Notes:	
Sample #: 311995-007	Client Sample #: C-1-CW05		

Analyte	Result	DF	MDL	RDL	Units	Analyzed	By	Notes
Dibromomethane	ND	1	0.06	0.5	ug/L	10/16/12	liaoyuanz	
Dichlorodifluoromethane	ND	1	0.062	0.5	ug/L	10/16/12	liaoyuanz	
Di-isopropyl ether (DIPE)	ND	1	0.17	0.5	ug/L	10/16/12	liaoyuanz	
Ethylbenzene	ND	1	0.091	0.5	ug/L	10/16/12	liaoyuanz	
Ethyl-tertbutylether (ETBE)	ND	1	0.25	0.5	ug/L	10/16/12	liaoyuanz	
Hexachlorobutadiene	ND	1	0.073	1	ug/L	10/16/12	liaoyuanz	
Isopropylbenzene	ND	1	0.089	0.5	ug/L	10/16/12	liaoyuanz	
m and p-Xylene	ND	1	0.17	0.5	ug/L	10/16/12	liaoyuanz	
Methylene chloride	ND	1	0.15	0.5	ug/L	10/16/12	liaoyuanz	
Methyl-t-butyl Ether (MTBE)	ND	1	0.068	0.5	ug/L	10/16/12	liaoyuanz	
Naphthalene	ND	1	0.061	0.5	ug/L	10/16/12	liaoyuanz	
N-butylbenzene	ND	1	0.094	0.5	ug/L	10/16/12	liaoyuanz	
N-propylbenzene	ND	1	0.09	0.5	ug/L	10/16/12	liaoyuanz	
o-Xylene	ND	1	0.075	0.5	ug/L	10/16/12	liaoyuanz	
Sec-butylbenzene	ND	1	0.077	0.5	ug/L	10/16/12	liaoyuanz	
Styrene	ND	1	0.088	0.5	ug/L	10/16/12	liaoyuanz	
t-Butyl alcohol (TBA)	ND	1	5	5	ug/L	10/16/12	liaoyuanz	
Tert-amylmethylether (TAME)	ND	1	0.13	0.5	ug/L	10/16/12	liaoyuanz	
Tert-butylbenzene	ND	1	0.092	0.5	ug/L	10/16/12	liaoyuanz	
Tetrachloroethene	0.8	1	0.15	0.5	ug/L	10/16/12	liaoyuanz	
Toluene	ND	1	0.078	0.5	ug/L	10/16/12	liaoyuanz	
trans-1,2-dichloroethene	ND	1	0.17	0.5	ug/L	10/16/12	liaoyuanz	
trans-1,3-dichloropropene	ND	1	0.056	0.5	ug/L	10/16/12	liaoyuanz	
trans-1,4-dichloro-2-butene	ND	1	0.075	5	ug/L	10/16/12	liaoyuanz	
Trichloroethene	ND	1	0.078	0.5	ug/L	10/16/12	liaoyuanz	
Trichlorofluoromethane	ND	1	0.06	0.5	ug/L	10/16/12	liaoyuanz	
Vinyl Chloride	ND	1	0.08	0.5	ug/L	10/16/12	liaoyuanz	
Xylenes (Total)	ND	1	0.25	0.5	ug/L	10/16/12	liaoyuanz	

Analyte	% Recovery	Limits	Notes
1,2-Dichloroethane-d4 (SUR)	*98*	*70-145*	
4-Bromofluorobenzene (SUR)	*100*	*70-145*	
Dibromodifluoromethane (SUR)	*98*	*70-145*	
Toluene-d8 (SUR)	*103*	*70-145*	

Method: EPA 8260M Prep Method: EPA 5030B QCBatchID: QC1130929

1,2,3-Trichloropropane	ND	1	0.005	0.005	ug/L	10/26/12	akk	

Analyte	% Recovery	Limits	Notes
Toluene-d8 (SUR)	*103*	*50-150*	*High amont of Surr3, but no hits for 1,2,3-TCP*

ND = Not Detected or < MDL MDL = Method Detection Limit RDL = Reporting Detection Limit DF = Dilution Factor

Matrix: Water	Client: ARCADIS	Collector: Client	
Sampled: 10/11/2012 15:19	Site:	Notes:	
Sample #: 311995-008	Client Sample #: A-1-CW09		

Analyte	Result	DF	MDL	RDL	Units	Analyzed	By	Notes
Method: EPA 8260 *NELAC*	Prep Method: EPA 5030B						QCBatchID: QC1130739	
1,1,1,2-Tetrachloroethane	ND	1	0.122	0.5	ug/L	10/20/12	nicollez	
1,1,1-Trichloroethane	ND	1	0.063	0.5	ug/L	10/20/12	nicollez	
1,1,2,2-Tetrachloroethane	ND	1	0.063	0.5	ug/L	10/20/12	nicollez	
1,1,2-Trichloroethane	6.5	1	0.045	0.5	ug/L	10/20/12	nicollez	
1,1,2-Trichlorotrifluoroethane	ND	1	0.119	0.5	ug/L	10/20/12	nicollez	
1,1-Dichloroethane	ND	1	0.078	0.5	ug/L	10/20/12	nicollez	
1,1-Dichloroethene	1.1	1	0.13	0.5	ug/L	10/20/12	nicollez	
1,1-Dichloropropene	ND	1	0.06	0.5	ug/L	10/20/12	nicollez	
1,2,3-Trichlorobenzene	ND	1	0.06	0.5	ug/L	10/20/12	nicollez	
1,2,3-Trichloropropane	8.9	1	0.073	0.5	ug/L	10/20/12	nicollez	
1,2,4-Trichlorobenzene	ND	1	0.068	0.5	ug/L	10/20/12	nicollez	
1,2,4-Trimethylbenzene	ND	1	0.078	0.5	ug/L	10/20/12	nicollez	
1,2-Dibromo-3-chloropropane	ND	1	0.08	0.5	ug/L	10/20/12	nicollez	
1,2-Dibromoethane	ND	1	0.043	0.5	ug/L	10/20/12	nicollez	
1,2-Dichlorobenzene	ND	1	0.051	0.5	ug/L	10/20/12	nicollez	
1,2-Dichloroethane	0.8	1	0.066	0.5	ug/L	10/20/12	nicollez	
1,2-Dichloropropane	1.1	1	0.06	0.5	ug/L	10/20/12	nicollez	
1,3,5-Trimethylbenzene	ND	1	0.097	0.5	ug/L	10/20/12	nicollez	
1,3-Dichlorobenzene	ND	1	0.052	0.5	ug/L	10/20/12	nicollez	
1,3-Dichloropropane	ND	1	0.68	0.5	ug/L	10/20/12	nicollez	
1,4-Dichlorobenzene	ND	1	0.12	0.5	ug/L	10/20/12	nicollez	
2,2-Dichloropropane	ND	1	0.11	0.5	ug/L	10/20/12	nicollez	
2-Butanone (MEK)	ND	1	0.3	5	ug/L	10/20/12	nicollez	
2-Chloroethyl Vinyl Ether	ND	1	0.23	0.5	ug/L	10/20/12	nicollez	
2-Chlorotoluene	ND	1	0.079	0.5	ug/L	10/20/12	nicollez	
4-Chlorotoluene	ND	1	0.08	0.5	ug/L	10/20/12	nicollez	
4-Isopropyltoluene	ND	1	0.091	0.5	ug/L	10/20/12	nicollez	
4-Methyl-2-pentanone (MIBK)	ND	1	0.16	5	ug/L	10/20/12	nicollez	
Acetone	ND	1	0.2	10	ug/L	10/20/12	nicollez	
Allyl Chloride	ND	1	0.08	0.5	ug/L	10/20/12	nicollez	
Benzene	ND	1	0.071	0.5	ug/L	10/20/12	nicollez	
Bromobenzene	ND	1	0.073	1	ug/L	10/20/12	nicollez	
Bromochloromethane	ND	1	0.06	0.5	ug/L	10/20/12	nicollez	
Bromodichloromethane	ND	1	0.06	0.5	ug/L	10/20/12	nicollez	
Bromoform	ND	1	0.053	0.5	ug/L	10/20/12	nicollez	
Bromomethane	ND	1	0.13	1	ug/L	10/20/12	nicollez	
Carbon Tetrachloride	1.4	1	0.045	0.5	ug/L	10/20/12	nicollez	
Chlorobenzene	ND	1	0.075	0.5	ug/L	10/20/12	nicollez	
Chlorodibromomethane	ND	1	0.045	0.5	ug/L	10/20/12	nicollez	
Chloroethane	ND	1	0.4	0.5	ug/L	10/20/12	nicollez	
Chloroform	5.9	1	0.044	0.5	ug/L	10/20/12	nicollez	
Chloromethane	ND	1	0.055	0.5	ug/L	10/20/12	nicollez	
cis-1,2-Dichloroethene	ND	1	0.055	0.5	ug/L	10/20/12	nicollez	
cis-1,3-dichloropropene	ND	1	0.061	0.5	ug/L	10/20/12	nicollez	
cis-1,4-dichloro-2-butene	ND	1	0.075	5	ug/L	10/20/12	nicollez	
Dibromomethane	ND	1	0.06	0.5	ug/L	10/20/12	nicollez	
Dichlorodifluoromethane	ND	1	0.062	0.5	ug/L	10/20/12	nicollez	
Di-isopropyl ether (DIPE)	ND	1	0.17	0.5	ug/L	10/20/12	nicollez	
Ethylbenzene	ND	1	0.091	0.5	ug/L	10/20/12	nicollez	
Ethyl-tertbutylether (ETBE)	ND	1	0.25	0.5	ug/L	10/20/12	nicollez	

ND = Not Detected or < MDL MDL = Method Detection Limit RDL = Reporting Detection Limit DF = Dilution Factor

Matrix: Water	Client: ARCADIS	Collector: Client	
Sampled: 10/11/2012 15:19	Site:	Notes:	
Sample #: 311995-008	Client Sample #: A-1-CW09		

Analyte	Result	DF	MDL	RDL	Units	Analyzed	By	Notes
Hexachlorobutadiene	ND	1	0.073	1	ug/L	10/20/12	nicollez	
Isopropylbenzene	ND	1	0.089	0.5	ug/L	10/20/12	nicollez	
m and p-Xylene	ND	1	0.17	0.5	ug/L	10/20/12	nicollez	
Methylene chloride	ND	1	0.15	0.5	ug/L	10/20/12	nicollez	
Methyl-t-butyl Ether (MTBE)	ND	1	0.068	0.5	ug/L	10/20/12	nicollez	
Naphthalene	ND	1	0.061	0.5	ug/L	10/20/12	nicollez	
N-butylbenzene	ND	1	0.094	0.5	ug/L	10/20/12	nicollez	
N-propylbenzene	ND	1	0.09	0.5	ug/L	10/20/12	nicollez	
o-Xylene	ND	1	0.075	0.5	ug/L	10/20/12	nicollez	
Sec-butylbenzene	ND	1	0.077	0.5	ug/L	10/20/12	nicollez	
Styrene	ND	1	0.088	0.5	ug/L	10/20/12	nicollez	
t-Butyl alcohol (TBA)	ND	1	5	5	ug/L	10/20/12	nicollez	
Tert-amylmethylether (TAME)	ND	1	0.13	0.5	ug/L	10/20/12	nicollez	
Tert-butylbenzene	ND	1	0.092	0.5	ug/L	10/20/12	nicollez	
Tetrachloroethene	21	1	0.15	0.5	ug/L	10/20/12	nicollez	
Toluene	ND	1	0.078	0.5	ug/L	10/20/12	nicollez	
trans-1,2-dichloroethene	ND	1	0.17	0.5	ug/L	10/20/12	nicollez	
trans-1,3-dichloropropene	ND	1	0.056	0.5	ug/L	10/20/12	nicollez	
trans-1,4-dichloro-2-butene	ND	1	0.075	5	ug/L	10/20/12	nicollez	
Trichloroethene	16	1	0.078	0.5	ug/L	10/20/12	nicollez	
Trichlorofluoromethane	ND	1	0.06	0.5	ug/L	10/20/12	nicollez	
Vinyl Chloride	ND	1	0.08	0.5	ug/L	10/20/12	nicollez	
Xylenes (Total)	ND	1	0.25	0.5	ug/L	10/20/12	nicollez	

Analyte	% Recovery	Limits	Notes
1,2-Dichloroethane-d4 (SUR)	*110*	*70-145*	
4-Bromofluorobenzene (SUR)	*111*	*70-145*	
Dibromodifluoromethane (SUR)	*102*	*70-145*	
Toluene-d8 (SUR)	*103*	*70-145*	

ND = Not Detected or < MDL MDL = Method Detection Limit RDL = Reporting Detection Limit DF = Dilution Factor

Matrix: Water	Client: ARCADIS		Collector: Client
Sampled: 10/11/2012 11:29	Site:		Notes:
Sample #: 311995-009	Client Sample #: 3851M		

Analyte	Result	DF	MDL	RDL	Units	Analyzed	By	Notes
Method: EPA 218.6	**Prep Method:** EPA 218.6						QCBatchID: QC1130675	
Hexavalent Chromium	1.42	1		1	ug/L	10/16/12	rybechay	
Method: EPA 6010 *NELAC*	**Prep Method:** EPA 3010A/Filtered						QCBatchID: QC1130580	
Chromium	**0.005 J**	1	0.002	0.01	mg/L	10/17/12	nina	

ND = Not Detected or < MDL MDL = Method Detection Limit RDL = Reporting Detection Limit DF = Dilution Factor

ALAB : 00018

Matrix: Water	**Client:** ARCADIS		**Collector:** Client
Sampled: 10/11/2012 12:41	**Site:**		**Notes:**
Sample #: 311995-010	**Client Sample #:** B1CW17		

