H1200

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Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD C01-008 ~~H1205~~ H1200rc 12/5/01

DATE RECEIVED: 01/10/01 LVL LOT # :0101L761

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
B10LC2						
SILVER, TOTAL	001	W	01L0020	01/04/01	01/19/01	02/12/01
SILVER, TOTAL	001 REP	W	01L0020	01/04/01	01/19/01	02/12/01
SILVER, TOTAL	001 MS	W	01L0020	01/04/01	01/19/01	02/12/01
ALUMINUM, TOTAL	001	W	01L0020	01/04/01	01/19/01	02/12/01
ALUMINUM, TOTAL	001 REP	W	01L0020	01/04/01	01/19/01	02/12/01
ALUMINUM, TOTAL	001 MS	W	01L0020	01/04/01	01/19/01	02/12/01
BARIUM, TOTAL	001	W	01L0020	01/04/01	01/19/01	02/12/01
BARIUM, TOTAL	001 REP	W	01L0020	01/04/01	01/19/01	02/12/01
BARIUM, TOTAL	001 MS	W	01L0020	01/04/01	01/19/01	02/12/01
BERYLLIUM, TOTAL	001	W	01L0020	01/04/01	01/19/01	02/12/01
BERYLLIUM, TOTAL	001 REP	W	01L0020	01/04/01	01/19/01	02/12/01
BERYLLIUM, TOTAL	001 MS	W	01L0020	01/04/01	01/19/01	02/12/01
CALCIUM, TOTAL	001	W	01L0020	01/04/01	01/19/01	02/12/01
CALCIUM, TOTAL	001 REP	W	01L0020	01/04/01	01/19/01	02/12/01
CALCIUM, TOTAL	001 MS	W	01L0020	01/04/01	01/19/01	02/12/01
CADMIUM, TOTAL	001	W	01L0020	01/04/01	01/19/01	02/12/01
CADMIUM, TOTAL	001 REP	W	01L0020	01/04/01	01/19/01	02/12/01
CADMIUM, TOTAL	001 MS	W	01L0020	01/04/01	01/19/01	02/12/01
COBALT, TOTAL	001	W	01L0020	01/04/01	01/19/01	02/12/01
COBALT, TOTAL	001 REP	W	01L0020	01/04/01	01/19/01	02/12/01
COBALT, TOTAL	001 MS	W	01L0020	01/04/01	01/19/01	02/12/01
CHROMIUM, TOTAL	001	W	01L0020	01/04/01	01/19/01	02/12/01
CHROMIUM, TOTAL	001 REP	W	01L0020	01/04/01	01/19/01	02/12/01
CHROMIUM, TOTAL	001 MS	W	01L0020	01/04/01	01/19/01	02/12/01
COPPER, TOTAL	001	W	01L0020	01/04/01	01/19/01	02/12/01
COPPER, TOTAL	001 REP	W	01L0020	01/04/01	01/19/01	02/12/01
COPPER, TOTAL	001 MS	W	01L0020	01/04/01	01/19/01	02/12/01
IRON, TOTAL	001	W	01L0020	01/04/01	01/19/01	02/12/01
IRON, TOTAL	001 REP	W	01L0020	01/04/01	01/19/01	02/12/01
IRON, TOTAL	001 MS	W	01L0020	01/04/01	01/19/01	02/12/01
POTASSIUM, TOTAL	001	W	01L0020	01/04/01	01/19/01	02/12/01
POTASSIUM, TOTAL	001 REP	W	01L0020	01/04/01	01/19/01	02/12/01
POTASSIUM, TOTAL	001 MS	W	01L0020	01/04/01	01/19/01	02/12/01
MAGNESIUM, TOTAL	001	W	01L0020	01/04/01	01/19/01	02/12/01
MAGNESIUM, TOTAL	001 REP	W	01L0020	01/04/01	01/19/01	02/12/01

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Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD C01-008 ~~H1205~~ H1200 MC 3/5/01

DATE RECEIVED: 01/10/01 LVL LOT # :0101L761

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
MAGNESIUM, TOTAL	001 MS	W	01L0020	01/04/01	01/19/01	02/12/01
MANGANESE, TOTAL	001	W	01L0020	01/04/01	01/19/01	02/12/01
MANGANESE, TOTAL	001 REP	W	01L0020	01/04/01	01/19/01	02/12/01
MANGANESE, TOTAL	001 MS	W	01L0020	01/04/01	01/19/01	02/12/01
SODIUM, TOTAL	001	W	01L0020	01/04/01	01/19/01	02/12/01
SODIUM, TOTAL	001 REP	W	01L0020	01/04/01	01/19/01	02/12/01
SODIUM, TOTAL	001 MS	W	01L0020	01/04/01	01/19/01	02/12/01
NICKEL, TOTAL	001	W	01L0020	01/04/01	01/19/01	02/12/01
NICKEL, TOTAL	001 REP	W	01L0020	01/04/01	01/19/01	02/12/01
NICKEL, TOTAL	001 MS	W	01L0020	01/04/01	01/19/01	02/12/01
ANTIMONY, TOTAL	001	W	01L0020	01/04/01	01/19/01	02/12/01
ANTIMONY, TOTAL	001 REP	W	01L0020	01/04/01	01/19/01	02/12/01
ANTIMONY, TOTAL	001 MS	W	01L0020	01/04/01	01/19/01	02/12/01
STRONTIUM, TOTAL	001	W	01L0020	01/04/01	01/19/01	02/12/01
STRONTIUM, TOTAL	001 REP	W	01L0020	01/04/01	01/19/01	02/12/01
STRONTIUM, TOTAL	001 MS	W	01L0020	01/04/01	01/19/01	02/12/01
VANADIUM, TOTAL	001	W	01L0020	01/04/01	01/19/01	02/12/01
VANADIUM, TOTAL	001 REP	W	01L0020	01/04/01	01/19/01	02/12/01
VANADIUM, TOTAL	001 MS	W	01L0020	01/04/01	01/19/01	02/12/01
ZINC, TOTAL	001	W	01L0020	01/04/01	01/19/01	02/12/01
ZINC, TOTAL	001 REP	W	01L0020	01/04/01	01/19/01	02/12/01
ZINC, TOTAL	001 MS	W	01L0020	01/04/01	01/19/01	02/12/01
B10LC3						
SILVER, TOTAL	002	W	01L0020	01/04/01	01/19/01	02/12/01
ALUMINUM, TOTAL	002	W	01L0020	01/04/01	01/19/01	02/12/01
BARIUM, TOTAL	002	W	01L0020	01/04/01	01/19/01	02/12/01
BERYLLIUM, TOTAL	002	W	01L0020	01/04/01	01/19/01	02/12/01
CALCIUM, TOTAL	002	W	01L0020	01/04/01	01/19/01	02/12/01
CADMIUM, TOTAL	002	W	01L0020	01/04/01	01/19/01	02/12/01
COBALT, TOTAL	002	W	01L0020	01/04/01	01/19/01	02/12/01
CHROMIUM, TOTAL	002	W	01L0020	01/04/01	01/19/01	02/12/01
COPPER, TOTAL	002	W	01L0020	01/04/01	01/19/01	02/12/01
IRON, TOTAL	002	W	01L0020	01/04/01	01/19/01	02/12/01
POTASSIUM, TOTAL	002	W	01L0020	01/04/01	01/19/01	02/12/01
MAGNESIUM, TOTAL	002	W	01L0020	01/04/01	01/19/01	02/12/01
MANGANESE, TOTAL	002	W	01L0020	01/04/01	01/19/01	02/12/01

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD C01-008 ~~H1205~~ H1300 NC 3-5-01

DATE RECEIVED: 01/10/01 LVL LOT # :0101L761

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
SODIUM, TOTAL	002	W	01L0020	01/04/01	01/19/01	02/12/01
NICKEL, TOTAL	002	W	01L0020	01/04/01	01/19/01	02/12/01
ANTIMONY, TOTAL	002	W	01L0020	01/04/01	01/19/01	02/12/01
STRONTIUM, TOTAL	002	W	01L0020	01/04/01	01/19/01	02/12/01
VANADIUM, TOTAL	002	W	01L0020	01/04/01	01/19/01	02/12/01
ZINC, TOTAL	002	W	01L0020	01/04/01	01/19/01	02/12/01
B10LJ6						
SILVER, TOTAL	003	W	01L0020	01/03/01	01/19/01	02/12/01
ALUMINUM, TOTAL	003	W	01L0020	01/03/01	01/19/01	02/12/01
BARIUM, TOTAL	003	W	01L0020	01/03/01	01/19/01	02/12/01
BERYLLIUM, TOTAL	003	W	01L0020	01/03/01	01/19/01	02/12/01
CALCIUM, TOTAL	003	W	01L0020	01/03/01	01/19/01	02/12/01
CADMIUM, TOTAL	003	W	01L0020	01/03/01	01/19/01	02/12/01
COBALT, TOTAL	003	W	01L0020	01/03/01	01/19/01	02/12/01
CHROMIUM, TOTAL	003	W	01L0020	01/03/01	01/19/01	02/12/01
COPPER, TOTAL	003	W	01L0020	01/03/01	01/19/01	02/12/01
IRON, TOTAL	003	W	01L0020	01/03/01	01/19/01	02/12/01
POTASSIUM, TOTAL	003	W	01L0020	01/03/01	01/19/01	02/12/01
MAGNESIUM, TOTAL	003	W	01L0020	01/03/01	01/19/01	02/12/01
MANGANESE, TOTAL	003	W	01L0020	01/03/01	01/19/01	02/12/01
SODIUM, TOTAL	003	W	01L0020	01/03/01	01/19/01	02/12/01
NICKEL, TOTAL	003	W	01L0020	01/03/01	01/19/01	02/12/01
ANTIMONY, TOTAL	003	W	01L0020	01/03/01	01/19/01	02/12/01
STRONTIUM, TOTAL	003	W	01L0020	01/03/01	01/19/01	02/12/01
VANADIUM, TOTAL	003	W	01L0020	01/03/01	01/19/01	02/12/01
ZINC, TOTAL	003	W	01L0020	01/03/01	01/19/01	02/12/01
B10LJ7						
SILVER, TOTAL	004	W	01L0020	01/03/01	01/19/01	02/12/01
ALUMINUM, TOTAL	004	W	01L0020	01/03/01	01/19/01	02/12/01
BARIUM, TOTAL	004	W	01L0020	01/03/01	01/19/01	02/12/01
BERYLLIUM, TOTAL	004	W	01L0020	01/03/01	01/19/01	02/12/01
CALCIUM, TOTAL	004	W	01L0020	01/03/01	01/19/01	02/12/01
CADMIUM, TOTAL	004	W	01L0020	01/03/01	01/19/01	02/12/01
COBALT, TOTAL	004	W	01L0020	01/03/01	01/19/01	02/12/01

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD C01-008 ~~H1205~~ H1200 nc 3-5-01

DATE RECEIVED: 01/10/01 LVL LOT # :0101L761

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
CHROMIUM, TOTAL	004	W	01L0020	01/03/01	01/19/01	02/12/01
COPPER, TOTAL	004	W	01L0020	01/03/01	01/19/01	02/12/01
IRON, TOTAL	004	W	01L0020	01/03/01	01/19/01	02/12/01
POTASSIUM, TOTAL	004	W	01L0020	01/03/01	01/19/01	02/12/01
MAGNESIUM, TOTAL	004	W	01L0020	01/03/01	01/19/01	02/12/01
MANGANESE, TOTAL	004	W	01L0020	01/03/01	01/19/01	02/12/01
SODIUM, TOTAL	004	W	01L0020	01/03/01	01/19/01	02/12/01
NICKEL, TOTAL	004	W	01L0020	01/03/01	01/19/01	02/12/01
ANTIMONY, TOTAL	004	W	01L0020	01/03/01	01/19/01	02/12/01
STRONTIUM, TOTAL	004	W	01L0020	01/03/01	01/19/01	02/12/01
VANADIUM, TOTAL	004	W	01L0020	01/03/01	01/19/01	02/12/01
ZINC, TOTAL	004	W	01L0020	01/03/01	01/19/01	02/12/01
B10LK8						
SILVER, TOTAL	005	W	01L0020	01/03/01	01/19/01	02/12/01
ALUMINUM, TOTAL	005	W	01L0020	01/03/01	01/19/01	02/12/01
BARIUM, TOTAL	005	W	01L0020	01/03/01	01/19/01	02/12/01
BERYLLIUM, TOTAL	005	W	01L0020	01/03/01	01/19/01	02/12/01
CALCIUM, TOTAL	005	W	01L0020	01/03/01	01/19/01	02/12/01
CADMIUM, TOTAL	005	W	01L0020	01/03/01	01/19/01	02/12/01
COBALT, TOTAL	005	W	01L0020	01/03/01	01/19/01	02/12/01
CHROMIUM, TOTAL	005	W	01L0020	01/03/01	01/19/01	02/12/01
COPPER, TOTAL	005	W	01L0020	01/03/01	01/19/01	02/12/01
IRON, TOTAL	005	W	01L0020	01/03/01	01/19/01	02/12/01
POTASSIUM, TOTAL	005	W	01L0020	01/03/01	01/19/01	02/12/01
MAGNESIUM, TOTAL	005	W	01L0020	01/03/01	01/19/01	02/12/01
MANGANESE, TOTAL	005	W	01L0020	01/03/01	01/19/01	02/12/01
SODIUM, TOTAL	005	W	01L0020	01/03/01	01/19/01	02/12/01
NICKEL, TOTAL	005	W	01L0020	01/03/01	01/19/01	02/12/01
ANTIMONY, TOTAL	005	W	01L0020	01/03/01	01/19/01	02/12/01
STRONTIUM, TOTAL	005	W	01L0020	01/03/01	01/19/01	02/12/01
VANADIUM, TOTAL	005	W	01L0020	01/03/01	01/19/01	02/12/01
ZINC, TOTAL	005	W	01L0020	01/03/01	01/19/01	02/12/01
B10LK9						
SILVER, TOTAL	006	W	01L0020	01/03/01	01/19/01	02/12/01

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD C01-008 ~~H1205~~ H1300 3-5-01 nc

DATE RECEIVED: 01/10/01 LVL LOT # :0101L761

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
ALUMINUM, TOTAL	006	W	01L0020	01/03/01	01/19/01	02/12/01
BARIUM, TOTAL	006	W	01L0020	01/03/01	01/19/01	02/12/01
BERYLLIUM, TOTAL	006	W	01L0020	01/03/01	01/19/01	02/12/01
CALCIUM, TOTAL	006	W	01L0020	01/03/01	01/19/01	02/12/01
CADMIUM, TOTAL	006	W	01L0020	01/03/01	01/19/01	02/12/01
COBALT, TOTAL	006	W	01L0020	01/03/01	01/19/01	02/12/01
CHROMIUM, TOTAL	006	W	01L0020	01/03/01	01/19/01	02/12/01
COPPER, TOTAL	006	W	01L0020	01/03/01	01/19/01	02/12/01
IRON, TOTAL	006	W	01L0020	01/03/01	01/19/01	02/12/01
POTASSIUM, TOTAL	006	W	01L0020	01/03/01	01/19/01	02/12/01
MAGNESIUM, TOTAL	006	W	01L0020	01/03/01	01/19/01	02/12/01
MANGANESE, TOTAL	006	W	01L0020	01/03/01	01/19/01	02/12/01
SODIUM, TOTAL	006	W	01L0020	01/03/01	01/19/01	02/12/01
NICKEL, TOTAL	006	W	01L0020	01/03/01	01/19/01	02/12/01
ANTIMONY, TOTAL	006	W	01L0020	01/03/01	01/19/01	02/12/01
STRONTIUM, TOTAL	006	W	01L0020	01/03/01	01/19/01	02/12/01
VANADIUM, TOTAL	006	W	01L0020	01/03/01	01/19/01	02/12/01
ZINC, TOTAL	006	W	01L0020	01/03/01	01/19/01	02/12/01
B10LP2						
SILVER, TOTAL	007	W	01L0020	01/04/01	01/19/01	02/12/01
ALUMINUM, TOTAL	007	W	01L0020	01/04/01	01/19/01	02/12/01
BARIUM, TOTAL	007	W	01L0020	01/04/01	01/19/01	02/12/01
BERYLLIUM, TOTAL	007	W	01L0020	01/04/01	01/19/01	02/12/01
CALCIUM, TOTAL	007	W	01L0020	01/04/01	01/19/01	02/12/01
CADMIUM, TOTAL	007	W	01L0020	01/04/01	01/19/01	02/12/01
COBALT, TOTAL	007	W	01L0020	01/04/01	01/19/01	02/12/01
CHROMIUM, TOTAL	007	W	01L0020	01/04/01	01/19/01	02/12/01
COPPER, TOTAL	007	W	01L0020	01/04/01	01/19/01	02/12/01
IRON, TOTAL	007	W	01L0020	01/04/01	01/19/01	02/12/01
POTASSIUM, TOTAL	007	W	01L0020	01/04/01	01/19/01	02/12/01
MAGNESIUM, TOTAL	007	W	01L0020	01/04/01	01/19/01	02/12/01
MANGANESE, TOTAL	007	W	01L0020	01/04/01	01/19/01	02/12/01
SODIUM, TOTAL	007	W	01L0020	01/04/01	01/19/01	02/12/01
NICKEL, TOTAL	007	W	01L0020	01/04/01	01/19/01	02/12/01
ANTIMONY, TOTAL	007	W	01L0020	01/04/01	01/19/01	02/12/01
STRONTIUM, TOTAL	007	W	01L0020	01/04/01	01/19/01	02/12/01

