DEVELOPMENT OF LOCAL POLLUTANT CONTROLS

City of Keene, New Hampshire
Public Works Department
Wastewater Treatment Plant Division

December 2014

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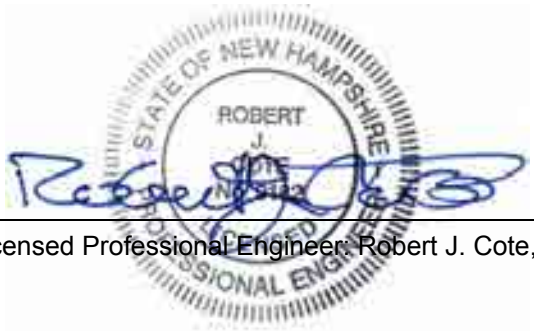

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1. SUMMARY OF RESULTS

Wastewater discharges from the City of Keene (Keene or City) are conveyed to the Ashuelot River, a tributary of the Connecticut River. Keene's Industrial Pretreatment Program (IPP) is U.S. Environmental Protection Agency (EPA) approved and includes pollutant controls applicable to wastewater received from industrial sources.

To comply with the requirements applicable for wastewater received by the Keene Publicly Owned Treatment Works (POTW), the following industrial pollutant controls are recommended for metals and cyanide:

Table 1-1 Regulatory Controls for Metals and Cyanide

POLLUTANT	REGULATORY VALUE	TYPE OF CONTROL	LIMITING FACTOR(1)
Antimony	100 mg/L	NLR	WQ
Arsenic	0.032 mg/L	Screening Level	WQ
Beryllium	0.416 mg/L	NLR	WQ
Cadmium	0.013 lb/day	MAIHL (2)	WQ
Chromium (total)	7.99 lb/day	MAIHL (2)	WQ
Copper	0.93 lb/day	MAIHL (2)	NPDES Permit
Cyanide	1.22 lb/day	MAIHL (2)	WQ
Lead	0.14 lb/day	MAIHL (2)	NPDES Permit
Mercury	0.005 lb/day	MAIHL (2)	WQ
Nickel	1.47 lb/day	MAIHL (2)	WQ
Selenium	0.30 mg/L	Screening Level	WQ
Silver	0.10 lb/day	MAIHL (2)	WQ
Zinc	3.67 lb/day	MAIHL (2)	NPDES Permit

NOTES:

(1) LandApp = land application of biosolids; WQ = surface water quality; Inhib = Process Inhibition; NPDES Permit = Keene Wastewater Treatment Facility National Pollutant Discharge Elimination System permit limit.

(2) MAIHL – Maximum allowable industrial headworks loading - Permitted concentration values are issued on a permit-specific basis and must assure that the MAIHL is not exceeded. The Public Works Department will not issue permits that in combination with other industrial loads exceed the MAIHLs above.

(3) NLR – No limit recommended. Due to the relatively high calculated value, a published value is not recommended as a measure to avoid an "invitation to pollute."

(4) Molybdenum is not proposed for regulation. The previous land application criterion is no longer applicable due to a change in State of New Hampshire regulations, and landfilling as Keene's preferred sludge disposal method.

This document presents a relatively recent regulatory approach using mass limitations and uniform concentration values for conservative pollutants. This approach is partly driven by a State of New Hampshire regulatory requirement [NHDES Env-Ws 904.05 (c)] that municipalities possess authority to incorporate mass limits into industrial user discharge permits in place of, or in addition to, concentration-based limits. Additionally, the October 14, 2005 Pretreatment Regulation revisions allow development of equivalent mass limits for certain Categorical Pretreatment Standards. The City's proposed approach is to adopt maximum allowable industrial headworks loading limits into the SUO as an enforceable provision. These values represent the combined total amounts of pollutant discharges that may be accepted from industrial sources. The City's approach then provides flexibility in allocating these amounts to discharging industrial sources. All permitted industrial user loadings will be tracked by the City. Uniform concentration values that are equivalent to uniform concentration limits are maintained by the City, independent of the SUO, as part of this strategy to promote equity and a framework for implementation.