Analyte	Result	DF	MDL	RDL	Units	Analyzed	By	Notes
Method: EPA 200.7	**Prep Method:** EPA 3010A						**QCBatchID:** QC1130599	
Calcium	118	1	0.038	0.1	mg/L	10/17/12	nina	
Magnesium	33.8	1	0.016	0.1	mg/L	10/17/12	nina	
Method: EPA 218.6	**Prep Method:** EPA 218.6						**QCBatchID:** QC1130675	
Hexavalent Chromium	24.2	1		1	ug/L	10/16/12	rybechay	
Method: EPA 300.0	**Prep Method:** Method						**QCBatchID:** QC1130493	
Chloride	66.8	1	0.1	1	mg/L	10/12/12	wei	
Sulfate	102	1	0.12	1	mg/L	10/12/12	wei	
Nitrate, as Nitrogen	17.5	2	0.12	0.2	mg/L	10/12/12	wei	
Nitrite, as Nitrogen	ND	1	0.018	0.1	mg/L	10/12/12	wei	
Fluoride	0.34	1	0.04	0.2	mg/L	10/12/12	wei	
Method: EPA 6010 *NELAC*	**Prep Method:** EPA 3010A/Filtered						**QCBatchID:** QC1130580	
Chromium	0.027	1	0.002	0.01	mg/L	10/17/12	nina	
Method: EPA 8260 *NELAC*	**Prep Method:** EPA 5030B						**QCBatchID:** QC1130649	
1,1,1,2-Tetrachloroethane	ND	1	0.122	0.5	ug/L	10/17/12	liaoyuanz	
1,1,1-Trichloroethane	ND	1	0.063	0.5	ug/L	10/17/12	liaoyuanz	
1,1,2,2-Tetrachloroethane	ND	1	0.063	0.5	ug/L	10/17/12	liaoyuanz	
1,1,2-Trichloroethane	ND	1	0.045	0.5	ug/L	10/17/12	liaoyuanz	
1,1,2-Trichlorotrifluoroethane	ND	1	0.119	0.5	ug/L	10/17/12	liaoyuanz	
1,1-Dichloroethane	ND	1	0.078	0.5	ug/L	10/17/12	liaoyuanz	
1,1-Dichloroethene	0.5	1	0.13	0.5	ug/L	10/17/12	liaoyuanz	
1,1-Dichloropropene	ND	1	0.06	0.5	ug/L	10/17/12	liaoyuanz	
1,2,3-Trichlorobenzene	ND	1	0.06	0.5	ug/L	10/17/12	liaoyuanz	
1,2,3-Trichloropropane	ND	1	0.073	0.5	ug/L	10/17/12	liaoyuanz	
1,2,4-Trichlorobenzene	ND	1	0.068	0.5	ug/L	10/17/12	liaoyuanz	
1,2,4-Trimethylbenzene	ND	1	0.078	0.5	ug/L	10/17/12	liaoyuanz	
1,2-Dibromo-3-chloropropane	ND	1	0.08	0.5	ug/L	10/17/12	liaoyuanz	
1,2-Dibromoethane	ND	1	0.043	0.5	ug/L	10/17/12	liaoyuanz	
1,2-Dichlorobenzene	ND	1	0.051	0.5	ug/L	10/17/12	liaoyuanz	
1,2-Dichloroethane	ND	1	0.066	0.5	ug/L	10/17/12	liaoyuanz	
1,2-Dichloropropane	ND	1	0.06	0.5	ug/L	10/17/12	liaoyuanz	
1,3,5-Trimethylbenzene	ND	1	0.097	0.5	ug/L	10/17/12	liaoyuanz	
1,3-Dichlorobenzene	ND	1	0.052	0.5	ug/L	10/17/12	liaoyuanz	
1,3-Dichloropropane	ND	1	0.68	0.5	ug/L	10/17/12	liaoyuanz	
1,4-Dichlorobenzene	ND	1	0.12	0.5	ug/L	10/17/12	liaoyuanz	
2,2-Dichloropropane	ND	1	0.11	0.5	ug/L	10/17/12	liaoyuanz	
2-Butanone (MEK)	ND	1	0.3	5	ug/L	10/17/12	liaoyuanz	
2-Chloroethyl Vinyl Ether	ND	1	0.23	0.5	ug/L	10/17/12	liaoyuanz	
2-Chlorotoluene	ND	1	0.079	0.5	ug/L	10/17/12	liaoyuanz	
4-Chlorotoluene	ND	1	0.08	0.5	ug/L	10/17/12	liaoyuanz	
4-Isopropyltoluene	ND	1	0.091	0.5	ug/L	10/17/12	liaoyuanz	
4-Methyl-2-pentanone (MIBK)	ND	1	0.16	5	ug/L	10/17/12	liaoyuanz	
Acetone	ND	1	0.2	10	ug/L	10/17/12	liaoyuanz	
Allyl Chloride	ND	1	0.08	0.5	ug/L	10/17/12	liaoyuanz	
Benzene	ND	1	0.071	0.5	ug/L	10/17/12	liaoyuanz	
Bromobenzene	ND	1	0.073	1	ug/L	10/17/12	liaoyuanz	
Bromochloromethane	ND	1	0.06	0.5	ug/L	10/17/12	liaoyuanz	
Bromodichloromethane	ND	1	0.06	0.5	ug/L	10/17/12	liaoyuanz	
Bromoform	ND	1	0.053	0.5	ug/L	10/17/12	liaoyuanz	
Bromomethane	ND	1	0.13	1	ug/L	10/17/12	liaoyuanz	

ND = Not Detected or < MDL MDL = Method Detection Limit RDL = Reporting Detection Limit DF = Dilution Factor

Matrix: Water	Client: ARCADIS		Collector: Client
Sampled: 10/11/2012 12:41	Site:		Notes:
Sample #: 311995-010	Client Sample #: B1CW17		

Analyte	Result	DF	MDL	RDL	Units	Analyzed	By	Notes
Carbon Tetrachloride	ND	1	0.045	0.5	ug/L	10/17/12	liaoyuanz	
Chlorobenzene	ND	1	0.075	0.5	ug/L	10/17/12	liaoyuanz	
Chlorodibromomethane	ND	1	0.045	0.5	ug/L	10/17/12	liaoyuanz	
Chloroethane	ND	1	0.4	0.5	ug/L	10/17/12	liaoyuanz	
Chloroform	3.5	1	0.044	0.5	ug/L	10/17/12	liaoyuanz	
Chloromethane	ND	1	0.055	0.5	ug/L	10/17/12	liaoyuanz	
cis-1,2-Dichloroethene	6.2	1	0.055	0.5	ug/L	10/17/12	liaoyuanz	
cis-1,3-dichloropropene	ND	1	0.061	0.5	ug/L	10/17/12	liaoyuanz	
cis-1,4-dichloro-2-butene	ND	1	0.075	5	ug/L	10/17/12	liaoyuanz	
Dibromomethane	ND	1	0.06	0.5	ug/L	10/17/12	liaoyuanz	
Dichlorodifluoromethane	ND	1	0.062	0.5	ug/L	10/17/12	liaoyuanz	
Di-isopropyl ether (DIPE)	ND	1	0.17	0.5	ug/L	10/17/12	liaoyuanz	
Ethylbenzene	ND	1	0.091	0.5	ug/L	10/17/12	liaoyuanz	
Ethyl-tertbutylether (ETBE)	ND	1	0.25	0.5	ug/L	10/17/12	liaoyuanz	
Hexachlorobutadiene	ND	1	0.073	1	ug/L	10/17/12	liaoyuanz	
Isopropylbenzene	ND	1	0.089	0.5	ug/L	10/17/12	liaoyuanz	
m and p-Xylene	ND	1	0.17	0.5	ug/L	10/17/12	liaoyuanz	
Methylene chloride	ND	1	0.15	0.5	ug/L	10/17/12	liaoyuanz	
Methyl-t-butyl Ether (MTBE)	ND	1	0.068	0.5	ug/L	10/17/12	liaoyuanz	
Naphthalene	ND	1	0.061	0.5	ug/L	10/17/12	liaoyuanz	
N-butylbenzene	ND	1	0.094	0.5	ug/L	10/17/12	liaoyuanz	
N-propylbenzene	ND	1	0.09	0.5	ug/L	10/17/12	liaoyuanz	
o-Xylene	ND	1	0.075	0.5	ug/L	10/17/12	liaoyuanz	
Sec-butylbenzene	ND	1	0.077	0.5	ug/L	10/17/12	liaoyuanz	
Styrene	ND	1	0.088	0.5	ug/L	10/17/12	liaoyuanz	
t-Butyl alcohol (TBA)	ND	1	5	5	ug/L	10/17/12	liaoyuanz	
Tert-amylmethylether (TAME)	ND	1	0.13	0.5	ug/L	10/17/12	liaoyuanz	
Tert-butylbenzene	ND	1	0.092	0.5	ug/L	10/17/12	liaoyuanz	
Tetrachloroethene	81	1	0.15	0.5	ug/L	10/17/12	liaoyuanz	
Toluene	ND	1	0.078	0.5	ug/L	10/17/12	liaoyuanz	
trans-1,2-dichloroethene	0.7	1	0.17	0.5	ug/L	10/17/12	liaoyuanz	
trans-1,3-dichloropropene	ND	1	0.056	0.5	ug/L	10/17/12	liaoyuanz	
trans-1,4-dichloro-2-butene	ND	1	0.075	5	ug/L	10/17/12	liaoyuanz	
Trichloroethene	120	1	0.078	0.5	ug/L	10/17/12	liaoyuanz	
Trichlorofluoromethane	ND	1	0.06	0.5	ug/L	10/17/12	liaoyuanz	
Vinyl Chloride	ND	1	0.08	0.5	ug/L	10/17/12	liaoyuanz	
Xylenes (Total)	ND	1	0.25	0.5	ug/L	10/17/12	liaoyuanz	

Analyte	% Recovery	Limits	Notes
1,2-Dichloroethane-d4 (SUR)	*95*	*70-145*	
4-Bromofluorobenzene (SUR)	*98*	*70-145*	
Dibromodifluoromethane (SUR)	*94*	*70-145*	
Toluene-d8 (SUR)	*100*	*70-145*	

Method: EPA 8260M **Prep Method:** EPA 5030B **QCBatchID:** QC1130929

1,2,3-Trichloropropane	ND	1	0.005	0.005	ug/L	10/26/12	akk	

Analyte	% Recovery	Limits	Notes
Toluene-d8 (SUR)	*98*	*50-150*	*High amont of Surr3, but no hits for 1,2,3-TCP*

Method: SM 2320-B **Prep Method:** Method **QCBatchID:** QC1130512

Bicarbonate (HCO3)	336	1	1	5	mg/L	10/15/12	hanhkhong	
Carbonate (CO3)	ND	1	0.7	5	mg/L	10/15/12	hanhkhong	
Hydroxide (OH)	ND	1	0.3	5	mg/L	10/15/12	hanhkhong	

ND = Not Detected or < MDL MDL = Method Detection Limit RDL = Reporting Detection Limit DF = Dilution Factor

Matrix: Water	**Client:** ARCADIS		**Collector:** Client
Sampled: 10/11/2012 12:41	**Site:**		**Notes:**
Sample #: 311995-010	**Client Sample #:** B1CW17		

Analyte	Result	DF	MDL	RDL	Units	Analyzed	By	Notes
Total Alkalinity (as CaCO3)	275	1	1.8	5	mg/L	10/15/12	hanhkhong	
Method: SM 2510-B **Prep Method:** Method							**QCBatchID:**	
Specific Conductance	1000	1		1	umhos/cm	10/12/12	ame	
Method: SM 2540-C **Prep Method:** Method							**QCBatchID:**	QC1130496
Total Dissolved Solids	554	1	5.7	10	mg/L	10/12/12	rvenal	
Method: SM 4500-H+B **Prep Method:** Method							**QCBatchID:**	
pH	7.24	1			pH Units	10/12/12	robert	
Method: SM 4500-Si-C **Prep Method:** Method							**QCBatchID:**	QC1130568
Silica	29.6	5	0.5	5	mg/L	10/16/12	cathy	
Method: SM 5310B **Prep Method:** Method							**QCBatchID:**	QC1130627
Total Organic Carbon (TOC)	0.5	1		0.5	mg/L	10/15/12	quang	

ND = Not Detected or < MDL MDL = Method Detection Limit RDL = Reporting Detection Limit DF = Dilution Factor

ALAB : 99821

Matrix: Water	Client: ARCADIS		Collector: Client
Sampled: 10/11/2012 12:41	Site:		Notes:
Sample #: 311995-011	Client Sample #: B-1-CW17 Duplicate		

Analyte	Result	DF	MDL	RDL	Units	Analyzed	By	Notes
Method: EPA 218.6	Prep Method: EPA 218.6						QCBatchID: QC1130675	
Hexavalent Chromium	25.1	1		1	ug/L	10/16/12	rybechay	
Method: EPA 6010 NELAC	Prep Method: EPA 3010A/Filtered						QCBatchID: QC1130580	
Chromium	0.026	1	0.002	0.01	mg/L	10/17/12	nina	

ND = Not Detected or < MDL MDL = Method Detection Limit RDL = Reporting Detection Limit DF = Dilution Factor

ALAB : 00022

ASSOCIATED LABORATORIES QC SUMMARY FOR LAB REQUEST #311995

QCBatchID: QC1130493	Analyst: wei	Method: EPA 300.0
Matrix: Water	Analyzed: 10/12/2012	Instrument: CHEM (group)

Blank Summary

Analyte	Blank Result	Units	MDL	RDL	Notes
QC1130493MB1					
Chloride	ND	mg/L	0.1	1	
Fluoride	ND	mg/L	0.04	0.2	
Nitrate, as Nitrogen	ND	mg/L	0.06	0.1	
Nitrate, as NO3	ND	mg/L	0.08	0.44	
Nitrite, as Nitrogen	ND	mg/L	0.018	0.1	
Sulfate	ND	mg/L	0.12	1	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1130493LCS1											
Chloride	40		41.1		mg/L	103			90-110		
Fluoride	8		7.97		mg/L	100			90-110		
Nitrate, as Nitrogen	4.5		4.60		mg/L	102			90-110		
Nitrate, as NO3	20		20.6		mg/L	103			90-110		
Nitrite, as Nitrogen	3.1		2.90		mg/L	94			90-110		
Sulfate	40		39.0		mg/L	98			90-110		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1130493MS1												Source: 311995-010
Chloride	66.8	200		262		mg/L	98			75-125		
Fluoride	0.34	40		38.5		mg/L	95			75-125		
Nitrate, as Nitrogen	17.5	22.6		41.3		mg/L	105			75-125		
Nitrite, as Nitrogen	ND	30.5		30.2		mg/L	99			75-125		
Sulfate	102	200		283		mg/L	91			75-125		
QC1130493MS2												Source: 311991-015
Chloride	37.7	200		230		mg/L	96			75-125		
Nitrate, as Nitrogen	0.06	22.6		23.5		mg/L	104			75-125		
Nitrate, as NO3	0.27	100		104		mg/L	104			75-125		
Sulfate	484	200		672		mg/L	94			75-125		

ND = Not Detected or < MDL MDL = Method Detection Limit RDL = Reporting Detection Limit DF = Dilution Factor

ASSOCIATED LABORATORIES QC SUMMARY FOR LAB REQUEST #311995

QCBatchID: QC1130496	Analyst: rvenal	Method: SM 2540-C
Matrix: Water	Analyzed: 10/12/2012	Instrument: CHEM (group)

Blank Summary

Analyte	Blank Result	Units	MDL	RDL	Notes
QC1130496MB1					
Total Dissolved Solids	ND	mg/L	5.7	10	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1130496LCS1											
Total Dissolved Solids	293		282		mg/L	96			90-110		

Duplicate Summary

Analyte	Sample Amount	Duplicate Amount	Units	RPD	Limits RPD	Notes
QC1130496DUP1						Source: 312025-001
Total Dissolved Solids	2010	2020	mg/L	0.5	5	
QC1130496DUP2						Source: 312043-001
Total Dissolved Solids	3110	3190	mg/L	2.5	5	

ND = Not Detected or < MDL MDL = Method Detection Limit RDL = Reporting Detection Limit DF = Dilution Factor

ASSOCIATED LABORATORIES QC SUMMARY FOR LAB REQUEST #311995

QCBatchID: QC1130512	Analyst: hanhkhong	Method: SM 2320-B
Matrix: Water	Analyzed: 10/15/2012	Instrument: CHEM (group)

Duplicate Summary

Analyte	Sample Amount	Duplicate Amount	Units	RPD	Limits RPD	Notes
QC1130512DUP1						**Source: 311995-010**
Bicarbonate (HCO3)	336	332	mg/L	1.2	20	
Carbonate (CO3)	ND	ND	mg/L	0.0	20	
Hydroxide (OH)	ND	ND	mg/L	0.0	20	
Total Alkalinity (as CaCO3)	275	273	mg/L	0.7	20	

ND = Not Detected or < MDL MDL = Method Detection Limit RDL = Reporting Detection Limit DF = Dilution Factor

ASSOCIATED LABORATORIES QC SUMMARY FOR LAB REQUEST #311995

QCBatchID: QC1130545	Analyst: rvenal	Method: SM 2540-C
Matrix: Water	Analyzed: 10/15/2012	Instrument: CHEM (group)

Blank Summary

Analyte	Blank Result	Units	MDL	RDL	Notes
QC1130545MB1					
Total Dissolved Solids	ND	mg/L	5.7	10	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1130545LCS1											
Total Dissolved Solids	293		275		mg/L	94			90-110		

Duplicate Summary

Analyte	Sample Amount	Duplicate Amount	Units	RPD	Limits RPD	Notes
QC1130545DUP1						**Source: 312149-001**
Total Dissolved Solids	8340	8320	mg/L	0.2	5	

ND = Not Detected or < MDL MDL = Method Detection Limit RDL = Reporting Detection Limit DF = Dilution Factor

ASSOCIATED LABORATORIES QC SUMMARY FOR LAB REQUEST #311995

QCBatchID: QC1130554	Analyst: wei	Method: EPA 300.0
Matrix: Water	Analyzed: 10/15/2012	Instrument: CHEM (group)