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD C01-008 ~~H1205~~ H1200 nc 3-5-01

DATE RECEIVED: 01/10/01 LVL LOT # :0101L761

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
VANADIUM, TOTAL	007	W	01L0020	01/04/01	01/19/01	02/12/01
ZINC, TOTAL	007	W	01L0020	01/04/01	01/19/01	02/12/01
B10LP3						
SILVER, TOTAL	008	W	01L0020	01/04/01	01/19/01	02/12/01
ALUMINUM, TOTAL	008	W	01L0020	01/04/01	01/19/01	02/12/01
BARIUM, TOTAL	008	W	01L0020	01/04/01	01/19/01	02/12/01
BERYLLIUM, TOTAL	008	W	01L0020	01/04/01	01/19/01	02/12/01
CALCIUM, TOTAL	008	W	01L0020	01/04/01	01/19/01	02/12/01
CADMIUM, TOTAL	008	W	01L0020	01/04/01	01/19/01	02/12/01
COBALT, TOTAL	008	W	01L0020	01/04/01	01/19/01	02/12/01
CHROMIUM, TOTAL	008	W	01L0020	01/04/01	01/19/01	02/12/01
COPPER, TOTAL	008	W	01L0020	01/04/01	01/19/01	02/12/01
IRON, TOTAL	008	W	01L0020	01/04/01	01/19/01	02/12/01
POTASSIUM, TOTAL	008	W	01L0020	01/04/01	01/19/01	02/12/01
MAGNESIUM, TOTAL	008	W	01L0020	01/04/01	01/19/01	02/12/01
MANGANESE, TOTAL	008	W	01L0020	01/04/01	01/19/01	02/12/01
SODIUM, TOTAL	008	W	01L0020	01/04/01	01/19/01	02/12/01
NICKEL, TOTAL	008	W	01L0020	01/04/01	01/19/01	02/12/01
ANTIMONY, TOTAL	008	W	01L0020	01/04/01	01/19/01	02/12/01
STRONTIUM, TOTAL	008	W	01L0020	01/04/01	01/19/01	02/12/01
VANADIUM, TOTAL	008	W	01L0020	01/04/01	01/19/01	02/12/01
ZINC, TOTAL	008	W	01L0020	01/04/01	01/19/01	02/12/01
B10LP4						
SILVER, TOTAL	009	W	01L0020	01/04/01	01/19/01	02/12/01
ALUMINUM, TOTAL	009	W	01L0020	01/04/01	01/19/01	02/12/01
BARIUM, TOTAL	009	W	01L0020	01/04/01	01/19/01	02/12/01
BERYLLIUM, TOTAL	009	W	01L0020	01/04/01	01/19/01	02/12/01
CALCIUM, TOTAL	009	W	01L0020	01/04/01	01/19/01	02/12/01
CADMIUM, TOTAL	009	W	01L0020	01/04/01	01/19/01	02/12/01
COBALT, TOTAL	009	W	01L0020	01/04/01	01/19/01	02/12/01
CHROMIUM, TOTAL	009	W	01L0020	01/04/01	01/19/01	02/12/01
COPPER, TOTAL	009	W	01L0020	01/04/01	01/19/01	02/12/01
IRON, TOTAL	009	W	01L0020	01/04/01	01/19/01	02/12/01
POTASSIUM, TOTAL	009	W	01L0020	01/04/01	01/19/01	02/12/01

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD C01-008 ~~H1205~~ H1200 NC 3-5-01

DATE RECEIVED: 01/10/01 LVL LOT # :0101L761

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
MAGNESIUM, TOTAL	009	W	01L0020	01/04/01	01/19/01	02/12/01
MANGANESE, TOTAL	009	W	01L0020	01/04/01	01/19/01	02/12/01
SODIUM, TOTAL	009	W	01L0020	01/04/01	01/19/01	02/12/01
NICKEL, TOTAL	009	W	01L0020	01/04/01	01/19/01	02/12/01
ANTIMONY, TOTAL	009	W	01L0020	01/04/01	01/19/01	02/12/01
STRONTIUM, TOTAL	009	W	01L0020	01/04/01	01/19/01	02/12/01
VANADIUM, TOTAL	009	W	01L0020	01/04/01	01/19/01	02/12/01
ZINC, TOTAL	009	W	01L0020	01/04/01	01/19/01	02/12/01
B10LP5						
SILVER, TOTAL	010	W	01L0020	01/04/01	01/19/01	02/12/01
ALUMINUM, TOTAL	010	W	01L0020	01/04/01	01/19/01	02/12/01
BARIUM, TOTAL	010	W	01L0020	01/04/01	01/19/01	02/12/01
BERYLLIUM, TOTAL	010	W	01L0020	01/04/01	01/19/01	02/12/01
CALCIUM, TOTAL	010	W	01L0020	01/04/01	01/19/01	02/12/01
CADMIUM, TOTAL	010	W	01L0020	01/04/01	01/19/01	02/12/01
COBALT, TOTAL	010	W	01L0020	01/04/01	01/19/01	02/12/01
CHROMIUM, TOTAL	010	W	01L0020	01/04/01	01/19/01	02/12/01
COPPER, TOTAL	010	W	01L0020	01/04/01	01/19/01	02/12/01
IRON, TOTAL	010	W	01L0020	01/04/01	01/19/01	02/12/01
POTASSIUM, TOTAL	010	W	01L0020	01/04/01	01/19/01	02/12/01
MAGNESIUM, TOTAL	010	W	01L0020	01/04/01	01/19/01	02/12/01
MANGANESE, TOTAL	010	W	01L0020	01/04/01	01/19/01	02/12/01
SODIUM, TOTAL	010	W	01L0020	01/04/01	01/19/01	02/12/01
NICKEL, TOTAL	010	W	01L0020	01/04/01	01/19/01	02/12/01
ANTIMONY, TOTAL	010	W	01L0020	01/04/01	01/19/01	02/12/01
STRONTIUM, TOTAL	010	W	01L0020	01/04/01	01/19/01	02/12/01
VANADIUM, TOTAL	010	W	01L0020	01/04/01	01/19/01	02/12/01
ZINC, TOTAL	010	W	01L0020	01/04/01	01/19/01	02/12/01
B10LV0						
SILVER, TOTAL	011	W	01L0020	01/04/01	01/19/01	02/12/01
ALUMINUM, TOTAL	011	W	01L0020	01/04/01	01/19/01	02/12/01
BARIUM, TOTAL	011	W	01L0020	01/04/01	01/19/01	02/12/01
BERYLLIUM, TOTAL	011	W	01L0020	01/04/01	01/19/01	02/12/01
CALCIUM, TOTAL	011	W	01L0020	01/04/01	01/19/01	02/12/01

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD C01-008 ~~H1205~~ H1300 3-5-01 nc

DATE RECEIVED: 01/10/01 LVL LOT # :0101L761

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
CADMIUM, TOTAL	011	W	01L0020	01/04/01	01/19/01	02/12/01
COBALT, TOTAL	011	W	01L0020	01/04/01	01/19/01	02/12/01
CHROMIUM, TOTAL	011	W	01L0020	01/04/01	01/19/01	02/12/01
COPPER, TOTAL	011	W	01L0020	01/04/01	01/19/01	02/12/01
IRON, TOTAL	011	W	01L0020	01/04/01	01/19/01	02/12/01
POTASSIUM, TOTAL	011	W	01L0020	01/04/01	01/19/01	02/12/01
MAGNESIUM, TOTAL	011	W	01L0020	01/04/01	01/19/01	02/12/01
MANGANESE, TOTAL	011	W	01L0020	01/04/01	01/19/01	02/12/01
SODIUM, TOTAL	011	W	01L0020	01/04/01	01/19/01	02/12/01
NICKEL, TOTAL	011	W	01L0020	01/04/01	01/19/01	02/12/01
ANTIMONY, TOTAL	011	W	01L0020	01/04/01	01/19/01	02/12/01
STRONTIUM, TOTAL	011	W	01L0020	01/04/01	01/19/01	02/12/01
VANADIUM, TOTAL	011	W	01L0020	01/04/01	01/19/01	02/12/01
ZINC, TOTAL	011	W	01L0020	01/04/01	01/19/01	02/12/01
B10LV1						
SILVER, TOTAL	012	W	01L0020	01/04/01	01/19/01	02/12/01
ALUMINUM, TOTAL	012	W	01L0020	01/04/01	01/19/01	02/12/01
BARIUM, TOTAL	012	W	01L0020	01/04/01	01/19/01	02/12/01
BERYLLIUM, TOTAL	012	W	01L0020	01/04/01	01/19/01	02/12/01
CALCIUM, TOTAL	012	W	01L0020	01/04/01	01/19/01	02/12/01
CADMIUM, TOTAL	012	W	01L0020	01/04/01	01/19/01	02/12/01
COBALT, TOTAL	012	W	01L0020	01/04/01	01/19/01	02/12/01
CHROMIUM, TOTAL	012	W	01L0020	01/04/01	01/19/01	02/12/01
COPPER, TOTAL	012	W	01L0020	01/04/01	01/19/01	02/12/01
IRON, TOTAL	012	W	01L0020	01/04/01	01/19/01	02/12/01
POTASSIUM, TOTAL	012	W	01L0020	01/04/01	01/19/01	02/12/01
MAGNESIUM, TOTAL	012	W	01L0020	01/04/01	01/19/01	02/12/01
MANGANESE, TOTAL	012	W	01L0020	01/04/01	01/19/01	02/12/01
SODIUM, TOTAL	012	W	01L0020	01/04/01	01/19/01	02/12/01
NICKEL, TOTAL	012	W	01L0020	01/04/01	01/19/01	02/12/01
ANTIMONY, TOTAL	012	W	01L0020	01/04/01	01/19/01	02/12/01
STRONTIUM, TOTAL	012	W	01L0020	01/04/01	01/19/01	02/12/01
VANADIUM, TOTAL	012	W	01L0020	01/04/01	01/19/01	02/12/01
ZINC, TOTAL	012	W	01L0020	01/04/01	01/19/01	02/12/01
B10LM0						
SILVER, TOTAL	013	W	01L0020	01/04/01	01/19/01	02/12/01

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD C01-008 ~~H1205~~ H1200 MC 3-5-01

DATE RECEIVED: 01/10/01 LVL LOT # :0101L761

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
ALUMINUM, TOTAL	013	W	01L0020	01/04/01	01/19/01	02/12/01
BARIUM, TOTAL	013	W	01L0020	01/04/01	01/19/01	02/12/01
BERYLLIUM, TOTAL	013	W	01L0020	01/04/01	01/19/01	02/12/01
CALCIUM, TOTAL	013	W	01L0020	01/04/01	01/19/01	02/12/01
CADMIUM, TOTAL	013	W	01L0020	01/04/01	01/19/01	02/12/01
COBALT, TOTAL	013	W	01L0020	01/04/01	01/19/01	02/12/01
CHROMIUM, TOTAL	013	W	01L0020	01/04/01	01/19/01	02/12/01
COPPER, TOTAL	013	W	01L0020	01/04/01	01/19/01	02/12/01
IRON, TOTAL	013	W	01L0020	01/04/01	01/19/01	02/12/01
POTASSIUM, TOTAL	013	W	01L0020	01/04/01	01/19/01	02/12/01
MAGNESIUM, TOTAL	013	W	01L0020	01/04/01	01/19/01	02/12/01
MANGANESE, TOTAL	013	W	01L0020	01/04/01	01/19/01	02/12/01
SODIUM, TOTAL	013	W	01L0020	01/04/01	01/19/01	02/12/01
NICKEL, TOTAL	013	W	01L0020	01/04/01	01/19/01	02/12/01
ANTIMONY, TOTAL	013	W	01L0020	01/04/01	01/19/01	02/12/01
STRONTIUM, TOTAL	013	W	01L0020	01/04/01	01/19/01	02/12/01
VANADIUM, TOTAL	013	W	01L0020	01/04/01	01/19/01	02/12/01
ZINC, TOTAL	013	W	01L0020	01/04/01	01/19/01	02/12/01
B10LM1						
SILVER, TOTAL	014	W	01L0020	01/04/01	01/19/01	02/12/01
ALUMINUM, TOTAL	014	W	01L0020	01/04/01	01/19/01	02/12/01
BARIUM, TOTAL	014	W	01L0020	01/04/01	01/19/01	02/12/01
BERYLLIUM, TOTAL	014	W	01L0020	01/04/01	01/19/01	02/12/01
CALCIUM, TOTAL	014	W	01L0020	01/04/01	01/19/01	02/12/01
CADMIUM, TOTAL	014	W	01L0020	01/04/01	01/19/01	02/12/01
COBALT, TOTAL	014	W	01L0020	01/04/01	01/19/01	02/12/01
CHROMIUM, TOTAL	014	W	01L0020	01/04/01	01/19/01	02/12/01
COPPER, TOTAL	014	W	01L0020	01/04/01	01/19/01	02/12/01
IRON, TOTAL	014	W	01L0020	01/04/01	01/19/01	02/12/01
POTASSIUM, TOTAL	014	W	01L0020	01/04/01	01/19/01	02/12/01
MAGNESIUM, TOTAL	014	W	01L0020	01/04/01	01/19/01	02/12/01
MANGANESE, TOTAL	014	W	01L0020	01/04/01	01/19/01	02/12/01
SODIUM, TOTAL	014	W	01L0020	01/04/01	01/19/01	02/12/01
NICKEL, TOTAL	014	W	01L0020	01/04/01	01/19/01	02/12/01
ANTIMONY, TOTAL	014	W	01L0020	01/04/01	01/19/01	02/12/01
STRONTIUM, TOTAL	014	W	01L0020	01/04/01	01/19/01	02/12/01

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD C01-008 ~~H1205~~ H1200 NC 3-5-01

DATE RECEIVED: 01/10/01 LVL LOT # :0101L761

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
VANADIUM, TOTAL	014	W	01L0020	01/04/01	01/19/01	02/12/01
ZINC, TOTAL	014	W	01L0020	01/04/01	01/19/01	02/12/01

LAB QC:

SILVER LABORATORY	LC1 BS	W	01L0020	N/A	01/19/01	02/12/01
SILVER, TOTAL	MB1	W	01L0020	N/A	01/19/01	02/12/01
ALUMINUM LABORTORY	LC1 BS	W	01L0020	N/A	01/19/01	02/12/01
ALUMINUM, TOTAL	MB1	W	01L0020	N/A	01/19/01	02/12/01
BARIUM LABORATORY	LC1 BS	W	01L0020	N/A	01/19/01	02/12/01
BARIUM, TOTAL	MB1	W	01L0020	N/A	01/19/01	02/12/01
BERYLLIUM LABORATORY	LC1 BS	W	01L0020	N/A	01/19/01	02/12/01
BERYLLIUM, TOTAL	MB1	W	01L0020	N/A	01/19/01	02/12/01
CALCIUM LABORATORY	LC1 BS	W	01L0020	N/A	01/19/01	02/12/01
CALCIUM, TOTAL	MB1	W	01L0020	N/A	01/19/01	02/12/01
CADMIUM LABORATORY	LC1 BS	W	01L0020	N/A	01/19/01	02/12/01
CADMIUM, TOTAL	MB1	W	01L0020	N/A	01/19/01	02/12/01
COBALT LABORATORY	LC1 BS	W	01L0020	N/A	01/19/01	02/12/01
COBALT, TOTAL	MB1	W	01L0020	N/A	01/19/01	02/12/01
CHROMIUM LABORATORY	LC1 BS	W	01L0020	N/A	01/19/01	02/12/01
CHROMIUM, TOTAL	MB1	W	01L0020	N/A	01/19/01	02/12/01
COPPER LABORATORY	LC1 BS	W	01L0020	N/A	01/19/01	02/12/01
COPPER, TOTAL	MB1	W	01L0020	N/A	01/19/01	02/12/01
IRON LABORATORY	LC1 BS	W	01L0020	N/A	01/19/01	02/12/01
IRON, TOTAL	MB1	W	01L0020	N/A	01/19/01	02/12/01
POTASSIUM LABORATORY	LC1 BS	W	01L0020	N/A	01/19/01	02/12/01
POTASSIUM, TOTAL	MB1	W	01L0020	N/A	01/19/01	02/12/01
MAGNESIUM LABORATORY	LC1 BS	W	01L0020	N/A	01/19/01	02/12/01
MAGNESIUM, TOTAL	MB1	W	01L0020	N/A	01/19/01	02/12/01
MANGANESE LABORATORY	LC1 BS	W	01L0020	N/A	01/19/01	02/12/01
MANGANESE, TOTAL	MB1	W	01L0020	N/A	01/19/01	02/12/01
SODIUM LABORATORY	LC1 BS	W	01L0020	N/A	01/19/01	02/12/01
SODIUM, TOTAL	MB1	W	01L0020	N/A	01/19/01	02/12/01
NICKEL LABORATORY	LC1 BS	W	01L0020	N/A	01/19/01	02/12/01
NICKEL, TOTAL	MB1	W	01L0020	N/A	01/19/01	02/12/01
ANTIMONY LABORATORY	LC1 BS	W	01L0020	N/A	01/19/01	02/12/01
ANTIMONY, TOTAL	MB1	W	01L0020	N/A	01/19/01	02/12/01
STRONTIUM LCS STANDA	LC1 BS	W	01L0020	N/A	01/19/01	02/12/01

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD C01-008 ~~H1205~~ HQ00 nc 3-5-01

DATE RECEIVED: 01/10/01 LVL LOT # :0101L761

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
STRONTIUM, TOTAL	MB1	W	01L0020	N/A	01/19/01	02/12/01
VANADIUM LABORATORY	LC1 BS	W	01L0020	N/A	01/19/01	02/12/01
VANADIUM, TOTAL	MB1	W	01L0020	N/A	01/19/01	02/12/01
ZINC LABORATORY	LC1 BS	W	01L0020	N/A	01/19/01	02/12/01
ZINC, TOTAL	MB1	W	01L0020	N/A	01/19/01	02/12/01

LIONVILLE LABORATORY INC.

Analytical Report

Client: TNU-HANFORD C01-008
LVL#: 0101L761
SDG/SAF#: ~~H1205~~/C01-008
H1200 nc 3/5/01

W.O.#: 10985-001-001-9999-00
Date Received: 01-10-01

METALS CASE NARRATIVE

1. This narrative covers the analyses of 14 water samples.

2. The samples were prepared and analyzed in accordance with methods checked on the attached glossary.

3. All analyses were performed within the required holding times.

4. All cooler temperatures have been recorded on the Chain of Custody.

5. All Initial and Continuing Calibration Verifications (ICV/CCVs) were within the 90-110% control limits (80-120% for Mercury).

6. All Initial and Continuing Calibration Blanks (ICB/CCBs) were within control limits (less than the PQL).

7. All preparation/method blanks (MB) were within method criteria {less than the Practical Quantitation Limit (3X the IDL), MB value less than 5% of the RCRA limit, or samples greater than 20X MB value}. Refer to the Inorganics Method Blank Data Summary.

8. All ICP Interference Check Standards were within control limits with the exception of the CRI for Calcium at 165% recovery. The impact to the samples should be negligible as all samples read in the range between the CCV's and the ISA's, which each recovered between 90-110%.

9. All laboratory control samples (LCS) were within the 80-120% control limits. Refer to the Inorganics Laboratory Control Standards Report.

10. The matrix spike (MS) recovery for 1 analyte was outside the 75-125% control limits. Refer to the Inorganics Accuracy Report.

11. For analytes where the ICP MS is out-of-control, a post-digestion MS (PDS) and serial dilution are performed. A serial dilution is performed for Mercury. A PDS was prepared at meaningful concentration levels, due to high concentrations of the following analytes:

Sample ID	Element	PDS Concentration (ppb)	PDS % Recovery
B10LC2	Chromium	500	75.2

The results presented in this report relate only to the analytical testing and conditions of the samples at receipt and during storage. All pages of this report are integral parts of the analytical data. Therefore, this report should only be reproduced in its entirety of 42 pages.

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12. The duplicate analyses for 2 analytes were outside the 20% Relative Percent Difference (RPD) control limits. Refer to the Inorganics Precision Report.

13. For the purposes of this report, the data has been reported to the Instrument Detection Limit (IDL). Values between the IDL and the Practical Quantitation Limit (PQL) are acquired in a region of less-certain quantification.

14. I certify that this sample data package is in compliance with SOW requirements, both technically and for completeness, other than the conditions detailed above. Release of the data contained in this hard-copy data package has been authorized by the Laboratory Manager or a designee, as verified by the following signature.

15. As of January 27, 2001, Recra LabNet Philadelphia became Lionville Laboratory Incorporated. Some forms may still reference Recra LabNet Philadelphia.

for Pat EC

J. Michael Taylor
President
Lionville Laboratory Incorporated

02-20-01
Date

jjw/m01-761

METALS METHOD GLOSSARY

The following methods are used as reference for the digestion and analysis of samples contained within this Recra Lot#: 010/L761

Leaching Procedure: __1310 __1311 __1312 __Other:_____

CLP Metals __ Digestion and __ Analysis Methods: __ILM03.0 __ILM04.0

Metals Digestion Methods: X3005A __3010A __3015 __3020A __3050B __3051 __200.7 __SS17
__Other: _____

Metals Analysis Methods

	SW846		EPA		STD MTD	EPA OSWR	USATHAMA
Aluminum	X6010B		__200.7				__99
Antimony	X6010B	__7041 [5]	__200.7	__204.2			__99
Arsenic	__6010B	__7060A [5]	__200.7	__206.2	__3113B		__99
Barium	X6010B		__200.7				__99
Beryllium	X6010B		__200.7				__99
Bismuth	__6010B [1]		__200.7 [1]			__1620	__99
Boron	__6010B		__200.7				__99
Cadmium	X6010B	__7131A [5]	__200.7	__213.2			__99
Calcium	X6010B		__200.7				__99
Chromium	X6010B	__7191 [5]	__200.7	__218.2			__SS17
Cobalt	X6010B		__200.7				__99
Copper	X6010B	__7211 [5]	__200.7	__220.2			__99
Iron	X6010B		__200.7				__99
Lead	__6010B	__7421 [5]	__200.7	__239.2	__3113B		__99
Lithium	__6010B	__7430 [4]	__200.7			__1620	__99
Magnesium	X6010B		__200.7				__99
Manganese	X6010B		__200.7				__99
Mercury	__7470A [3]	__7471A [3]	__245.1 [2]	__245.5 [2]			__99
Molybdenum	__6010B		__200.7				__99
Nickel	X6010B		__200.7				__99
Potassium	X6010B	__7610 [4]	__200.7	__258.1 [4]			__99
Rare Earths	__6010B [1]		__200.7 [1]			__1620	__99
Selenium	__6010B	__7740 [5]	__200.7	__270.2	__3113B		__99
Silicon	__6010B [1]		__200.7			__1620	__99
Silica	__6010B		__200.7			__1620	__99
Silver	X6010B	__7761 [5]	__200.7	__272.2			__99
Sodium	X6010B	__7770 [4]	__200.7	__273.1 [4]			__99
Strontium	X6010B		__200.7				__99
Thallium	__6010B	__7841 [5]	__200.7	__279.2	__200.9		__99
Tin	__6010B		__200.7				__99
Titanium	__6010B		__200.7				__99
Uranium	__6010B [1]		__200.7 [1]			__1620	__99
Vanadium	X6010B		__200.7				__99
Zinc	X6010B		__200.7				__99
Zirconium	__6010B [1]		__200.7 [1]			__1620	__99

Other:_____ Method:_____

L-WI-033/M-11/99

METHOD REFERENCES AND DATA QUALIFIERS

DATA QUALIFIERS

U = Indicates that the parameter was not detected at or above the reported limit. The associated numerical value is the sample detection limit.

* = Indicates that the original sample result is greater than 4x the spike amount added.

ABBREVIATIONS

MB = Method or Preparation Blank.
MS = Matrix Spike.
MSD = Matrix Spike Duplicate.
REP = Sample Replicate
LCS = Laboratory Control Sample.
NC = Not calculated.

ANALYTICAL METAL METHODS

1. Not included in the method element list.

2. Modified Hg: Hg1 and Hg2 require less total volume of digestate due to the autosampler analysis. Sample volumes and reagents for mercury determinations in water and soil have been proportionately scaled down to adapt to this semi-automated technique. The sample volume used for water analysis is 33 mL. For soils, 0.1 grams of sample is taken to a final volume of 50 mL (including all reagents).

3. Modified Hg: Hg1 and Hg2 require less total volume of digestate due to the autosampler analysis. Sample volumes and reagents for mercury determinations in water and soil have been proportionately scaled down to adapt to this semi-automated technique. The sample volume used for water analysis is 33 mL. For soils, three 0.1 gram of sample is taken to a final volume of 50 mL (including all reagents).

4. Flame AA.

5. Graphite Furnace AA.

RFW 21-21L-033/N-10/96

Lionville Lababoratory, Inc.

INORGANICS DATA SUMMARY REPORT 02/15/01

CLIENT: TNUHANFORD C01-008 ~~H1205~~ H1200 nc 3/5/01 LVL LOT #: 0101L761

WORK ORDER: 10985-001-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-001	B10LC2	Silver, Total	1.1 u	UG/L	1.1	1.0
		Aluminum, Total	22.7 u	UG/L	22.7	1.0
		Barium, Total	72.4	UG/L	0.20	1.0
		Beryllium, Total	0.10 u	UG/L	0.10	1.0
		Calcium, Total	79400	UG/L	19.2	1.0
		Cadmium, Total	0.30 u	UG/L	0.30	1.0
		Cobalt, Total	0.90 u	UG/L	0.90	1.0
		Chromium, Total	2370	UG/L	0.60	1.0
		Copper, Total	0.95	UG/L	0.90	1.0
		Iron, Total	21.8 u	UG/L	21.8	1.0
		Potassium, Total	4540	UG/L	40.9	1.0
		Magnesium, Total	18800	UG/L	6.7	1.0
		Manganese, Total	0.20 u	UG/L	0.20	1.0
		Sodium, Total	9860	UG/L	4.1	1.0
		Nickel, Total	1.5	UG/L	0.90	1.0
		Antimony, Total	4.0	UG/L	2.3	1.0
		Strontium, Total	448	UG/L	0.10	1.0
		Vanadium, Total	8.5	UG/L	0.80	1.0
		Zinc, Total	22.3	UG/L	0.40	1.0

Lionville Lababoratory, Inc.

INORGANICS DATA SUMMARY REPORT 02/15/01

CLIENT: TNUHANFORD C01-008 ~~H1205~~ H1200 NC 3-5-01 LVL LOT #: 0101L761

WORK ORDER: 10985-001-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-002	B10LC3	Silver, Total	1.1 u	UG/L	1.1	1.0
		Aluminum, Total	22.7 u	UG/L	22.7	1.0
		Barium, Total	70.9	UG/L	0.20	1.0
		Beryllium, Total	0.10 u	UG/L	0.10	1.0
		Calcium, Total	77400	UG/L	19.2	1.0
		Cadmium, Total	0.30 u	UG/L	0.30	1.0
		Cobalt, Total	0.90 u	UG/L	0.90	1.0
		Chromium, Total	2340	UG/L	0.60	1.0
		Copper, Total	0.90 u	UG/L	0.90	1.0
		Iron, Total	21.8 u	UG/L	21.8	1.0
		Potassium, Total	4510	UG/L	40.9	1.0
		Magnesium, Total	18500	UG/L	6.7	1.0
		Manganese, Total	0.20 u	UG/L	0.20	1.0
		Sodium, Total	9750	UG/L	4.1	1.0
		Nickel, Total	0.90 u	UG/L	0.90	1.0
		Antimony, Total	2.9	UG/L	2.3	1.0
		Strontium, Total	441	UG/L	0.10	1.0
		Vanadium, Total	8.0	UG/L	0.80	1.0
		Zinc, Total	23.1	UG/L	0.40	1.0

Lionville Lababoratory, Inc.

INORGANICS DATA SUMMARY REPORT 02/15/01

CLIENT: TNUHANFORD C01-008 ~~H1205~~ H1200 3/5/01 nc LVL LOT #: 0101L761

WORK ORDER: 10985-001-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-003	B10LJ6	Silver, Total	1.1 u	UG/L	1.1	1.0
		Aluminum, Total	22.7 u	UG/L	22.7	1.0
		Barium, Total	76.4	UG/L	0.20	1.0
		Beryllium, Total	0.10 u	UG/L	0.10	1.0
		Calcium, Total	87900	UG/L	19.2	1.0
		Cadmium, Total	0.30 u	UG/L	0.30	1.0
		Cobalt, Total	0.90 u	UG/L	0.90	1.0
		Chromium, Total	849	UG/L	0.60	1.0
		Copper, Total	1.4	UG/L	0.90	1.0
		Iron, Total	21.8 u	UG/L	21.8	1.0
		Potassium, Total	4190	UG/L	40.9	1.0
		Magnesium, Total	21200	UG/L	6.7	1.0
		Manganese, Total	0.23	UG/L	0.20	1.0
		Sodium, Total	6120	UG/L	4.1	1.0
		Nickel, Total	0.90 u	UG/L	0.90	1.0
		Antimony, Total	2.3 u	UG/L	2.3	1.0
		Strontium, Total	526	UG/L	0.10	1.0
		Vanadium, Total	6.1	UG/L	0.80	1.0
		Zinc, Total	32.6	UG/L	0.40	1.0

Lionville Lababoratory, Inc.

INORGANICS DATA SUMMARY REPORT 02/15/01

CLIENT: TNUHANFORD C01-008 ~~H1205~~ H1200 nc 3-5-01 LVL LOT #: 0101L761

WORK ORDER: 10985-001-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-004	B10LJ7	Silver, Total	1.1 u	UG/L	1.1	1.0
		Aluminum, Total	22.7 u	UG/L	22.7	1.0
		Barium, Total	79.3	UG/L	0.20	1.0
		Beryllium, Total	0.10 u	UG/L	0.10	1.0
		Calcium, Total	91400	UG/L	19.2	1.0
		Cadmium, Total	0.30 u	UG/L	0.30	1.0
		Cobalt, Total	0.90 u	UG/L	0.90	1.0
		Chromium, Total	849	UG/L	0.60	1.0
		Copper, Total	1.9	UG/L	0.90	1.0
		Iron, Total	40.4	UG/L	21.8	1.0
		Potassium, Total	4290	UG/L	40.9	1.0
		Magnesium, Total	22000	UG/L	6.7	1.0
		Manganese, Total	0.61	UG/L	0.20	1.0
		Sodium, Total	6270	UG/L	4.1	1.0
		Nickel, Total	0.90 u	UG/L	0.90	1.0
		Antimony, Total	2.4	UG/L	2.3	1.0
		Strontium, Total	544	UG/L	0.10	1.0
		Vanadium, Total	6.3	UG/L	0.80	1.0
		Zinc, Total	35.2	UG/L	0.40	1.0

Lionville Lababoratory, Inc.