Uniform concentration values are concentrations below which approval to discharge can generally be expected. If approval for a discharge greater than a uniform concentration value is granted (*i.e.*, a "special allocation"), the user may be required to demonstrate that their discharge will not create or contribute to adverse effects on the City's POTW. However, to encourage the practice of pollution prevention, the City has the authority to require that a Best Management Practices Plan be developed and implemented as a condition of obtaining a special allocation.

Concentration values, mass values and Best Management Practices, when written into industrial wastewater discharge permits, are intended to apply to the combined industrial wastewater discharge from a facility. These requirements are enforceable under the provisions of the Sewer Regulations.

For discharges of non-metallic pollutants, the following regulatory controls (developed by Keene WWTP staff separately from this study) are proposed:

Table 1-2 Regulatory Controls (Non-metals)

POLLUTANT	REGULATORY VALUE	CONTROL TYPE
Oil & Grease (mineral)	100 mg/L	Limit
Total toxic organics	5.0 mg/L	Screening level
Sulfite	2.0 mg/L	Screening level
Sulfate	20.0 mg/L	Screening level
Sulfide	20.0 mg/L	Screening level
pH	5.5 – 12.0 (allowable range)	Limit

A copy of the associated development documents for the **Table 1-2** pollutants, originally presented in the Keene December 2004 Local Limits Evaluation Report with minor edits to facilitate inclusion within this report, is included as an attachment in **Section 10** of this report.

The administrative process for managing screening level exceedances is documented in the recommended Sewer Use Ordinance text presented in **Section 10** of this report.

2. BACKGROUND

This December 2014 iteration of the Keene Local Pollutant Controls report represents the third edition of a process to derive a technically defensible system of industrial wastewater discharge pollutant controls. The first edition was submitted to EPA in January 2007.

January 2012 Update

After the City's January 2007 Local Limits report was submitted to EPA, significant changes to the WWTP's operations occurred. The 2007 NPDES permit included a lowered phosphorus limit, which triggered changes to the wastewater treatment process in order to meet the new limits. Those and other changes since the January 2007 report included:

- Ability to add poly aluminum chloride (PAC) at primary clarifiers as needed to aid in removal of phosphorus, but with the result of increased metals removal efficiencies;
- Fine-tuning of the operation of the aeration basin, including use of anaerobic and anoxic zones for enhanced treatment;
- New SCADA monitoring of several parameters at key points in the WWTP for enhanced process monitoring and control;
- WWTP process changes that resulted in reduction of solids, and any metals tied up in those solids, in the final effluent;
- Increased septage volumes. In the prior several years, two local septage receiving lagoons discontinued their operations. The Keene WWTP is the only remaining significant septage receiving station in the region. The result was an increase in septage and holding tank waste from approximately 2.2 million gallons (MG) in 2006 to approximately 6.2 MG in 2010.

Based on the nature of these WWTP operational changes, the City requested in 2010 approval from EPA to significantly revise the findings of the January 2007 Local Limits report. That approval was granted, and the second edition of the Local Limits report was finalized in January 2012.

December 2014 Update

The January 2012 update was submitted for NHDES and EPA review on February 13, 2012. Before EPA review was initiated, a September 29, 2004 EPA-issued Administrative Order, which included a 20 ppb interim NPDES discharge limit for copper, was rescinded (in July 2012). The copper limits

reverted to the 1994 NPDES permit limit values of 6.2 ug/L and 8.2 ug/L, monthly average and maximum day, respectively. Inserting these more restrictive criteria into the recently completed calculations resulted in a negative local limit for copper, with the background sources of copper significantly exceeding the maximum allowable headworks loading, with no capacity to allocate copper to industrial sources.