Blank Summary

Analyte	Blank Result	Units	MDL	RDL	Notes
QC1130554MB1					
Chloride	ND	mg/L	0.1	1	
Fluoride	ND	mg/L	0.04	0.2	
Nitrate + Nitrite, as Nitrogen	ND	mg/L	0.3	0.44	
Nitrate, as Nitrogen	ND	mg/L	0.016	0.1	
Nitrate, as NO3	ND	mg/L	0.07	0.44	
Nitrite, as Nitrogen	ND	mg/L	0.018	0.1	
Sulfate	ND	mg/L	0.17	1	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1130554LCS1											
Chloride	40		38.5		mg/L	96			90-110		
Fluoride	8		7.50		mg/L	94			90-110		
Nitrate, as Nitrogen	4.5		4.40		mg/L	98			90-110		
Nitrate, as NO3	20		19.5		mg/L	98			90-110		
Nitrite, as Nitrogen	3.1		3.00		mg/L	97			90-110		
Sulfate	40		36.1		mg/L	90			90-110		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1130554MS1												Source: 312058-004
Chloride	ND	200		192		mg/L	96			80-120		
Sulfate	ND	200		180		mg/L	90			80-120		
QC1130554MS2												Source: 311995-002
Chloride	ND	200		190		mg/L	95			80-120		
Fluoride	ND	40		37.5		mg/L	94			80-120		
Nitrate, as Nitrogen	ND	22.6		22.8		mg/L	101			80-120		
Nitrite, as Nitrogen	ND	30.5		30.8		mg/L	101			80-120		
Sulfate	ND	200		180		mg/L	90			80-120		

ND = Not Detected or < MDL MDL = Method Detection Limit RDL = Reporting Detection Limit DF = Dilution Factor

ASSOCIATED LABORATORIES QC SUMMARY FOR LAB REQUEST #311995

QCBatchID: QC1130568	Analyst: cathy	Method: SM 4500-Si-C
Matrix: Water	Analyzed: 10/16/2012	Instrument: CHEM (group)

Blank Summary

Analyte	Blank Result	Units	MDL	RDL	Notes
QC1130568MB1					
Silica	ND	mg/L	0.1	1	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1130568LCS1											
Silica	2		2.05		mg/L	103			80-120		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1130568MS1, QC1130568MSD1												Source: 312080-013
Silica	33.8	10	10	44.8	43.8	mg/L	110	100	2.3	75-125	20	

ND = Not Detected or < MDL MDL = Method Detection Limit RDL = Reporting Detection Limit DF = Dilution Factor

ASSOCIATED LABORATORIES QC SUMMARY FOR LAB REQUEST #311995

QCBatchID: QC1130580	Analyst: metha	Method: EPA 6010B
Matrix: Water	Analyzed: 10/17/2012	Instrument: AAICP (group)

Blank Summary

Analyte	Blank Result	Units	MDL	RDL	Notes
QC1130580MB1					
Chromium	ND	mg/L	0.002	0.01	
Thallium	ND	mg/L	0.003	0.005	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1130580LCS1											
Chromium	2		2.23		mg/L	112			80-120		
Thallium	2		2.15		mg/L	108			80-120		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1130580MS1, QC1130580MSD1												**Source: 311995-007**
Chromium	0.004	1	1	1.02	1.03	mg/L	102	103	1.0	75-125	20	
Thallium	ND	1	1	0.958	0.958	mg/L	96	96	0.0	75-125	20	

ND = Not Detected or < MDL MDL = Method Detection Limit RDL = Reporting Detection Limit DF = Dilution Factor

ASSOCIATED LABORATORIES QC SUMMARY FOR LAB REQUEST #311995

QCBatchID: QC1130599	Analyst: nina	Method: EPA 200.7
Matrix: Water	Analyzed: 10/17/2012	Instrument: AAICP (group)

Blank Summary

Analyte	Blank Result	Units	MDL	RDL	Notes
QC1130599MB1					
Calcium	ND	mg/L	0.038	0.1	
Magnesium	0.031 J	mg/L	0.016	0.1	

ND = Not Detected or < MDL MDL = Method Detection Limit RDL = Reporting Detection Limit DF = Dilution Factor

ASSOCIATED LABORATORIES QC SUMMARY FOR LAB REQUEST #311995

QCBatchID: QC1130627	Analyst: quang	Method: SM 5310B
Matrix: Water	Analyzed: 10/15/2012	Instrument: TOC-BIO (group)

Blank Summary

Analyte	Blank Result	Units	MDL	RDL	Notes
QC1130627MB1					
Total Organic Carbon (TOC)	ND	mg/L	0.1	0.5	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1130627LCS1											
Total Organic Carbon (TOC)	10		9.8		mg/L	98			80-120		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1130627MS1, QC1130627MSD1												**Source: 311995-010**
Total Organic Carbon (TOC)	0.5	10	10	10.8	10.9	mg/L	103	104	0.9	80-120	20	

ND = Not Detected or < MDL MDL = Method Detection Limit RDL = Reporting Detection Limit DF = Dilution Factor

ASSOCIATED LABORATORIES QC SUMMARY FOR LAB REQUEST #311995

QCBatchID: QC1130649	Analyst: lucy	Method: EPA 8260B
Matrix: Water	Analyzed: 10/18/2012	Instrument: VOA-MS (group)

Blank Summary

Analyte	Blank Result	Units	MDL	RDL	Notes
QC1130649MB1					
1,1,1,2-Tetrachloroethane	ND	ug/L	0.122	0.5	
1,1,1-Trichloroethane	ND	ug/L	0.063	0.5	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.063	0.5	
1,1,2-Trichloroethane	ND	ug/L	0.045	0.5	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	0.119	0.5	
1,1-Dichloroethane	ND	ug/L	0.078	0.5	
1,1-Dichloroethene	ND	ug/L	0.13	0.5	
1,1-Dichloropropene	ND	ug/L	0.06	0.5	
1,2,3-Trichlorobenzene	ND	ug/L	0.06	0.5	
1,2,3-Trichloropropane	ND	ug/L	0.073	0.5	
1,2,4-Trichlorobenzene	ND	ug/L	0.068	0.5	
1,2,4-Trimethylbenzene	ND	ug/L	0.078	0.5	
1,2-Dibromo-3-chloropropane	ND	ug/L	0.08	0.5	
1,2-Dibromoethane	ND	ug/L	0.043	0.5	
1,2-Dichlorobenzene	ND	ug/L	0.051	0.5	
1,2-Dichloroethane	ND	ug/L	0.066	0.5	
1,2-Dichloropropane	ND	ug/L	0.06	0.5	
1,3,5-Trimethylbenzene	ND	ug/L	0.097	0.5	
1,3-Dichlorobenzene	ND	ug/L	0.052	0.5	
1,3-Dichloropropane	ND	ug/L	0.68	0.5	
1,4-Dichlorobenzene	ND	ug/L	0.12	0.5	
2,2-Dichloropropane	ND	ug/L	0.11	0.5	
2-Butanone (MEK)	ND	ug/L	0.3	5	
2-Chloroethyl Vinyl Ether	ND	ug/L	0.23	0.5	
2-Chlorotoluene	ND	ug/L	0.079	0.5	
4-Chlorotoluene	ND	ug/L	0.08	0.5	
4-Isopropyltoluene	ND	ug/L	0.091	0.5	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	0.16	5	
Acetone	ND	ug/L	0.2	10	
Allyl Chloride	ND	ug/L	0.08	0.5	
Benzene	ND	ug/L	0.071	0.5	
Bromobenzene	ND	ug/L	0.073	1	
Bromochloromethane	ND	ug/L	0.06	0.5	
Bromodichloromethane	ND	ug/L	0.06	0.5	
Bromoform	ND	ug/L	0.053	0.5	
Bromomethane	ND	ug/L	0.13	1	
Carbon Tetrachloride	ND	ug/L	0.045	0.5	
Chlorobenzene	ND	ug/L	0.075	0.5	
Chlorodibromomethane	ND	ug/L	0.045	0.5	
Chloroethane	ND	ug/L	0.4	0.5	
Chloroform	ND	ug/L	0.044	0.5	
Chloromethane	ND	ug/L	0.055	0.5	
cis-1,2-Dichloroethene	ND	ug/L	0.055	0.5	
cis-1,3-dichloropropene	ND	ug/L	0.061	0.5	
cis-1,4-dichloro-2-butene	ND	ug/L	0.075	5	
Dibromomethane	ND	ug/L	0.06	0.5	

ND = Not Detected or < MDL MDL = Method Detection Limit RDL = Reporting Detection Limit DF = Dilution Factor

ASSOCIATED LABORATORIES QC SUMMARY FOR LAB REQUEST #311995

QCBatchID: QC1130649	Analyst: lucy	Method: EPA 8260B
Matrix: Water	Analyzed: 10/18/2012	Instrument: VOA-MS (group)

Analyte	Blank Result	Units	MDL	RDL	Notes
QC1130649MB1					
Dichlorodifluoromethane	ND	ug/L	0.062	0.5	
Di-isopropyl ether (DIPE)	ND	ug/L	0.17	0.5	
Ethylbenzene	ND	ug/L	0.091	0.5	
Ethyl-tertbutylether (ETBE)	ND	ug/L	0.25	0.5	
Hexachlorobutadiene	ND	ug/L	0.073	1	
Isopropylbenzene	ND	ug/L	0.089	0.5	
m and p-Xylene	ND	ug/L	0.17	0.5	
Methylene chloride	ND	ug/L	0.15	0.5	
Methyl-t-butyl Ether (MTBE)	ND	ug/L	0.068	0.5	
Naphthalene	ND	ug/L	0.061	0.5	
N-butylbenzene	ND	ug/L	0.094	0.5	
N-propylbenzene	ND	ug/L	0.09	0.5	
o-Xylene	ND	ug/L	0.075	0.5	
Sec-butylbenzene	ND	ug/L	0.077	0.5	
Styrene	ND	ug/L	0.088	0.5	
t-Butyl alcohol (TBA)	ND	ug/L	5	5	
Tert-amylmethylether (TAME)	ND	ug/L	0.13	0.5	
Tert-butylbenzene	ND	ug/L	0.092	0.5	
Tetrachloroethene	ND	ug/L	0.15	0.5	
Toluene	ND	ug/L	0.078	0.5	
trans-1,2-dichloroethene	ND	ug/L	0.17	0.5	
trans-1,3-dichloropropene	ND	ug/L	0.056	0.5	
trans-1,4-dichloro-2-butene	ND	ug/L	0.075	5	
Trichloroethene	ND	ug/L	0.078	0.5	
Trichlorofluoromethane	ND	ug/L	0.06	0.5	
Vinyl Chloride	ND	ug/L	0.08	0.5	
Xylenes (Total)	ND	ug/L	0.25	0.5	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1130649LCS1											
1,1-Dichloroethene	25		24		ug/L	96			59-172		
Benzene	25		24		ug/L	96			62-137		
Chlorobenzene	25		25		ug/L	100			60-133		
Methyl-t-butyl Ether (MTBE)	25		22		ug/L	88			62-137		
Toluene	25		25		ug/L	100			59-139		
Trichloroethene	25		24		ug/L	96			66-142		

ND = Not Detected or < MDL MDL = Method Detection Limit RDL = Reporting Detection Limit DF = Dilution Factor

ASSOCIATED LABORATORIES QC SUMMARY FOR LAB REQUEST #311995

QCBatchID: QC1130649	Analyst: lucy	Method: EPA 8260B
Matrix: Water	Analyzed: 10/18/2012	Instrument: VOA-MS (group)

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1130649MS1, QC1130649MSD1												**Source: 311995-007**
1,1-Dichloroethene	ND	25	25	23	23	ug/L	92	92	0.0	59-172	22	
Benzene	ND	25	25	22	22	ug/L	88	88	0.0	62-137	24	
Chlorobenzene	ND	25	25	25	23	ug/L	100	92	8.3	60-133	24	
Methyl-t-butyl Ether (MTBE)	ND	25	25	22	22	ug/L	88	88	0.0	62-137	21	
Toluene	ND	25	25	24	23	ug/L	96	92	4.3	59-139	21	
Trichloroethene	ND	25	25	21	21	ug/L	84	84	0.0	66-142	21	

ND = Not Detected or < MDL MDL = Method Detection Limit RDL = Reporting Detection Limit DF = Dilution Factor

ASSOCIATED LABORATORIES QC SUMMARY FOR LAB REQUEST #311995

QCBatchID: QC1130675	Analyst: rybechay	Method: EPA 218.6
Matrix: Water	Analyzed: 10/19/2012	Instrument: CHEM (group)

Blank Summary

Analyte	Blank Result	Units	MDL	RDL	Notes
QC1130675MB1					
Hexavalent Chromium	ND	ug/L	0.1	1	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1130675LCS1											
Hexavalent Chromium	5		5.64		ug/L	113			80-120		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1130675MS1, QC1130675MSD1												Source: 311995-002
Hexavalent Chromium	ND	2	2	2.13	2.08	ug/L	107	104	2.4	75-125	20	

ND = Not Detected or < MDL MDL = Method Detection Limit RDL = Reporting Detection Limit DF = Dilution Factor

ASSOCIATED LABORATORIES QC SUMMARY FOR LAB REQUEST #311995

QCBatchID: QC1130712	Analyst: hongling	Method: SM 5310B	
Matrix: Water	Analyzed: 10/19/2012	Instrument: TOC-BIO (group)	

Blank Summary

Analyte	Blank Result	Units	MDL	RDL	Notes
QC1130712MB1					
Total Organic Carbon (TOC)	ND	mg/L	0.1	0.5	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1130712LCS1											
Total Organic Carbon (TOC)	10		9.9		mg/L	99			80-120		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1130712MS1, QC1130712MSD1												Source: 311995-002
Total Organic Carbon (TOC)	ND	10	10	9.9	9.9	mg/L	99	99	8.7	80-120	20	

ND = Not Detected or < MDL MDL = Method Detection Limit RDL = Reporting Detection Limit DF = Dilution Factor

ASSOCIATED LABORATORIES QC SUMMARY FOR LAB REQUEST #311995

QCBatchID: QC1130739	Analyst: nicollez	Method: EPA 8260B
Matrix: Water	Analyzed: 10/19/2012	Instrument: VOA-MS (group)

Blank Summary

Analyte	Blank Result	Units	MDL	RDL	Notes
QC1130739MB1					
1,1,1,2-Tetrachloroethane	ND	ug/L	0.122	0.5	
1,1,1-Trichloroethane	ND	ug/L	0.063	0.5	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.063	0.5	
1,1,2-Trichloroethane	ND	ug/L	0.045	0.5	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	0.119	0.5	
1,1-Dichloroethane	ND	ug/L	0.078	0.5	
1,1-Dichloroethene	ND	ug/L	0.13	0.5	
1,1-Dichloropropene	ND	ug/L	0.06	0.5	
1,2,3-Trichlorobenzene	ND	ug/L	0.06	0.5	
1,2,3-Trichloropropane	ND	ug/L	0.073	0.5	
1,2,4-Trichlorobenzene	ND	ug/L	0.068	0.5	
1,2,4-Trimethylbenzene	ND	ug/L	0.078	0.5	
1,2-Dibromo-3-chloropropane	ND	ug/L	0.08	0.5	
1,2-Dibromoethane	ND	ug/L	0.043	0.5	
1,2-Dichlorobenzene	ND	ug/L	0.051	0.5	
1,2-Dichloroethane	ND	ug/L	0.066	0.5	
1,2-Dichloropropane	ND	ug/L	0.06	0.5	
1,3,5-Trimethylbenzene	ND	ug/L	0.097	0.5	
1,3-Dichlorobenzene	ND	ug/L	0.052	0.5	
1,3-Dichloropropane	ND	ug/L	0.68	0.5	
1,4-Dichlorobenzene	ND	ug/L	0.12	0.5	
2,2-Dichloropropane	ND	ug/L	0.11	0.5	
2-Butanone (MEK)	ND	ug/L	0.3	5	
2-Chloroethyl Vinyl Ether	ND	ug/L	0.23	0.5	
2-Chlorotoluene	ND	ug/L	0.079	0.5	
4-Chlorotoluene	ND	ug/L	0.08	0.5	
4-Isopropyltoluene	ND	ug/L	0.091	0.5	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	0.16	5	
Acetone	ND	ug/L	0.2	10	
Allyl Chloride	ND	ug/L	0.08	0.5	
Benzene	ND	ug/L	0.071	0.5	
Bromobenzene	ND	ug/L	0.073	1	
Bromochloromethane	ND	ug/L	0.06	0.5	
Bromodichloromethane	ND	ug/L	0.06	0.5	
Bromoform	ND	ug/L	0.053	0.5	
Bromomethane	ND	ug/L	0.13	1	
Carbon Tetrachloride	ND	ug/L	0.045	0.5	
Chlorobenzene	ND	ug/L	0.075	0.5	
Chlorodibromomethane	ND	ug/L	0.045	0.5	
Chloroethane	ND	ug/L	0.4	0.5	
Chloroform	ND	ug/L	0.044	0.5	
Chloromethane	ND	ug/L	0.055	0.5	
cis-1,2-Dichloroethene	ND	ug/L	0.055	0.5	
cis-1,3-dichloropropene	ND	ug/L	0.061	0.5	
cis-1,4-dichloro-2-butene	ND	ug/L	0.075	5	
Dibromomethane	ND	ug/L	0.06	0.5	

