Instrument Calibration Log

Summer 2006

1394

FIELD INSTRUMENT CALIBRATION LOG

ARCADIS

1 August 2006

ARCADIS Project Name: Terrebonne Water Sampling

Project Number: RN0 06104.0001.LA001

Field Calibration by: LWF

Instrument Source

YSI 6820 Type of Instrument	Manufacturer	Model Number	Time	Standard Concentration	Calibrated Reading	Remarks
pH Meter			8:18	4.00 s.u.	4.08	
			8:18	7.00 s.u.	6.86	
				10.00 s.u.		
				4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
				4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
Conductivity Meter			8:18 1,413	~~3,000~~ µmhos/cm	1395	
				5,000 µmhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 umhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 µmhos/cm		
				30,000 µmhos/cm		
Dissolved Oxygen Calibrate to Water-Saturated Air	YSI 6820	6820	8:18 Am	mm Hg	101.096	
				mm Hg		
				mm Hg		
Turbidimeter				0 NTU	~~5~~	91.7
				100 NTU	102.1	
				NTU		
ORP				150 MV		
				150 MV		
				150 MV		

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FIELD INSTRUMENT CALIBRATION LOG

ARCADIS

2 August 2006

ARCADIS Project Name: Terrebonne Water Sampling

Project Number: RN006104.0001.LA001

Field Calibration by: LWF

Instrument Source

YSI 6820 Type of Instrument	Manufacturer	Model Number	Time	Standard Concentration	Calibrated Reading	Remarks
pH Meter			7:55	4.00 s.u.	4.03	
			7:55	7.00 s.u.	6.96	
				10.00 s.u.		
				4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
				4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
Conductivity Meter		7:55AM		1413 ~~3,000~~ µmhos/cm	1401	
				5,000 µmhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 umhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 µmhos/cm		
				30,000 µmhos/cm		
Dissolved Oxygen Calibrate to Water-Saturated Air				768.9 mm Hg	101.2%	
				mm Hg		
				mm Hg		
Turbidimeter			7:55	0 NTU	-95.6	
				100 NTU	106.9	
				NTU		
ORP				150 MV		
				150 MV		
				150 MV		

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ARCADIS

3 August 2006

FIELD INSTRUMENT CALIBRATION LOG

ARCADIS Project Name: Terrebonne Water Sampling

Project Number: RN006104.0001.LA001

Field Calibration by: LWF

Instrument Source

45F 6820 Type of Instrument	Manufacturer	Model Number	Time	Standard Concentration	Calibrated Reading	Remarks
pH Meter			7:46	4.00 s.u.	4.01	
			7:46	7.00 s.u.	7.03	
				10.00 s.u.		
				4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
				4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
Conductivity Meter			7:46	1413 ~~3,000~~ µmhos/cm	1391	
				5,000 µmhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 umhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 µmhos/cm		
				30,000 µmhos/cm		
Dissolved Oxygen Calibrate to Water-Saturated Air				768.5 mm Hg	101.19	
				mm Hg		
				mm Hg		
Turbidimeter			7:46	0 NTU	~~0.7~~	1.2
			7:46	100 NTU		97.2
				NTU		
ORP				150 MV		
				150 MV		
				150 MV		

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FIELD INSTRUMENT CALIBRATION LOG

ARCADIS

Pine # 05887 → 04C4785

ARCADIS Project Name: Terrebonne Water Sampling

Project Number: RN006104.0001.LA001

Field Calibration by: Caleb Fontenot

Instrument Source: Pine Environmental

Type of Instrument	Manufacturer	Model Number	Time	Standard Concentration	Calibrated Reading	Remarks
pH Meter	YSI	6820	1420	4.00 s.u.	4.11	
				7.00 s.u.	6.99	
				10.00 s.u.		
				4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
				4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
Conductivity Meter				4.00 ~~3,000~~ µmhos/cm	4.33	
				5,000 µmhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 umhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 µmhos/cm		
				30,000 µmhos/cm		
Dissolved Oxygen Calibrate to Water-Saturated Air				778.7 mm Hg	9.85	Large air bubble under membrane
				mm Hg		
				mm Hg		
Turbidimeter				~~778.7~~ NTU		
				20.0 NTU	2.0	
				100 NTU	100.3	
ORP				150 MV		
				150 MV		
				150 MV		

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FIELD INSTRUMENT CALIBRATION LOG

ARCADIS

Pine # 06710, 05 81 495AD

ARCADIS Project Name: Terrebonne Water Sampling

Project Number: RN006104.0001.LA001

Field Calibration by:

Instrument Source: Pin Environmental

Type of Instrument	Manufacturer	Model Number	Time	Standard Concentration	Calibrated Reading	Remarks
pH Meter	YSI	6920	1415	4.00 s.u.	4.12	Temp = 21.95
				7.00 s.u.	7.00	
				10.00 s.u.		
				4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
				4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
Conductivity Meter				4.49 mS ~~5,000 µmhos/cm~~	4.53 mS	
				5,000 µmhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 µmhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 µmhos/cm		
				30,000 µmhos/cm		
Dissolved Oxygen Calibrate to Water-Saturated Air				778.5 mm Hg	10.05 mg/L	
				mm Hg		
				mm Hg		
Turbidimeter				0.0 NTU	2.3	
				100 NTU	98.0	
				NTU		
ORP				150 MV		
				150 MV		
				150 MV		

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FIELD INSTRUMENT CALIBRATION LOG

ARCADIS

8/14/06

ARCADIS Project Name: Terrebonne Water Sampling

Project Number: RN006104.0001.LA001

Field Calibration by: C.F.

Instrument Source Pine Environmental

Type of Instrument	Manufacturer	Model Number	Time	Standard Concentration	Calibrated Reading	Remarks
pH Meter	YSI	6920 05865	1350	4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
				4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
				4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
Conductivity Meter				3,000 µmhos/cm		
				5,000 µmhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 umhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 µmhos/cm		
				30,000 µmhos/cm		
Dissolved Oxygen Calibrate to Water-Saturated Air				mm Hg		
				mm Hg		
				mm Hg		
Turbidimeter				NTU		
				NTU		
				NTU		
ORP				150 MV		
				150 MV		
				150 MV		

FIELD INSTRUMENT CALIBRATION LOG

ARCADIS

3/14/06

ARCADIS Project Name: Terrebonne Water Sampling

Project Number: RN006104.0001.LA001

Field Calibration by: C Fontenot

Instrument Source

Type of Instrument	Manufacturer	Model Number	Time	Standard Concentration	Calibrated Reading	Remarks
pH Meter	YSI	6920 0844	1350	4.00 s.u.	4.01	
				7.00 s.u.	6.94	
				10.00 s.u.		
				4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
				4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
Conductivity Meter			4.49	~~5,000~~ 35,000 µmhos/cm	4.41	
				5,000 µmhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 umhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 µmhos/cm		
				30,000 µmhos/cm		
Dissolved Oxygen Calibrate to Water-Saturated Air				779.9 mm Hg	8.06 mg/L	
				mm Hg		
				mm Hg		
Turbidimeter				0.0 NTU	2.5	
				100 NTU	100.9	
				NTU		
ORP				150 MV		
				150 MV		
				150 MV		

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FIELD INSTRUMENT CALIBRATION LOG

ARCADIS

8/14/06

ARCADIS Project Name: Terrebonne Water Sampling

Project Number: RN006104.0001.LA001

Field Calibration by: O.F.

Instrument Source Pine Environmental

Type of Instrument	Manufacturer	Model Number	Time	Standard Concentration	Calibrated Reading	Remarks
pH Meter	YSI	6920 01833	1300	4.00 s.u.	3.95	
				7.00 s.u.	6.70	
				10.00 s.u.		
				4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
				4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
Conductivity Meter			4.49	~~3,000~~ µmhos/cm	4.47	
				5,000 µmhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 umhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 µmhos/cm		
				30,000 µmhos/cm		
Dissolved Oxygen Calibrate to Water-Saturated Air				779.8 mm Hg	8.97 mg/L	
				mm Hg		
				mm Hg		
Turbidimeter				~~779.8~~ NTU	~~9.01~~	
				0.0 NTU	1.4	
				100 NTU	95.9	
ORP				150 MV		
				150 MV		
				150 MV		

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FIELD INSTRUMENT CALIBRATION LOG

ARCADIS

8/14/06

ARCADIS Project Name: Terrebonne Water Sampling

Project Number: RN006104.0001.LA001

Field Calibration by: CF

Instrument Source: Pine Environmental

Type of Instrument	Manufacturer	Model Number	Time	Standard Concentration	Calibrated Reading	Remarks
pH Meter	YSI	6920 05452	1420	4.00 s.u.	4.38	
				7.00 s.u.		4.65 * pH bulb Broken
				10.00 s.u.		
				4.00 s.u.		
				7.00 s.u.		C-5 Sonde
				10.00 s.u.		
				4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
Conductivity Meter				44 µmhos/cm	3.60	
				5,000 µmhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 umhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 µmhos/cm		
				30,000 µmhos/cm		
Dissolved Oxygen Calibrate to Water-Saturated Air				779.7 mm Hg	8.99 mg/L	
				mm Hg		
				mm Hg		
Turbidimeter				0.0 NTU	3.9	
				100.0 NTU	98.4	
				NTU		
ORP				150 MV		
				150 MV		
				150 MV		

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FIELD INSTRUMENT CALIBRATION LOG

ARCADIS

8/14/06

ARCADIS Project Name: Terrebonne Water Sampling

Project Number: RN006104.0001.LA001

Field Calibration by: CF

Instrument Source Pine Environmental

Type of Instrument	Manufacturer	Model Number	Time	Standard Concentration	Calibrated Reading	Remarks
pH Meter	YSI	6920 06545	1445	4.00 s.u.	3.70	
				7.00 s.u.	6.73	
				10.00 s.u.		
				4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
				4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
Conductivity Meter				4.48 ~~3,000~~ µmhos/cm	4.30	
				5,000 µmhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 umhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 µmhos/cm		
				30,000 µmhos/cm		
Dissolved Oxygen Calibrate to Water-Saturated Air				779.4 mm Hg	8.46mg/L	
				mm Hg		
				mm Hg		
Turbidimeter				0.0 NTU	3.3	
				100 NTU	91.6	
				NTU		
ORP				150 MV		
				150 MV		
				150 MV		

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FIELD INSTRUMENT CALIBRATION LOG

ARCADIS

8/14/06

ARCADIS Project Name: Terrebonne Water Sampling

Project Number: RN006104.0001.LA001

Field Calibration by: C.F.