In September 2012, in an effort to comply with the more restrictive NPDES limits, the WWTP began adding more polyaluminum chloride (a coagulant to increase particulate removal) at the primary clarifiers. And with the passage of time, it is likely that the increasing percentage of non-copper (*e.g.*, PEX [cross-linked polyethylene]) plumbing in new residential construction and remodeling projects has contributed to decreasing copper concentrations in domestic wastewater.

To assess the anticipated changes in copper removal efficiency and background data, the WWTP has continued a relatively comprehensive monitoring program. This 2014 report update relies on new copper analytical data from 2012/2013 for WWTP influent/effluent, domestic sources, and septage. A 3-day WWTP influent/effluent monitoring event to obtain low reporting limit data for lead was also completed in 2014. This targeted monitoring event was planned since the lead calculations and local limit are particularly sensitive to the WWTP removal efficiency. Therefore, obtaining the highest quality lead data became an objective for this round of calculations.

Another important change since the 2012 update was that, effective August 1, 2013, the Env-Ws 904.04(c)(3) requirement to provide for beneficial reuse of sludge (biosolids land application) was revised so that the land application criteria for the City's pollutant controls are no longer applicable. The City has determined that future land application is unlikely, and therefore land application criteria have been excluded from these calculations.

The 2007 report included a significant quantity of analytical data that was developed using techniques providing very low analytical reporting limits. Much of that data has been retained in the current calculations on the basis that it more accurately represents present conditions than much of the recent data reported using methods with higher reporting limits. Since allowable pollutant loadings are often quite low, it is important not to overestimate loadings from sources, or to underestimate wastewater treatment plant (WWTP) pollutant removal efficiencies.

The primary goals of Keene's wastewater discharge pollutant controls are to:

- Ensure that surface water quality requirements are satisfied;
- Comply with the requirements of its NPDES permit;

- Ensure the safety of collection system workers;
- Protect the integrity of the wastewater collection system; and
- Protect the quality of biosolids generated at the facility.

These considerations are incorporated into the controls established for Keene's industrial wastewater discharges.

Keene's wastewater, after treatment at its municipal WWTP, is conveyed to the Ashuelot River, a tributary of the Connecticut River, in accordance with the requirements of a National Pollutant Discharge Elimination System Permit (No. NH0100790) issued by the U.S. Environmental Protection Agency (EPA) and certified by the New Hampshire Department of Environmental Services (NHDES), effective November 1, 2007.