INORGANICS DATA SUMMARY REPORT 02/15/01

CLIENT: TNUHANFORD C01-008 ~~M1805~~ H1200 3/5/01 nc LVL LOT #: 0101L761

WORK ORDER: 10985-001-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT	DILUTION FACTOR
-005	B10LK8	Silver, Total	1.1	u	UG/L	1.1	1.0
		Aluminum, Total	22.7	u	UG/L	22.7	1.0
		Barium, Total	105		UG/L	0.20	1.0
		Beryllium, Total	0.10	u	UG/L	0.10	1.0
		Calcium, Total	82600		UG/L	19.2	1.0
		Cadmium, Total	0.30	u	UG/L	0.30	1.0
		Cobalt, Total	0.90	u	UG/L	0.90	1.0
		Chromium, Total	20.9		UG/L	0.60	1.0
		Copper, Total	1.0		UG/L	0.90	1.0
		Iron, Total	21.8	u	UG/L	21.8	1.0
		Potassium, Total	5490		UG/L	40.9	1.0
		Magnesium, Total	25700		UG/L	6.7	1.0
		Manganese, Total	0.66		UG/L	0.20	1.0
		Sodium, Total	14500		UG/L	4.1	1.0
		Nickel, Total	2.9		UG/L	0.90	1.0
		Antimony, Total	2.3	u	UG/L	2.3	1.0
		Strontium, Total	591		UG/L	0.10	1.0
		Vanadium, Total	6.2		UG/L	0.80	1.0
		Zinc, Total	10.3		UG/L	0.40	1.0

Lionville Lababoratory, Inc.

INORGANICS DATA SUMMARY REPORT 02/15/01

CLIENT: TNUHANFORD C01-006 ~~[illegible]~~ 1120 nc 3-5-01 LVL LOT #: 0101L761

WORK ORDER: 10985-001-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT	DILUTION FACTOR
-006	B10LK9	Silver, Total	1.1	u	UG/L	1.1	1.0
		Aluminum, Total	22.7	u	UG/L	22.7	1.0
		Barium, Total	104		UG/L	0.20	1.0
		Beryllium, Total	0.10	u	UG/L	0.10	1.0
		Calcium, Total	83100		UG/L	19.2	1.0
		Cadmium, Total	0.30	u	UG/L	0.30	1.0
		Cobalt, Total	0.90	u	UG/L	0.90	1.0
		Chromium, Total	26.3		UG/L	0.60	1.0
		Copper, Total	2.0		UG/L	0.90	1.0
		Iron, Total	94.1		UG/L	21.8	1.0
		Potassium, Total	5450		UG/L	40.9	1.0
		Magnesium, Total	25800		UG/L	6.7	1.0
		Manganese, Total	1.5		UG/L	0.20	1.0
		Sodium, Total	14400		UG/L	4.1	1.0
		Nickel, Total	5.1		UG/L	0.90	1.0
		Antimony, Total	2.3	u	UG/L	2.3	1.0
		Strontium, Total	590		UG/L	0.10	1.0
		Vanadium, Total	6.3		UG/L	0.80	1.0
		Zinc, Total	11.1		UG/L	0.40	1.0

Lionville Lababoratory, Inc.

INORGANICS DATA SUMMARY REPORT 02/15/01

CLIENT: TNUHANFORD C01-008 ~~H1206~~ H1200NC 3-5-01 LVL LOT #: 0101L761

WORK ORDER: 10985-001-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT	DILUTION FACTOR
-007	B10LP2	Silver, Total	1.1	u	UG/L	1.1	1.0
		Aluminum, Total	22.7	u	UG/L	22.7	1.0
		Barium, Total	111		UG/L	0.20	1.0
		Beryllium, Total	0.10	u	UG/L	0.10	1.0
		Calcium, Total	99200		UG/L	19.2	1.0
		Cadmium, Total	0.30	u	UG/L	0.30	1.0
		Cobalt, Total	5.9		UG/L	0.90	1.0
		Chromium, Total	562		UG/L	0.60	1.0
		Copper, Total	2.9		UG/L	0.90	1.0
		Iron, Total	21.8	u	UG/L	21.8	1.0
		Potassium, Total	4100		UG/L	40.9	1.0
		Magnesium, Total	21800		UG/L	6.7	1.0
		Manganese, Total	0.20	u	UG/L	0.20	1.0
		Sodium, Total	17300		UG/L	4.1	1.0
		Nickel, Total	6.5		UG/L	0.90	1.0
		Antimony, Total	2.3	u	UG/L	2.3	1.0
		Strontium, Total	496		UG/L	0.10	1.0
		Vanadium, Total	2.6		UG/L	0.80	1.0
		Zinc, Total	2.3		UG/L	0.40	1.0

Lionville Lababoratory, Inc.

INORGANICS DATA SUMMARY REPORT 02/15/01

CLIENT: TNUHANFORD C01-008 ~~[illegible]~~ H1200 nc 10/5/01 LVL LOT #: 0101L761

WORK ORDER: 10985-001-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-008	B10LP3	Silver, Total	1.1 u	UG/L	1.1	1.0
		Aluminum, Total	22.7 u	UG/L	22.7	1.0
		Barium, Total	109	UG/L	0.20	1.0
		Beryllium, Total	0.10 u	UG/L	0.10	1.0
		Calcium, Total	98400	UG/L	19.2	1.0
		Cadmium, Total	0.30 u	UG/L	0.30	1.0
		Cobalt, Total	6.1	UG/L	0.90	1.0
		Chromium, Total	555	UG/L	0.60	1.0
		Copper, Total	2.9	UG/L	0.90	1.0
		Iron, Total	27.4	UG/L	21.8	1.0
		Potassium, Total	3910	UG/L	40.9	1.0
		Magnesium, Total	21500	UG/L	6.7	1.0
		Manganese, Total	1.3	UG/L	0.20	1.0
		Sodium, Total	16900	UG/L	4.1	1.0
		Nickel, Total	6.8	UG/L	0.90	1.0
		Antimony, Total	2.5	UG/L	2.3	1.0
		Strontium, Total	486	UG/L	0.10	1.0
		Vanadium, Total	2.5	UG/L	0.80	1.0
		Zinc, Total	2.1	UG/L	0.40	1.0

Lionville Lababoratory, Inc.

INORGANICS DATA SUMMARY REPORT 02/15/01

CLIENT: TNUHANFORD C01-008 ~~M1205~~ H1300 3/5/01 NC LVL LOT #: 0101L761

WORK ORDER: 10985-001-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-009	B10LP4	Silver, Total	1.1 u	UG/L	1.1	1.0
		Aluminum, Total	22.7 u	UG/L	22.7	1.0
		Barium, Total	95.4	UG/L	0.20	1.0
		Beryllium, Total	0.10 u	UG/L	0.10	1.0
		Calcium, Total	89000	UG/L	19.2	1.0
		Cadmium, Total	0.30 u	UG/L	0.30	1.0
		Cobalt, Total	0.90 u	UG/L	0.90	1.0
		Chromium, Total	1530	UG/L	0.60	1.0
		Copper, Total	0.90 u	UG/L	0.90	1.0
		Iron, Total	21.8 u	UG/L	21.8	1.0
		Potassium, Total	7250	UG/L	40.9	1.0
		Magnesium, Total	20200	UG/L	6.7	1.0
		Manganese, Total	0.20 u	UG/L	0.20	1.0
		Sodium, Total	11500	UG/L	4.1	1.0
		Nickel, Total	0.90 u	UG/L	0.90	1.0
		Antimony, Total	3.1	UG/L	2.3	1.0
		Strontium, Total	473	UG/L	0.10	1.0
		Vanadium, Total	4.4	UG/L	0.80	1.0
		Zinc, Total	0.97	UG/L	0.40	1.0

Lionville Lababoratory, Inc.

INORGANICS DATA SUMMARY REPORT 02/15/01

CLIENT: TNUHANFORD C01-008 ~~[illegible]~~ H1200 nc 3-5-01 LVL LOT #: 0101L761

WORK ORDER: 10985-001-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-010	B10LP5	Silver, Total	1.6	UG/L	1.1	1.0
		Aluminum, Total	22.7 u	UG/L	22.7	1.0
		Barium, Total	98.3	UG/L	0.20	1.0
		Beryllium, Total	0.10 u	UG/L	0.10	1.0
		Calcium, Total	92800	UG/L	19.2	1.0
		Cadmium, Total	0.30 u	UG/L	0.30	1.0
		Cobalt, Total	0.90 u	UG/L	0.90	1.0
		Chromium, Total	1600	UG/L	0.60	1.0
		Copper, Total	0.90 u	UG/L	0.90	1.0
		Iron, Total	38.7	UG/L	21.8	1.0
		Potassium, Total	7250	UG/L	40.9	1.0
		Magnesium, Total	21000	UG/L	6.7	1.0
		Manganese, Total	2.0	UG/L	0.20	1.0
		Sodium, Total	11900	UG/L	4.1	1.0
		Nickel, Total	0.90 u	UG/L	0.90	1.0
		Antimony, Total	2.9	UG/L	2.3	1.0
		Strontium, Total	489	UG/L	0.10	1.0
		Vanadium, Total	4.0	UG/L	0.80	1.0
		Zinc, Total	2.7	UG/L	0.40	1.0

Lionville Lababoratory, Inc.

INORGANICS DATA SUMMARY REPORT 02/15/01

CLIENT: TNUHANFORD C01-008 ~~H1205~~ H1200 nc 3-5-01 LVL LOT #: 0101L761

WORK ORDER: 10985-001-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT	DILUTION FACTOR
-011	B10LV0	Silver, Total	1.1	u	UG/L	1.1	1.0
		Aluminum, Total	22.7	u	UG/L	22.7	1.0
		Barium, Total	77.0		UG/L	0.20	1.0
		Beryllium, Total	0.10	u	UG/L	0.10	1.0
		Calcium, Total	59700		UG/L	19.2	1.0
		Cadmium, Total	0.30	u	UG/L	0.30	1.0
		Cobalt, Total	0.90	u	UG/L	0.90	1.0
		Chromium, Total	320		UG/L	0.60	1.0
		Copper, Total	0.90	u	UG/L	0.90	1.0
		Iron, Total	21.8	u	UG/L	21.8	1.0
		Potassium, Total	4010		UG/L	40.9	1.0
		Magnesium, Total	15500		UG/L	6.7	1.0
		Manganese, Total	0.64		UG/L	0.20	1.0
		Sodium, Total	6250		UG/L	4.1	1.0
		Nickel, Total	10.0		UG/L	0.90	1.0
		Antimony, Total	2.3		UG/L	2.3	1.0
		Strontium, Total	383		UG/L	0.10	1.0
		Vanadium, Total	6.4		UG/L	0.80	1.0
		Zinc, Total	0.40		UG/L	0.40	1.0

Lionville Lababoratory, Inc.

INORGANICS DATA SUMMARY REPORT 02/15/01

CLIENT: TNUHANFORD C01-008 ~~M1205~~ H1200 3-5-01 nc LVL LOT #: 0101L761

WORK ORDER: 10985-001-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-012	B10LV1	Silver, Total	1.1 u	UG/L	1.1	1.0
		Aluminum, Total	152	UG/L	22.7	1.0
		Barium, Total	78.2	UG/L	0.20	1.0
		Beryllium, Total	0.10 u	UG/L	0.10	1.0
		Calcium, Total	59500	UG/L	19.2	1.0
		Cadmium, Total	0.30 u	UG/L	0.30	1.0
		Cobalt, Total	0.90 u	UG/L	0.90	1.0
		Chromium, Total	412	UG/L	0.60	1.0
		Copper, Total	4.2	UG/L	0.90	1.0
		Iron, Total	757	UG/L	21.8	1.0
		Potassium, Total	4020	UG/L	40.9	1.0
		Magnesium, Total	15300	UG/L	6.7	1.0
		Manganese, Total	16.0	UG/L	0.20	1.0
		Sodium, Total	6170	UG/L	4.1	1.0
		Nickel, Total	47.3	UG/L	0.90	1.0
		Antimony, Total	2.3 u	UG/L	2.3	1.0
		Strontium, Total	378	UG/L	0.10	1.0
		Vanadium, Total	8.5	UG/L	0.80	1.0
		Zinc, Total	5.6	UG/L	0.40	1.0

Lionville Lababoratory, Inc.

INORGANICS DATA SUMMARY REPORT 02/15/01

CLIENT: TNUHANFORD C01-008 ~~H1200~~ H1200 nc 3-5-01 LVL LOT #: 0101L761

WORK ORDER: 10985-001-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT		DILUTION FACTOR
-013	B10LM0	Silver, Total	1.1	u	UG/L	1.1		1.0
		Aluminum, Total	22.7	u	UG/L	22.7		1.0
		Barium, Total	59.1		UG/L	0.20		1.0
		Beryllium, Total	0.10	u	UG/L	0.10		1.0
		Calcium, Total	64200		UG/L	19.2		1.0
		Cadmium, Total	0.30	u	UG/L	0.30		1.0
		Cobalt, Total	0.90	u	UG/L	0.90		1.0
		Chromium, Total	104		UG/L	0.60		1.0
		Copper, Total	7.6		UG/L	0.90		1.0
		Iron, Total	21.8	u	UG/L	21.8		1.0
		Potassium, Total	5750		UG/L	40.9	*	1.0
		Magnesium, Total	17800		UG/L	6.7		1.0
		Manganese, Total	0.28		UG/L	0.20		1.0
		Sodium, Total	23100		UG/L	4.1		1.0
		Nickel, Total	17.1		UG/L	0.90		1.0
		Antimony, Total	2.3	u	UG/L	2.3		1.0
		Strontium, Total	384		UG/L	0.10		1.0
		Vanadium, Total	5.8		UG/L	0.80		1.0
		Zinc, Total	1.8		UG/L	0.40		1.0

Lionville Lababoratory, Inc.

INORGANICS DATA SUMMARY REPORT 02/15/01

CLIENT: TNUHANFORD C01-008 ~~H1203~~ H1200 3-5-01 nc LVL LOT #: 0101L761

WORK ORDER: 10985-001-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT	DILUTION FACTOR
-014	B10LM1	Silver, Total	1.1	u	UG/L	1.1	1.0
		Aluminum, Total	22.7	u	UG/L	22.7	1.0
		Barium, Total	58.2		UG/L	0.20	1.0
		Beryllium, Total	0.10	u	UG/L	0.10	1.0
		Calcium, Total	63900		UG/L	19.2	1.0
		Cadmium, Total	0.30	u	UG/L	0.30	1.0
		Cobalt, Total	0.90	u	UG/L	0.90	1.0
		Chromium, Total	114		UG/L	0.60	1.0
		Copper, Total	0.90	u	UG/L	0.90	1.0
		Iron, Total	53.1		UG/L	21.8	1.0
		Potassium, Total	5710		UG/L	40.9	1.0
		Magnesium, Total	17700		UG/L	6.7	1.0
		Manganese, Total	0.75		UG/L	0.20	1.0
		Sodium, Total	23000		UG/L	4.1	1.0
		Nickel, Total	17.1		UG/L	0.90	1.0
		Antimony, Total	2.3	u	UG/L	2.3	1.0
		Strontium, Total	381		UG/L	0.10	1.0
		Vanadium, Total	6.4		UG/L	0.80	1.0
		Zinc, Total	1.4		UG/L	0.40	1.0

Lionville Lababoratory, Inc.

INORGANICS METHOD BLANK DATA SUMMARY PAGE 02/15/01

CLIENT: TNUHANFORD C01-008 ~~H1206~~ H1200 nc 3-6-01 LVL LOT #: 0101L761

WORK ORDER: 10985-001-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT	DILUTION FACTOR
BLANK1	01L0020-MB1	Silver, Total	1.1	u	UG/L	1.1	1.0
		Aluminum, Total	22.7	u	UG/L	22.7	1.0
		Barium, Total	0.20	u	UG/L	0.20	1.0
		Beryllium, Total	0.10	u	UG/L	0.10	1.0
		Calcium, Total	19.2	u	UG/L	19.2	1.0
		Cadmium, Total	0.30	u	UG/L	0.30	1.0
		Cobalt, Total	0.90	u	UG/L	0.90	1.0
		Chromium, Total	0.60	u	UG/L	0.60	1.0
		Copper, Total	0.90	u	UG/L	0.90	1.0
		Iron, Total	21.8	u	UG/L	21.8	1.0
		Potassium, Total	40.9	u	UG/L	40.9	1.0
		Magnesium, Total	6.7	u	UG/L	6.7	1.0
		Manganese, Total	0.21		UG/L	0.20	1.0
		Sodium, Total	4.1		UG/L	4.1	1.0
		Nickel, Total	0.90	u	UG/L	0.90	1.0
		Antimony, Total	2.3	u	UG/L	2.3	1.0
		Strontium, Total	0.10	u	UG/L	0.10	1.0
		Vanadium, Total	0.80	u	UG/L	0.80	1.0
		Zinc, Total	0.45		UG/L	0.40	1.0

Lionville Lababoratory, Inc.