ND = Not Detected or < MDL MDL = Method Detection Limit RDL = Reporting Detection Limit DF = Dilution Factor

ASSOCIATED LABORATORIES QC SUMMARY FOR LAB REQUEST #311995

QCBatchID: QC1130739	Analyst: nicollez	Method: EPA 8260B
Matrix: Water	Analyzed: 10/19/2012	Instrument: VOA-MS (group)

Analyte	Blank Result	Units	MDL	RDL	Notes
QC1130739MB1					
Dichlorodifluoromethane	ND	ug/L	0.062	0.5	
Di-isopropyl ether (DIPE)	ND	ug/L	0.17	0.5	
Ethylbenzene	ND	ug/L	0.091	0.5	
Ethyl-tertbutylether (ETBE)	ND	ug/L	0.25	0.5	
Hexachlorobutadiene	ND	ug/L	0.073	1	
Isopropylbenzene	ND	ug/L	0.089	0.5	
m and p-Xylene	ND	ug/L	0.17	0.5	
Methylene chloride	ND	ug/L	0.15	0.5	
Methyl-t-butyl Ether (MTBE)	ND	ug/L	0.068	0.5	
Naphthalene	ND	ug/L	0.061	0.5	
N-butylbenzene	ND	ug/L	0.094	0.5	
N-propylbenzene	ND	ug/L	0.09	0.5	
o-Xylene	ND	ug/L	0.075	0.5	
Sec-butylbenzene	ND	ug/L	0.077	0.5	
Styrene	ND	ug/L	0.088	0.5	
t-Butyl alcohol (TBA)	ND	ug/L	5	5	
Tert-amylmethylether (TAME)	ND	ug/L	0.13	0.5	
Tert-butylbenzene	ND	ug/L	0.092	0.5	
Tetrachloroethene	ND	ug/L	0.15	0.5	
Toluene	ND	ug/L	0.078	0.5	
trans-1,2-dichloroethene	ND	ug/L	0.17	0.5	
trans-1,3-dichloropropene	ND	ug/L	0.056	0.5	
trans-1,4-dichloro-2-butene	ND	ug/L	0.075	5	
Trichloroethene	ND	ug/L	0.078	0.5	
Trichlorofluoromethane	ND	ug/L	0.06	0.5	
Vinyl Chloride	ND	ug/L	0.08	0.5	
Xylenes (Total)	ND	ug/L	0.25	0.5	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1130739LCS1											
1,1-Dichloroethene	25		24		ug/L	96			59-172		
Benzene	25		25		ug/L	100			62-137		
Chlorobenzene	25		26		ug/L	104			60-133		
Methyl-t-butyl Ether (MTBE)	25		24		ug/L	96			62-137		
Toluene	25		26		ug/L	104			59-139		
Trichloroethene	25		26		ug/L	104			66-142		

ND = Not Detected or < MDL MDL = Method Detection Limit RDL = Reporting Detection Limit DF = Dilution Factor

ASSOCIATED LABORATORIES QC SUMMARY FOR LAB REQUEST #311995

QCBatchID: QC1130739	Analyst: nicollez	Method: EPA 8260B	
Matrix: Water	Analyzed: 10/19/2012	Instrument: VOA-MS (group)	

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1130739MS1, QC1130739MSD1												**Source: 312094-002**
1,1-Dichloroethene	ND	25	25	26	26	ug/L	104	104	0.0	59-172	22	
Benzene	ND	25	25	25	26	ug/L	100	104	3.9	62-137	24	
Chlorobenzene	ND	25	25	26	26	ug/L	104	104	0.0	60-133	24	
Methyl-t-butyl Ether (MTBE)	ND	25	25	27	26	ug/L	108	104	3.8	62-137	21	
Toluene	ND	25	25	26	26	ug/L	104	104	0.0	59-139	21	
Trichloroethene	ND	25	25	26	25	ug/L	104	100	3.9	66-142	21	

ND = Not Detected or < MDL MDL = Method Detection Limit RDL = Reporting Detection Limit DF = Dilution Factor

ASSOCIATED LABORATORIES QC SUMMARY FOR LAB REQUEST #311995

QCBatchID: QC1130838	Analyst: akk	Method: EPA 8260M
Matrix: Water	Analyzed: 10/24/2012	Instrument:

Blank Summary

Analyte	Blank Result	Units	MDL	RDL	Notes
QC1130838MB1					
1,2,3-Trichloropropane	ND	ug/L	0.005	0.005	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1130838LCS1, QC1130838LCSD1											
1,2,3-Trichloropropane	0.02	0.02	0.022	0.028	ug/L	110	140	24	50-150	30	

ND = Not Detected or < MDL MDL = Method Detection Limit RDL = Reporting Detection Limit DF = Dilution Factor

ASSOCIATED LABORATORIES QC SUMMARY FOR LAB REQUEST #311995

QCBatchID: QC1130844	Analyst: akk	Method: EPA 8260M
Matrix: Water	Analyzed: 10/25/2012	Instrument: VOA-MS (group)

Blank Summary

Analyte	Blank Result	Units	MDL	RDL	Notes
QC1130844MB1					
1,2,3-Trichloropropane	ND	ug/L	0.005	0.005	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1130844LCS1, QC1130844LCSD1											
1,2,3-Trichloropropane	0.02	0.02	0.022	0.019	ug/L	110	95	15	50-150	30	

ND = Not Detected or < MDL MDL = Method Detection Limit RDL = Reporting Detection Limit DF = Dilution Factor

ASSOCIATED LABORATORIES QC SUMMARY FOR LAB REQUEST #311995

QCBatchID: QC1130929	Analyst: akk	Method: EPA 8260M
Matrix: Water	Analyzed: 10/29/2012	Instrument: VOA-MS (group)

Blank Summary

Analyte	Blank Result	Units	MDL	RDL	Notes
QC1130929MB1					
1,2,3-Trichloropropane	ND	ug/L	0.005	0.005	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1130929LCS1, QC1130929LCSD1											
1,2,3-Trichloropropane	0.02	0.02	0.016	0.019	ug/L	80	95	17	50-150	30	

ND = Not Detected or < MDL MDL = Method Detection Limit RDL = Reporting Detection Limit DF = Dilution Factor

Notes and Definitions

B	Analyte was present in an associated method blank. Associated sample data was reported with qualifier.
C	Laboratory Contamination.
D	The sample duplicate RPD was not within control limits, the sample data was reported without further clarification.
DF	Dilution Factor
DW	Sample result is calculated on a dry weigh basis
J	Reported value is estimated
L	The laboratory control sample (LCS) or laboratory control sample duplicate (LCSD) was out of control limits. Associated sample data was reported with qualifier.
M	The matrix spike (MS) or matrix spike duplicate (MSD) was not within control limits due to matrix interference. The associated LCS and/or LCSD was within control limits and the sample data was reported without further clarification.
MDL	Method Detection Limit
NC	The analyte concentration in the sample exceeded the spike level by a factor of four or greater, spike recovery and limits do not apply.
ND	Analyte was not detected or was less than the detection limit.
P	Sample was received without proper preservation according to EPA guidelines.
RDL	Reporting Detection Limit
S	The surrogate recovery was out of control limits due to matrix interference. The associated method blank surrogate recovery was within control limits and the sample data was reported without further clarification.
T	Sample was extracted/analyzed past the holding time.

ASSOCIATED LABORATORIES

NARRATIVE

Date: November 1, 2012

Narrative for Lab Request LR: 311995

Client Project Identification:

Client Name: ARCADIS
Project: BOU Burbank

This narrative includes all samples as shown on the attached Lab Request final report.

Data Validation:

Holding Times
Samples were received on October 12th, 2012 intact and at a temperature of 2.0°C. All EPA recommended holding times were met for this project except for: EPA 300.0 was added for the Sample (ID# Equipment Blank) on 10/15/2012 per client, the Nitrate/Nitrite test was out of 48 hours holding time.

Calibration
Initial calibration criteria were met. Initial and Continuing Calibration Check samples were run at the required frequency. All results were within required limits.

Quality Control Samples
All QC results were within control limits.

Other Anomalies or Comments
Estimated concentrations ("J" Flags) were reported on all samples and method blanks. The following samples have reported "J" flags:

Metals: Equipment Blank C-1-CW05
3851M

ALAB : 8884U

ASSOCIATED LABORATORIES
806 North Batavia • Orange, CA 92868
Phone: (714) 771-6900 • Fax: (714) 538-1209

Chain of Custody Record

Lab Job No. 311995
Page 1 of 1

CUSTOMER INFORMATION		PROJECT INFORMATION	
COMPANY	ARCADIS	PROJECT NAME:	BOU Burbank
SEND REPORT TO:	Erik Gaiser	NUMBER:	B0038189.0000.00001
EMAIL:	on file	ADDRESS:	
ADDRESS:			Burbank, CA
		P.O. #:	
PHONE:		SAMPLED BY:	H. Tauscher, H. Armstrong

REQUIRED TURN AROUND TIME: Standard: X
72 Hours: _____ 48 Hours: _____ 24 Hours: _____

	Sample ID	Date	Time	Matrix	Container Number/Size	Pres.	ANALYSIS REQUEST: VOCs 8260B Full List	1,2,3 TCP	total chrome (4 Hour)	Hex chrome	Nitrate/Nitrite	TDS	General Minerals	Test Instructions & Comments
1	TB101112	10/11/12	0715	W	2 VOAs	HCL	X							
2	~~EB101112~~ Equipment Blank	10/11/12	0730	W	11 Various	various	X							
3	B-6-CW02	10/11/12	1010	W	3 VOAs	HCL	X							
4	B-6-CW03R	10/11/12	1020	W	6 VOAs	HCL	X	X						
5	B-6-CW03R Duplicate	10/11/12	1025	W	3 VOAs	HCL		X						
6	B-1-CW28	10/11/12	1249	W	3 VOAs	HCL	X							
7	C-1-CW05	10/11/12	1500	W	8 various	HCL/½	X	X	X	X				
8	A-1-CW09	10/11/12	1519	W	3 VOAs	HCL	X							
9	3851M	10/11/12	1129	W	2	HNO3			X	X				
10	B1CW17	10/11/12	1241	W	15 Various	HNO3 HCL	X	X	X	X	X	X	X	
11	B-1-CW17 Duplicate	10/11/12	1241	W	2 poly	HNO3			X	X				
12														
13														
14														
15														

Total No. of Samples: 58 Method of Shipment: Courier

Preservative: 1= Ice 2 =HCl 3 =HNO_3 4 =H_2SO_4 5 =NaOH 6 =Other

Relinquished by 1.	Received By: 1.	Relinquished by 2.	Received By: 2.	Relinquished by 3.	Received By: 3.
ARCADIS	LAUCRI SCHG	LAUCRI SCHG			
Signature:	Signature:	Signature:	Signature:	Signature:	Signature:
Printed Name: Heather Tauscher	Printed Name: LAUCRI SCHG	Printed Name: LAUCRI SCHG	Printed Name: Chris Soyle	Printed Name:	Printed Name:
Date: 10/11/12 Time: 1625	Date: 10-11 Time: 1625	Date: 10-11 Time: 8PM LV	Date: 10/12/12 Time: 8:42	Date: Time:	Date: Time:

Distribution: White - Laboratory Canary - Laboratory Pink - Project/Account Manager Goldenrod - Sampler/Originator

ALAB: 86615

LMC-PET-00000419

CONFIDENTIAL

ASSOCIATED LABORATORIES
806 North Batavia – Orange, California 92868 – 714-771-6900 *FAX 714-538-1209*

SAMPLE ACCEPTANCE CHECKLIST

Section 1
Client: Arcadis Project: _____
Date Received: 10-12-12 Sampler's Name: (Yes) No
Sample(s) received in cooler: (Yes) No (Skip Section 2)
Shipping Information: _____

Section 2
Was the cooler packed with: X Ice ___ Ice Packs ___ Bubble Wrap ___ Styrofoam ___ Paper ___ None ___ Other _____
Cooler or box temperature: 2 °C

(Acceptance range is 0 to 6 Deg. C.)

Section 3	YES	NO	N/A
Was a COC received?	X		
Is it properly completed? (IDs, sampling date and time, signature, test)	X		
Were custody seals present?		X	
If Yes – were they intact?			X
Were all samples sealed in plastic bags?	X		
Did all samples arrive intact? If no, indicate below.	X		
Did all bottle labels agree with COC? (ID, dates and times)	X		
Were correct containers used for the tests required?	X		
Was a sufficient amount of sample sent for tests indicated?	X		
Was there headspace in VOA vials?		X	
Were the containers labeled with correct preservatives?	X		
Was total residual chlorine measured (Fish Bioassay samples only)? *			X

*: If the answer is no, please inform Fish Bioassay Dept. immediately.

Section 4
Explanations/Comments

Section 5
Was Project Manager notified of discrepancies: Y / N N/A

Completed By: _____ Date: 10/12/12

Created on 7/6/2012 1:29:00 PM

ALAB : 00046

SM 2320B

Alkalinity
EPA 310.1 / SM 2320B

Analyst H. K

Date 10 15 2012

H2SO4 (0.020 N) ID # 04 04 2012

Phenolphthalein ID # 01 17 2011

Methyl Orange ID # 05 30 2012

Lab Request #	Init. Vol.	Ml of H2SO4	PH	Tot. Alk.	Bicarb.	Carb.	OH	Comments
blank	50	0.10		ND	ND	ND	ND	9:45 AM
311995-010 #9	20	5.50		275	336	ND	ND	
dup		5.45		273	332	ND	ND	
312052-013 #5		5.90		295	360	ND	ND	
014 #1		5.90		295	360	ND	ND	
312094-02 #10	↓	4.30		215	262	ND	ND	

ALAB : 000148

Alkalinity
EPA 310.1 / SM 2320B

Analyst H. K

Date 10 15 2012

H2SO4 (0.020 N) ID # 04 04 2012

Phenolphthalein ID # 01 17 2011

Methyl Orange ID # 05 30 2012

Lab Request #	Init. Vol.	Ml of H2SO4	PH	Tot. Alk.	Bicarb.	Carb.	OH	Comments
blank	50	0.10		ND	ND	ND	ND	9:45 AM
311995-010 #9	20	5.50		275	336	ND	ND	GC: 130512
dup		5.45		273	332	ND	ND	
312082-013 #5		5.90		295	360	ND	ND	
014 #1		5.90		295	360	ND	ND	
312094-02 #10	↓	4.30		215	262	ND	ND	
311995-02	50	0.10		ND	ND	ND	ND	4:10 PM
								add No 311995-2 at 3:15 PM

SM 2510B

Electrical Conductivity
EPA 120.1 / SM 2510 B

Date	Lab ID #	Reading	EC	Temp.	Sigh.	Comments
10/11/12	311856-001	697	697	21.8	Thy	
	311857-001	856	856	21.7	Thy	
	311875-001	807	807	21.2	Thy	
	311885-002	520	520	21.2	Thy	
	311886-001	348	348	21.2	Thy	
	-002	513	513	21.2	Thy	
	311887-001	131.2	131.2	21.5	Thy	
	-002	152.6	152.6	21.4	Thy	
	-003	48.5	10 ion 48.5	21.4	Thy	
	311888-001	458	458	21.2	Thy	
	-002	294.3	294.3	21.2	Thy	
	311906-001	941	941	21.3	Thy	
Dup	311888-02 Dup	294.7	294.7	21.3	Thy	
Dup	311906-001 Dup	941	941	21.3	Thy	
10/12/12	STD 100	100.4	100	21.4	AS	EC041712-3
10:05	STD 1413	1390	1390	21.4	AS	SS020112EC-3
	STD 19000	18.77	18770	21.6	AS	Cond 041712
	DI water	0.49	0.49	19.3	AS	
10:05 am	311965/001	954 µs	954	21.4	AS	tamarack
↓	311965/002	1098 µs	1098	21.4	AS	↓
	311965/003	821 µs	821	21.4	AS	
Dup.	311965/003	820 µs	820	21.5	AS	
12:05 pm	311995/010	1003 µs	1003	19.7	AS	ARCADIS

SM 2540C

QC 113096 ✓

ASSOCIATED LABORATORIES

Date 10.12.12

Chem. Dept. Total Dissolved Solids T.D.S. EPA 160-1

Initials RV

SAMPLE # MBI Company

81.3825 5:02pm Electroconductivity ____ µmhos/cm

D. Solids + container 81.3838 g. 3:15pm Sample amount 100 ml

Cont. wt. # ____ - 81.3873 g. 5:45pm

Dissolved solids ____ g. T.D.S. ND mg/L

SAMPLE # LCS1 Company

79.4737 5:03pm Electroconductivity ____ µmhos/cm

D. Solids + container 79.4738 g. 3:17pm Sample amount 100 ml

Cont. wt. # ____ - 79.4455 g. 5:52pm

Dissolved solids ____ g. T.D.S. 282 mg/L

SAMPLE # 311748-001/1 Company * re-run

113.7090 Electroconductivity 47.4 µmhos/cm

D. Solids + container 113.7092 g. Sample amount 200 ml

Cont. wt. # ____ - 113.7058 g.