Instrument Source: Pine Environmental

Type of Instrument	Manufacturer	Model Number	Time	Standard Concentration	Calibrated Reading	Remarks
pH Meter	YSI	6920 07731	1600	4.00 s.u.	4.19	21.72°
				7.00 s.u.	6.99	
				10.00 s.u.		
				4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
				4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
Conductivity Meter				4.49 ~~3,000~~ µmhos/cm		
				5,000 µmhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 umhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 µmhos/cm		
				30,000 µmhos/cm		
Dissolved Oxygen Calibrate to Water-Saturated Air				774.2 mm Hg	9.84 mg/L	
				mm Hg		
				mm Hg		
Turbidimeter				0.0 NTU	3.2	
				100 NTU	103.3	
				NTU		
ORP				150 MV		
				150 MV		
				150 MV		

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FIELD INSTRUMENT CALIBRATION LOG

ARCADIS

8/14/06

ARCADIS Project Name: Terrebonne Water Sampling

Project Number: RN006104.0001.LA001

Field Calibration by: CF

Instrument Source Pine Environmental

Type of Instrument	Manufacturer	Model Number	Time	Standard Concentration	Calibrated Reading	Remarks
pH Meter	YSI	6920 2677	1510	4.00 s.u.	4.09	
				7.00 s.u.	7.04	
				10.00 s.u.		
				4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
				4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
Conductivity Meter				4.49 ~~3,000~~ µmhos/cm	4.15	
				5,000 µmhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 umhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 µmhos/cm		
				30,000 µmhos/cm		
Dissolved Oxygen Calibrate to Water-Saturated Air				779.2 mm Hg	9.31 mg/L	
				mm Hg		
				mm Hg		
Turbidimeter				0.0 NTU	3.1	
				100 NTU	97.9	
				NTU		
ORP				150 MV		
				150 MV		
				150 MV		

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FIELD INSTRUMENT CALIBRATION LOG

ARCADIS

8/14/06

ARCADIS Project Name: Terrebonne Water Sampling

Project Number: RN006104.0001.LA001

Field Calibration by: CF

Instrument Source: Pine Environmental

Type of Instrument	Manufacturer	Model Number	Time	Standard Concentration	Calibrated Reading	Remarks
pH Meter	YSI	6920 05311	1520	4.00 s.u.	4.00	
				7.00 s.u.	6.95	
				10.00 s.u.		
				4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
				4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
Conductivity Meter				4.49 ~~3,000~~ µmhos/cm	3.80	
				5,000 µmhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 umhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 µmhos/cm		
				30,000 µmhos/cm		
Dissolved Oxygen Calibrate to Water-Saturated Air				779.1 mm Hg	9.17	
				mm Hg		
				mm Hg		
Turbidimeter				0.0 NTU	1.5	
				100 NTU	104.7	
				NTU		
ORP				150 MV		
				150 MV		
				150 MV		

FIELD INSTRUMENT CALIBRATION LOG

ARCADIS

8/14/06

ARCADIS Project Name: Terrebonne Water Sampling

Project Number: RN0016104.0001.LA001

Field Calibration by: OF

Instrument Source: Pine ENVIRONMental

Type of Instrument	Manufacturer	Model Number	Time	Standard Concentration	Calibrated Reading	Remarks
pH Meter	YSI	6920 06710	1540	4.00 s.u.	4.20	
				7.00 s.u.	7.04	
				10.00 s.u.		
				4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
				4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
Conductivity Meter				4.49 ~~8,000~~ µmhos/cm	4.33	
				5,000 µmhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 umhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 µmhos/cm		
				30,000 µmhos/cm		
Dissolved Oxygen Calibrate to Water-Saturated Air				7790 mm Hg	10.16	
				mm Hg		
				mm Hg		
Turbidimeter				~~779.0 NTU~~	~~10.16~~	
				0.0 NTU	3.5	
				100 NTU	96.8	
ORP				150 MV		
				150 MV		
				150 MV		

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FIELD INSTRUMENT CALIBRATION LOG

ARCADIS

ARCADIS Project Name: Terrebonne Water Sampling

Project Number: RN006104.0001.LA001

Field Calibration by:

Instrument Source

Type of Instrument	Manufacturer	Model Number	Time	Standard Concentration	Calibrated Reading	Remarks
pH Meter	YSI	6920 05087		4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
				4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
				4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
Conductivity Meter				3,000 µmhos/cm		
				5,000 µmhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 umhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 µmhos/cm		
				30,000 µmhos/cm		
Dissolved Oxygen Calibrate to Water-Saturated Air				mm Hg		
				mm Hg		
				mm Hg		
Turbidimeter				NTU		
				NTU		
				NTU		
ORP				150 MV		
				150 MV		
				150 MV		

FIELD INSTRUMENT CALIBRATION LOG

ARCADIS

ARCADIS Project Name: Terrebonne Water Sampling

Project Number: RN 006104.0001.LA001

Field Calibration by:

Instrument Source

Type of Instrument	Manufacturer	Model Number	Time	Standard Concentration	Calibrated Reading	Remarks
pH Meter	YSI	6920 L194		4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
				4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
				4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
Conductivity Meter				3,000 µmhos/cm		
				5,000 µmhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 umhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 µmhos/cm		
				30,000 µmhos/cm		
Dissolved Oxygen Calibrate to Water-Saturated Air				mm Hg		
				mm Hg		
				mm Hg		
Turbidimeter				NTU		
				NTU		
				NTU		
ORP				150 MV		
				150 MV		
				150 MV		

FIELD INSTRUMENT CALIBRATION LOG

ARCADIS

ARCADIS Project Name: Terrebonne Water Sampling

Project Number: RN006104.0001.LA001

Field Calibration by:

Instrument Source

Type of Instrument	Manufacturer	Model Number	Time	Standard Concentration	Calibrated Reading	Remarks
pH Meter				4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
				4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
				4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
Conductivity Meter				3,000 µmhos/cm		
				5,000 µmhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 umhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 µmhos/cm		
				30,000 µmhos/cm		
Dissolved Oxygen Calibrate to Water-Saturated Air				mm Hg		
				mm Hg		
				mm Hg		
Turbidimeter				NTU		
				NTU		
				NTU		
ORP				150 MV		
				150 MV		
				150 MV		

FIELD INSTRUMENT CALIBRATION LOG

ARCADIS

ARCADIS Project Name: Terrebonne Water Sampling

Project Number: RN00161041.0001.LA000

Field Calibration by:

Instrument Source

Type of Instrument	Manufacturer	Model Number	Time	Standard Concentration	Calibrated Reading	Remarks
pH Meter				4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
				4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
				4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
Conductivity Meter				3,000 µmhos/cm		
				5,000 µmhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 umhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 µmhos/cm		
				30,000 µmhos/cm		
Dissolved Oxygen Calibrate to Water-Saturated Air				mm Hg		
				mm Hg		
				mm Hg		
Turbidimeter				NTU		
				NTU		
				NTU		
ORP				150 MV		
				150 MV		
				150 MV		

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866-981-7463(Toll-Free)
713-981-6283(Phone)
713-981-7466(Fax)
pine-tx@pine-environmental.com

Certificate of YSI Calibration

This is to certify that the YSI 6920 Serial Number 06G2068AB was calibrated with standard units traceable to manufacturer's specification

Model: 6920
Pine No: 7731
Serial No: 06G2068AB

lot Number:G798-0rp

Calibration Standard	Instrument Output	Allowable Range	% Difference
Redox: 240mv	240mv	228-252 mv	0%

lot Number:2503365

Calibration Standard	Instrument Output	Allowable Range	% Difference
PH-Zero1: 7PH	7PH	6.65-7.35 PH	0%

lot Number:2509214-cond

Calibration Standard	Instrument Output	Allowable Range	% Difference
Conductivity-Span1: 1413ms/cm	1413ms/cm	1342.35-1483.65 ms/cm	0%

lot Number:5065-auto

Calibration Standard	Instrument Output	Allowable Range	% Difference
Turbidity-Zero1: 0NTU	0NTU	0-0 NTU	0%
PH-Span1: 4PH	4PH	3.8-4.2 PH	0%
Conductivity-Span1: 4.49ms/cm	4.49ms/cm	4.27-4.71 ms/cm	0%

lot Number:2885-100

Calibration Standard	Instrument Output	Allowable Range	% Difference
Turbidity-Span1: 100NTU	100NTU	95-105 NTU	0%

Temprature DO Chart:

Water Temperature (C)	DO(mg/L)	Result
22	8.53	8.66

Environmental Conditions of Test Area:

Temprature Degree F: %Relative Humidity

Calibrated By: James Logan **Date:** 8/4/2006 6:03:00 PM

All instrument are calibrated according to manufacturer's specifications

Customer must notify PES of any defect within 24 hours of receipt of equipment
Please call 866-981-7463 for Technical Assistance

See Attach Packing List

Pine Environmental Services, Inc

10611 Harwin Drive, Suite 416, Houston, TX 77036
866-981-7463(Toll-Free)
713-981-6283(Phone)
713-981-7466(Fax)
pine-tx@pine-environmental.com