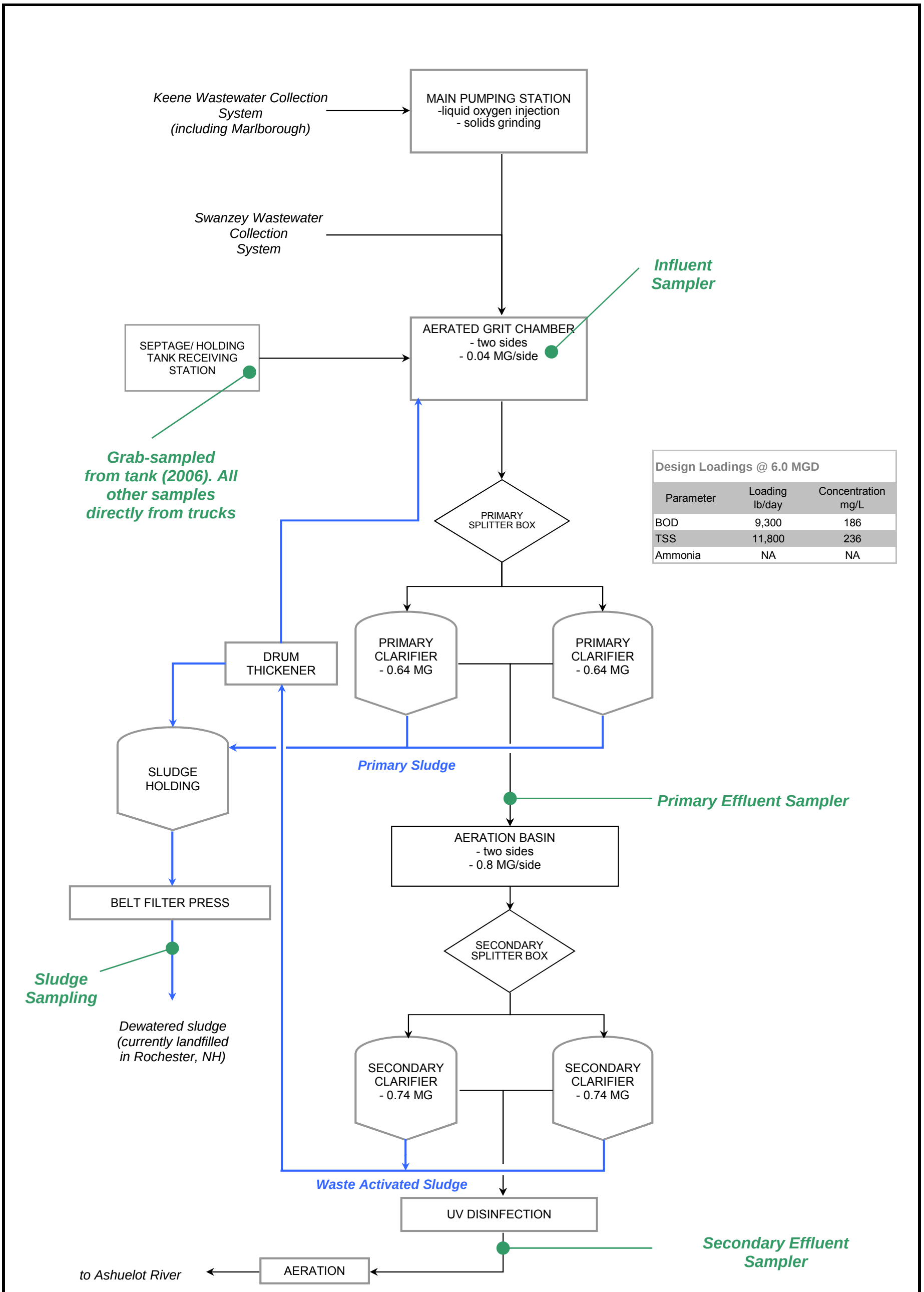
The City's WWTP is primarily designed to treat normal sanitary wastewater from residential locations and sink and toilet wastes from commercial, industrial and other locations. Wastewater discharged from other sources is generally identified as "industrial wastewater" by regulatory agencies, although it does not necessarily originate from manufacturing operations. Industrial wastewater may contain pollutants that POTWs are not designed to treat or manage. Therefore, controls are established to protect the POTW and the environment.

This document describes the basis for those controls established for industrial wastewater discharges originating within Keene, Marlborough, Swanzey, and hauled wastes, as appropriate. The methodology utilized is consistent with EPA's 2004 Local Limits Development Guidance document.

Approximately 5 percent of the flow to the WWTP is of industrial origin and 9 significant industrial user wastewater discharge permits are currently issued.

Attachments to this section:

- *Figure 2-1 Keene WWTP Process Schematic Diagram*



2-1	FIGURE NO.:	13-271	PROJECT NO.:	**WASTEWATER TREATMENT PLANT** **CITY OF KEENE** KEENE, NEW HAMPSHIRE	DES'D BY : R.J.C. CKD'D BY : M.E.S.
				PROCESS SCHEMATIC DIAGRAM	SCALE : N.T.S. DATE : OCT 2014

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3. ENVIRONMENTAL CRITERIA

Keene's pollutant controls are based on the environmental criteria typical for Publicly Owned Treatment Works (POTWs). These include:

- *Surface water quality standards*
- *Sludge quality*
- *Process inhibition*
- *National Pollutant Discharge Elimination System (NPDES) permit limits*

Surface Water Quality Standards

Surface water quality standards are promulgated by NHDES in Chapter Env-1700 and include specific numeric standards in Part Env-Wq 1703.21. These standards are equal to or more stringent than EPA's National Recommended Water Quality Criteria for Priority Toxic Pollutants and were used as a basis for determining compliance with surface water quality standards.