INORGANICS ACCURACY REPORT 02/15/01

CLIENT: TNUHANFORD C01-008 ~~M1209~~ H1200 nc 3-5-01 LVL LOT #: 0101L761

WORK ORDER: 10985-001-001-9999-00

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	INITIAL RESULT	SPIKED AMOUNT	%RECOV	DILUTION FACTOR(SPK)
-001	B10LC2	Silver, Total	49.3	1.1 u	50.0	98.6	1.0
		Aluminum, Total	2030	22.7 u	2000	101.5	1.0
		Barium, Total	2060	72.4	2000	99.3	1.0
		Beryllium, Total	49.1	0.10u	50.0	98.2	1.0
		Calcium, Total	101000	79400	25000	86.5	1.0
		Cadmium, Total	47.4	0.30u	50.0	94.8	1.0
		Cobalt, Total	482	0.90u	500	96.3	1.0
		Chromium, Total	2500	2370	200	61.3*	1.0
		Copper, Total	248	0.95	250	99.0	1.0
		Iron, Total	979	21.8 u	1000	97.9	1.0
		Potassium, Total	31100	4540	25000	106.2	1.0
		Magnesium, Total	43600	18800	25000	99.3	1.0
		Manganese, Total	498	0.20u	500	99.6	1.0
		Sodium, Total	34800	9860	25000	99.8	1.0
		Nickel, Total	472	1.5	500	94.1	1.0
		Antimony, Total	510	4.0	500	101.3	1.0
		Strontium, Total	1460	448	1000	101.5	1.0
		Vanadium, Total	506	8.5	500	99.4	1.0
		Zinc, Total	506	22.3	500	96.7	1.0

Lionville Lababoratory, Inc.

INORGANICS PRECISION REPORT 02/15/01

CLIENT: TNUHANFORD C01-008 ~~H1205~~ H1200 3-6-01 nc LVL LOT #: 0101L761

WORK ORDER: 10985-001-001-9999-00

SAMPLE	SITE ID	ANALYTE	INITIAL RESULT	REPLICATE	RPD	DILUTION FACTOR(REP)
-001REP	B10LC2	Silver, Total	1.1 u	1.1 u	NC	1.0
		Aluminum, Total	22.7 u	22.7 u	NC	1.0
		Barium, Total	72.4	72.1	0.42	1.0
		Beryllium, Total	0.10u	0.10u	NC	1.0
		Calcium, Total	79400	78100	1.6	1.0
		Cadmium, Total	0.30u	0.30u	NC	1.0
		Cobalt, Total	0.90u	0.90u	NC	1.0
		Chromium, Total	2370	2340	1.5	1.0
		Copper, Total	0.95	0.90u	~~NC~~ 20% MW 2/16/01	1.0
		Iron, Total	21.8 u	21.8 u	NC	1.0
		Potassium, Total	4540	4550	0.42	1.0
		Magnesium, Total	18800	18600	0.93	1.0
		Manganese, Total	0.20u	0.20u	NC	1.0
		Sodium, Total	9860	9860	0.008	1.0
		Nickel, Total	1.5	1.5	0.00	1.0
		Antimony, Total	4.0	5.2	26.1	1.0
		Strontium, Total	448	447	0.20	1.0
		Vanadium, Total	8.5	7.8	8.6	1.0
		Zinc, Total	22.3	21.5	3.7	1.0

Lionville Lababoratory, Inc.

INORGANICS LABORATORY CONTROL STANDARDS REPORT 02/15/01

CLIENT: TNUHANFORD C01-008 ~~H1205~~ H1200 3-5-01 nc LVL LOT #: 0101L761

WORK ORDER: 10985-001-001-9999-00

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	SPIKED AMOUNT	UNITS	%RECOV
LCS1	01L0020-LC1	Silver, LCS	502	500	UG/L	100.4
		Aluminum, LCS	5110	5000	UG/L	102.2
		Barium, LCS	4950	5000	UG/L	99.1
		Beryllium, LCS	250	250	UG/L	99.8
		Calcium, LCS	24500	25000	UG/L	98.0
		Cadmium, LCS	249	250	UG/L	99.7
		Cobalt, LCS	2500	2500	UG/L	100
		Chromium, LCS	496	500	UG/L	99.3
		Copper, LCS	1240	1250	UG/L	99.2
		Iron, LCS	4970	5000	UG/L	99.5
		Potassium, LCS	25400	25000	UG/L	101.5
		Magnesium, LCS	25500	25000	UG/L	101.9
		Manganese, LCS	765	750	UG/L	102.0
		Sodium, LCS	24500	25000	UG/L	97.8
		Nickel, LCS	1990	2000	UG/L	99.5
		Antimony, LCS	3020	3000	UG/L	100.8
		Strontium, LCS	4980	5000	UG/L	99.5
		Vanadium, LCS	2540	2500	UG/L	101.4
		Zinc, LCS	1000	1000	UG/L	100.2

RECRA LabNet Use Only
0101L761

Custody Transfer Record/Lab Work Request

Page 1 of 2

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

RECRA LabNet

Client: TMU-Hanford C01-008
Est. Final Proj. Sampling Date:
Project #: 10985-001-001-9999-00
Project Contact/Phone #:
RECRA Project Manager: DJ
QC: Spec Del: Std TAT: 30 day
Date Rec'd: 1-10-01 Date Due: 2-9-01
Account #:

		A	B
Refrigerator #		6	6
#/Type Container	Liquid	1P	1P
	Solid		
Volume	Liquid	500	500
	Solid		
Preservatives		HNO3	–

ANALYSES REQUESTED →

ORGANIC				INORG	
VOA	BNA	Pest/PCB	Herb	Metal	CN

MATRIX CODES:
S - Soil
SE - Sediment
SO - Solid
SL - Sludge
W - Water
O - Oil
A - Air
DS - Drum Solids
DL - Drum Liquids
L - EP/TCLP Leachate
WI - Wipe
X - Other
F - Fish

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected	RECRA LabNet Use Only: Metal (1)	IC (1)
001	B10LC2			W	1-4-01	1040	✓	
002	C3				↓	↓	✓	✓
003	J16				1-3-01	1207	✓	
004	J7					↓	✓	✓
005	K8					1117	✓	
006	K9					↓	✓	✓
007	P2				1-4-01	0948	✓	
008	P3					↓	✓	✓
009	P4					0913	✓	
010	P5			↓	↓	↓	✓	✓

Special Instructions: SAP C01-008

Run Matrix QC

*Samples were originally part of 0101L727.

DATE/REVISIONS:

Met (1) 1. Al, Ag, Ba, Br, Ca, Cd, Cr, Cu, Co, Fe, K-,
↓ 2. Mg, Mn, Ni, Na, Sb, Sr, V-, Zn
IC (1) 3. Br, Cl, F1, NO2, NO3, PO4, SO4
4.
5.
6.

RECRA LabNet Use Only

Samples were:
1) Shipped ✓ or Hand Delivered
Airbill # Scrbctw
2) Ambient or Chilled
3) Received in Good Condition (Y) or N
4) Labels Indicate Properly Preserved (Y) or N
5) Received Within Holding Times (Y) or N (not NO3)

COC Tape was:
1) Present on Outer Package (Y) or N
2) Unbroken on Outer Package (Y) or N
3) Present on Sample (Y) or N
4) Unbroken on Sample (Y) or N

COC Record Present Upon Sample Rec'd (Y) or N

Cooler Temp. °C

Discrepancies Between Samples Labels and COC Record? Y or (N)

NOTES:
8214898318204 - 4.1°C
9659505204 - 3.0°C

Relinquished by	Received by	Date	Time
FedEx	V. Hernandez	1-10-01	0940
	TU 1-12-01		

Relinquished by	Received by	Date	Time
COMPOSITE WASTE	ORIGINAL! REWRITTEN		

35

RECRA LabNet Use Only

0101L761

Custody Transfer Record/Lab Work Request

Page 2 of 2

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

RECRA LabNet

Client: TRU-Hanford C01008

Est. Final Proj. Sampling Date:

Project #:

Project Contact/Phone #:

RECRA Project Manager:

QC: Del: TAT:

Date Rec'd: Date Due:

Account #:

Refrigerator #										A		B						
#/Type Container	Liquid									6		6						
	Solid									1P		1P						
Volume	Liquid									500		500						
	Solid																	
Preservatives										HNO3		—						
ANALYSES REQUESTED		ORGANIC								INORG								
		VOA	BNA	Pest/PCB	Herb					Metal	CN							
		RECRA LabNet Use Only																
										(1) PCB		(1) PCB						

MATRIX CODES:
S - Soil
SE - Sediment
SO - Solid
SL - Sludge
W - Water
O - Oil
A - Air
DS - Drum Solids
DL - Drum Liquids
L - EP/TCLP Leachate
WI - Wipe
X - Other
F - Fish

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected															
011	BIOLVO			W	1-4-01	1142								✓							
012	VI					↓								✓		✓					
013	MO					1247								✓							
014	MI					↓								✓		✓					

Special Instructions:

DATE/REVISIONS:
1.
2.
3.
4.
5.
6.

Relinquished by	Received by	Date	Time
FedEx	U. Hernandez	1-10-01	0940
	TK 1-12-01		

Relinquished by	Received by	Date	Time

Discrepancies Between Samples Labels and COC Record? Y or N

NOTES:

RECRA LabNet Use Only

Samples were:
1) Shipped ____ or Hand Delivered ____
Airbill # ____
2) Ambient or Chilled
3) Received in Good Condition Y or N
4) Labels Indicate Properly Preserved Y or N
5) Received Within Holding Times Y or N

COC Tape was:
1) Present on Outer Package Y or N
2) Unbroken on Outer Package Y or N
3) Present on Sample Y or N
4) Unbroken on Sample Y or N

COC Record Present Upon Sample Rec't Y or N

Cooler Temp. °C

PNNL

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # C01-00840

Page 1 of 1

Collector: J. G. HOGAN	Contact/Requester: JH KESSNER	Telephone No.: (509) 375-4688 MSIN FAX
SAF No.: C01-008	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: 100HR3 IAM (1&2) GW MONITORING NOVEMBER 2000	Logbook No.: WM-SWS-1139	Ice Chest No.: SML 465 Temp.
Shipped To (Lab): TMA/RECRA	Method of Shipment: GOVT VEHICLE	Bill of Lading/Air Bill No.: 42357954 1562
Protocol: CERCLA	Data Turnaround: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Fax TMA log-in to JH Kessner (372-9487) & DL Stewart (372-1704).

	Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
13	B10LC2 (F)		W	1-4-01	1040	1x500-mL G/P	ICP Metals - 6010A RCRA GW	HNO3 to pH <2
14	B10LC3		W			1x500-mL G/P	ICP Metals - 6010A RCRA GW	HNO3 to pH <2
14	B10LC3		W			1x500-mL P	IC Anions - 300.0	Cool 4C
	B10LC3		W			1x20-mL P	Activity Scan	None
	B10LC3		W			2x1000-mL G/P	Gross Alpha	HNO3 to pH <2
	B10LC3		W			2x1000-mL G/P	Gross Beta	HNO3 to pH <2
	B10LC3		W			1x250-mL P	Tritium - H3	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
J. G. HOGAN		J. G. Hogan	JAN 04 2001 1230	Fed Ex			01-04-01
PGN. EXPRESS			01-05-01 10:00	F. SEGURO			01-05-01 10:11
Fed Ex			1-10-01 0940	Vicki Hernandez			1-10-01 0940

Matrix *

S = Soil	DS = Drum Solid	SE = Sediment	DL = Drum Liqui
SO = Solid	T = Tissue	SL = Sludge	WI = Wipe
W = Water	L = Liquid	O = Oil	V = Vegetation
A = Air	X = Other		

FINAL SAMPLE DISPOSITION: Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

PNNL

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # C01-008-34

Page 1 of 2

Collector: D. R. BREWINGTON	Contact/Requester: JH KESSNER	Telephone No.: (509) 375-4688 MSIN FAX
SAF No.: C01-008	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: 100HR3 IAM (1&2) GW MONITORING, NOVEMBER 2000	Logbook No.: WM-SAWS-H30	Ice Chest No.: 3H7L-002 Temp.
Shipped To (Lab): TMA/RECRA	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 4235 7954 1573
Protocol: CERCLA	Data Turnaround: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Fax TMA log-in to JH Kessner (372-9487) & DL Stewart (372-1704).

	Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
15	B10LJ6 (F)		W	1/3/01	1207	1x500-mL G/P	ICP Metals - 6010A RCRA GW	HNO3 to pH <2
16	B10LJ7		W			1x500-mL G/P	ICP Metals - 6010A RCRA GW	HNO3 to pH <2
16	B10LJ7		W			1x500-mL P	IC Anions - 300.0	Cool 4C
	B10LJ7		W			1x20-mL P	Activity Scan	None
	B10LJ7		W			2x1000-mL G/P	Gross Alpha	HNO3 to pH <2
	B10LJ7		W			2x1000-mL G/P	Gross Beta	HNO3 to pH <2
	B10LJ7		W			1x250-mL P	Tritium - H3	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
	D. R. BREWINGTON	D.R. Brewington	1/4/01 1325	FED EX			01-04-01
FED. EXPRESS			01-05-01 10 Am	E. STGUNO			01-05-01 10 Am
Fed Ex			1-10-01 0940				1-10-01 0940

Matrix *

S	= Soil	DS	= Drum Solid
SE	= Sediment	DL	= Drum Liqui
SD	= Solid	T	= Tissue
SL	= Sludge	WI	= Wipe
W	= Water	L	= Liquid
O	= Oil	V	= Vegetation
A	= Air	X	= Other

FINAL SAMPLE DISPOSITION: Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

PNNL

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # C01-008-2

Page 1 of 1

Collector: D. R. BREWINGTON	Contact/Requester: JH KESSNER	Telephone No.: (509) 375-4688 MSIN FAX
SAF No.: C01-008	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: 100HR3 IAM (1&2) GW MONITORING NOVEMBER 2000	Logbook No.: WM-SAWS-H38	Ice Chest No.: 3ML-002 Temp.
Shipped To (Lab): TMA/RECRA	Method of Shipment: GOVT VEHICLE	Bill of Lading/Air Bill No.: 4235 7954 1573
Protocol: CERCLA	Data Turnaround: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Fax TMA log-in to JH Kessner (372-9487) & DL Stewart (372-1704).

	Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
17	B10LK8 (F)		W	1/3/01	1117	1x500-mL G/P	ICP Metals - 6010A RCRA GW	HNO3 to pH <2
18	B10LK9		W			1x500-mL G/P	ICP Metals - 6010A RCRA GW	HNO3 to pH <2
18	B10LK9		W			1x500-mL P	IC Anions - 300.0	Cool 4C
	B10LK9		W			1x20-mL P	Activity Scan	None
	B10LK9		W			2x1000-mL G/P	Gross Alpha	HNO3 to pH <2
	B10LK9		W			2x1000-mL G/P	Gross Beta	HNO3 to pH <2
	B10LK9		W			1x250-mL P	Tritium - H3	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
D. R. BREWINGTON		D.R. Brewington	1/4/01 1325	FEDEX			01-04-01
FED. EXPRESS			01-05-01 10 AM	E. SEGURO			01-05-01
Fed Ex			1-10-01 0940	[illegible]			1-10-01 0940

Matrix *

S	= Soil	DS	= Drum Solid
SE	= Sediment	DL	= Drum Liqui
SO	= Solid	T	= Tissue
SL	= Sludge	WI	= Wipe
W	= Water	L	= Liquid
O	= Oil	V	= Vegetation
A	= Air	X	= Other

FINAL SAMPLE DISPOSITION: Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

PNNL

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # C01-008-1

Page 1 of 1

Collector: D. E. PARCHEN	Contact/Requester: JH KESSNER	Telephone No.: (509) 375-4688 MSIN FAX
SAF No.: C01-008	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: 100HR3 IAM (1&2) GW MONITORING, NOVEMBER, 2000	Logbook No.: WM-SAWS - H30	Ice Chest No.: SML-48 Temp.
Shipped To (Lab): TMA/RECRA	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 4235 7954 1551
Protocol: CERCLA	Data Turnaround: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Fax TMA log-in to JH Kessner (372-9487) & DL Stewart (372-1704).