Certificate of YSI Calibration

This is to certify that the YSI 6920 Serial Number 01B0202AC was calibrated with standard units traceable to manufacturer's specification

Model: 6920
Pine No: 1844
Serial No: 01B0202AC

lot Number:G798-0rp

Calibration Standard	Instrument Output	Allowable Range	% Difference
Redox: 240mv	240mv	228-252 mv	0%

lot Number:2503365

Calibration Standard	Instrument Output	Allowable Range	% Difference
PH-Zero1: 7PH	7PH	6.65-7.35 PH	0%

lot Number:2505079ph4

Calibration Standard	Instrument Output	Allowable Range	% Difference
PH -Span2: 4PH	4PH	3.8-4.2 PH	0%

lot Number:2509214-cond

Calibration Standard	Instrument Output	Allowable Range	% Difference
Conductivity-Span1: 1413ms/cm	1413ms/cm	1342.35-1483.65 ms/cm	0%

lot Number:5065-auto

Calibration Standard	Instrument Output	Allowable Range	% Difference
Turbidity-Zero1:			

0NTU	0NTU	0-0 NTU	0%

lot Number:2885-100

Calibration Standard	Instrument Output	Allowable Range	% Difference
Turbidity-Span1: 100NTU	100NTU	95-105 NTU	0%

Temprature DO Chart:

Water Temperature (C)	DO(mg/L)	Result
23	8.39	8.75

Environmental Conditions of Test Area:

Temprature Degree F: %Relative Humidity

Calibrated By: James Logan **Date:** 8/4/2006 4:17:00 PM

All instrument are calibrated according to manufacturer's specifications

Customer must notify PES of any defect within 24 hours of receipt of equipment
Please call 866-981-7463 for Technical Assistance

See Attach Packing List

Pine Environmental Services, Inc

10611 Harwin Drive, Suite 416, Houston, TX 77036
866-981-7463(Toll-Free)
713-981-6283(Phone)
713-981-7466(Fax)
pine-tx@pine-environmental.com

Certificate of YSI Calibration

This is to certify that the YSI 6920 Serial Number 00F1381AA was calibrated with standard units traceable to manufacturer's specification

Model: 6920
Pine No: 1833
Serial No: 00F1381AA

lot Number:G798-0rp

Calibration Standard	Instrument Output	Allowable Range	% Difference
Redox: 240mv	240mv	228-252 mv	0%

lot Number:2503365

Calibration Standard	Instrument Output	Allowable Range	% Difference
PH-Zero1: 7PH	7PH	6.65-7.35 PH	0%

lot Number:2509214-cond

Calibration Standard	Instrument Output	Allowable Range	% Difference
Conductivity-Span1: 1413ms/cm	1413ms/cm	1342.35-1483.65 ms/cm	0%

lot Number:5065-auto

Calibration Standard	Instrument Output	Allowable Range	% Difference
Turbidity-Zero1: 0NTU	0NTU	0-0 NTU	0%
PH-Span1: 4PH	4PH	3.8-4.2 PH	0%

lot Number:2885-100

Calibration			

Standard	Instrument Output	Allowable Range	% Difference
Turbidity-Span1: 100NTU	100NTU	95-105 NTU	0%

Temprature DO Chart:

Water Temperature (C)	DO(mg/L)	Result
23	8.39	8.67

Environmental Conditions of Test Area:

Temprature Degree F: %Relative Humidity

Calibrated By: James Logan **Date:** 7/26/2006 1:21:00 PM

All instrument are calibrated according to manufacturer's specifications

Customer must notify PES of any defect within 24 hours of receipt of equipment
Please call 866-981-7463 for Technical Assistance

Pine Environmental Services, Inc
5170 Hudson Dr., Suite 1, Hudson, OH 44236
877-326-PINE(Toll-Free)
330-650-3571(Phone)
330-650-3581(Fax)
pine-oh@pine-environmental.com

Certificate of YSI Calibration

This is to certify that the YSI 6920 Serial Number 00L0818AA was calibrated with standard units traceable to manufacturer's specification

Model: 6920
Pine No: 5118
Serial No: 00L0818AA

lot Number:DI NTU

Calibration Standard	Instrument Output	Allowable Range	% Difference
Turbidity-Zero1: 0NTU	0NTU	0-0 NTU	0%

lot Number:1509707

Calibration Standard	Instrument Output	Allowable Range	% Difference
Turbidity-Span1: 100NTU	100.2NTU	95-105 NTU	0.2%

lot Number:2509214

Calibration Standard	Instrument Output	Allowable Range	% Difference
Conductivity-Span1: 1.413ms/cm	1.412ms/cm	1.34-1.48 ms/cm	-0.07%

lot Number:G894

Calibration Standard	Instrument Output	Allowable Range	% Difference
Redox: 240mv	240.1mv	228-252 mv	0.04%

lot Number:2507093

Calibration Standard	Instrument Output	Allowable Range	% Difference
PH-Zero1: 7PH	7PH	6.65-7.35 PH	0%

lot Number:2505079

Calibration Standard	Instrument Output	Allowable Range	% Difference
PH-Span1: 4PH	4PH	3.8-4.2 PH	0%

Temprature DO Chart:

Water Temperature (C)	DO(mg/L)	Result
25	8.11	8.1

Environmental Conditions of Test Area:

Temprature Degree F: 80 %Relative Humidity 56

Calibrated By: Kurt Cessna **Date:** 7/24/2006 4:01:00 PM

All instrument are calibrated according to manufacturer's specifications

Customer must notify PES of any defect within 24 hours of receipt of equipment
Please call 877-326-PINE for Technical Assistance

Pine Environmental Services, Inc

10611 Harwin Drive, Suite 416, Houston, TX 77036
866-981-7463(Toll-Free)
713-981-6283(Phone)
713-981-7466(Fax)
pine-tx@pine-environmental.com

Certificate of YSI Calibration

This is to certify that the YSI 6920 Serial Number 01M0724AB was calibrated with standard units traceable to NIST

Model: 6920
Pine No: 2676
Serial No: 01M0724AB

lot Number:G798-0rp

Calibration Standard	Instrument Output	Allowable Range	% Difference
Redox: 240mv	240mv	228-252 mv	0%

lot Number:2503365

Calibration Standard	Instrument Output	Allowable Range	% Difference
PH-Zero1: 7PH	7PH	6.65-7.35 PH	0%

lot Number:2505079ph4

Calibration Standard	Instrument Output	Allowable Range	% Difference
PH -Span2: 4PH	4PH	3.8-4.2 PH	0%

lot Number:2509214-cond

Calibration Standard	Instrument Output	Allowable Range	% Difference
Conductivity-Span1: 1413ms/cm	1413ms/cm	1342.35-1483.65 ms/cm	0%

lot Number:5065-auto

Calibration Standard	Instrument Output	Allowable Range	% Difference
Turbidity-Zero1:			

0NTU	0NTU	0-0 NTU	0%

lot Number:2885-100

Calibration Standard	Instrument Output	Allowable Range	% Difference
Turbidity-Span1: 100NTU	100NTU	95-105 NTU	0%

lot Number:88410-Iso

Calibration Standard	Instrument Output	Allowable Range	% Difference
Isobutylene: 100PPM	100PPM	95-105 PPM	0%

Temprature DO Chart:

Water Temperature (C)	DO(mg/L)	Result
23	8.39	8.75

Environmental Conditions of Test Area:

Temprature Degree F: %Relative Humidity

Calibrated By: James Logan **Date:** 7/25/2006 2:46:00 PM

All instrument are calibrated according to manufacturer's specifications

Customer must notify PES of any defect within 24 hours of receipt of equipment
Please call 866-981-7463 for Technical Assistance

Pine Environmental Services, Inc

10611 Harwin Drive, Suite 416, Houston, TX 77036
866-981-7463(Toll-Free)
713-981-6283(Phone)
713-981-7466(Fax)
pine-tx@pine-environmental.com

Certificate of YSI Calibration

This is to certify that the YSI 6920 Serial Number 05G1495AD was calibrated with standard units traceable to manufacturer's specification

Model: 6920
Pine No: 6710
Serial No: 05G1495AD

lot Number:G798-0rp

Calibration Standard	Instrument Output	Allowable Range	% Difference
Redox: 240mv	240mv	228-252 mv	0%

lot Number:2503365

Calibration Standard	Instrument Output	Allowable Range	% Difference
PH-Zero1: 7PH	7PH	6.65-7.35 PH	0%

lot Number:2505079ph4

Calibration Standard	Instrument Output	Allowable Range	% Difference
PH -Span2: 4PH	4PH	3.8-4.2 PH	0%

lot Number:2509214-cond

Calibration Standard	Instrument Output	Allowable Range	% Difference
Conductivity-Span1: 1413ms/cm	1413ms/cm	1342.35-1483.65 ms/cm	0%

lot Number:5065-auto

Calibration Standard	Instrument Output	Allowable Range	% Difference
Turbidity-Zero1:			

0NTU	0NTU	0-0 NTU	0%

lot Number:2885-100

Calibration Standard	Instrument Output	Allowable Range	% Difference
Turbidity-Span1: 100NTU	100NTU	95-105 NTU	0%

Temprature DO Chart:

Water Temperature (C)	DO(mg/L)	Result
23	8.39	8.64

Environmental Conditions of Test Area:

Temprature Degree F: %Relative Humidity

Calibrated By: James Logan **Date:** 7/25/2006 2:52:00 PM

All instrument are calibrated according to manufacturer's specifications

Customer must notify PES of any defect within 24 hours of receipt of equipment
Please call 866-981-7463 for Technical Assistance

Pine Environmental Services, Inc

10611 Harwin Drive, Suite 416, Houston, TX 77036
866-981-7463(Toll-Free)
713-981-6283(Phone)
713-981-7466(Fax)
pine-tx@pine-environmental.com