For metals, the NHDES values in Part Env-Wq 1703.21 are expressed as dissolved concentrations. Part Env-Wq 1705 specifies the stream flows at which these standards apply. The City's NPDES permit prohibits discharges that cause violations of the surface water quality standards.

Several of the water quality standards are dependent on the hardness of the receiving stream. In accordance with Env-Wq 1703.22 (f), the minimum allowable value for the calculations is 25 mg/L. Based on historic measurements, the Ashuelot River hardness is less than 25 mg/L, therefore 25 mg/L is used for these calculations.

Metals analytical results used for this study are expressed as total recoverable metals. Accordingly, the water quality standard values presented in **Table 3-1** were calculated using the conversion factors of Env-Wq Table 1703.23.

Table 3-1 State of New Hampshire Surface Water Quality Criteria (1)

POLLUTANT	ACUTE FRESH WATER CRITERIA (ug/L)	CHRONIC FRESH WATER CRITERIA (ug/L)	HUMAN HEALTH WATER CRITERIA[2] (ug/L)
Antimony	9,000	1,600	4,300
Arsenic	340	150	0.14
Beryllium	130	5.3	#NA
Cadmium	0.52 (3)	0.10 (3)	#NA
Chromium (III)	579	28	#NA
Chromium (VI)	16.3	11.4	#NA
Copper	3.8	2.9	1,000
Cyanide (T)	22.0	5.2	220,000
Lead	14.0	0.5	#NA
Mercury	1.6	0.9	0.05
Molybdenum	#N/A	#N/A	#N/A
Nickel	145	16.1	4,600
Selenium	#N/A	5.0	11,000
Silver	0.37	#N/A	65,000
Zinc	36.2	32.7	5,000

NOTES:

(1) All values based on river hardness of 25.0 mg/L (minimum value for calculations). Water quality criteria are expressed as total recoverable metals.

(2) Criteria for Fish Ingestion only - River is not used as a drinking water supply.

(3) Criteria published in revised EPA Federal Register, dated April 12, 2001 (see attachment to Section 3).

"#N/A" = An applicable water quality standard has not been established

Sludge[1] Quality

The City currently contracts with a vendor for transport of its sludge to the Turnkey Landfill in Rochester, New Hampshire. In the 2007 and 2012 editions of this report, it was necessary to comply with the Env-Ws 904.04(c)(3) requirement to provide for beneficial reuse of sludge (biosolids land application), and those reports included limits calculations to allow for land application disposal. The disposal of sludge is federally-regulated under 40 CFR Part 503, *Standards for the Use or Disposal of Sewage Sludge* and is also subject to the New Hampshire Code of Administrative Rules, Env-Wq 800, *Sludge Management*. Both regulations were promulgated to protect human health and the environment from pollutants potentially present in sewage sludge.

Effective August 1, 2013, the Env-Ws 904.04(c)(3) requirement was revised to read "that wastes introduced into a POTW by any person shall not…prevent disposal of sludge in the manner used by the POTW." (Note, this requirement is now codified as Env-Wq 305.04(c)(3).) Accordingly, the land application criteria are no longer applicable, unless the City chooses to ensure its option to do so in the future. Since the City has determined that future land application is unlikely, these criteria have been excluded from these calculations.

[1] New Hampshire Revised Statutes Annotated, Section 485:A-2, XXII defines biosolids as any sludge derived from a sewage wastewater treatment facility that meets the standards for beneficial reuse specified by the NHDES. In general, the term "biosolids" applies to sludge at the outlet of all stabilization processes.