Dissolved solids ____ g. T.D.S. 16 mg/L

SAMPLE # 311920-001/2 Company

113.6045 Electroconductivity 486 µmhos/cm

D. Solids + container 113.6055 g. Sample amount 200 ml

Cont. wt. # ____ - 113.6065 g.

Dissolved solids ____ g. T.D.S. ND mg/L

$$T.D.S = \frac{\text{Dissolved Solids g}}{\text{Sample Amount ml}} \times \frac{1000\text{ mg}}{1\text{g}} \times \frac{1000\text{ ml}}{1\text{L}}$$

ALAB : 00053

ASSOCIATED LABORATORIES

Date 10.12.12

Chem. Dept. Total Dissolved Solids T.D.S. EPA 160-1

Initials KV

SAMPLE # 311948-001/1 Company

112.2970

Electroconductivity 3.74 µmhos/cm

D. Solids + container 112.2971 g.

Sample amount 200 ml

Cont. wt. # _____ - 112.2985 g.

Dissolved solids g.

T.D.S. ND mg/L

SAMPLE # 311949-001/1 Company

113.4215

Electroconductivity 3.63 µmhos/cm

D. Solids + container 113.4226 g.

Sample amount 200 ml

Cont. wt. # _____ - 113.4258 g.

Dissolved solids g.

T.D.S. ND mg/L

SAMPLE # 311960-001/2 Company

83.3020

Electroconductivity 475 µmhos/cm

D. Solids + container 83.3024 g.

Sample amount 50 ml

Cont. wt. # _____ - 83.2882 g.

Dissolved solids g.

T.D.S. 276 mg/L

SAMPLE # 311995-010/8 Company

81.3675 5:20pm

Electroconductivity 950 µmhos/cm

D. Solids + container 81.3679 g. 3:40pm

Sample amount 50 ml

Cont. wt. # _____ - 81.3398 g. 6:00pm

Dissolved solids g.

T.D.S. 554 mg/L

$$\text{T.D.S} = \frac{\text{Dissolved Solids g}}{\text{Sample Amount ml}} \quad \frac{1000 \text{ mg}}{1 \text{g}} \quad \frac{1000 \text{ ml}}{1 \text{L}}$$

ASSOCIATED LABORATORIES

Date 10.12.12

Chem. Dept. Total Dissolved Solids T.D.S. EPA 160-1

Initials RV

SAMPLE # 312025-001/5 Company

82.6124

D. Solids + container 82.6127 g.

Cont. wt. # _____ - 82.5721 g.

Dissolved solids g.

Electroconductivity 3090 µmhos/cm

Sample amount 50 ml

T.D.S. 2006 mg/L

SAMPLE # 312025-001/5 dup Company

80.4217 5:25pm

D. Solids + container 80.4224 g. 3:43pm

Cont. wt. # _____ - 80.3204 g. 6:15pm

Dissolved solids g.

Electroconductivity 3090 µmhos/cm

Sample amount 50 ml

T.D.S. 2018 mg/L

SAMPLE # 312037-001/4 Company

79.9564

D. Solids + container 79.9570 g.

Cont. wt. # _____ - 79.9456 g.

Dissolved solids g.

Electroconductivity 478 µmhos/cm

Sample amount 50 ml

T.D.S. 216 mg/L

SAMPLE # 312037-002/2 Company

73.7591

D. Solids + container 73.7585 g.

Cont. wt. # _____ - 73.7472 g.

Dissolved solids g.

Electroconductivity 477 µmhos/cm

Sample amount 50 ml

T.D.S. 218 mg/L

$$T.D.S = \frac{\text{Dissolved Solids g}}{\text{Sample Amount ml}} \quad \frac{1000 \text{ mg}}{1 \text{g}} \quad \frac{1000 \text{ ml}}{1 \text{L}}$$

ALAB : 00054

ASSOCIATED LABORATORIES Date

Chem. Dept. Total Dissolved Solids T.D.S. EPA 160-1 Initials RV

SAMPLE # MB1 Company

90.2960 1:16pm Electroconductivity µmhos/cm

D. Solids + container 90.2865 g. 10:11am Sample amount 100 ml

Cont. wt. # _____ - 90.2892 g. 6:03pm

Dissolved solids g. T.D.S. ND mg/L

SAMPLE # LCS1 Company

94.7715 1:15pm Electroconductivity µmhos/cm

D. Solids + container 94.7723 g. 10:19am Sample amount 100 ml

Cont. wt. # _____ - 94.7440 g. 6:10pm

Dissolved solids g. T.D.S. 275 mg/L

SAMPLE # 311995-002/3 Company Equipment Blank

~~118.3780 RV~~ 118.3780 1:17pm Electroconductivity 0.96 µmhos/cm

D. Solids + container 118.3781 g. 10:29am Sample amount 200 ml

Cont. wt. # _____ - 118.3830 g. 6:21pm

Dissolved solids g. T.D.S. ND mg/L

SAMPLE # 312080-008/1 Company Equipment Blank

111.0275 1:19pm Electroconductivity 0.93 µmhos/cm

D. Solids + container 111.0279 g. 10:30am Sample amount 200 ml

Cont. wt. # _____ - 111.0325 g. 6:24pm

Dissolved solids g. T.D.S. ND mg/L

$$\text{T.D.S} = \frac{\text{Dissolved Solids g}}{\text{Sample Amount ml}} \quad \frac{1000\text{ mg}}{1\text{g}} \quad \frac{1000\text{ ml}}{1\text{L}}$$

ASSOCIATED LABORATORIES

Chem. Dept. Total Dissolved Solids T.D.S. EPA 160-1

Date 10.15.12

Initials RV

SAMPLE # 312149-001/1 dup Company

93.2301 / ~~93.2301~~ RV 1:35pm

D. Solids + container 93.2313 g. 11:00am

Cont. wt. # _____ - 93.0220 g. 7:05pm

Dissolved solids g.

Electroconductivity 8960 µmhos/cm

Sample amount 25 ml

T.D.S. 8324 mg/L

SAMPLE # Company

D. Solids + container _____ g.

Cont. wt. # _____ - _____ g.

Dissolved solids g.

Electroconductivity _____ µmhos/cm

Sample amount _____ ml

T.D.S. _____ mg/L

SAMPLE # Company

D. Solids + container _____ g.

Cont. wt. # _____ - _____ g.

Dissolved solids g.

Electroconductivity _____ µmhos/cm

Sample amount _____ ml

T.D.S. _____ mg/L

SAMPLE # Company

D. Solids + container _____ g.

Cont. wt. # _____ - _____ g.

Dissolved solids g.

Electroconductivity _____ µmhos/cm

Sample amount _____ ml

T.D.S. _____ mg/L

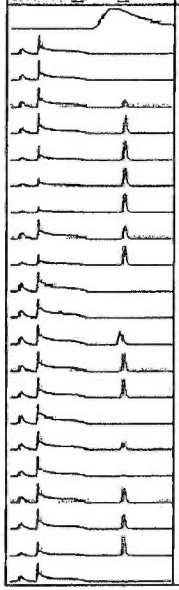
$$T.D.S = \frac{\text{Dissolved Solids g}}{\text{Sample Amount ml}} \times \frac{1000\text{ mg}}{1\text{g}} \times \frac{1000\text{ ml}}{1\text{L}}$$

EPA 218.6

Hexavalent Chromium

DATA PACKAGE
218.6-CR VI

Sequence: 2012_1016
Last Update Operator: rybechay

UV_VIS_1	Name	Type	Level	Position	Volume [µl]	Instrument Method	Processing Method	Status	Inject Time
	MB	Unknown		3	5000	AS7	AS7	Finished	10/16/2012 12:06:18 PM -07
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	STD1 1.0ppb	Calibration Stan	01	6	5000	AS7	AS7	Finished	10/16/2012 12:44:35 PM -07
	STD2 2.5ppb	Calibration Stan	02	7	5000	AS7	AS7	Finished	10/16/2012 12:57:32 PM -07
	STD3 5.0ppb	Calibration Stan	03	8	5000	AS7	AS7	Finished	10/16/2012 1:10:29 PM -07:
	STD4 7.5ppb	Calibration Stan	04	9	5000	AS7	AS7	Finished	10/16/2012 1:23:25 PM -07:
	STD5 10.0ppb	Calibration Stan	05	10	5000	AS7	AS7	Finished	10/16/2012 1:36:21 PM -07:
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	lcs 5.0ppb	Unknown		12	5000	AS7	AS7	Finished	10/16/2012 2:09:30 PM -07:
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	311877-003/1	Unknown		24	5000	AS7	AS7	Finished	10/16/2012 4:36:21 PM -07:
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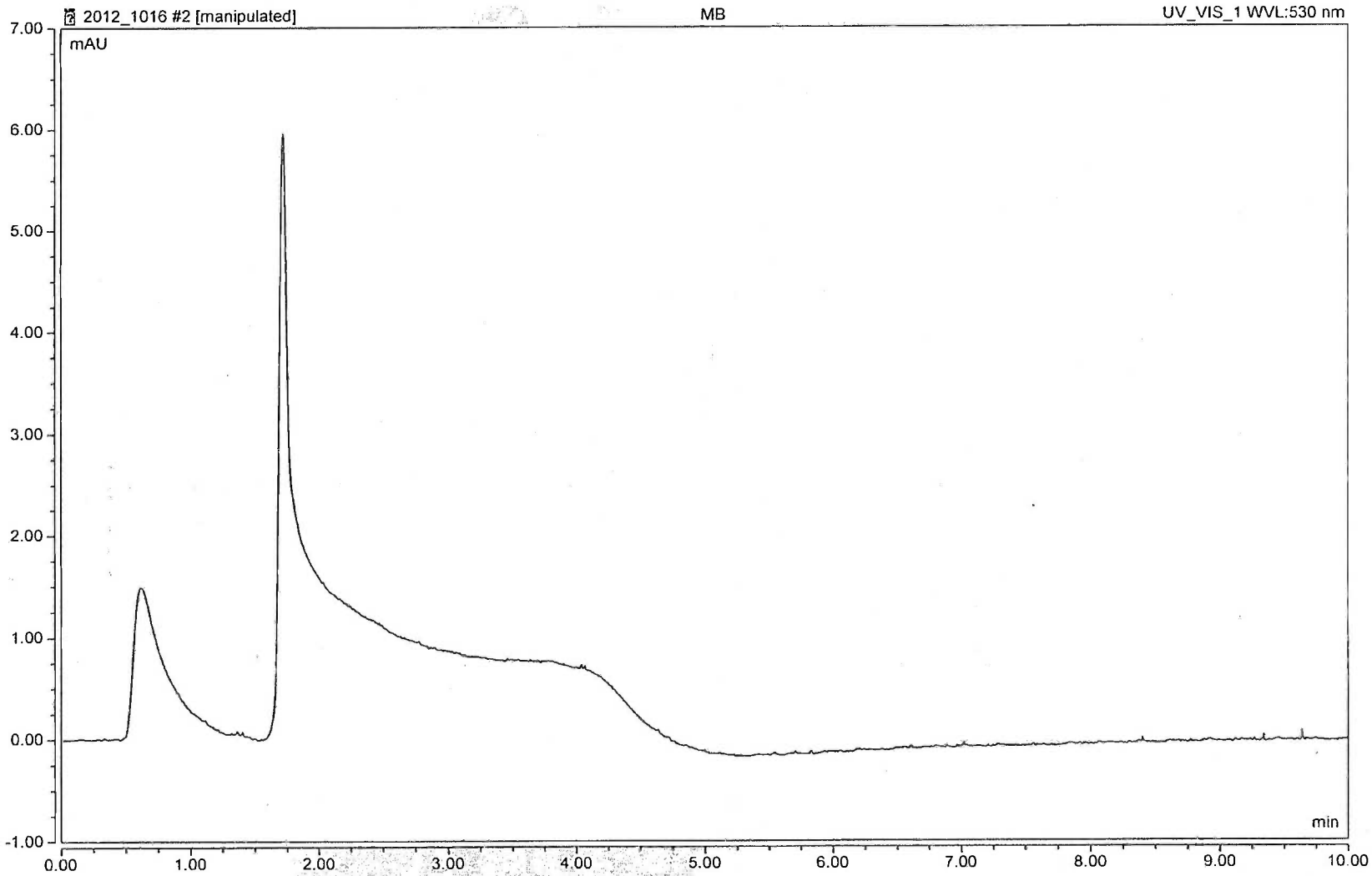
	ccb	Unknown		29	5000	AS7	AS7	Finished	10/16/2012 5:41:05 PM -07:

* Some of the peak amount can't be read due to moving the area of the UV reading (retention time), so I moved the retention time to cover the Peak area that's why covers the statement manipulated