Certificate of YSI Calibration

This is to certify that the YSI 6920 Serial Number 04D6185AC was calibrated with standard units traceable to manufacturer's specification

Model: 6920
Pine No: 5865
Serial No: 04D6185AC

lot Number:G798-0rp

Calibration Standard	Instrument Output	Allowable Range	% Difference
Redox: 240mv	240mv	228-252 mv	0%

lot Number:2503365

Calibration Standard	Instrument Output	Allowable Range	% Difference
PH-Zero1: 7PH	7PH	6.65-7.35 PH	0%

lot Number:2505079ph4

Calibration Standard	Instrument Output	Allowable Range	% Difference
PH -Span2: 4PH	4PH	3.8-4.2 PH	0%

lot Number:2509214-cond

Calibration Standard	Instrument Output	Allowable Range	% Difference
Conductivity-Span1: 1413ms/cm	1413ms/cm	1342.35-1483.65 ms/cm	0%

lot Number:5065-auto

Calibration Standard	Instrument Output	Allowable Range	% Difference
Turbidity-Zero1:			

0NTU	0NTU	0-0 NTU	0%

lot Number:2885-100

Calibration Standard	Instrument Output	Allowable Range	% Difference
Turbidity-Span1: 100NTU	100NTU	95-105 NTU	0%

Temprature DO Chart:

Water Temperature (C)	DO(mg/L)	Result
24	8.25	8.34

Environmental Conditions of Test Area:

Temprature Degree F: %Relative Humidity

Calibrated By: James Logan **Date:** 8/1/2006 1:42:00 PM

All instrument are calibrated according to manufacturer's specifications

Customer must notify PES of any defect within 24 hours of receipt of equipment
Please call 866-981-7463 for Technical Assistance

See Attach Packing List

Pine Environmental Services, Inc

5170 Hudson Dr., Suite 1, Hudson, OH 44236
877-326-PINE(Toll-Free)
330-650-3571(Phone)
330-650-3581(Fax)
pine-oh@pine-environmental.com

Certificate of YSI Calibration

This is to certify that the YSI 6920 Serial Number 01G0441AA was calibrated with standard units traceable to manufacturer's specification

Model: 6920
Pine No: 5087
Serial No: 01G0441AA

lot Number:DI NTU

Calibration Standard	Instrument Output	Allowable Range	% Difference
Turbidity-Zero1: 0NTU	0NTU	0-0 NTU	0%

lot Number:1509707

Calibration Standard	Instrument Output	Allowable Range	% Difference
Turbidity-Span1: 100NTU	99.6NTU	95-105 NTU	-0.4%

lot Number:2509214

Calibration Standard	Instrument Output	Allowable Range	% Difference
Conductivity-Span1: 1.413ms/cm	1.413ms/cm	1.34-1.48 ms/cm	0%

lot Number:G894

Calibration Standard	Instrument Output	Allowable Range	% Difference
Redox: 240mv	240.1mv	228-252 mv	0.04%

lot Number:2507093

Calibration Standard	Instrument Output	Allowable Range	% Difference
PH-Zero1: 7PH	7PH	6.65-7.35 PH	0%

lot Number:2505079

Calibration Standard	Instrument Output	Allowable Range	% Difference
PH-Span1: 4PH	4PH	3.8-4.2 PH	0%

Temprature DO Chart:

Water Temperature (C)	DO(mg/L)	Result
26	7.99	7.91

Environmental Conditions of Test Area:

Temprature Degree F: 86 %Relative Humidity 53

Calibrated By: Kurt Cessna **Date:** 8/2/2006 2:52:00 PM

All instrument are calibrated according to manufacturer's specifications

Customer must notify PES of any defect within 24 hours of receipt of equipment
Please call 877-326-PINE for Technical Assistance

See Attach Packing List

Pine Environmental Services, Inc

10611 Harwin Drive, Suite 416, Houston, TX 77036
866-981-7463(Toll-Free)
713-981-6283(Phone)
713-981-7466(Fax)
pine-tx@pine-environmental.com

Certificate of YSI Calibration

This is to certify that the YSI 6920 Serial Number 01H1295AA was calibrated with standard units traceable to manufacturer's specification

Model: 6920
Pine No: 3351
Serial No: 01H1295AA

lot Number:G798-0rp

Calibration Standard	Instrument Output	Allowable Range	% Difference
Redox: 240mv	240mv	228-252 mv	0%

lot Number:2503365

Calibration Standard	Instrument Output	Allowable Range	% Difference
PH-Zero1: 7PH	7PH	6.65-7.35 PH	0%

lot Number:2505079ph4

Calibration Standard	Instrument Output	Allowable Range	% Difference
PH -Span2: 4PH	4PH	3.8-4.2 PH	0%

lot Number:2509214-cond

Calibration Standard	Instrument Output	Allowable Range	% Difference
Conductivity-Span1: 1413ms/cm	1413ms/cm	1342.35-1483.65 ms/cm	0%

lot Number:5065-auto

Calibration Standard	Instrument Output	Allowable Range	% Difference
Turbidity-Zero1:			

0NTU	0NTU	0-0 NTU	0%

lot Number:2885-100

Calibration Standard	Instrument Output	Allowable Range	% Difference
Turbidity-Span1: 100NTU	100NTU	95-105 NTU	0%

Temprature DO Chart:

Water Temperature (C)	DO(mg/L)	Result
24	8.25	8.37

Environmental Conditions of Test Area:

Temprature Degree F: %Relative Humidity

Calibrated By: James Logan **Date:** 8/1/2006 1:48:00 PM

All instrument are calibrated according to manufacturer's specifications

Customer must notify PES of any defect within 24 hours of receipt of equipment
Please call 866-981-7463 for Technical Assistance

See Attach Packing List

Pine Environmental Services, Inc

10611 Harwin Drive, Suite 416, Houston, TX 77036
866-981-7463(Toll-Free)
713-981-6283(Phone)
713-981-7466(Fax)
pine-tx@pine-environmental.com

Certificate of YSI Calibration

This is to certify that the YSI 6920 Serial Number 05G1495AC was calibrated with standard units traceable to manufacturer's specification

Model: 6920
Pine No: 6545
Serial No: 05G1495AC

lot Number:G798-0rp

Calibration Standard	Instrument Output	Allowable Range	% Difference
Redox: 240mv	240mv	228-252 mv	0%

lot Number:2503365

Calibration Standard	Instrument Output	Allowable Range	% Difference
PH-Zero1: 7PH	7PH	6.65-7.35 PH	0%

lot Number:2505079ph4

Calibration Standard	Instrument Output	Allowable Range	% Difference
PH -Span2: 4PH	4PH	3.8-4.2 PH	0%

lot Number:2509214-cond

Calibration Standard	Instrument Output	Allowable Range	% Difference
Conductivity-Span1: 1413ms/cm	1413ms/cm	1342.35-1483.65 ms/cm	0%

lot Number:5065-auto

Calibration Standard	Instrument Output	Allowable Range	% Difference
Turbidity-Zero1:			

0NTU	0NTU	0-0 NTU	0%

lot Number:2885-100

Calibration Standard	Instrument Output	Allowable Range	% Difference
Turbidity-Span1: 100NTU	100NTU	95-105 NTU	0%

Temprature DO Chart:

Water Temperature (C)	DO(mg/L)	Result
23	8.39	8.54

Environmental Conditions of Test Area:

Temprature Degree F: %Relative Humidity

Calibrated By: James Logan **Date:** 7/25/2006 4:28:00 PM

All instrument are calibrated according to manufacturer's specifications

Customer must notify PES of any defect within 24 hours of receipt of equipment
Please call 866-981-7463 for Technical Assistance

Instrument Calibration Log

Winter 2006

ARCADIS

FIELD INSTRUMENT CALIBRATION LOG

C-1B

Date: 1-20-06

ARCADIS Project Name: CADMUS

Project Number: RN006104.1-LA002

Field Calibration by: KWM/CF/JS

Instrument Source: Pine Environmental

Type of Instrument	Manufacturer	Model Number	Time	Standard Concentration	Calibrated Reading	Remarks
pH Meter	YSI	6920 Pine #6710 Ser. #05614954D	1010	4.00 s.u.	3.68	
			1010	7.00 s.u.	7.03	
				10.00 s.u.		
				4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
				4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
Conductivity Meter	YSI	6920	1012	1,413 ~~8,000~~ µmhos/cm	1194	
				5,000 µmhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 umhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
Temp 21.52				5,000 µmhos/cm		
				30,000 µmhos/cm		
Dissolved Oxygen BP = 765.7 Calibrate to Water-Saturated Air	"	"	1026	mm Hg	102.5%	
				mm Hg		
				mm Hg		
Turbidimeter	"	"	1014	100 NTU	95.5	
				NTU		
				NTU		
ORP	"	"	1020	240 ~~150~~ MV	233.5	
				150 MV		
				150 MV		

H /Excel Files/CALIBRATIONFORM xls/Field Instr/ibk

ARCADIS

FIELD INSTRUMENT CALIBRATION LOG

C-4B

Date: 1/20/06

ARCADIS Project Name: CADMUS

Project Number: LN006104.1-2A002

Field Calibration by: KWM/CF/SCS

Instrument Source: Pine Environmental

Type of Instrument	Manufacturer	Model Number	Time	Standard Concentration	Calibrated Reading	Remarks
pH Meter	YSI	6920	1042	4.00 s.u.	4.05	
			1042	7.00 s.u.	7.04	
				10.00 s.u.		
		PH 1459		4.00 s.u.		
				7.00 s.u.		
		SN II		10.00 s.u.		
				4.00 s.u.		
		01A0144AB		7.00 s.u.		
				10.00 s.u.		
Conductivity Meter	"	"	1046	1413 ~~3,000~~ µmhos/cm	1356	
				5,000 µmhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 umhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 µmhos/cm		
				30,000 µmhos/cm		
BP= Dissolved Oxygen Calibrate to Water-Saturated Air	"	"	1127	mm Hg	97.1	BP = 765.8
				mm Hg		
				mm Hg		
Turbidimeter	"	"		100 NTU	89.3	
				NTU		
				NTU		
ORP	"	"		240 ~~150~~ MV	237.6	
				150 MV		
				~~150 MV~~		