Sludge Hazardous Waste Designation Limitations

The Toxicity Characteristic Leaching Procedure (TCLP) is one of the protocols utilized to determine whether a solid waste exhibits hazardous waste characteristics under the federal Resource Conservation and Recovery Act (RCRA). If sludge generated by the City's WWTP exceeds any of the TCLP limitations, then it is a hazardous waste and must be stored and disposed in accordance with RCRA requirements and the New Hampshire Hazardous Waste Rules. Pollutants, EPA hazardous waste numbers and TCLP threshold concentrations are listed in **Table 3-2**.

Table 3-2 NHDES Section Env-Hw 403.06 TCLP pollutant threshold concentrations for hazardous waste determination

EPA HAZARDOUS WASTE NO.	POLLUTANT	TCLP THRESHOLD CONCENTRATIONS (mg/L)
D004	Arsenic	5.0
D005	Barium	100.0
D006	Cadmium	1.0
D007	Chromium	5.0
D008	Lead	5.0
D009	Mercury	0.2
D010	Selenium	1.0
D011	Silver	5.0

Process Inhibition

Interference with the WWTP's activated sludge process and/or nitrification could potentially occur. Accordingly, both activated sludge inhibition and nitrification inhibition have been considered as part of this evaluation. The City has currently not experienced interference or a disruption of WWTP operations or maintenance activities attributable to any one specific pollutant. Therefore, no site-specific inhibition data can be applied.

The inhibition data presented in Appendix G of EPA's 2004 Local Limits Development Guidance document has been used as default values in this evaluation. If a value was not found in Appendix G for a specific pollutant, then older EPA reference materials were used and noted accordingly. If a range of literature values was reported, the lower value was used as a conservative approach in calculating allowable headworks loadings based on process inhibition, with the exception of copper and zinc as noted below.

For copper and zinc, the WWTP's secondary treatment processes have routinely received concentrations exceeding EPA's lower range inhibition values. Adverse impacts are absent. Based on this experience, the maximum of Keene's primary effluent value observed during 2005 (during the original 2007 study) was selected to represent the inhibition value. A review of more recent (2010/2013) primary effluent data indicates similar results (on an average basis), therefore the maximum primary effluent data in 2005 was considered valid. These maximum values are still within the lower end of the range of values provided by the EPA guidance.

The process inhibition values used in this local limits evaluation are presented in **Table 3-3**. Where applicable, values based on local experience are identified by footnotes.

Table 3-3 Process Inhibition Values (1)

POLLUTANT	ACTIVATED SLUDGE INHIBITION LEVEL (mg/L)	NITRIFICATION INHIBITION LEVEL (mg/L)
Antimony	#N/A	#N/A
Arsenic	0.1	1.5
Beryllium	#N/A	#N/A
Cadmium	1	5.2
Chromium (III)	10	0.25
Chromium (VI)	1	0.25
Copper	1	0.104 (4)
Cyanide (T)	0.1	0.34
Lead	1	0.5
Mercury	0.1	#N/A
Molybdenum	#N/A	#N/A
Nickel	1	0.25
Selenium	#N/A	#N/A
Silver	0.25 (3)	0.25 (2)
Zinc	0.3	0.139 (4)

NOTES:

(1) Default values from EPA's July 2004 Local Limits Development Guidance document, Appendix G were used unless otherwise noted.

(2) Default value, EPA Guidance Manual for Preventing Interference at POTWs (Sept. 1997), Table 2-1, p.20

(3) Default value, Prelim Version 4 User's Guide (May 1991), Table 3-2, p.14

(4) Used maximum primary effluent value observed during prior years. EPA ranges are 0.05 - 0.48 for copper and 0.08 - 0.5 for zinc.