Sequence: 2012_1016
Last Update Operator: rybechay

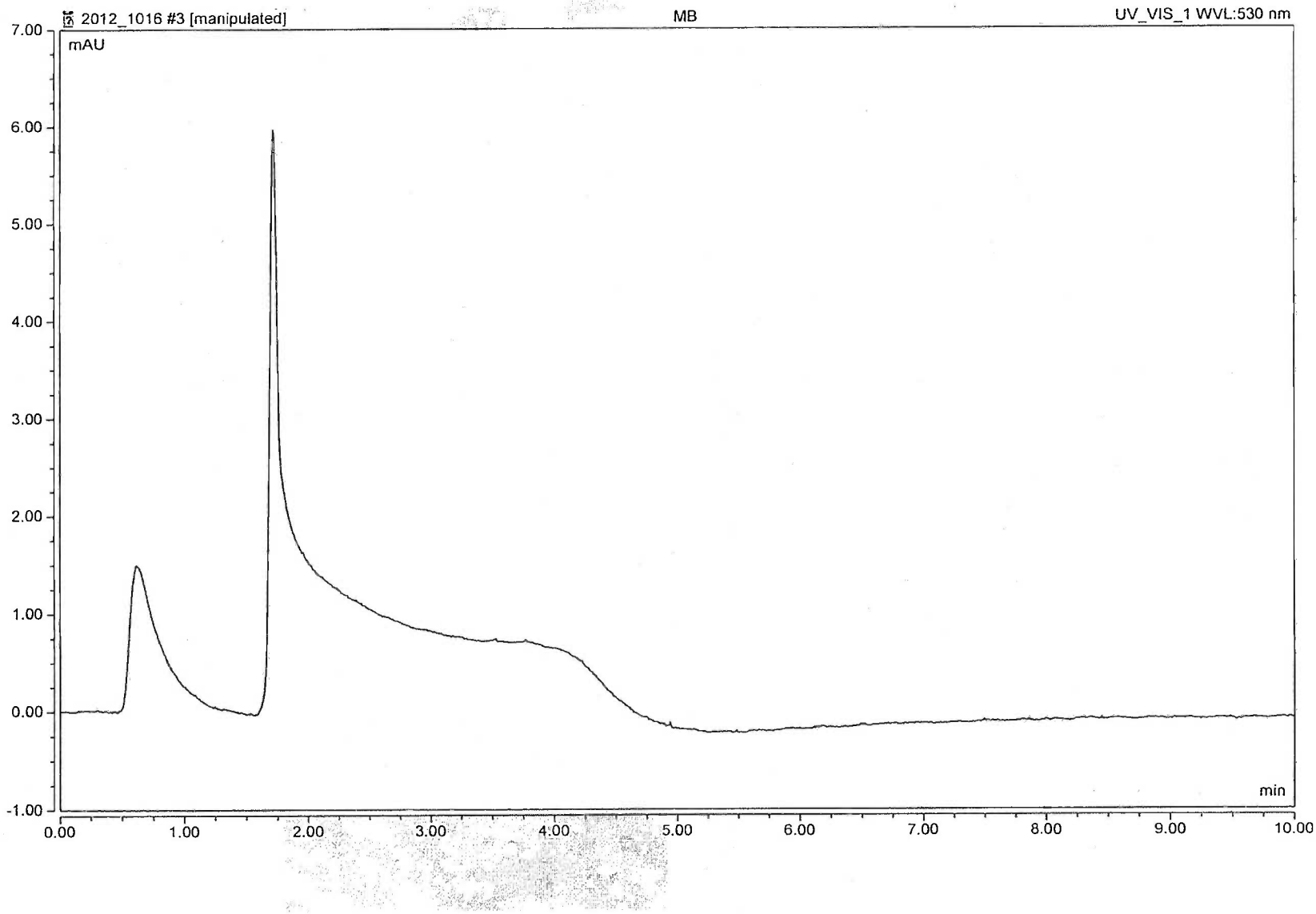
Lock Status	Weight	Dilution	IntStd	Replicate ID	Comment	Spike Group
	1.0000	1.0000	1.0000		Arcadis	
	1.0000	1.0000	1.0000			
	1.0000	1.0000	1.0000			
	1.0000	1.0000	1.0000			
	1.0000	1.0000	1.0000			
	1.0000	1.0000	1.0000			
	1.0000	1.0000	1.0000			
	1.0000	1.0000	1.0000			
	1.0000	1.0000	1.0000			
	1.0000	1.0000	1.0000			
	1.0000	1.0000	1.0000			
	1.0000	1.0000	1.0000			
	1.0000	1.0000	1.0000			
	1.0000	1.0000	1.0000			1:10
	1.0000	1.0000	1.0000			1:10
	1.0000	1.0000	1.0000			
	1.0000	1.0000	1.0000			1:10
	1.0000	1.0000	1.0000			1:10
	1.0000	1.0000	1.0000			2ppb
	1.0000	1.0000	1.0000			2ppb
	1.0000	1.0000	1.0000			
	1.0000	1.0000	1.0000			



Peak No.	Peak Name	Ret.Time min	Amount n.a.	Rel.Area %	Area mAU*min	Height mAU	Type	Width (50%) min	Asym. EP	Resol. EP	Plates EP
Maximum			0.0000	0.00	0.0000	0.00		0.000	0.00	0.00	0
Minimum			0.0000	0.00	0.0000	0.00		0.000	0.00	0.00	0
Sum			0.0000	0.00	0.0000	0.00					

Sequence: 2012_1016
Injection #3: MB

Chromatogram



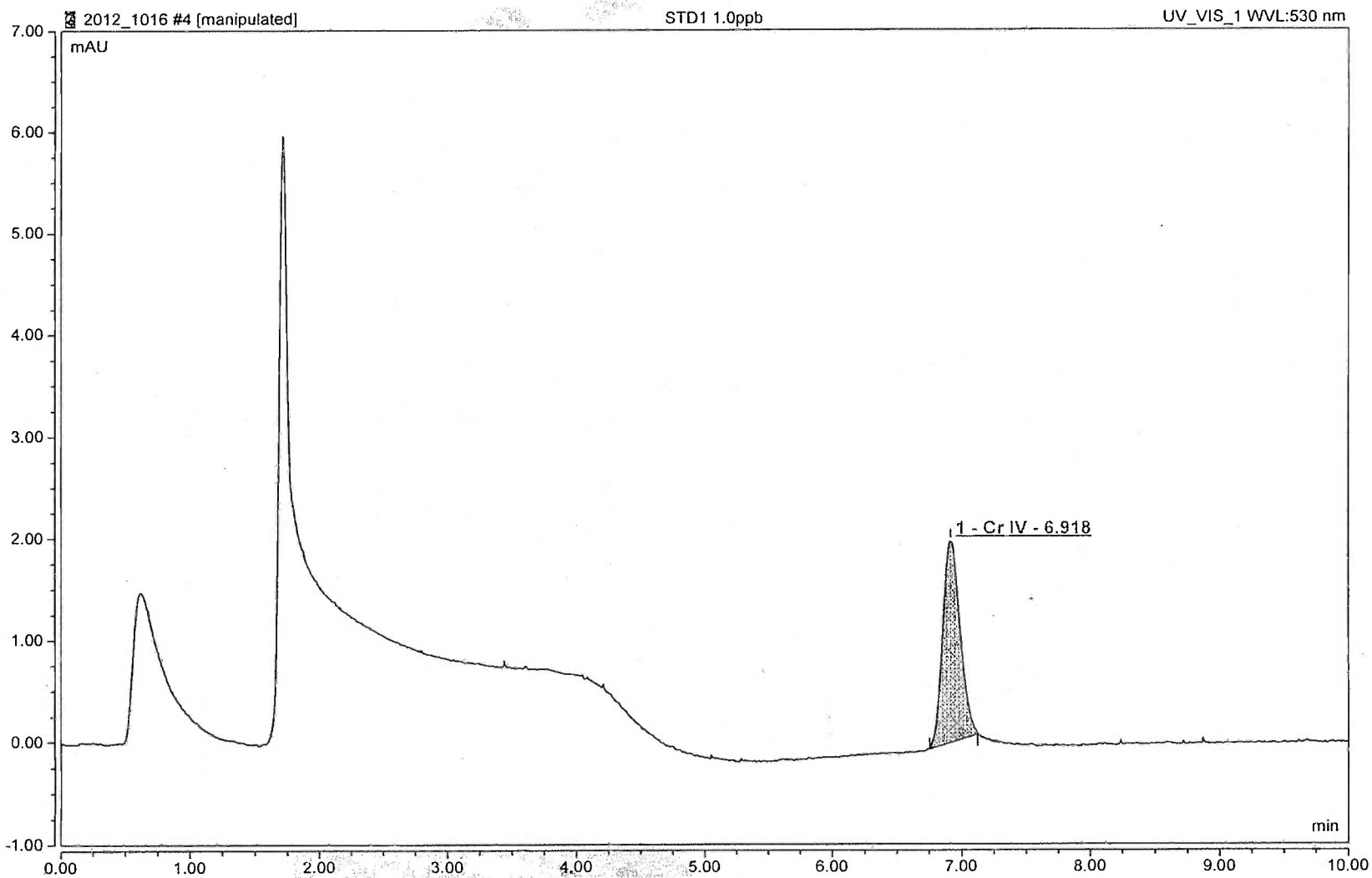
Chromeleon 7,
Version 7.1.1.1127, Dionex Corporation

Printed by rybechay
17/10/12 13:59

Peak No.	Peak Name	Ret.Time min	Amount n.a.	Rel.Area %	Area mAU*min	Height mAU	Type	Width (50%) min	Asym. EP	Resol. EP	Plates EP
Maximum			0.0000	0.00	0.0000	0.00		0.000	0.00	0.00	0
Minimum			0.0000	0.00	0.0000	0.00		0.000	0.00	0.00	0
Sum			0.0000	0.00	0.0000	0.00					

Sequence: 2012_1016
Injection #4: STD1 1.0ppb

Chromatogram



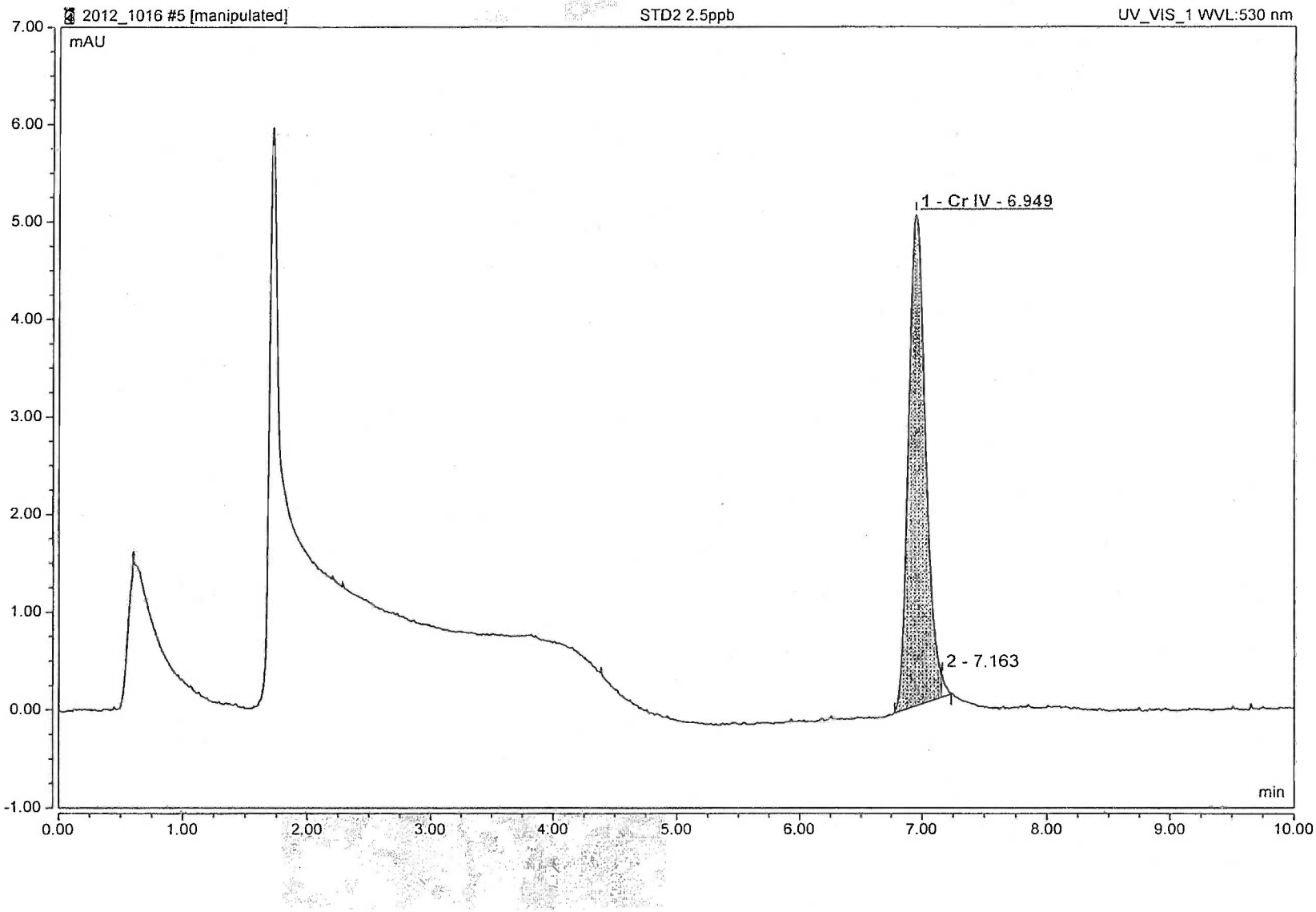
Chromeleon 7,
Version 7.1.1.1127, Dionex Corporation

Printed by rybechay
17/10/12 14:02

Peak No.	Peak Name	Ret.Time min	Amount ppb	Rel.Area %	Area mAU*min	Height mAU	Type	Width (50%) min	Asym. EP	Resol. EP	Plates EP
1	*Cr IV*	*6.918*	*0.9300*	*100.00*	*0.3075*	*1.98*	*BMB*	*0.145*	*1.17*	*n.a.*	*12621*
Maximum			**0.9300**	**100.00**	**0.3075**	**1.98**		**0.145**	**1.17**	**0.00**	**12621**
Minimum			**0.9300**	**100.00**	**0.3075**	**1.98**		**0.145**	**1.17**	**0.00**	**12621**
Sum			**0.9300**	**100.00**	**0.3075**	**1.98**					

Sequence: 2012_1016
Injection #5: STD2 2.5ppb

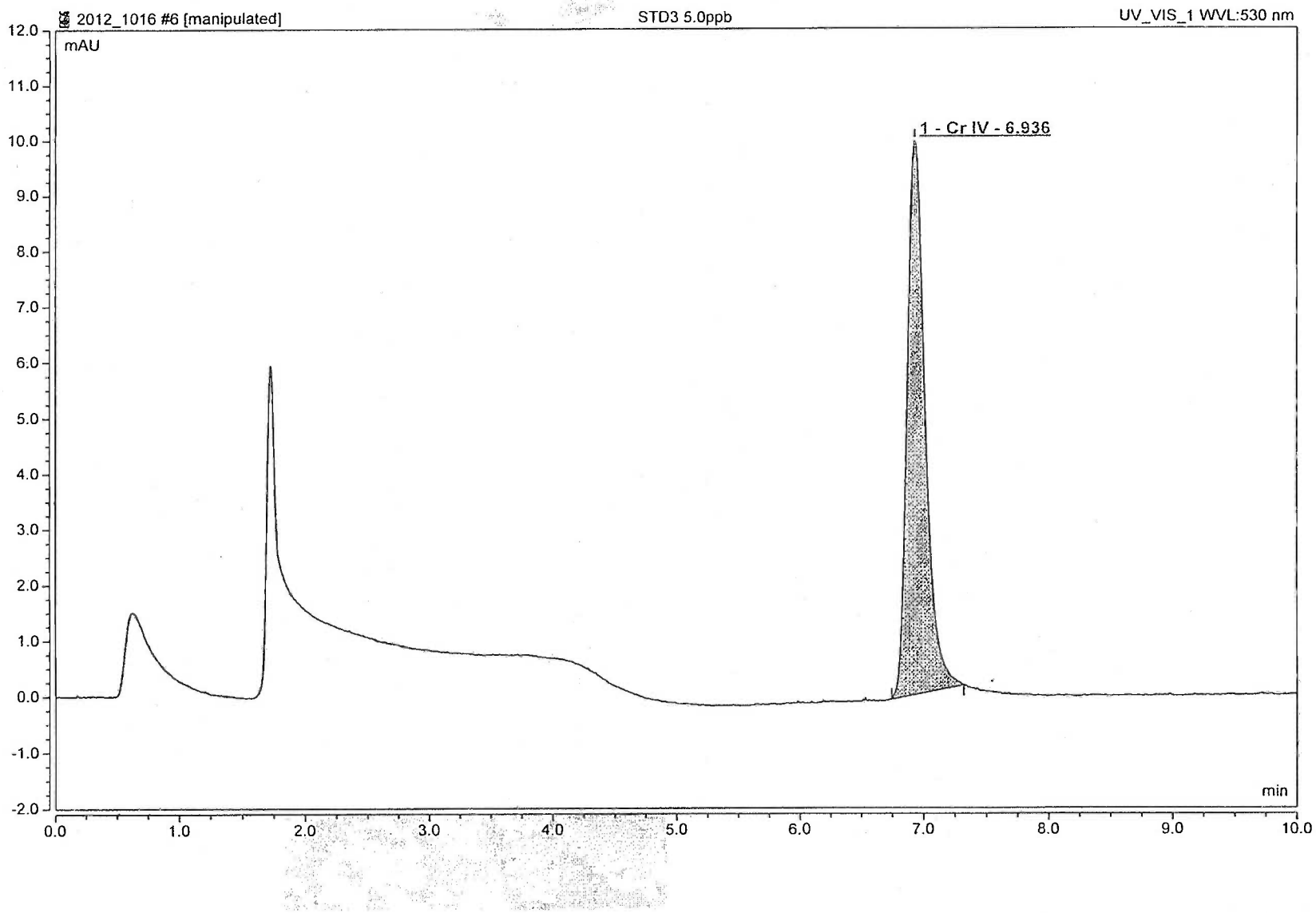
Chromatogram



Peak No.	Peak Name	Ret.Time min	Amount ppb	Rel.Area %	Area mAU*min	Height mAU	Type	Width (50%) min	Asym EP	Resol. EP	Plates EP
1	Cr IV	6.949	2.4339	99.08	0.8048	5.04	BM	0.147	1.28	n.a.	12322
2		7.163	n.a.	0.92	0.0074	0.24	MB	n.a.	n.a.	n.a.	n.a.
Maximum			2.4339	99.08	0.8048	5.04		0.147	1.28	0.00	12322
Minimum			2.4339	0.92	0.0074	0.24		0.147	1.28	0.00	12322
Sum			2.4339	100.00	0.8123	5.28					