C-3B

FIELD INSTRUMENT CALIBRATION LOG

ARCADIS

Date: 1/20/06

ARCADIS Project Name: CADMUS

Project Number: RN006104.1-LA002

Field Calibration by: Kim KF/JCS

Instrument Source Pinc Environmental

Type of Instrument	Manufacturer	Model Number	Time	Standard Concentration	Calibrated Reading	Remarks
pH Meter	YSI	6920 PH 4747 SN# 03D0888AC	1030	4.00 s.u.	3.93	
			1030	7.00 s.u.	7.09	
				~~10.00 s.u.~~		
				4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
				4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
Conductivity Meter	"	"	1053	1413 ~~3,000~~ µmhos/cm	1335	
				5,000 µmhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 umhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 µmhos/cm		
				30,000 µmhos/cm		
Dissolved Oxygen Calibrate to Water-Saturated Air	"	"	1102	8 mm Hg	100.6	BP = 765.7
				mm Hg		
				mm Hg		
Turbidimeter	"	"	1032	100 NTU	94.3	
				NTU		
				NTU		
ORP	"	"	1036	240 ~~150~~ MV	249.2	
				150 MV		
				150 MV		

FIELD INSTRUMENT CALIBRATION LOG

C-3B

ARCADIS

Date: 1/27/06

ARCADIS Project Name: CADmus

Project Number: RN006104.1 - LA002

Field Calibration by: JcS

Instrument Source: Pine Environmental

Type of Instrument	Manufacturer	Model Number	Time	Standard Concentration	Calibrated Reading	Remarks
pH Meter	YSI	6920	1620	4.00 s.u.	4.03	
			1620	7.00 s.u.	~~6.11~~ 7.16	
				10.00 s.u.		
				4.00 s.u.		
		PH-4747		7.00 s.u.		
				10.00 s.u.		
		SN#		4.00 s.u.		
		03D0888AC		7.00 s.u.		
				10.00 s.u.		
Conductivity Meter	"	"	1620	1413 ~~2,000~~ µmhos/cm	1365	
				5,000 µmhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 µmhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 µmhos/cm		
				30,000 µmhos/cm		
Dissolved Oxygen Calibrate to Water-Saturated Air	"	"	1642	mm Hg	101.2	767.8
				mm Hg		
				mm Hg		
Turbidimeter	"	"	1620	100 NTU	91.1	
				NTU		
				NTU		
ORP	"	"	1620	240 ~~150~~ MV	236.3	
				150 MV		
				150 MV		

C-5B

FIELD INSTRUMENT CALIBRATION LOG

ARCADIS

Date: 1/20/06

ARCADIS Project Name: CADMUS

Project Number: RN006104.1-LA002

Field Calibration by: KWM/CF/JCS

Instrument Source: Pine Environmental

Type of Instrument	Manufacturer	Model Number	Time	Standard Concentration	Calibrated Reading	Remarks
pH Meter	YSI	6920	1045	4.00 s.u.	3.90	
			1045	7.00 s.u.	7.08	
				10.00 s.u.		
		PH 5790		4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
		SN#		4.00 s.u.		
				7.00 s.u.		
		01J0214AA		10.00 s.u.		
Conductivity Meter	"	"	1049	1413 ~~3,000~~ µmhos/cm	1337	
				5,000 µmhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 µmhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 µmhos/cm		
				30,000 µmhos/cm		
Dissolved Oxygen Calibrate to Water-Saturated Air	"	"	1059	~~100~~ mm Hg	100.7	BP = 764.1
				mm Hg		
				mm Hg		
Turbidimeter	"	"	1055	100 NTU	90.7	
				NTU		
				NTU		
ORP	"	"	1052	240 ~~150~~ MV	237.6	
				150 MV		
				150 MV		

FIELD INSTRUMENT CALIBRATION LOG

C-5B

ARCADIS

Date: 1/24/06

ARCADIS Project Name: CADMUS

Project Number: RN006104.1 - LA002

Field Calibration by: JCS

Instrument Source Pine Environmental

Type of Instrument	Manufacturer	Model Number	Time	Standard Concentration	Calibrated Reading	Remarks
pH Meter YSI	YSI	6920 Pine # 5790 S# 01J0214AA	1530	4.00 s.u.	3.88	
			1530	7.00 s.u.	7.07	
				10.00 s.u.		
				4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
				4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
Conductivity Meter	"	"	1530	1413 ~~3,000~~ µmhos/cm	1349	
				5,000 µmhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 umhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 µmhos/cm		
				30,000 µmhos/cm		
Dissolved Oxygen Calibrate to Water-Saturated Air	"	"	1654	mm Hg	103.9	767.7
				mm Hg		
				~~mm Hg~~		
Turbidimeter	"	"	1530	100 NTU	107.3	
				NTU		
				NTU		
ORP	"	"	1530	240 ~~150~~ MV	238.6	
				~~150 MV~~		
				150 MV		

C-6B

FIELD INSTRUMENT CALIBRATION LOG

ARCADIS

Date: 1/20/06

ARCADIS Project Name: Cadmus

Project Number: RN006104.1-LA002

Field Calibration by: KWM/CF/JCS

Instrument Source Pine Environmental

Type of Instrument	Manufacturer	Model Number	Time	Standard Concentration	Calibrated Reading	Remarks
pH Meter	YSI	6920	1101	4.00 s.u.	4.00	
			1101	7.00 s.u.	7.07	
				10.00 s.u.		
		PH=6711		4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
		SN#		4.00 s.u.		
		05G1496AC		7.00 s.u.		
				10.00 s.u.		
Conductivity Meter	"	"	1102	1413 ~~3,000~~ µmhos/cm	1244	
				5,000 µmhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 µmhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 µmhos/cm		
				30,000 µmhos/cm		
Dissolved Oxygen Calibrate to Water-Saturated Air	"		1054	mm Hg	95.30%	BP = 765.7
				mm Hg		
				mm Hg		
Turbidimeter	"	"	1103	100 NTU	109.6	
				NTU		
				NTU		
ORP	"	"	1106	240 ~~150~~ MV	239.9	
				150 MV		
				150 MV		

C-6B

FIELD INSTRUMENT CALIBRATION LOG

ARCADIS

Date: 1/27/06

ARCADIS Project Name: Cadmus

Project Number: RN006104.1-LA002

Field Calibration by: JCS

Instrument Source Pine Environmental

Type of Instrument	Manufacturer	Model Number	Time	Standard Concentration	Calibrated Reading	Remarks
pH Meter	YSI	6920	1550	4.00 s.u.	4.09	
			1550	7.00 s.u.	7.07	
				10.00 s.u.		
				4.00 s.u.		
		PH 6711		7.00 s.u.		
				10.00 s.u.		
				4.00 s.u.		
		SI		7.00 s.u.		
		05G1496AC		10.00 s.u.		
Conductivity Meter	"	"	1550	14~~13,000~~ µmhos/cm	1286	
				5,000 µmhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 µmhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 µmhos/cm		
				30,000 µmhos/cm		
Dissolved Oxygen Calibrate to Water-Saturated Air	"	"	1645	mm Hg	90.9	767.8
				mm Hg		
				mm Hg		
Turbidimeter	"	"	1550	100 NTU	113.9	
				NTU		
				NTU		
ORP	"	"	1550	240~~150~~ MV	237.1	
				~~150~~ MV		
				150 MV		

H:/Excel Files/CALIBRATIONFORM.xls/Field Instr/ibk

FIELD INSTRUMENT CALIBRATION LOG

C-2B

ARCADIS

Date: 1/27/06

ARCADIS Project Name: CADMUS

Project Number: RN006104.1-LA002

Field Calibration by: JCS

Instrument Source: Pine Environmental

Type of Instrument	Manufacturer	Model Number	Time	Standard Concentration	Calibrated Reading	Remarks
pH Meter	YSI	6920	1600	4.00 s.u.	3.95	
			1600	7.00 s.u.	7.08	
				10.00 s.u.		
		PH-6441		4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
		SN		4.00 s.u.		
		04K17092AA		7.00 s.u.		
				10.00 s.u.		
Conductivity Meter	"	"	1600	1413 ~~3,000~~ µmhos/cm	1330	
				5,000 µmhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 µmhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 µmhos/cm		
				30,000 µmhos/cm		
Dissolved Oxygen Calibrate to Water-Saturated Air	"	"	1648	mm Hg	107.8	767.7
				mm Hg		
				mm Hg		
Turbidimeter	"	"	1600	100 NTU	113.0	
				NTU		
				NTU		
ORP	"	"	1600	240 ~~150~~ MV	248.5	
				150 MV		
				150 MV		