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B10LP2 (F)		W	1/4/01	0948	1x500-mL G/P	ICP Metals - 6010A RCRA GW	HNO3 to pH <2
B10LP3		W			1x500-mL G/P	ICP Metals - 6010A RCRA GW	HNO3 to pH <2
B10LP3		W			1x500-mL P	IC Anions - 300.0	Cool 4C
B10LP3		W			1x20-mL P	Activity Scan	None
B10LP3		W			2x1000-mL G/P	Gross Alpha	HNO3 to pH <2
B10LP3		W			2x1000-mL G/P	Gross Beta	HNO3 to pH <2
B10LP3		W			1x250-mL P	Tritium - H3	None

Relinquished By	Received By
Print: D. E. PARCHEN 1330 Sign: [signature] Date/Time: JAN 04 2001	Print: Fed Ex Sign: Date/Time: 01-04-01
Relinquished By: FED. EXPRESS Date/Time: 01-05-01 10:AM	Received By: E. SEGURA Date/Time: 01-05-01 10:AM
Relinquished By: Fed Ex 1-10-01 Date/Time: 0940	Received By: [signature] 1-10-01 Date/Time: 0940
Relinquished By: Date/Time:	Received By: Date/Time:

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wipe	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

PNNL

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # C01-008-1

Page 1 of 1

Collector: J. G. HOGAN	Contact/Requester: JH KESSNER	Telephone No.: (509) 375-4688 MSIN FAX
SAF No.: C01-008	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: 100HR3 IAM (1&2) GW MONITORING NOVEMBER 2000	Logbook No.: WM-SHWS-H39	Ice Chest No.: 5012465 Temp.
Shipped To (Lab): TMA/RECRA	Method of Shipment: GOVT VEHICLE	Bill of Lading/Air Bill No.: 4235 7954 1562
Protocol: CERCLA	Data Turnaround: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Fax TMA log-in to JH Kessner (372-9487) & DL Stewart (372-1704).

	Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
21	B10LP4 (F)		W	1-4-01	0913	1x500-mL G/P	ICP Metals - 6010A RCRA GW	HNO3 to pH <2
22	B10LP5		W			1x500-mL G/P	ICP Metals - 6010A RCRA GW	HNO3 to pH <2
22	B10LP5		W			1x500-mL P	IC Anions - 300.0	Cool 4C
	B10LP5		W			1x20-mL P	Activity Scan	None
	B10LP5		W			2x1000-mL G/P	Gross Alpha	HNO3 to pH <2
	B10LP5		W			2x1000-mL G/P	Gross Beta	HNO3 to pH <2
	B10LP5		W			1x250-mL P	Tritium - H3	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
J. G. HOGAN		J G Hogan	JAN 04 2001 2300	Fed Ex			01-04-01
FED. EXPRESS			01-05-01 10A	E. SEGURO			01-05-01 10 AM
Fed Ex			1-10-01 0940				1-10-01 0940

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wipe	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION: Disposal Method (e.g., Return to customer, per lab procedure, used in process) | Disposed By | Date/Time

PNNL

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # C01-008-46

Collector: J. G. HOGAN	Contact/Requester: JH KESSNER	Telephone No.: (509) 375-4688 MSIN FAX
SAF No.: C01-008	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: 100HR3 IAM (1&2) GW MONITORING NOVEMBER 2000	Logbook No.: WMI-SHWS-139	Ice Chest No.: SINL 465 Temp.
Shipped To (Lab): TMA/RECRA	Method of Shipment: GOVT VEHICLE	Bill of Lading/Air Bill No.: 4235 7954 1562
Protocol: CERCLA	Data Turnaround: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Fax TMA log-in to JH Kessner (372-9487) & DL Stewart (372-1704).

	Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
23	B10LV0 (F)		W	1-4-01	1142	1x500-mL G/P	ICP Metals - 6010A RCRA GW	HNO3 to pH <2
24	B10LV1		W			1x500-mL G/P	ICP Metals - 6010A RCRA GW	HNO3 to pH <2
24	B10LV1		W			1x500-mL P	IC Anions - 300.0	Cool 4C
	B10LV1		W			1x20-mL P	Activity Scan	None
	B10LV1		W			2x1000-mL G/P	Gross Alpha	HNO3 to pH <2
	B10LV1		W			2x1000-mL G/P	Gross Beta	HNO3 to pH <2
	B10LV1		W			1x250-mL P	Tritium - H3	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
J. G. HOGAN		J G Hogan	JAN 0 4 2001 12:30	FED EX			01-04-01
FED. EXPRESS			01-05-01 10:AM	E. Deguro			01-05-01 10:AM
Fed Ex			1-10-01 0940	Vicki Hennig			1-10-01 0940
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wipe	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

PNNL

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # C01-008-150

Page 1 of 1

Collector D. E. PARCHEN	Contact/Requester JH KESSNER	Telephone No. (509) 375-4688 MSIN FAX
SAF No. C01-008	Sampling Origin HANFORD SITE	Purchase Order/Charge Code
Project Title 100HR3 IAM (1&2) GW MONITORING NOVEMBER 2000	Logbook No. WM-SAWS-H38	Ice Chest No. SMC-48 Temp.
Shipped To (Lab) TMA/RECRA	Method of Shipment GOVT. VEHICLE	Bill of Lading/Air Bill No. 4235 7954 1551
Protocol CERCLA	Data Turnaround 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Fax TMA log-in to JH Kessner (372-9487) & DL Stewart (372-1704).

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B10LM0 (F)		W	1/4/01	1247	1x500-mL G/P	ICP Metals - 6010A RCRA GW	HNO3 to pH <2
B10LM1		W			1x500-mL G/P	ICP Metals - 6010A RCRA GW	HNO3 to pH <2
B10LM1		W			1x500-mL P	IC Anions - 300.0	Cool 4C
B10LM1		W			1x20-mL P	Activity Scan	None
B10LM1		W			2x1000-mL G/P	Gross Alpha	HNO3 to pH <2
B10LM1		W			2x1000-mL G/P	Gross Beta	HNO3 to pH <2
B10LM1		W			1x250-mL P	Tritium - H3	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
D. E. PARCHEN			330 JAN 04 2001	Fed Ex			01-04-01
FED EXPRESS			10:00 01-05-01	E. SEGURO			10:00 01-05-01
Fed Ex	1-10-01		0940				1-10-01 0940

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wipe	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

Relinquished By	Date/Time	Received By	Date/Time

FINAL SAMPLE DISPOSITION — Disposal Method (e.g., Return to customer, per lab procedure, used in process) — Disposed By — Date/Time

MAR 2001
RECEIVED

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD C01-008 ~~H1205~~ H1200 nc 3-5-01

DATE RECEIVED: 01/10/01 LVL LOT # :0101L761

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
B10LC3						
BROMIDE BY IC	002	W	01LIC004	01/04/01	01/17/01	01/17/01
CHLORIDE BY IC	002	W	01LIC004	01/04/01	01/17/01	01/17/01
FLUORIDE BY IC	002	W	01LIC004	01/04/01	01/17/01	01/17/01
NITRITE BY IC	002	W	01LIC004	01/04/01	01/17/01	01/17/01
NITRATE BY IC	002	W	01LIC004	01/04/01	01/17/01	01/17/01
PHOSPHATE BY IC	002	W	01LIC004	01/04/01	01/17/01	01/17/01
SULFATE BY IC	002	W	01LIC004	01/04/01	01/17/01	01/17/01
B10LJ7						
BROMIDE BY IC	004	W	01LIC004	01/03/01	01/17/01	01/17/01
CHLORIDE BY IC	004	W	01LIC004	01/03/01	01/17/01	01/17/01
FLUORIDE BY IC	004	W	01LIC004	01/03/01	01/17/01	01/17/01
NITRITE BY IC	004	W	01LIC004	01/03/01	01/17/01	01/17/01
NITRATE BY IC	004	W	01LIC004	01/03/01	01/17/01	01/17/01
PHOSPHATE BY IC	004	W	01LIC004	01/03/01	01/17/01	01/17/01
SULFATE BY IC	004	W	01LIC004	01/03/01	01/17/01	01/17/01
B10LK9						
BROMIDE BY IC	006	W	01LIC004	01/03/01	01/17/01	01/17/01
CHLORIDE BY IC	006	W	01LIC004	01/03/01	01/17/01	01/17/01
FLUORIDE BY IC	006	W	01LIC004	01/03/01	01/17/01	01/17/01
NITRITE BY IC	006	W	01LIC004	01/03/01	01/17/01	01/17/01
NITRATE BY IC	006	W	01LIC004	01/03/01	01/17/01	01/17/01
PHOSPHATE BY IC	006	W	01LIC004	01/03/01	01/17/01	01/17/01
SULFATE BY IC	006	W	01LIC004	01/03/01	01/17/01	01/17/01
B10LP3						
BROMIDE BY IC	008	W	01LIC004	01/04/01	01/17/01	01/17/01
CHLORIDE BY IC	008	W	01LIC004	01/04/01	01/17/01	01/17/01
FLUORIDE BY IC	008	W	01LIC004	01/04/01	01/17/01	01/17/01
NITRITE BY IC	008	W	01LIC004	01/04/01	01/17/01	01/17/01
NITRATE BY IC	008	W	01LIC004	01/04/01	01/17/01	01/17/01

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD C01-008 ~~H1205~~ H1300 nc 3-5-01

DATE RECEIVED: 01/10/01 LVL LOT # :0101L761

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
PHOSPHATE BY IC	008	W	01LIC004	01/04/01	01/17/01	01/17/01
SULFATE BY IC	008	W	01LIC004	01/04/01	01/17/01	01/17/01
B10LP5						
BROMIDE BY IC	010	W	01LIC004	01/04/01	01/17/01	01/17/01
CHLORIDE BY IC	010	W	01LIC004	01/04/01	01/17/01	01/17/01
FLUORIDE BY IC	010	W	01LIC004	01/04/01	01/17/01	01/17/01
NITRITE BY IC	010	W	01LIC004	01/04/01	01/17/01	01/17/01
NITRATE BY IC	010	W	01LIC004	01/04/01	01/17/01	01/17/01
PHOSPHATE BY IC	010	W	01LIC004	01/04/01	01/17/01	01/17/01
SULFATE BY IC	010	W	01LAC006	01/04/01	01/25/01	01/25/01
B10LV1						
BROMIDE BY IC	012	W	01LIC004	01/04/01	01/17/01	01/17/01
CHLORIDE BY IC	012	W	01LIC004	01/04/01	01/17/01	01/17/01
FLUORIDE BY IC	012	W	01LIC004	01/04/01	01/17/01	01/17/01
NITRITE BY IC	012	W	01LIC004	01/04/01	01/17/01	01/17/01
NITRATE BY IC	012	W	01LIC004	01/04/01	01/17/01	01/17/01
PHOSPHATE BY IC	012	W	01LIC004	01/04/01	01/17/01	01/17/01
SULFATE BY IC	012	W	01LIC004	01/04/01	01/17/01	01/17/01
B10LM1						
BROMIDE BY IC	014	W	01LIC004	01/04/01	01/17/01	01/17/01
BROMIDE BY IC	014 REP	W	01LIC004	01/04/01	01/17/01	01/17/01
BROMIDE BY IC	014 MS	W	01LIC004	01/04/01	01/17/01	01/17/01
CHLORIDE BY IC	014	W	01LIC004	01/04/01	01/17/01	01/17/01
CHLORIDE BY IC	014 REP	W	01LIC004	01/04/01	01/17/01	01/17/01
CHLORIDE BY IC	014 MS	W	01LIC004	01/04/01	01/17/01	01/17/01
FLUORIDE BY IC	014	W	01LIC004	01/04/01	01/17/01	01/17/01
FLUORIDE BY IC	014 REP	W	01LIC004	01/04/01	01/17/01	01/17/01
FLUORIDE BY IC	014 MS	W	01LIC004	01/04/01	01/17/01	01/17/01
NITRITE BY IC	014	W	01LIC004	01/04/01	01/17/01	01/17/01
NITRITE BY IC	014 REP	W	01LIC004	01/04/01	01/17/01	01/17/01
NITRITE BY IC	014 MS	W	01LIC004	01/04/01	01/17/01	01/17/01
NITRATE BY IC	014	W	01LIC004	01/04/01	01/17/01	01/17/01

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD C01-008 ~~H1205~~ H1200 ns 3-5-01

DATE RECEIVED: 01/10/01 LVL LOT # :0101L761

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
NITRATE BY IC	014 REP	W	01LIC004	01/04/01	01/17/01	01/17/01
NITRATE BY IC	014 MS	W	01LIC004	01/04/01	01/17/01	01/17/01
PHOSPHATE BY IC	014	W	01LIC004	01/04/01	01/17/01	01/17/01
PHOSPHATE BY IC	014 REP	W	01LIC004	01/04/01	01/17/01	01/17/01
PHOSPHATE BY IC	014 MS	W	01LIC004	01/04/01	01/17/01	01/17/01
SULFATE BY IC	014	W	01LIC004	01/04/01	01/17/01	01/17/01
SULFATE BY IC	014 REP	W	01LIC004	01/04/01	01/17/01	01/17/01
SULFATE BY IC	014 MS	W	01LIC004	01/04/01	01/17/01	01/17/01

LAB QC:

BROMIDE BY IC	MB1	W	01LIC004	N/A	01/17/01	01/17/01
BROMIDE BY IC	MB1 BS	W	01LIC004	N/A	01/17/01	01/17/01
CHLORIDE BY IC	MB1	W	01LIC004	N/A	01/17/01	01/17/01
CHLORIDE BY IC	MB1 BS	W	01LIC004	N/A	01/17/01	01/17/01
FLUORIDE BY IC	MB1	W	01LIC004	N/A	01/17/01	01/17/01
FLUORIDE BY IC	MB1 BS	W	01LIC004	N/A	01/17/01	01/17/01
NITRITE BY IC	MB1	W	01LIC004	N/A	01/17/01	01/17/01
NITRITE BY IC	MB1 BS	W	01LIC004	N/A	01/17/01	01/17/01
NITRATE BY IC	MB1	W	01LIC004	N/A	01/17/01	01/17/01
NITRATE BY IC	MB1 BS	W	01LIC004	N/A	01/17/01	01/17/01
PHOSPHATE BY IC	MB1	W	01LIC004	N/A	01/17/01	01/17/01
PHOSPHATE BY IC	MB1 BS	W	01LIC004	N/A	01/17/01	01/17/01
SULFATE BY IC	MB1	W	01LIC004	N/A	01/17/01	01/17/01
SULFATE BY IC	MB1 BS	W	01LIC004	N/A	01/17/01	01/17/01
SULFATE BY IC	MB1	W	01LAC006	N/A	01/25/01	01/25/01
SULFATE BY IC	MB1 BS	W	01LAC006	N/A	01/25/01	01/25/01

LIONVILLE LABORATORY INC.

Analytical Report

Client: TNU HANFORD C01-008 ~~H1205 H1300~~ nc 3-5-01 **W.O.#:** 01985-001-001-9999-00
LVL#: 0101L761 **Date Received:** 01-10-01

INORGANIC NARRATIVE

As of 27 January 2001, Recra LabNet Philadelphia became Lionville Laboratory Inc. Some forms may still reference Recra LabNet Philadelphia.

1. This narrative covers the analyses of 7 water samples.

2. The samples were prepared and analyzed in accordance with the methods checked on the attached glossary.

3. Sample holding times as required by the method and/or contract were met with the exception of Nitrate, Nitrite and Phosphate that were received past hold.