Sequence: 2012_1016
Injection #6: STD3 5.0ppb

Chromatogram



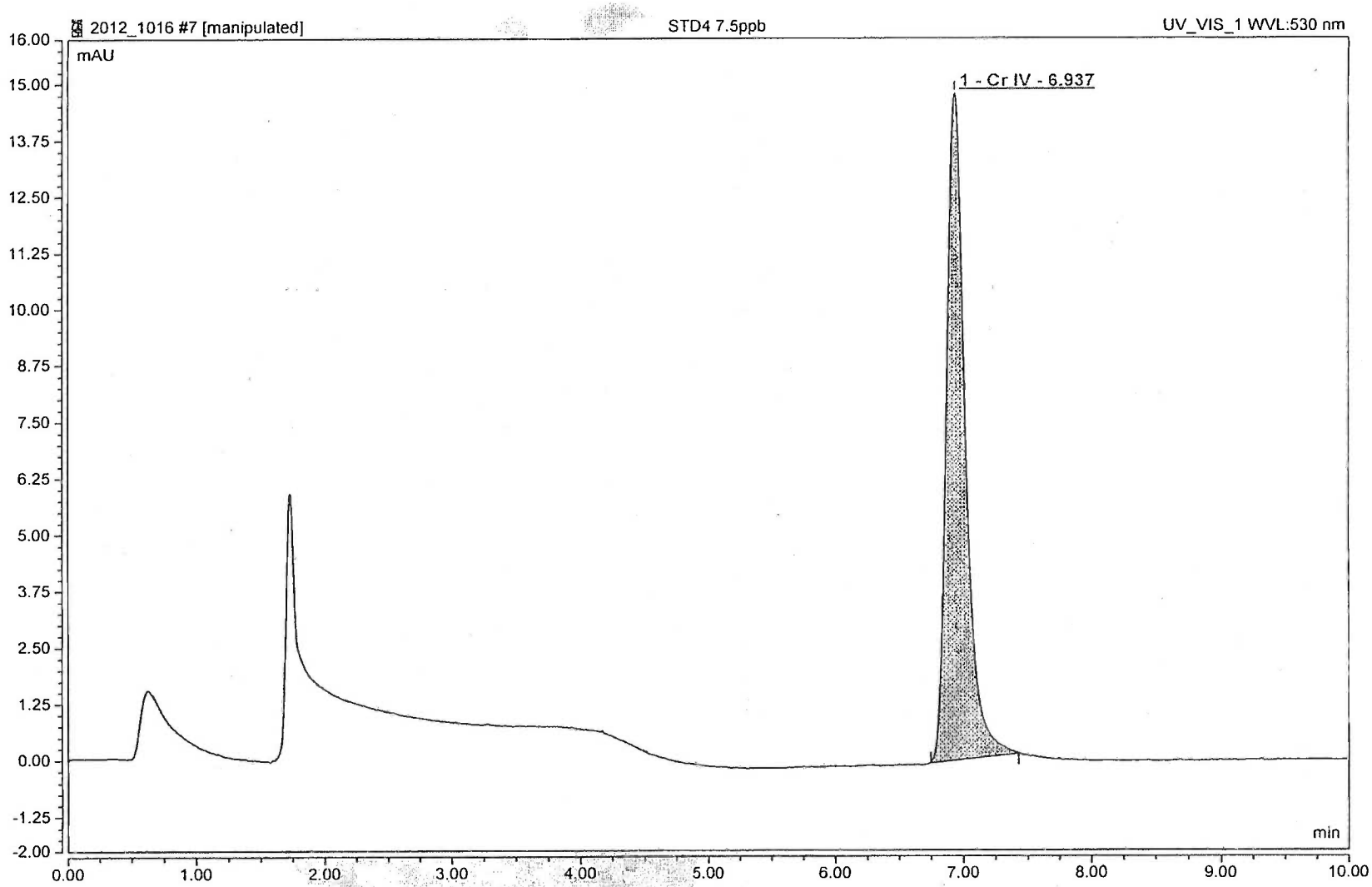
Chromeleon 7,
Version 7.1.1.1127, Dionex Corporation

Printed by rybechay
17/10/12 14:05

Peak No.	Peak Name	Ret.Time min	Amount ppb	Rel.Area %	Area mAU*min	Height mAU	Type	Width (50%) min	Asym. EP	Resol. EP	Plates EP
1	Cr IV	6.936	4.9834	100.00	1.6479	9.97	BMB	0.148	1.33	n.a	12087
Maximum			4.9834	100.00	1.6479	9.97		0.148	1.33	0.00	12087
Minimum			4.9834	100.00	1.6479	9.97		0.148	1.33	0.00	12087
Sum			4.9834	100.00	1.6479	9.97					

Sequence: 2012_1016
Injection #7: STD4 7.5ppb

Chromatogram



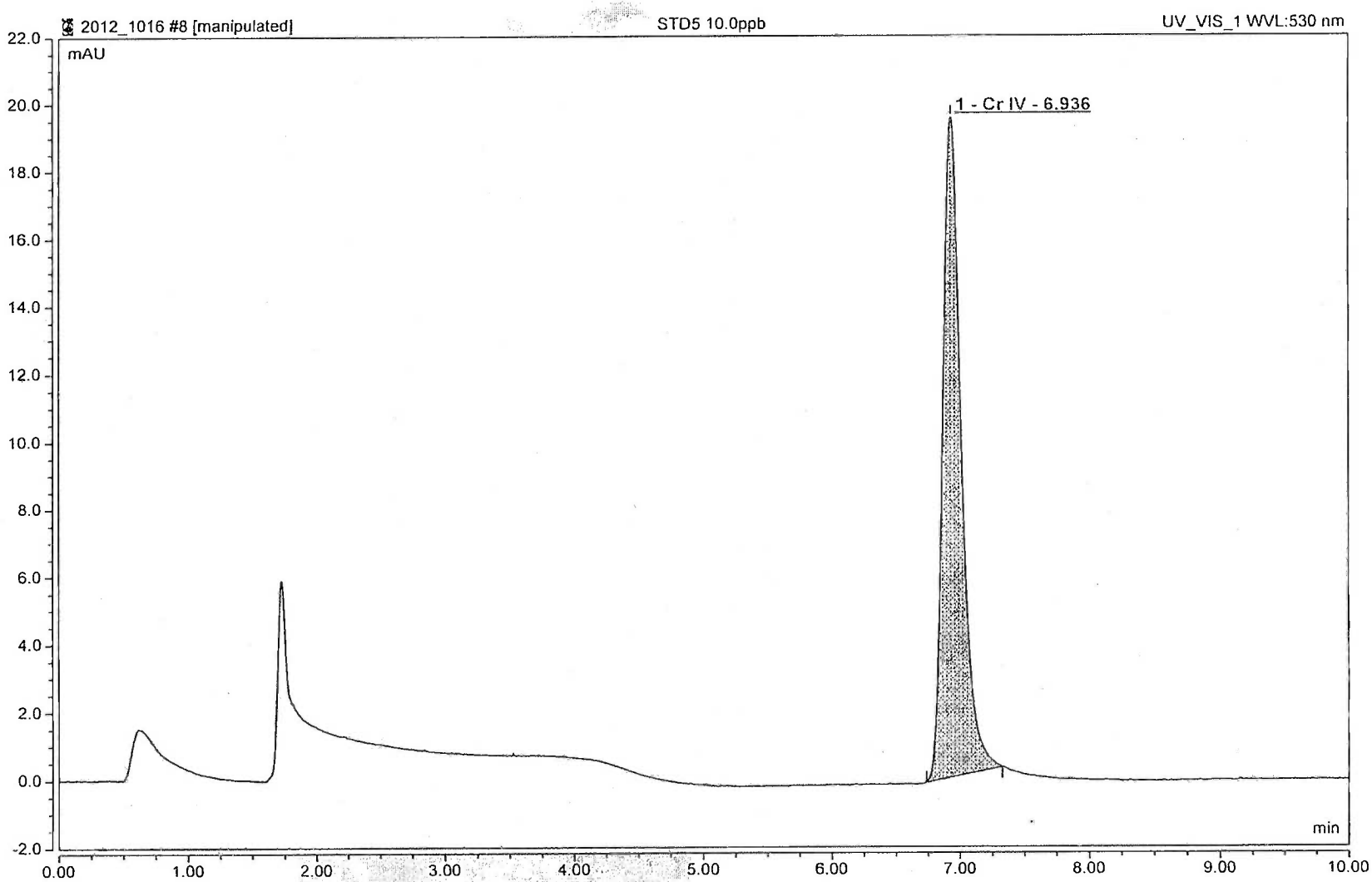
Chromeleon 7,
Version 7.1.1.1127, Dionex Corporation

Printed by rybechay
17/10/12 14:05

Peak No.	Peak Name	Ret.Time min	Amount ppb	Rel.Area %	Area mAU*min	Height mAU	Type	Width (50%) min	Asym. EP	Resol. EP	Plates EP
1	*Cr IV*	*6.937*	*7.5425*	*100.00*	*2.4941*	*14.79*	*BMB*	*0.149*	*1.36*	*n.a.*	*11963*
Maximum			7.5425	100.00	2.4941	14.79		0.149	1.36	0.00	11963
Minimum			7.5425	100.00	2.4941	14.79		0.149	1.36	0.00	11963
Sum			7.5425	100.00	2.4941	14.79					

Sequence: 2012_1016
Injection #8: STD5 10.0ppb

Chromatogram



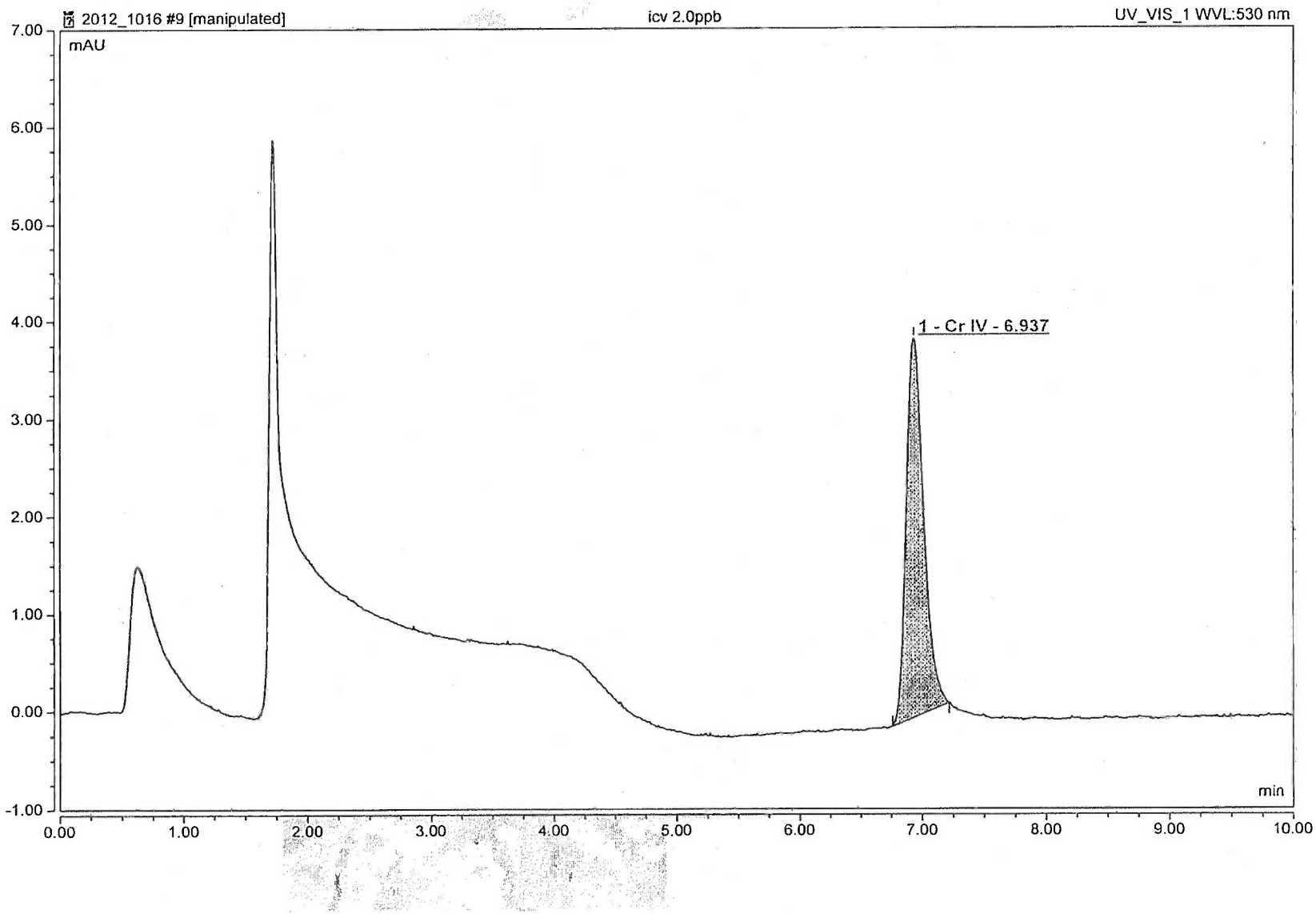
Chromeleon 7,
Version 7.1.1.1127, Dionex Corporation

Printed by rybechay
17/10/12 14:05

Peak No.	Peak Name	Ret.Time min	Amount ppb	Rel.Area %	Area mAU*min	Height mAU	Type	Width (50%) min	Asym. EP	Resol. EP	Plates EP
1	*Cr IV*	*6.936*	*9.7853*	*100.00*	*3.2358*	*19.53*	*BMB*	*0.149*	*1.32*	*n.a.*	*12083*
Maximum			**9.7853**	**100.00**	**3.2358**	**19.53**		0.149	1.32	0.00	12083
Minimum			**9.7853**	**100.00**	**3.2358**	**19.53**		**0.149**	1.32	**0.00**	**12083**
Sum			**9.7853**	**100.00**	**3.2358**	**19.53**					