C-2B

FIELD INSTRUMENT CALIBRATION LOG

ARCADIS

Date: 1/20/06

ARCADIS Project Name: CadmusInc/Assessment of Terrebonne Basin

Project Number: **RN006104.0001.LA002**

Field Calibration by: KWM / CF / JCS

Instrument Source Pine Environmental

Type of Instrument	Manufacturer	Model Number	Time	Standard Concentration	Calibrated Reading	Remarks
pH Meter	YSI	6920 P# 6441 SN# 04K17092AA	1012	4.00 s.u.	3.98	
			1012	7.00 s.u.	7.16	
				~~10.00 s.u.~~		
				4.00 s.u.		
				7.00 s.u.		
				~~10.00 s.u.~~		
				4.00 s.u.		
				7.00 s.u.		
				~~10.00 s.u.~~		
Conductivity Meter	YSI	6920	1016	1413 ~~3,000~~ µmhos/cm	1324	
				5,000 µmhos/cm		
				30,000 µmhos/cm		
				~~3,000~~ µmhos/cm		
				5,000 umhos/cm		
				30,000 µmhos/cm		
	"	"		3,000 µmhos/cm		
				5,000 µmhos/cm		
Temp - 21.45				30,000 µmhos/cm		
BP = 764.4 Dissolved Oxygen Calibrate to Water-Saturated Air	"	"	1029	mm Hg	98.7	
				mm Hg		
				mm Hg		
Turbidimeter	"	"	1022	~~01~~ 100 NTU	91.9	
				NTU		
				NTU		
ORP	"	"	1019	240 ~~150~~ MV	233.5	
				150 MV		
				150 MV		

FIELD INSTRUMENT CALIBRATION LOG

C-9B

ARCADIS

Date: 1/20/06

ARCADIS Project Name: CADMUS

Project Number: PA006104.1-LA002

Field Calibration by: Kwm/CF/JCS

Instrument Source Pine Environmental

Type of Instrument	Manufacturer	Model Number	Time	Standard Concentration	Calibrated Reading	Remarks
pH Meter	YSI	6920 PH 1458 SN# 01A0144AC	1120	4.00 s.u.	3.89	
			1120	7.00 s.u.	7.09	
				10.00 s.u.		
				4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
				4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
Conductivity Meter	"	"	1122	1413 ~~3,000~~ µmhos/cm	1283	
				5,000 µmhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 µmhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 µmhos/cm		
				30,000 µmhos/cm		
BP: 765.5 Dissolved Oxygen Calibrate to Water-Saturated Air	"	"	1035	mm Hg	100.1%	
				mm Hg		
				mm Hg		
Turbidimeter	"	"	1124	100 NTU	111.2	
				NTU		
				NTU		
ORP	"	"	1126	240 ~~150~~ MV	243.9	
				150 MV		
				150 MV		

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FIELD INSTRUMENT CALIBRATION LOG

ARCADIS

Date: 1/20/06

ARCADIS Project Name: CADMUS

Project Number: RN006104.0001 - LA002

Field Calibration by: KWM/CF/JCS

Instrument Source: Pine Environmental

Type of Instrument	Manufacturer	Model Number	Time	Standard Concentration	Calibrated Reading	Remarks
pH Meter	YSI	6920 PH 5877 SN# 04D6186AD	1122	4.00 s.u.	4.00	
			1122	7.00 s.u.	7.01	
				10.00 s.u.		
				4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
				4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
Conductivity Meter	"	"	1128	K/13 ~~3,000~~ µmhos/cm	1389	
				5,000 µmhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 umhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 µmhos/cm		
				30,000 µmhos/cm		
BP-765.7 Dissolved Oxygen Calibrate to Water-Saturated Air	"	"	1058	mm Hg	83.9%	
				mm Hg		
				mm Hg		
Turbidimeter	"	"	1128	NTU	106.3	
				NTU		
				NTU		
ORP	"	"	1130	240 ~~150~~ MV	240.3	
				150 MV		
				150 MV		

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Pine Environmental Services, Inc
5170 Hudson Dr., Suite 1, Hudson, OH 44236
877-326-PINE(Toll-Free)
330-650-3571(Phone)
330-650-3581(Fax)
pine-oh@pine-environmental.com

Certificate of YSI Calibration

This is to certify that the YSI 6920 Serial Number 04D6186AD was calibrated with standard units traceable to manufacturer's specification

Model: 6920
Pine No: 5877
Serial No: 04D6186AD

lot Number:DI NTU

Calibration Standard	Instrument Output	Allowable Range	% Difference
Turbidity-Zero1: 0NTU	0NTU	0-0 NTU	0%

lot Number:2501256

Calibration Standard	Instrument Output	Allowable Range	% Difference
PH-Zero1: 7PH	7PH	6.65-7.35 PH	0%

lot Number:G798

Calibration Standard	Instrument Output	Allowable Range	% Difference
Redox: 240mv	239.8mv	228-252 mv	-0.08%

lot Number:2501275

Calibration Standard	Instrument Output	Allowable Range	% Difference
PH-Span1: 4PH	4PH	3.8-4.2 PH	0%

lot Number:1509707

Calibration Standard	Instrument Output	Allowable Range	% Difference
Turbidity-Span1:			

100NTU	100NTU	95-105 NTU	0%

lot Number:2509214

Calibration Standard	Instrument Output	Allowable Range	% Difference
Conductivity-Span1: 1.413ms/cm	1.413ms/cm	1.34-1.48 ms/cm	0%

Temprature DO Chart:

Water Temperature (C)	DO(mg/L)	Result
21	8.68	8.69

Environmental Conditions of Test Area:

Temprature Degree F: 73 %Relative Humidity 8

Calibrated By: Kurt Cessna **Date:** 1/12/2006 10:55:00 AM

All instrument are calibrated according to manufacturer's specifications

Customer must notify PES of any defect within 24 hours of receipt of equipment
Please call 1-800-301-9663 for Technical Assistance

Pine Environmental Services, Inc
5170 Hudson Dr., Suite 1, Hudson, OH 44236
877-326-PINE(Toll-Free)
330-650-3571(Phone)
330-650-3581(Fax)
pine-oh@pine-environmental.com

Certificate of YSI Calibration

This is to certify that the YSI 6920 Serial Number 02E0838AE was calibrated with standard units traceable to manufacturer's specification

Model: 6920
Pine No: 3330
Serial No: 02E0838AE

lot Number:DI NTU

Calibration Standard	Instrument Output	Allowable Range	% Difference
Turbidity-Zero1: 0NTU	0NTU	0-0 NTU	0%

lot Number:2501256

Calibration Standard	Instrument Output	Allowable Range	% Difference
PH-Zero1: 7PH	6.99PH	6.65-7.35 PH	-0.14%

lot Number:G798

Calibration Standard	Instrument Output	Allowable Range	% Difference
Redox: 240mv	241.2mv	228-252 mv	0.5%

lot Number:2501275

Calibration Standard	Instrument Output	Allowable Range	% Difference
PH-Span1: 4PH	3.99PH	3.8-4.2 PH	-0.25%

lot Number:1509707

Calibration Standard	Instrument Output	Allowable Range	% Difference
Turbidity-Span1:			

100NTU	99.3NTU	95-105 NTU	-0.7%

lot Number:2509214

Calibration Standard	Instrument Output	Allowable Range	% Difference
Conductivity-Span1: 1.413ms/cm	1.413ms/cm	1.34-1.48 ms/cm	0%

Temprature DO Chart:

Water Temperature (C)	DO(mg/L)	Result
21	8.68	8.65

Environmental Conditions of Test Area:

Temprature Degree F: 73 %Relative Humidity 8

Calibrated By: Kurt Cessna **Date:** 1/12/2006 11:16:00 AM

All instrument are calibrated according to manufacturer's specifications

Customer must notify PES of any defect within 24 hours of receipt of equipment
Please call 1-800-301-9663 for Technical Assistance

Pine Environmental Services, Inc
5170 Hudson Dr., Suite 1, Hudson, OH 44236
877-326-PINE(Toll-Free)
330-650-3571(Phone)
330-650-3581(Fax)
pine-oh@pine-environmental.com

Certificate of YSI Calibration

This is to certify that the YSI 6920 Serial Number 02E0838AE was calibrated with standard units traceable to manufacturer's specification

Model: 6920
Pine No: 3330
Serial No: 02E0838AE

lot Number:DI NTU

Calibration Standard	Instrument Output	Allowable Range	% Difference
Turbidity-Zero1: 0NTU	0NTU	0-0 NTU	0%

lot Number:2501256

Calibration Standard	Instrument Output	Allowable Range	% Difference
PH-Zero1: 7PH	6.99PH	6.65-7.35 PH	-0.14%

lot Number:G798

Calibration Standard	Instrument Output	Allowable Range	% Difference
Redox: 240mv	241.2mv	228-252 mv	0.5%

lot Number:2501275

Calibration Standard	Instrument Output	Allowable Range	% Difference
PH-Span1: 4PH	3.99PH	3.8-4.2 PH	-0.25%

lot Number:1509707

Calibration Standard	Instrument Output	Allowable Range	% Difference
Turbidity-Span1:			

100NTU	99.3NTU	95-105 NTU	-0.7%

lot Number:2509214

Calibration Standard	Instrument Output	Allowable Range	% Difference
Conductivity-Span1: 1.413ms/cm	1.413ms/cm	1.34-1.48 ms/cm	0%

Temprature DO Chart:

Water Temperature (C)	DO(mg/L)	Result
21	8.68	8.65

Environmental Conditions of Test Area:

Temprature Degree F: 73 %Relative Humidity 8

Calibrated By: Kurt Cessna **Date:** 1/12/2006 11:16:00 AM

All instrument are calibrated according to manufacturer's specifications

Customer must notify PES of any defect within 24 hours of receipt of equipment
Please call 1-800-301-9663 for Technical Assistance

Pine Environmental Services, Inc
92 North Main Street, Bldg 20, Windsor, NJ 08561
800-301-9663(Toll-Free)
609-371-9663(Phone)
609-371-1663(Fax)
pine-nj@pine-environmental.com

C-1B

Certificate of YSI Calibration

This is to certify that the YSI 6920 Serial Number 05G1495AD was calibrated with standard units traceable to manufacturer's specification

Model: 6920
Pine No: 6710
Serial No: 05G1495AD

[redacted]

Calibration Standard	Instrument Output	Allowable Range	% Difference
PH-Span1: 4.01mv	4.01mv	3.81-4.21 mv	0%