"#N/A" = An applicable inhibition value has not been published

NPDES Permit

The City was reissued an NPDES permit (No. NH0100790) in August 2007. However, the effluent limits for copper, lead and zinc were revoked and have reverted back to those in the 1994 NPDES permit. The following WWTP effluent discharge limitations for toxic pollutants are currently applicable:

EFFLUENT CHARACTERISTIC	AVERAGE MONTHLY LIMIT	MAXIMUM DAILY LIMIT
Total Copper	6.2 µg/L	8.2 µg/L
Total Lead	0.92 µg/L	23.8 µg/L
Total Zinc	55.7 µg/L	61.5 µg/L
Ammonia Nitrogen (summer)	2.1 mg/L	3.1 mg/L

Several other permit conditions exist that control the discharge of toxic priority pollutants, including:

1. Part I (A) sets a lethal concentration 50 percent (LC_{50}) limitation of 100 percent effluent (no dilution) based on acute whole effluent toxicity testing with daphnids *(Ceriodaphnia dubia)* and fathead minnows *(Pimephales promelas)*;
2. Part I (A) sets a Chronic-No Observed Effect Concentration (C-NOEC) limitation of greater than or equal to 48 percent effluent (minimum percentage of effluent at which no chronic effects will be observed); and
3. Part I (A) states "the discharge shall not cause a violation of the water quality standards of the receiving water."

A copy of the City's NPDES permit is included as an attachment to this section.

Administrative Order

On September 29, 2004 EPA issued Administrative Order Docket No. 04-47 (AO) to the City, which included a 20 ppb interim discharge limit for copper. This value superceded the NPDES limit. This AO was rescinded in July 2012 and the 1994 copper permit limits are currently in effect.

Attachments to this section:

- *NHDES Env-Wq 1700 Surface Water Quality Regulations (electronic copy only)*
- *Keene WWTP NPDES Permit (electronic copy only)*
- *Administrative Order (excerpt) (electronic copy only) and termination letter*

Env-Wq 1703.19 Biological and Aquatic Community Integrity.

(a) The surface waters shall support and maintain a balanced, integrated, and adaptive community of organisms having a species composition, diversity, and functional organization comparable to that of similar natural habitats of a region.

(b) Differences from naturally occurring conditions shall be limited to non-detrimental differences in community structure and function.

Source. (See Revision Note #1 at chapter heading for Env-Wq 1700) #7151, eff 12-10-99; ss by #9034, INTERIM, eff 12-10-07; ss by #9162, eff 5-21-08 (See Revision Note #2 at chapter heading for Env-Wq 1700)

Env-Wq 1703.20 Human Health Criteria for Toxic Substances.

(a) The department shall use a risk factor of one in 1,000,000 when determining human health criteria for all new discharges. The department shall also use a one in 1,000,000 risk factor in determining human health criteria for all existing discharges unless it can be demonstrated by the applicant for a water discharge permit under RSA 485-A:13 that the criteria obtained using the one in 1,000,000 risk factor cannot be achieved because it is either technologically impossible or economically unfeasible. However, in no case shall the department allow a risk factor greater than one in 100,000.

(b) For the protection of human health, class A and B waters shall not contain dioxin (2, 3, 7, 8 - TCDD) in excess of 0.001 ng/l, unless allowed under part Env-Wq 1707.

Source. (See Revision Note #1 at chapter heading for Env-Wq 1700) #7151, eff 12-10-99; ss by #9034, INTERIM, eff 12-10-07; ss by #9162, eff 5-21-08 (See Revision Note #2 at chapter heading for Env-Wq 1700)

Env-Wq 1703.21 Water Quality Criteria for Toxic Substances.

(a) Unless naturally occurring or allowed under part Env-Wq 1707, all surface waters shall be free from toxic substances or chemical constituents in concentrations or combinations that:

(1) Injure or are inimical to plants, animals, humans or aquatic life; or

(2) Persist in the environment or accumulate in aquatic organisms to levels that result in harmful concentrations in edible portions of fish, shellfish, other aquatic life, or wildlife which might consume aquatic life.