Sequence: 2012_1016
Injection #9: icv 2.0ppb

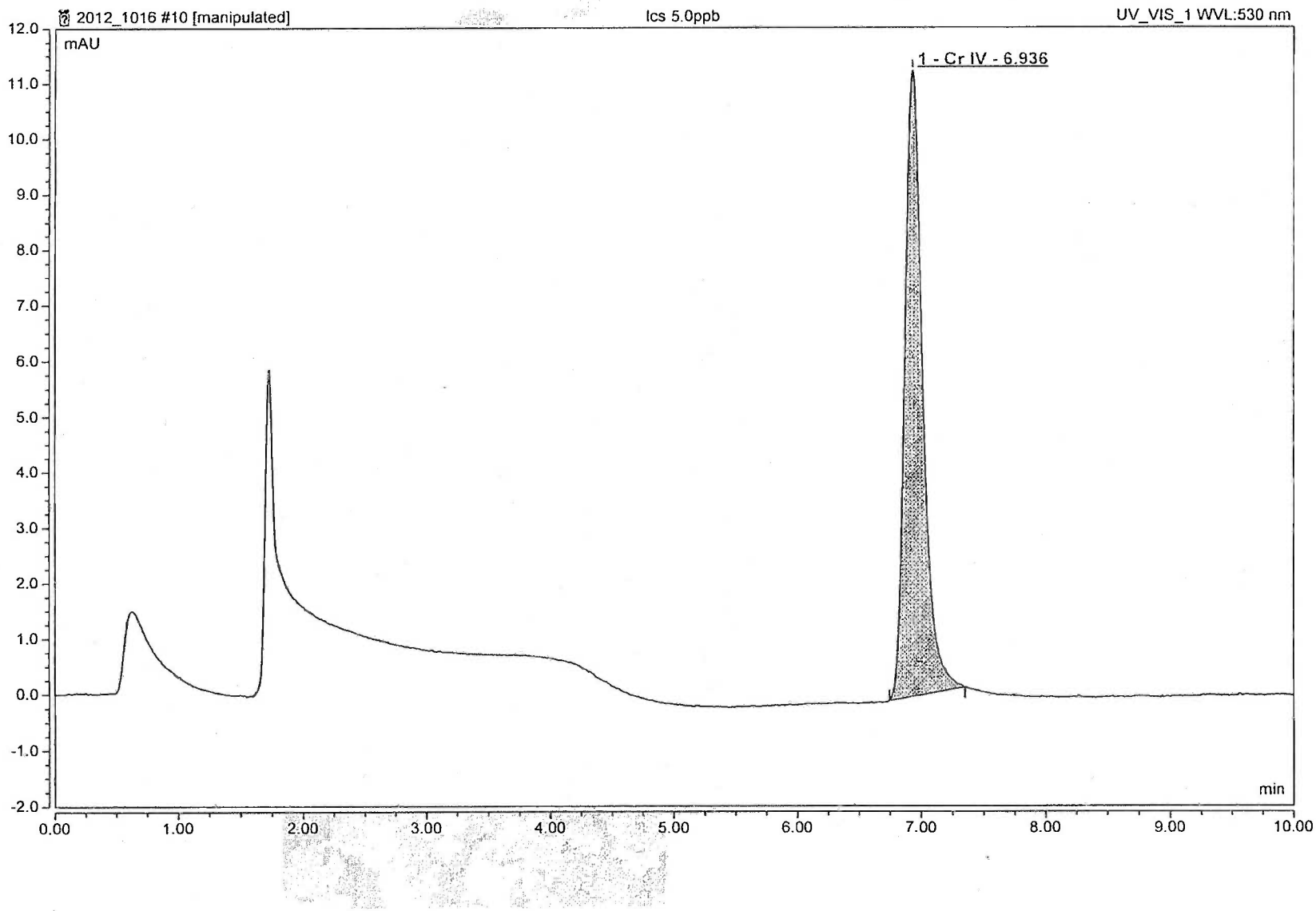
Chromatogram



Peak No.	Peak Name	Ret.Time min	Amount ppb	Rel.Area %	Area mAU*min	Height mAU	Type	Width (50%) min	Asym. EP	Reso EP	Plates EP
1	*Cr IV*	*6.937*	*1.9226*	*100.00*	*0.6358*	*3.88*	*BMB*	*0.149*	*1.28*	*n.a.*	*11985*
Maximum			**1.9226**	**100.00**	**0.6358**	**3.88**		**0.149**	**1.28**	**0.00**	**11985**
Minimum			**1.9226**	**100.00**	**0.6358**	**3.88**		**0.149**	**1.28**	**0.00**	**11985**
Sum			**1.9226**	**100.00**	**0.6358**	**3.88**					

Sequence: 2012_1016
Injection #10: lcs 5.0ppb

Chromatogram



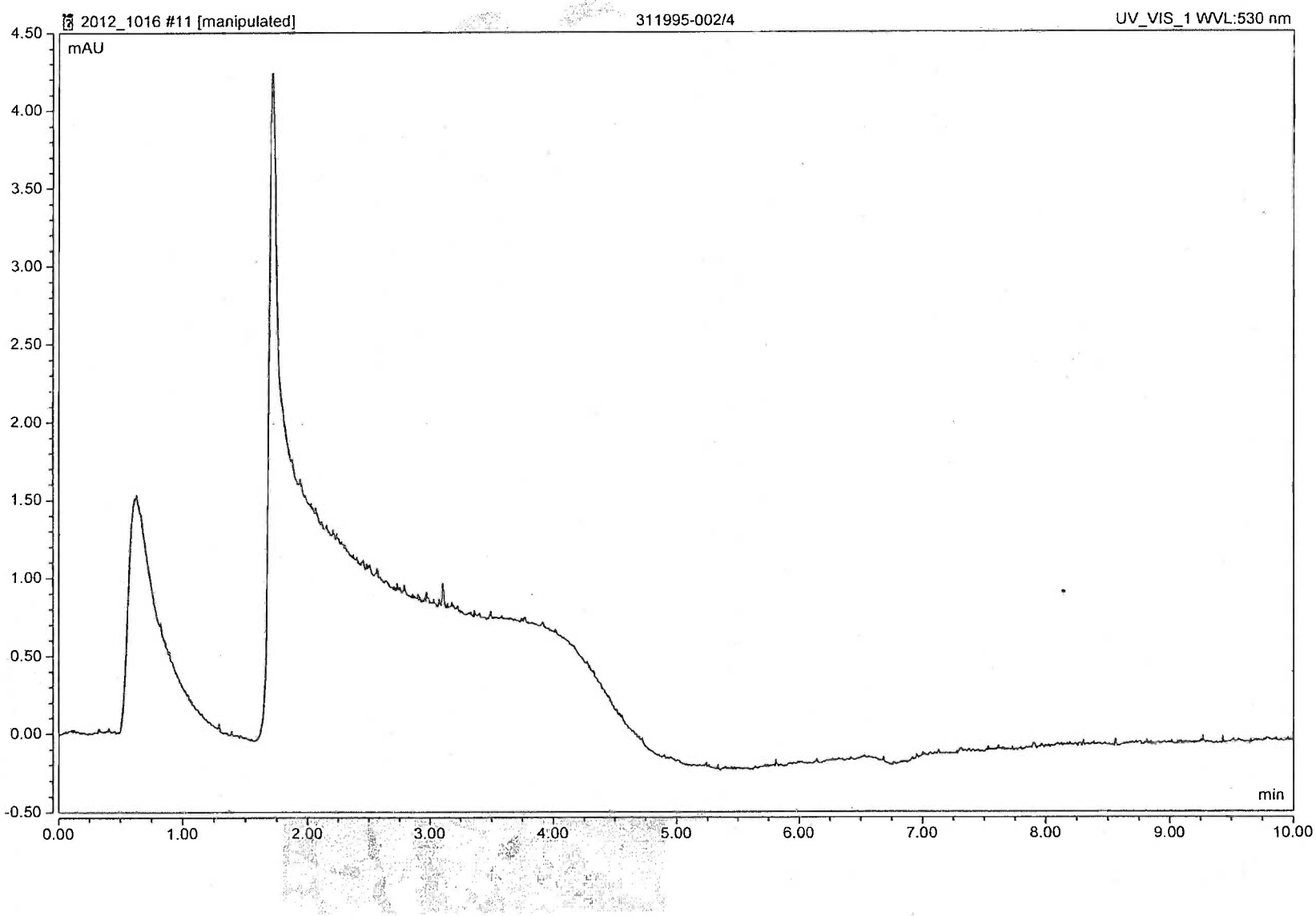
Chromeleon 7,
Version 7.1.1.1127, Dionex Corporation

Printed by rybechay
17/10/12 14:06

Peak No.	Peak Name	Ret.Time min	Amount ppb	Rel.Area %	Area mAU*min	Height mAU	Type	Width (50%) min	Asym. EP	Resol. EP	Plates EP
1	*Cr IV*	*6.936*	*5.6396*	*100.00*	*1.8649*	*11.26*	*BMB*	*0.148*	*1.33*	*n.a*	*12178*
Maximum			5.6396	100.00	1.8649	11.26		0.148	1.33	0.00	12178
Minimum			5.6396	100.00	1.8649	11.26		0.148	1.33	0.00	12178
Sum			5.6396	100.00	1.8649	11.26					

Sequence: 2012_1016
Injection #11: 311995-002/4

Chromatogram



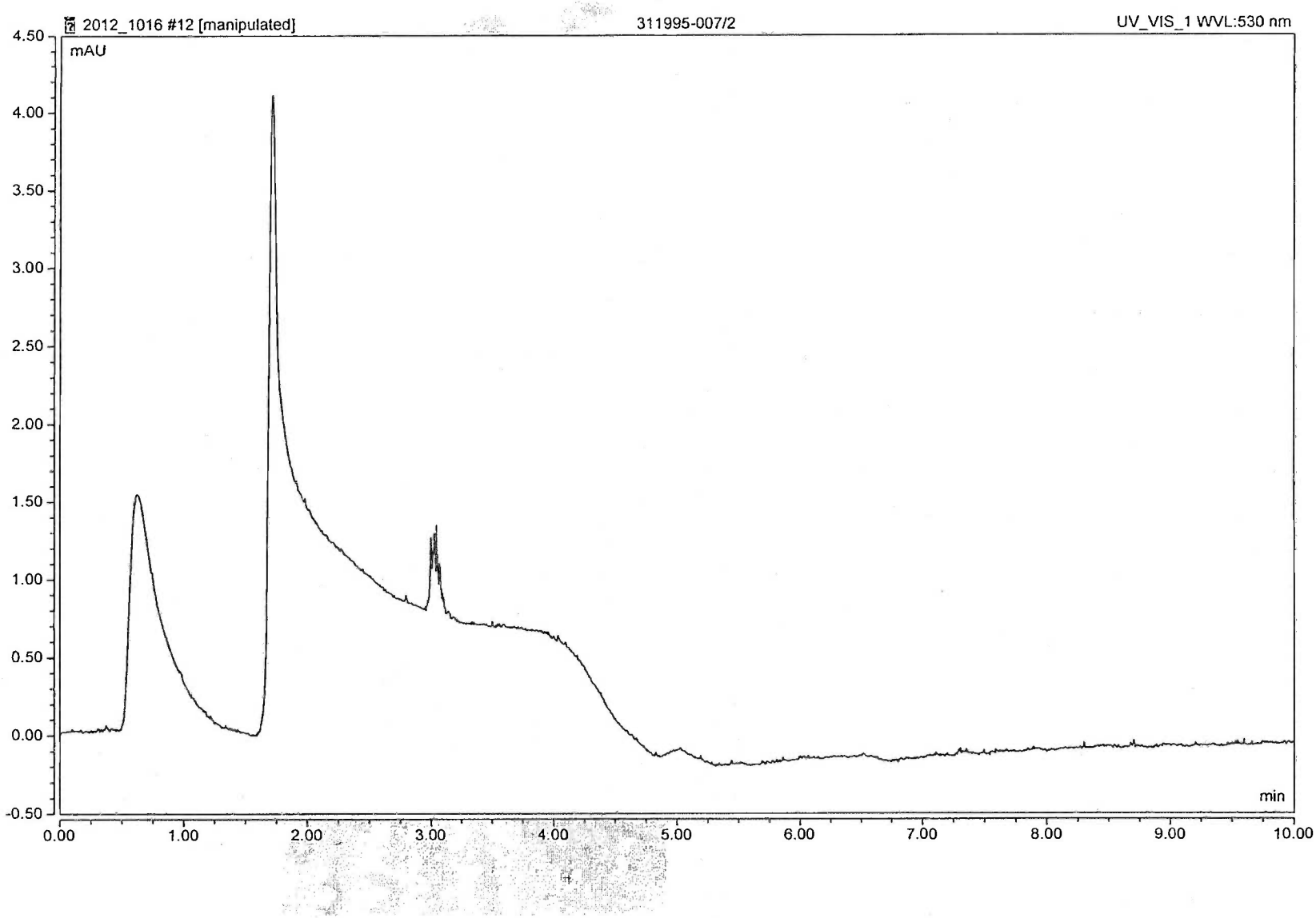
Chromeleon 7,
Version 7.1.1.1127, Dionex Corporation

Printed by rybechay
19/10/12 13:25

Peak No.	Peak Name	Ret.Time min	Amount n.a.	Rel.Area %	Area mAU*min	Height mAU	Type	Width (50%) min	Asym. EP	Resol. EP	Plates EP
Maximum			0.0000	0.00	0.0000	0.00		0.000	0.00	0.00	0
Minimum			0.0000	0.00	0.0000	0.00		0.000	0.00	0.00	0
Sum			0.0000	0.00	0.0000	0.00					

Sequence: 2012_1016
Injection #12: 311995-007/2

Chromatogram



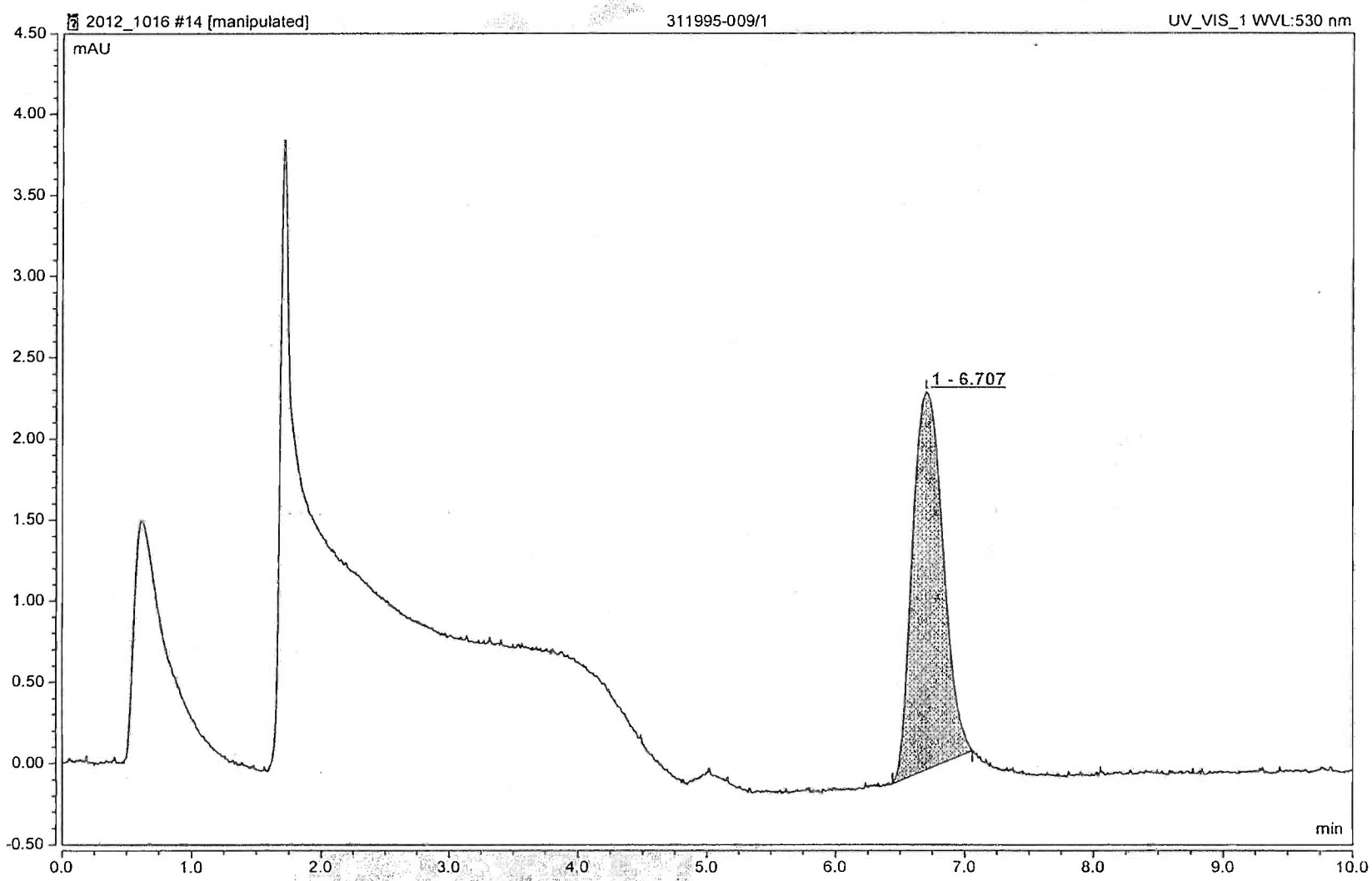
Chromeleon 7,
Version 7.1.1.1127, Dionex Corporation

Printed by rybechay
19/10/12 13:25

Peak No.	Peak Name	Ret.Time min	Amount n.a.	Rel.Area %	Area mAU*min	Height mAU	Type	Width (50%) min	Asym EP	Resol. EP	Plates EP
Maximum			0.0000	0.00	0.0000	0.00		0.000	0.00	0.00	0
Minimum			0.0000	0.00	0.0000	0.00		0.000	0.00	0.00	0
Sum			0.0000	0.00	0.0000	0.00					

Sequence: 2012_1016
Injection #14: 311995-009/1

Chromatogram



Chromeleon 7,
Version 7.1.1.1127, Dionex Corporation

Printed by rybechay
17/10/12 14:07