4. The cooler temperatures were recorded on the chain of custody.

5. The method blanks were within the method criteria.

6. The Laboratory Control Samples (LCS) were within the laboratory control limits.

8. The matrix spike recoveries were within the 75-125% control limits.

9. The replicate analyses were within the 20% RPD control limit.

10. I certify that this sample data package is in compliance with SOW requirements, both technically and for completeness, other than the conditions detailed above. Release of the data contained in this hard copy package has been authorized by the Laboratory Manager or a designee, as verified by the following signature.

for J. Michael Taylor
President
Lionville Laboratory Incorporated

02-26-01
Date

njp\i01-761

The results presented in this report relate to the analytical testing and conditions of the samples upon receipt and during storage. All pages of this report are integral parts of the analytical data. Therefore, this report should only be reproduced in its entirety of 21 pages.

208 Welsh Pool Road • Lionville, PA 19341-1333 • (610) 280-3000 • Fax (610) 280-3041

Lionville Laboratory, Inc.

WET CHEMISTRY

METHODS GLOSSARY FOR WATER SAMPLE ANALYSIS

	EPA /600	SW846	OTHER
Acidity	___ 305.1		
___Alkalinity ___Bicarbonate ___Carbonate	___ 310.1		
BOD	___ 405.1		___ 5210B (b)
Ion Chromatography:			
✓ Bromide ✓ Chloride ✓ Fluoride	✓ 300.0	___ 9056	
✓ Nitrate ✓ Nitrite ✓ Phosphate	✓ 300.0	___ 9056	
✓ Sulfate ___Formate ___Acetate ___Oxalate	✓ 300.0	___ 9056	
Chloride	___ 325.2	___ 9251	
Chorine, Residual	___ 330.5 (mod)		
Cyanide, Amenable to Chlorination	___ 335.2	___ 9010B	
Cyanide, Total	___ 335.2	___ 9010B ___ 9014	___ ILMO4.0 (e)
Cyanide, Weak Acid Dissociable		___	___ 412 (a) ___ 4500CN-I (b)
COD	___ 410.4(mod)		___ 5220C (b)
Color	___ 110.2		
Corrosivity by Coupon		___ 1110(mod)	
Chromium VI		___ 7196A	___ 3500Cr-D (b)
Fluoride	___ 340.2		___ 4500-FC
Hardness, Calcium	___ 215.2		
Hardness, Total	___ 130.2		
Iodide			___ ASTM D19P202 (1)
Surfactant	___ 425.1		
___Nitrate-Nitrite ___Nitrate ___Nitrite	___ 353.2		
Ammonia	___ 350.3		
Total___ Kjeldahl ___ Organic Nitrogen	___ 351.3		
Total___ Organic ___ Inorganic Carbon	___ 415.1	___ 9060	
Oil & Grease	___ 413.1	___ 9070	
___ pH ____ pH; paper	___ 150.1	___ 9040B ___ 9041A	
Petroleum Hydrocarbons, Total Recoverable	___ 418.1		
Phenol	___ 420.1 ___ 420.2	___ 9065 ___ 9066	
___Ortho ___Total Phosphate	___ 365.2		___ 4500-P B ___ C
Salinity			___ 210A (a) ___ 2520 (b)
Settleable Solids	___ 160.5		
Sulfide	___ 376.1	___ 9030B/9034 (acid soluble)	
Reactive ___Cyanide ___Sulfide		___ Section 7.3 (___9014___9030B)	
Silica	___ 370.1		
Sulfite	___ 377.1		
Sulfate	___ 375.4	___ 9038	
Specific Conductance	___ 120.1	___ 9050A	
Specific Gravity			___ D5057-90 ___ 213E (a)
Synthetic Precipitation Leach	___ 1312		
Total ___Dissolved ___Suspended ___Solids	160 ___.1 ___.2 ___.3		
Total Organic Halides	___ 450.1	___ 9020B	
Turbidity	___ 180.1		
Volatile Solids:			
___Total ___Dissolved ___Suspended	___ 160.4		
Other:		**Method:**	

Lionville Laboratory, Inc.

METHOD REFERENCES AND DATA QUALIFIERS

DATA QUALIFIERS

U = Indicates that the parameter was not detected at or above the reported limit. The associated numerical value is the sample detection limit.

* = Indicates that the original sample result is greater than 4x the spike amount added.

ABBREVIATIONS

MB = Method or Preparation Blank.
MS = Matrix Spike.
MSD = Matrix Spike Duplicate.
REP = Sample Replicate
LC = Laboratory Control Sample.
NC = Not calculated.

A suffix of -R, -S, or -T following these codes indicate a replicate, spike or sample duplicate analysis respectively.

ANALYTICAL WET CHEMISTRY METHODS

1. ASTM Standard Methods.

2. USEPA Methods for Chemical Analysis of Water and Wastes (USEPA 600/4-79-020).

3. Test Methods for Evaluating Solid Waste (USEPA SW-846).

a. Standard Methods for the Examination of Water and Waste, 16 ed, (1983).

b. Standard Methods for the Examination of Water and Waste, 17 ed, (1989)/18ed (1992).

c. Method of Soil Analysis, Part 1, Physical and Mineralogical Methods, 2nd ed, (1986).

d. Method of Soil Analysis, Part 2, Chemical and Microbiological Properties, Am. Soc. Agron., Madison, WI (1965).

e. USEPA Contract Laboratory Program, Statement of Work for Inorganic Analysis.

f. Code of Federal Regulations.

Lionville Lababoratory, Inc.

INORGANICS DATA SUMMARY REPORT 02/26/01

CLIENT: TNUHANFORD C01-008 ~~Hanes~~ HRDO nc 3-5-01 LVL LOT #: 0101L761
WORK ORDER: 10985-001-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-002	B10LC3	Bromide by IC	0.50 u	MG/L	0.50	2.0
		Chloride by IC	26.3	MG/L	1.2	5.0
		Fluoride by IC	1.0 u	MG/L	1.0	2.0
		Nitrite by IC	0.50 u	MG/L	0.50	2.0
		Nitrate by IC	49.2	MG/L	1.25	5.0
		Phosphate by IC	0.50 u	MG/L	0.50	2.0
		Sulfate by IC	117	MG/L	5.0	20.0
-004	B10LJ7	Bromide by IC	0.50 u	MG/L	0.50	2.0
		Chloride by IC	18.6	MG/L	0.50	2.0
		Fluoride by IC	1.0 u	MG/L	1.0	2.0
		Nitrite by IC	0.50 u	MG/L	0.50	2.0
		Nitrate by IC	49.2	MG/L	5.00	20.0
		Phosphate by IC	0.50 u	MG/L	0.50	2.0
		Sulfate by IC	173	MG/L	5.0	20.0
-006	B10LK9	Bromide by IC	5.0 u	MG/L	5.0	20.0
		Chloride by IC	14.1	MG/L	0.50	2.0
		Fluoride by IC	1.0 u	MG/L	1.0	2.0
		Nitrite by IC	0.50 u	MG/L	0.50	2.0
		Nitrate by IC	74.1	MG/L	5.00	20.0
		Phosphate by IC	0.50 u	MG/L	0.50	2.0
		Sulfate by IC	140	MG/L	5.0	20.0
-008	B10LP3	Bromide by IC	0.50 u	MG/L	0.50	2.0
		Chloride by IC	25.1	MG/L	2.5	10.0
		Fluoride by IC	1.0 u	MG/L	1.0	2.0
		Nitrite by IC	0.50 u	MG/L	0.50	2.0
		Nitrate by IC	40.2	MG/L	2.50	10.0
		Phosphate by IC	0.50 u	MG/L	0.50	2.0
		Sulfate by IC	192	MG/L	12.5	50.0
-010	B10LP5	Bromide by IC	0.50 u	MG/L	0.50	2.0
		Chloride by IC	31.5	MG/L	2.5	10.0
		Fluoride by IC	1.0 u	MG/L	1.0	2.0
		Nitrite by IC	0.50 u	MG/L	0.50	2.0
		Nitrate by IC	60.4	MG/L	2.50	10.0
		Phosphate by IC	0.50 u	MG/L	0.50	2.0
		Sulfate by IC	153	MG/L	5.0	20.0
-012	B10LV1	Bromide by IC	0.50 u	MG/L	0.50	2.0

Lionville Lababoratory, Inc.

INORGANICS DATA SUMMARY REPORT 02/26/01

CLIENT: TNUHANFORD C01-008 ~~H1905~~ H1200 nc 3-5-01 LVL LOT #: 0101L761
WORK ORDER: 10985-001-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-012	B10LV1	Chloride by IC	25.0	MG/L	2.5	10.0
		Fluoride by IC	1.0 u	MG/L	1.0	2.0
		Nitrite by IC	0.50 u	MG/L	0.50	2.0
		Nitrate by IC	39.7	MG/L	2.50	10.0
		Phosphate by IC	0.50 u	MG/L	0.50	2.0
		Sulfate by IC	78.7	MG/L	2.5	10.0
-014	B10LM1	Bromide by IC	0.50 u	MG/L	0.50	2.0
		Chloride by IC	30.7	MG/L	2.5	10.0
		Fluoride by IC	1.0 u	MG/L	1.0	2.0
		Nitrite by IC	0.50 u	MG/L	0.50	2.0
		Nitrate by IC	42.3	MG/L	2.50	10.0
		Phosphate by IC	0.50 u	MG/L	0.50	2.0
		Sulfate by IC	74.2	MG/L	2.5	10.0

Lionville Lababoratory, Inc.

INORGANICS METHOD BLANK DATA SUMMARY PAGE 02/26/01

CLIENT: TNUHANFORD C01-008 ~~H1005~~ H1200 nc 3-5-01 LVL LOT #: 0101L761
WORK ORDER: 10985-001-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
BLANK10	01LIC004-MB1	Bromide by IC	0.25 u	MG/L	0.25	1.0
		Chloride by IC	0.25 u	MG/L	0.25	1.0
		Fluoride by IC	0.50 u	MG/L	0.50	1.0
		Nitrite by IC	0.25 u	MG/L	0.25	1.0
		Nitrate by IC	0.25 u	MG/L	0.25	1.0
		Phosphate by IC	0.25 u	MG/L	0.25	1.0
		Sulfate by IC	0.25 u	MG/L	0.25	1.0
BLANK10	01LAC006-MB1	Sulfate by IC	0.25 u	MG/L	0.25	1.0

Lionville Lababoratory, Inc.

INORGANICS ACCURACY REPORT 02/26/01

CLIENT: TNUHANFORD C01-008 ~~H1205~~ H1200 nc 3-5-01 LVL LOT #: 0101L761
WORK ORDER: 10985-001-001-9999-00

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	INITIAL RESULT	SPIKED AMOUNT	%RECOV	DILUTION FACTOR(SPK)
-014	B10LM1	Bromide by IC	23.7	0.00	25.0	94.9	5.0
		Chloride by IC	128	30.7	100	97.4	20.0
		Fluoride by IC	21.1	0.25	20.0	104.4	2.0
		Nitrite by IC	9.22	0.50u	10.0	92.2	2.0
		Nitrate by IC	143	42.3	100	100.6	20.0
		Phosphate by IC	9.5	0.50u	10.0	94.8	2.0
		Sulfate by IC	176	74.2	100	101.9	20.0
BLANK10	01LIC004-MB1	Bromide by IC	4.9	0.25u	5.0	98.7	1.0
		Chloride by IC	4.7	0.25u	5.0	93.2	1.0
		Fluoride by IC	10.5	0.50u	10.0	105.3	1.0
		Nitrite by IC	4.91	0.25u	5.00	98.3	1.0
		Nitrate by IC	4.75	0.25u	5.00	95.0	1.0
		Phosphate by IC	4.9	0.25u	5.0	97.5	1.0
		Sulfate by IC	4.8	0.25u	5.0	96.9	1.0
BLANK10	01LAC006-MB1	Sulfate by IC	4.9	0.25u	5.0	98.8	1.0

Lionville Lababoratory, Inc.

INORGANICS PRECISION REPORT 02/26/01

CLIENT: TNUHANFORD C01-008 ~~H1205~~ H1200 nc 3-5-01 LVL LOT #: 0101L761
WORK ORDER: 10985-001-001-9999-00

SAMPLE	SITE ID	ANALYTE	INITIAL RESULT	REPLICATE	RPD	DILUTION FACTOR(REP)
-014REP	B10LM1	Bromide by IC	0.50u	0.50u	NC	2.0
		Chloride by IC	30.7	30.8	0.30	10.0
		Fluoride by IC	1.0 u	1.0 u	NC	2.0
		Nitrite by IC	0.50u	0.50u	NC	2.0
		Nitrate by IC	42.3	41.9	1.1	10.0
		Phosphate by IC	0.50u	0.50u	NC	2.0
		Sulfate by IC	74.2	73.9	0.42	10.0

RECRA LabNet Use Only: 0101L761

Custody Transfer Record/Lab Work Request

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

RECRA LabNet

Client: TMU-Hanford C01-008
Est. Final Proj. Sampling Date:
Project #: 10985-001001-999900
Project Contact/Phone #:
RECRA Project Manager: OJ
QC: Spec Del: Std TAT: 30 day
Date Rec'd: 1-10-01 Date Due: 2-9-01
Account #:

		A	B
Refrigerator #		6	6
#/Type Container	Liquid	1P	1P
	Solid		
Volume	Liquid	500	500
	Solid		
Preservatives		HNO3	–
ANALYSES REQUESTED →	ORGANIC: VOA		
	BNA		
	Pest/PCB		
	Herb		
	INORG: Metal		
	CN		
RECRA LabNet Use Only		Metal (1)	IC (1)

MATRIX CODES:
S - Soil
SE - Sediment
SO - Solid
SL - Sludge
W - Water
O - Oil
A - Air
DS - Drum Solids
DL - Drum Liquids
L - EP/TCLP Leachate
WI - Wipe
X - Other
F - Fish

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected	Metal (1)	IC (1)
001	B10L-C2			W	1-4-01	1040	✓	
002	C3				↓	↓	✓	✓
003	J16				1-3-01	1207	✓	
004	J7					↓	✓	✓
005	K8					1117	✓	
006	K9					↓	✓	✓
007	P2				1-4-01	0948	✓	
008	P3					↓	✓	✓
009	P4					0913	✓	
010	P5				↓	↓	✓	✓

Special Instructions: Saf C01-008

Run Matrix QC

*Samples were originally part of 0101L727.

DATE/REVISIONS:

Met (1) 1. Al, Ag, Ba, Br, Ca, Cd, Cr, Cu, Co, Fe, K-,
2. Mg, Mn, Ni, Na, Sb, Sr, V-, Zn
IC (1) 3. Br, Cl, F1, NO2, NO3, PO4, SO4
4.
5.
6.

RECRA LabNet Use Only

Samples were:
1) Shipped ✓ or Hand Delivered
Airbill # See below
2) Ambient or Chilled
3) Received in Good Condition (Y) or N
4) Labels Indicate Properly Preserved (Y) or N
5) Received Within Holding Times Y or (N) NO2 NO3 PO4

COC Tape was:
1) Present on Outer Package (Y) or N
2) Unbroken on Outer Package (Y) or N
3) Present on Sample (Y) or N
4) Unbroken on Sample (Y) or N
COC Record Present Upon Sample Rec't (Y) or N
Cooler Temp. °C

Relinquished by	Received by	Date	Time
FedEx	V. Hernandez TM 1-12-01	1-10-01	0940

Relinquished by	Received by	Date	Time
COMPOSITE WASTE	ORIGINAL REWRITTEN		

Discrepancies Between Samples Labels and COC Record? Y or (N)
NOTES:
8214898318 cool - 4.1°C
9659505204 - 3.0°C

13

RECRA LabNet Use Only
0101L761

Custody Transfer Record/Lab Work Request

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

RECRA LabNet

Client: TPU-Hanford C01-008
Est. Final Proj. Sampling Date:
Project #:
Project Contact/Phone #:
RECRA Project Manager:
QC: Del: TAT:
Date Rec'd: Date Due:
Account #:

		A	B
Refrigerator #		6	6
#/Type Container	Liquid	1P	1P
	Solid		
Volume	Liquid	500	500
	Solid		
Preservatives		HNO3	–

ANALYSES REQUESTED → ORGANIC: VOA, BNA, Pest/PCB, Herb; INORG: Metal, CN

RECRA LabNet Use Only: Metal ①, CN ①

MATRIX CODES:
S - Soil
SE - Sediment
SO - Solid
SL - Sludge
W - Water
O - Oil
A - Air
DS - Drum Solids
DL - Drum Liquids
L - EP/TCLP Leachate
WI - Wipe
X - Other
F - Fish

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected	Metal	CN
011	B10LV0			W	1-4-01	1142	✓	
012	VI					⊥	✓	✓
013	mo					1247	✓	
014	m1					⊥	✓	✓

Special Instructions:

DATE/REVISIONS:
1.
2.
3.
4.
5.
6.