[redacted]

Calibration Standard	Instrument Output	Allowable Range	% Difference
Turbidity-Zero1: 0NTU	0NTU	0-0 NTU	0%

[redacted]

Calibration Standard	Instrument Output	Allowable Range	% Difference
Turbidity-Span1: 100NTU	100NTU	95-105 NTU	0%

[redacted]

Calibration Standard	Instrument Output	Allowable Range	% Difference
Conductivity-Span1: 1.413ms/cm	1.413ms/cm	1.34-1.48 ms/cm	0%

[redacted]

Calibration Standard	Instrument Output	Allowable Range	% Difference
Redox: 240mv	240mv	228-252 mv	0%

[redacted]

Calibration Standard	Instrument Output	Allowable Range	% Difference
Dissolve Oxygen-Span1: 100%	100%	95-105 %	0%

[redacted]

Calibration Standard	Instrument Output	Allowable Range	% Difference
PH-Zero1: 7.01PH	7.01PH	6.66-7.36 PH	0%

Environmental Conditions of Test Area:

Temprature Degree F: %Relative Humidity

Calibrated By: William Bass **Date:** 1/11/2005 9:33:00 AM

All instrument are calibrated according to manufacturer's specifications

Customer must notify PES of any defect within 24 hours of receipt of equipment
Please call 1-800-301-9663 for Technical Assistance

C-9B

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92 North Main Street, Bldg 20, Windsor, NJ 08561
800-301-9663(Toll-Free)
609-371-9663(Phone)
609-371-1663(Fax)
pine-nj@pine-environmental.com

Certificate of YSI Calibration

This is to certify that the YSI 6920 Serial Number 01A0144AC was calibrated with standard units traceable to manufacturer's specification

Model: 6920
Pine No: 1458
Serial No: 01A0144AC

[redacted]

Calibration Standard	Instrument Output	Allowable Range	% Difference
PH-Span1: 4.01mv	4.01mv	3.81-4.21 mv	0%

[redacted]

Calibration Standard	Instrument Output	Allowable Range	% Difference
Turbidity-Zero1: 0NTU	0NTU	0-0 NTU	0%

[redacted]

Calibration Standard	Instrument Output	Allowable Range	% Difference
Turbidity-Span1: 100NTU	100NTU	95-105 NTU	0%

[redacted]

Calibration Standard	Instrument Output	Allowable Range	% Difference
Conductivity-Span1: 1.413ms/cm	1.413ms/cm	1.34-1.48 ms/cm	0%

[redacted]

Calibration Standard	Instrument Output	Allowable Range	% Difference
Redox: 240mv	240mv	228-252 mv	0%

[redacted]

Calibration Standard	Instrument Output	Allowable Range	% Difference
Dissolve Oxygen-Span1: 100%	100%	95-105 %	0%

[redacted]

Calibration Standard	Instrument Output	Allowable Range	% Difference
PH-Zero1: 7.01PH	7.01PH	6.66-7.36 PH	0%

Environmental Conditions of Test Area:

Temprature Degree F: %Relative Humidity

Calibrated By: William Bass **Date:** 1/11/2005 3:16:00 PM

All instrument are calibrated according to manufacturer's specifications

Customer must notify PES of any defect within 24 hours of receipt of equipment
Please call 1-800-301-9663 for Technical Assistance

C 6B

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609-371-1663(Fax)
pine-nj@pine-environmental.com

Certificate of YSI Calibration

This is to certify that the YSI 6920 Serial Number 05G1496AC was calibrated with standard units traceable to manufacturer's specification

Model: 6920
Pine No: 6711
Serial No: 05G1496AC

lot Number:2407088

Calibration Standard	Instrument Output	Allowable Range	% Difference
PH-Span1: 4.01mv	4.01mv	3.81-4.21 mv	0%

lot Number:4819

Calibration Standard	Instrument Output	Allowable Range	% Difference
Turbidity-Zero1: 0NTU	0NTU	0-0 NTU	0%

lot Number:1412580

Calibration Standard	Instrument Output	Allowable Range	% Difference
Turbidity-Span1: 100NTU	100NTU	95-105 NTU	0%

lot Number:2501028

Calibration Standard	Instrument Output	Allowable Range	% Difference
Conductivity-Span1: 1.413ms/cm	1.413ms/cm	1.34-1.48 ms/cm	0%

lot Number:G164

...=2=ipenum=6711&calibtype=0 1/13/2006

Calibration Standard	Instrument Output	Allowable Range	% Difference
Redox: 240mv	240mv	228-252 mv	0%

lot Number:01-070

Calibration Standard	Instrument Output	Allowable Range	% Difference
Dissolve Oxygen-Span1: 100%	100%	95-105 %	0%

lot Number:2501040

Calibration Standard	Instrument Output	Allowable Range	% Difference
PH-Zero1: 7.01PH	7.01PH	6.66-7.36 PH	0%

Environmental Conditions of Test Area:

Temprature Degree F: %Relative Humidity

Calibrated By: William Bass **Date:** 1/4/2006 4:03:00 PM

All instrument are calibrated according to manufacturer's specifications

Customer must notify PES of any defect within 24 hours of receipt of equipment
Please call 1-800-301-9663 for Technical Assistance

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92 North Main Street, Bldg 20, Windsor, NJ 08561
800-301-9663(Toll-Free)
609-371-9663(Phone)
609-371-1663(Fax)
pine-nj@pine-environmental.com

Certificate of YSI Calibration

This is to certify that the YSI 6920 Serial Number 04K17092AA was calibrated with standard units traceable to manufacturer's specification

Model: 6920
Pine No: 6441
Serial No: 04K17092AA

[redacted]

Calibration Standard	Instrument Output	Allowable Range	% Difference
Conductivity-Zero1: 1413ms/cm	1413ms/cm	1342.35-1483.65 ms/cm	0%

[redacted]

Calibration Standard	Instrument Output	Allowable Range	% Difference
PH-Zero1: 7PH	7PH	6.65-7.35 PH	0%

[redacted]

Calibration Standard	Instrument Output	Allowable Range	% Difference
PH-Zero1: 4PH	4PH	3.8-4.2 PH	0%

[redacted]

ARCADIS

FIELD INSTRUMENT CALIBRATION LOG

C-7B

Date: 1/20/06

ARCADIS Project Name: CADMUS

Project Number: N006104.1-LA002

Field Calibration by: KWM / CF / JCS

Instrument Source Pine Environmental

Type of Instrument	Manufacturer	Model Number	Time	Standard Concentration	Calibrated Reading	Remarks
pH Meter	YSI	6920 ~~6291~~ P# 3896 SN#	1106	4.00 s.u.	4.08	
			1106	7.00 s.u.	7.05	
				10.00 s.u.		
				4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
				4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
Conductivity Meter	YSI	"	1113	14,1~~3,000~~ µmhos/cm	1222	
				5,000 µmhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 µmhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 µmhos/cm		
				30,000 µmhos/cm		
Dissolved Oxygen BP = 765.7 Calibrate to Water-Saturated Air	"	"	1029	mm Hg	96%	
				mm Hg		
				mm Hg		
Turbidimeter	"	"	1119	100 NTU	100.2	
				NTU		
				NTU		
ORP	"	"	1116	240 ~~150~~ MV	~~234.9~~	238.4
				150 MV		
				150 MV		

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ARCADIS

FIELD INSTRUMENT CALIBRATION LOG

C-7B

Date: 1/27/06

ARCADIS Project Name: CADMUS

Project Number: RN006104.1-LA002

Field Calibration by: JCS

Instrument Source: Pine Environmental

Type of Instrument	Manufacturer	Model Number	Time	Standard Concentration	Calibrated Reading	Remarks
pH Meter	YSI	P# 3896	1610	4.00 s.u.	3.50	
			1610	7.00 s.u.	6.35	
				10.00 s.u.		
				4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
				4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
Conductivity Meter	"	"	1610	1413 ~~13,000~~ µmhos/cm	1233	
				5,000 µmhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 µmhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 µmhos/cm		
				30,000 µmhos/cm		
Dissolved Oxygen Calibrate to Water-Saturated Air	"	"	1650	mm Hg	103.6	767.9
				mm Hg		
				mm Hg		
Turbidimeter	"	"	1610	100 NTU	99.7	
				NTU		
				NTU		
ORP	"	"	1610	240 ~~150~~ MV	241.6	
				~~150 MV~~		
				150 MV		

H:/Excel Files/CALIBRATIONFORM.xls/Field Instr/ibk

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Pine Environmental Services, Inc
92 North Main Street, Bldg 20, Windsor, NJ 08561
800-301-9663(Toll-Free)
609-371-9663(Phone)
609-371-1663(Fax)
pine-nj@pine-environmental.com

Certificate of YSI Calibration

This is to certify that the YSI 6920 Serial Number OLE36-10568-02 was calibrated with standard units traceable to manufacturer's specification

Model: 6920
Pine No: 3896
Serial No: OLE36-10568-02

lot Number:2407088

Calibration Standard	Instrument Output	Allowable Range	% Difference
PH-Span1: 4.01mv	4.01mv	3.81-4.21 mv	0%

lot Number:4819

Calibration Standard	Instrument Output	Allowable Range	% Difference
Turbidity-Zero1: 0NTU	0NTU	0-0 NTU	0%

lot Number:1412580

Calibration Standard	Instrument Output	Allowable Range	% Difference
Turbidity-Span1: 100NTU	100NTU	95-105 NTU	0%

lot Number:2501028

Calibration Standard	Instrument Output	Allowable Range	% Difference
Conductivity-Span1: 1.413ms/cm	1.413ms/cm	1.34-1.48 ms/cm	0%

lot Number:G164

Calibration Standard	Instrument Output	Allowable Range	% Difference
Redox: 240mv	240mv	228-252 mv	0%

lot Number:01-070

Calibration Standard	Instrument Output	Allowable Range	% Difference
Dissolve Oxygen-Span1: 100%	100%	95-105 %	0%

lot Number:2501040

Calibration Standard	Instrument Output	Allowable Range	% Difference
PH-Zero1: 7.01PH	7.01PH	6.66-7.36 PH	0%