RECRA LabNet Use Only

Samples were:
1) Shipped ____ or Hand Delivered ____
Airbill # _____
2) Ambient or Chilled
3) Received In Good Condition Y or N
4) Labels Indicate Properly Preserved Y or N
5) Received Within Holding Times Y or N

COC Tape was:
1) Present on Outer Package Y or N
2) Unbroken on Outer Package Y or N
3) Present on Sample Y or N
4) Unbroken on Sample Y or N
COC Record Present Upon Sample Rec't Y or N
Cooler Temp. °C

Discrepancies Between Samples Labels and COC Record? Y or N
NOTES:

Relinquished by	Received by	Date	Time
FedEx	U. Hammer	1-10-01	0940
	TK 1-12-01		

Relinquished by	Received by	Date	Time

PNNL

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # C01-008-40

Page 1 of 1

Collector: J. G. HOGAN	Contact/Requester: JH KESSNER	Telephone No.: (509) 375-4688 MSIN FAX
SAF No.: C01-008	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: 100HR3 IAM (1&2) GW MONITORING, NOVEMBER, 2000	Logbook No.: WMI-SHWI-1139	Ice Chest No.: SHL 465 Temp.
Shipped To (Lab): TMA/RECRA	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 4235 7954 1562
Protocol: CERCLA	Data Turnaround: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Fax TMA log-in to JH Kessner (372-9487) & DL Stewart (372-1704).

	Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
13	B10LC2 (F)		W	1-4-01	1040	1x500-mL G/P	ICP Metals - 6010A RCRA GW	HNO3 to pH <2
14	B10LC3		W	↓	↓	1x500-mL G/P	ICP Metals - 6010A RCRA GW	HNO3 to pH <2
14	B10LC3		W	↓	↓	1x500-mL P	IC Anions - 300.0	Cool 4C
	B10LC3		W	↓	↓	1x20-mL P	Activity Scan	None
	B10LC3		W	↓	↓	2x1000-mL G/P	Gross Alpha	HNO3 to pH <2
	B10LC3		W	↓	↓	2x1000-mL G/P	Gross Beta	HNO3 to pH <2
	B10LC3		W	↓	↓	1x250-mL P	Tritium - H3	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
J. G. HOGAN		J. Hogan	1230 JAN 04 2001	Fed Ex			01-04-01
PED. EXPRESS			16:00 01-05-01	F. SEGURO			10:11 01-05-01
Fed Ex	1-10-01		0940	Vicki Hernandez	1-10-01		0940
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wipe	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION | Disposal Method (e.g., Return to customer, per lab procedure, used in process) | Disposed By | Date/Time

PNNL

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # C01-008-34

Page 1 of 1

Collector: D. R. BREWINGTON	Contact/Requester: JIL KESSNER	Telephone No.: (509) 375-4688 MSIN FAX
SAF No.: C01-008	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: 100HR3 IAM (1&2) GW MONITORING, NOVEMBER, 2000	Logbook No.: WMA SAWS-H38	Ice Chest No.: SHIL-002 Temp.
Shipped To (Lab): TMA/RECRA	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 4235 7954 1573
Protocol: CERCLA	Data Turnaround: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Fax TMA log-in to JIL Kessner (372-9487) & DL Stewart (372-1704).

	Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
15	B10LJ6 (F)		W	1/3/01	1207	1x500-mL G/P	ICP Metals - 6010A RCRA GW	HNO3 to pH <2
16	B10LJ7		W			1x500-mL G/P	ICP Metals - 6010A RCRA GW	HNO3 to pH <2
16	B10LJ7		W			1x500-mL P	IC Anions - 300.0	Cool 4C
	B10LJ7		W			1x20-mL P	Activity Scan	None
	B10LJ7		W			2x1000-mL G/P	Gross Alpha	HNO3 to pH <2
	B10LJ7		W			2x1000-mL G/P	Gross Beta	HNO3 to pH <2
	B10LJ7		W			1x250-mL P	Tritium - H3	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
	D. R. BREWINGTON	D.R. Brewington	1325	FED EX			01-04-01
Relinquished By			Date/Time	Received By			Date/Time
FED. EXPRESS			01-05-01 10 Am	E. Stewart			01-05-01 10 Am
Relinquished By			Date/Time	Received By			Date/Time
Fed Ex			1-10-01 0940	[illegible]			1-10-01 0940
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wipe	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION: Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

PNNL

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # C01-008-24

Page 1 of 1

Collector: D. R. BREWINGTON	Contact/Requester: JII KESSNER	Telephone No.: (509) 375-4688 MSIN FAX
SAF No.: C01-008	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: 100HR3 IAM (1&2) GW MONITORING, NOVEMBER 2000	Logbook No.: WM-SAWS-H38	Ice Chest No.: 3ML-00 Z Temp.
Shipped To (Lab): TMA/RECRA	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 4235 7954 1573
Protocol: CERCLA	Data Turnaround: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Fax TMA log-in to JII Kessner (372-9487) & DL Stewart (372-1704).

	Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
17	B10LK8 (F)		W	1/3/01	1117	1x500-mL G/P	ICP Metals - 6010A RCRA GW	HNO3 to pH <2
18	B10LK9		W			1x500-mL G/P	ICP Metals - 6010A RCRA GW	HNO3 to pH <2
18	B10LK9		W			1x500-mL P	IC Anions - 300.0	Cool 4C
	B10LK9		W			1x20-mL P	Activity Scan	None
	B10LK9		W			2x1000-mL G/P	Gross Alpha	HNO3 to pH <2
	B10LK9		W			2x1000-mL G/P	Gross Beta	HNO3 to pH <2
	B10LK9		W			1x250-mL P	Tritium - H3	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
	D. R. BREWINGTON	D.R. Brewington	1/4/01 1325	FED EX			01-04-01
FED. EXPRESS			01-05-01 10:00	E. SEGURO			01-05-01
Fed Ex			1-10-01 0940	Vicki Hernandez			1-10-01 0940

Matrix *

S	= Soil	DS	= Drum Solid
SE	= Sediment	DL	= Drum Liqui
SO	= Solid	T	= Tissue
SL	= Sludge	WI	= Wipe
W	= Water	L	= Liquid
O	= Oil	V	= Vegetation
A	= Air	X	= Other

FINAL SAMPLE DISPOSITION: Disposal Method (e.g., Return to customer, per lab procedure, used in process) | Disposed By | Date/Time

PNNL

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # C01-008-1

Page 1 of 1

Collector: D. E. PARCHEN	Contact/Requester: JH KESSNER	Telephone No.: (509) 375-4688 MSIN FAX
SAF No.: C01-008	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: 100HR3 JAM (1&2) GW MONITORING, NOVEMBER, 2000	Logbook No.: WM-SAWS-H30	Ice Chest No.: SML-48 Temp.
Shipped To (Lab): TMA/RECRA	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 4235 7954 1551
Protocol: CERCLA	Data Turnaround: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Fax TMA log-in to JH Kessner (372-9487) & DL Stewart (372-1704).

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B10LP2 (F)		W	1/4/01	0948	1x500-mL G/P	ICP Metals - 6010A RCRA GW	HNO3 to pH <2
B10LP3		W			1x500-mL G/P	ICP Metals - 6010A RCRA GW	HNO3 to pH <2
B10LP3		W			1x500-mL P	IC Anions - 300.0	Cool 4C
B10LP3		W			1x20-mL P	Activity Scan	None
B10LP3		W			2x1000-mL G/P	Gross Alpha	HNO3 to pH <2
B10LP3		W			2x1000-mL G/P	Gross Beta	HNO3 to pH <2
B10LP3		W			1x250-mL P	Tritium - H3	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
	D. E. PARCHEN		JAN 04 2001		Fed Ex		01-04-01
Relinquished By			Date/Time	Received By			Date/Time
FED. EXPRESS			01-05-01 10:AM	E. SEGURO			01-05-01 10:AM
Relinquished By			Date/Time	Received By			Date/Time
Fed Ex		1-10-01	0940			1-10-01	0940
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S	= Soil	DS	= Drum Solid
SE	= Sediment	DL	= Drum Liqui
SO	= Solid	T	= Tissue
SL	= Sludge	WI	= Wipe
W	= Water	L	= Liquid
O	= Oil	V	= Vegetation
A	= Air	X	= Other

FINAL SAMPLE DISPOSITION: Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

PNNL

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # C01-008-1(

Page 1 of 1

Collector: J. G. HOGAN	Contact/Requester: JH KESSNER	Telephone No.: (509) 375-4688 MSIN FAX
SAF No.: C01-008	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: 100HR3 IAM (1&2) GW MONITORING, NOVEMBER 2000	Logbook No.: WM-SAWS-439	Ice Chest No.: SIVL465 Temp.
Shipped To (Lab): TMA/RECRA	Method of Shipment: GOVT VEHICLE	Bill of Lading/Air Bill No.: 4235 7954 1562
Protocol: CERCLA	Data Turnaround: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Fax TMA log-in to JH Kessner (372-9487) & DL Stewart (372-1704).

	Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
21	B10LP4 (F)		W	1-4-01	0913	1x500-mL G/P	ICP Metals - 6010A RCRA GW	HNO3 to pH <2
22	B10LP5		W			1x500-mL G/P	ICP Metals - 6010A RCRA GW	HNO3 to pH <2
22	B10LP5		W			1x500-mL P	IC Anions - 300.0	Cool 4C
	B10LP5		W			1x20-mL P	Activity Scan	None
	B10LP5		W			2x1000-mL G/P	Gross Alpha	HNO3 to pH <2
	B10LP5		W			2x1000-mL G/P	Gross Beta	HNO3 to pH <2
	B10LP5		W			1x250-mL P	Tritium - H3	None

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
J. G. HOGAN / J. Hogan	JAN 04 2001 2300	Fed Ex	01-04-01
FED. EXPRESS	01-05-01 10:4	E. SEGURO	01-05-01 10:4
Fed Ex 1-10-01	0940	[signature] 1-10-01	0940

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wipe	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION — Disposal Method (e.g., Return to customer, per lab procedure, used in process) — Disposed By — Date/Time

PNNL

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # C01-008-46

Page 1 of 1

Collector: J. G. HOGAN	Contact/Requester: JH KESSNER	Telephone No.: (509) 375-4688 MSIN FAX
SAF No.: C01-008	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: 100HR3 IAM (1&2) GW MONITORING, NOVEMBER, 2000	Logbook No.: WIT-SHUS-H37	Ice Chest No.: SINL 465 Temp.
Shipped To (Lab): TMA/RECRA	Method of Shipment: GOVT VEHICLE	Bill of Lading/Air Bill No.: 4235 7954 1562
Protocol: CERCLA	Data Turnaround: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Fax TMA log-in to Jill Kessner (372-9487) & DL Stewart (372-1704).

	Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
23	B10LV0 (F)		W	1-4-01	1142	1x500-mL G/P	ICP Metals - 6010A RCRA GW	HNO3 to pH <2
24	B10LV1		W			1x500-mL G/P	ICP Metals - 6010A RCRA GW	HNO3 to pH <2
24	B10LV1		W			1x500-mL P	IC Anions - 300.0	Cool 4C
	B10LV1		W			1x20-mL P	Activity Scan	None
	B10LV1		W			2x1000-mL G/P	Gross Alpha	HNO3 to pH <2
	B10LV1		W			2x1000-mL G/P	Gross Beta	HNO3 to pH <2
	B10LV1		W			1x250-mL P	Tritium - H3	None

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
J. G. HOGAN / J Hogan	1230 JAN 04 2001	FED EX	01-04-01
FED. EXPRESS	10:AM 01-05-01	E. Deguro	10:AM 01-05-01
Fed Ex	1-10-01 0940	Vicki Hennings	1-10-01 0940

Matrix *

S = Soil	DS = Drum Solid		
SE = Sediment	DL = Drum Liqui		
SO = Solid	T = Tissue		
SL = Sludge	WI = Wipe		
W = Water	L = Liquid		
O = Oil	V = Vegetation		
A = Air	X = Other		

FINAL SAMPLE DISPOSITION: Disposal Method (e.g., Return to customer, per lab procedure, used in process) | Disposed By | Date/Time

PNNL

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # C01-008-150

Page 1 of 1

Collector D. E. PARCHEN	Contact/Requester JH KESSNER	Telephone No. (509) 375-4688 MSIN FAX
SAF No. C01-008	Sampling Origin HANFORD SITE	Purchase Order/Charge Code
Project Title 100HR3 IAM (1&2) GW MONITORING NOVEMBER 2000	Logbook No. WM-SAWS-H38	Ice Chest No. SMC-48 Temp.
Shipped To (Lab) TMA/RECRA	Method of Shipment GOVT. VEHICLE	Bill of Lading/Air Bill No. 4235 7954 1551
Protocol CERCLA	Data Turnaround 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Fax TMA log-in to JH Kessner (372-9487) & DL Stewart (372-1704).

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B10LM0 (F)		W	1/4/01	1247	1x500-mL G/P	ICP Metals - 6010A RCRA GW	HNO3 to pH <2
B10LM1		W			1x500-mL G/P	ICP Metals - 6010A RCRA GW	HNO3 to pH <2
B10LM1		W			1x500-mL P	IC Anions - 300.0	Cool 4C
B10LM1		W			1x20-mL P	Activity Scan	None
B10LM1		W			2x1000-mL G/P	Gross Alpha	HNO3 to pH <2
B10LM1		W			2x1000-mL G/P	Gross Beta	HNO3 to pH <2
B10LM1		W			1x250-mL P	Tritium - H3	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
	D. E. PARCHEN		330 JAN 04 2001	Fed Ex			01-04-01
Relinquished By			Date/Time	Received By			Date/Time
FED EXPRESS			01-05-01	E. SEGURO			01-05-01
Relinquished By			Date/Time	Received By			Date/Time
Fed Ex			1-10-01 0940	Vicki Hernandez			1-10-01 0940
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S	= Soil	DS	= Drum Solid
SE	= Sediment	DL	= Drum Liqui
SO	= Solid	T	= Tissue
SL	= Sludge	WI	= Wipe
W	= Water	L	= Liquid
O	= Oil	V	= Vegetation
A	= Air	X	= Other

FINAL SAMPLE DISPOSITION

Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

PAGE 1 Thermo NUtech CHAIN OF CUSTODY ORD # R1-01-019

01/09/01 12:54:49 WORK ID: SAF C01-008 SDG ~~H1203~~ H1200TK 3-S-0

RCVD: 01/05/01 DUE: 02/19/01 KEEP: 02/19/02 DISP: S

DASH	SAMPLE IDENTIFICATION	STORED	TESTS		
01A-W	B10LC2 (F)	RECRA	DISPOS	E011	
02A-W	B10LC3	RECRA	DISPOS	E011	E260
02B-W	B10LC3 MS	RECRA	E011	E260	
02C-W	B10LC3 DUP	RECRA	E011	E260	
03A-W	B10LJ6 (F)	RECRA	DISPOS	E011	
04A-W	B10LJ7	RECRA	DISPOS	E011	E260
05A-W	B10LK8 (F)	RECRA	DISPOS	E011	
06A-W	B10LK9	RECRA	DISPOS	E011	E260
07A-W	B10LM0 (F)	RECRA	DISPOS	E011	
08A-W	B10LM1	RECRA	DISPOS	E011	E260
09A-W	B10LP2 (F)	RECRA	DISPOS	E011	
10A-W	B10LP3	RECRA	DISPOS	E011	E260
11A-W	B10LP4 (F)	RECRA	DISPOS	E011	
12A-W	B10LP5	RECRA	DISPOS	E011	E260
13A-W	B10LV0 (F)	RECRA	DISPOS	E011	
14A-W	B10LV1	RECRA	DISPOS	E011	E260

RELEASED BY	DATE	TRANSFERRED TO	DATE	RECEIVED BY	DATE
E. Degnan	01-09-01	FEDERAL EXPRESS	01-09-01		