Environmental Conditions of Test Area:

Temprature Degree F: %Relative Humidity

Calibrated By: William Bass **Date:** 1/11/2006 4:05:00 PM

All instrument are calibrated according to manufacturer's specifications

Customer must notify PES of any defect within 24 hours of receipt of equipment
Please call 1-800-301-9663 for Technical Assistance

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Pine Environmental Services, Inc
92 North Main Street, Bldg 20, Windsor, NJ 08561
800-301-9663(Toll-Free)
609-371-9663(Phone)
609-371-1663(Fax)
pine-nj@pine-environmental.com

Certificate of YSI Calibration

This is to certify that the YSI 6920 Serial Number 01A0144AB was calibrated with standard units traceable to manufacturer's specification

Model: 6920
Pine No: 1459
Serial No: 01A0144AB

[redacted]

Calibration Standard	Instrument Output	Allowable Range	% Difference
PH-Span1: 4.01mv	4.01mv	3.81-4.21 mv	0%

[redacted]

Calibration Standard	Instrument Output	Allowable Range	% Difference
Turbidity-Zero1: 0NTU	0NTU	0-0 NTU	0%

[redacted]

Calibration Standard	Instrument Output	Allowable Range	% Difference
Turbidity-Span1: 100NTU	100NTU	95-105 NTU	0%

[redacted]

Calibration Standard	Instrument Output	Allowable Range	% Difference
Conductivity-Span1: 1.413ms/cm	1.413ms/cm	1.34-1.48 ms/cm	0%

[redacted]

Calibration Standard	Instrument Output	Allowable Range	% Difference
Redox: 240mv	240mv	228-252 mv	0%

[redacted]

Calibration Standard	Instrument Output	Allowable Range	% Difference
Dissolve Oxygen-Span1: 100%	100%	95-105 %	0%

[redacted]

Calibration Standard	Instrument Output	Allowable Range	% Difference
PH-Zero1: 7.01PH	7.01PH	6.66-7.36 PH	0%

Environmental Conditions of Test Area:

Temprature Degree F: 70 %Relative Humidity 60

Calibrated By: William Bass **Date:** 1/11/2005 9:34:00 AM

All instrument are calibrated according to manufacturer's specifications

Customer must notify PES of any defect within 24 hours of receipt of equipment
Please call 1-800-301-9663 for Technical Assistance

ARCADIS

FIELD INSTRUMENT CALIBRATION LOG

C-8B

Date: 1/20/06

ARCADIS Project Name: CADMUS

Project Number: LN006104.1 - LA002

Field Calibration by: KWM / CF / JCS

Instrument Source Pine Environmental

Type of Instrument	Manufacturer	Model Number	Time	Standard Concentration	Calibrated Reading	Remarks
pH Meter	YSI	6920	1111	4.00 s.u.	3.58	
			1111	7.00 s.u.	6.86	
				10.00 s.u.		
		PH		4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
		SN II		4.00 s.u.		
				7.00 s.u.		
				10.00 s.u.		
Conductivity Meter	"	"	1115	1413 ~~3,000~~ µmhos/cm	1350	
				5,000 µmhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 µmhos/cm		
				30,000 µmhos/cm		
				3,000 µmhos/cm		
				5,000 µmhos/cm		
				30,000 µmhos/cm		
Dissolved Oxygen BP-765.6 Calibrate to Water-Saturated Air	"	"	1033	mm Hg	64.9	
				mm Hg		
				mm Hg		
Turbidimeter	"	"	1116	100 NTU	90.1	
				NTU		
				NTU		
ORP	"	"	1118	240 ~~150~~ MV	375.2	
				150 MV		
				150 MV		

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C-8B

Pine Environmental Services, Inc
5170 Hudson Dr., Suite 1, Hudson, OH 44236
877-326-PINE(Toll-Free)
330-650-3571(Phone)
330-650-3581(Fax)
pine-oh@pine-environmental.com

Certificate of YSI Calibration

This is to certify that the YSI 6920 Serial Number 01H1295AA was calibrated with standard units traceable to manufacturer's specification

Model: 6920
Pine No: 3351
Serial No: 01H1295AA

lot Number:DI NTU

Calibration Standard	Instrument Output	Allowable Range	% Difference
Turbidity-Zero1: 0NTU	0NTU	0-0 NTU	0%

lot Number:2501256

Calibration Standard	Instrument Output	Allowable Range	% Difference
PH-Zero1: 7PH	7PH	6.65-7.35 PH	0%

lot Number:G798

Calibration Standard	Instrument Output	Allowable Range	% Difference
Redox: 240mv	240.1mv	228-252 mv	0.04%

lot Number:2501275

Calibration Standard	Instrument Output	Allowable Range	% Difference
PH-Span1: 4PH	3.99PH	3.8-4.2 PH	-0.25%

lot Number:1509707

Calibration Standard	Instrument Output	Allowable Range	% Difference
Turbidity-Span1:			

100NTU	100.2NTU	95-105 NTU	0.2%

lot Number:2509214

Calibration Standard	Instrument Output	Allowable Range	% Difference
Conductivity-Span1: 1.413ms/cm	1.414ms/cm	1.34-1.48 ms/cm	0.07%

Temprature DO Chart:

Water Temperature (C)	DO(mg/L)	Result
21	8.68	8.68

Environmental Conditions of Test Area:

Temprature Degree F: 73 %Relative Humidity 8

Calibrated By: Kurt Cessna **Date:** 1/12/2006 10:04:00 AM

All instrument are calibrated according to manufacturer's specifications

Customer must notify PES of any defect within 24 hours of receipt of equipment
Please call 1-800-301-9663 for Technical Assistance

Pine Environmental Services, Inc
92 North Main Street, Bldg 20, Windsor, NJ 08561
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609-371-1663(Fax)
pine-nj@pine-environmental.com

Certificate of YSI Calibration

This is to certify that the YSI 6920 Serial Number 03D0888AC was calibrated with standard units traceable to manufacturer's specification

Model: 6920
Pine No: 4747
Serial No: 03D0888AC

lot Number:2407088

Calibration Standard	Instrument Output	Allowable Range	% Difference
PH-Span1: 4.01mv	4.01mv	3.81-4.21 mv	0%

lot Number:4819

Calibration Standard	Instrument Output	Allowable Range	% Difference
Turbidity-Zero1: 0NTU	0NTU	0-0 NTU	0%

lot Number:1412580

Calibration Standard	Instrument Output	Allowable Range	% Difference
Turbidity-Span1: 100NTU	100NTU	95-105 NTU	0%

lot Number:2501028

Calibration Standard	Instrument Output	Allowable Range	% Difference
Conductivity-Span1: 1.413ms/cm	1.413ms/cm	1.34-1.48 ms/cm	0%

lot Number:G164

Calibration Standard	Instrument Output	Allowable Range	% Difference
Redox: 240mv	240mv	228-252 mv	0%

lot Number:01-070

Calibration Standard	Instrument Output	Allowable Range	% Difference
Dissolve Oxygen-Span1: 100%	100%	95-105 %	0%

lot Number:2501040

Calibration Standard	Instrument Output	Allowable Range	% Difference
PH-Zero1: 7.01PH	7.01PH	6.66-7.36 PH	0%

Environmental Conditions of Test Area:

Temprature Degree F: %Relative Humidity

Calibrated By: William Bass **Date:** 1/11/2006 10:35:00 AM

All instrument are calibrated according to manufacturer's specifications

Customer must notify PES of any defect within 24 hours of receipt of equipment
Please call 1-800-301-9663 for Technical Assistance

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Pine Environmental Services, Inc
92 North Main Street, Bldg 20, Windsor, NJ 08561
800-301-9663(Toll-Free)
609-371-9663(Phone)
609-371-1663(Fax)
pine-nj@pine-environmental.com

Certificate of YSI Calibration

This is to certify that the YSI 6920 Serial Number 01J0214AA was calibrated with standard units traceable to manufacturer's specification

Model: 6920
Pine No: 5790
Serial No: 01J0214AA

[redacted]

Calibration Standard	Instrument Output	Allowable Range	% Difference
PH-Span1: 4.01mv	4.01mv	3.81-4.21 mv	0%

[redacted]

Calibration Standard	Instrument Output	Allowable Range	% Difference
Turbidity-Zero1: 0NTU	0NTU	0-0 NTU	0%

[redacted]

Calibration Standard	Instrument Output	Allowable Range	% Difference
Turbidity-Span1: 100NTU	100NTU	95-105 NTU	0%

[redacted]

Calibration Standard	Instrument Output	Allowable Range	% Difference
Conductivity-Span1: 1.413ms/cm	1.413ms/cm	1.34-1.48 ms/cm	0%

[redacted]

Calibration Standard	Instrument Output	Allowable Range	% Difference
Redox: 240mv	240mv	228-252 mv	0%

[redacted]

Calibration Standard	Instrument Output	Allowable Range	% Difference
Dissolve Oxygen-Span1: 100%	100%	95-105 %	0%

[redacted]

Calibration Standard	Instrument Output	Allowable Range	% Difference
PH-Zero1: 7.01PH	7.01PH	6.66-7.36 PH	0%

Environmental Conditions of Test Area:

Temprature Degree F: %Relative Humidity

Calibrated By: William Bass **Date:** 1/11/2005 4:07:00 PM

All instrument are calibrated according to manufacturer's specifications

Customer must notify PES of any defect within 24 hours of receipt of equipment
Please call 1-800-301-9663 for Technical Assistance