(b) Unless allowed in part Env-Wq 1707 or naturally occurring, concentrations of toxic substances in all surface waters shall not exceed the recommended safe exposure levels of the most sensitive surface water use shown in Table 1703.1, subject to the notes as explained in Env-Wq 1703.22, as follows:

TABLE 1703.1
Water Quality Criteria For Toxic Substances

Chemical	Protection of Aquatic Life Concentration in micrograms per liter (ug/l)				Protection of Human Health Units per Liter	
	Fresh Acute Criteria	Fresh Chronic Criteria	Marine Acute Criteria	Marine Chronic Criteria	Water & Fish Ingestion	Fish Consumption Only
Acenaphthene	1,700	520	970	710	20 ug[j]	20 ug[j]
Acrolein	68	21	55	--	320 ug	780 ug
Acrylonitrile	7,550	2,600	--	--	0.059 ug[c]	0.66 ug[c]
Aldrin	3.0[k]	--	1.3[k]	--	0.13 ng[c]	0.14 ng[c]
Alkalinity	--	20,000	--	--	--	--
Aluminum	750	87	--	--	--	--
Ammonia[a]					--	--
Aniline	28	14	77	37	--	--
Anthracene	(see Polynuclear Aromatic Hydrocarbons)				9,600 ug	110,000 ug
Antimony	9,000	1,600	--	--	14 ug[l]	4300 ug
Arsenic	340[d,i]	150[d,i]	69[d,i]	36[d,i]	18 ng[b,c]	140 ng[b,c]
Asbestos	--	--	--	--	7,000,000 fibres[c]	
Barium	--	--	--	--	1.0 mg[l]	--
Benzene	5,300	--	5,100	700	1.2 ug[c]	71 ug[c]
Benzidine	2,500	--	--	--	0.12 ng[c]	0.54 ng[c]
Benzo(a) Anthracene	(see Polynuclear Aromatic Hydrocarbons)				0.0044 ug[c]	0.049 ug[c]
Benzo(a) Pyrene	(see Polynuclear Aromatic Hydrocarbons)				0.0044 ug[c]	0.049 ug[c]
Benzo(b) Fluoranthene	(see Polynuclear Aromatic Hydrocarbons)				0.0044 ug[c]	0.049 ug[c]
Benzo(g,h,i) Perylene	(see Polynuclear Aromatic Hydrocarbons)				--	--
Benzo(k) Fluoranthene	(see Polynuclear Aromatic Hydrocarbons)				0.0044 ug[c]	0.049 ug[c]
Beryllium	130	5.3	--	--	l	--
BHC	100[e]	--	0.34[e]	--	(see individual compounds)	
alpha-BHC	(see BHC)				3.9 ng[c]	13 ng[c]
beta-BHC	(see BHC)				14 ng[c]	46 ng[c]
delta-BHC	(see BHC)				0.0123 ug	0.0414 ug
gamma-BHC (Lindane)	0.95	.08	.16[k]	--	19 ng[c]	63 ng[c]
technical-BHC	--	--	--	--	0.0123 ug	0.0414 ug
Bis (2-Chloroethyl) Ether	(see Chloroalkyl ethers)				0.031[c]	1.4[c]
Bis (2-Ethylhexy)Phthalate	(see Phthalate esters)				1.8 ug[c]	5.9 ug[c]
Bromoform	(see Halomethanes)				4.3 ug[c]	360 ug[c]
4-Bromophenyl phenyl ether	(see Haloethers)				--	--
Butyl benzyl phthalate	(see Phthalate esters)				3000 ug	5200 ug
Cadmium[i]	0.95[f,d]	0.80[f,d]	42[d]	9.3[d]	--	--
Carbon Tetrachloride	35,200	--	50,000	--	0.25 ug[c]	4.4 ug[c]
Chlordane	2.4[k]	0.0043[k]	0.09[k]	0.004[k]	2.1 ng[c]	2.2 ng[c]
Chlorinated benzenes	250[e]	50[e]	160[e]	129[e]	(see individual compounds)	
Chlorobenzene	(See Chlorinated benzenes)				20 ug[j]	20 ug[j]
Chlorides	860,000	230,000	--	--	--	--
Chlorinated napthalenes	1,600[e]	--	7.5[e]	--	(see individual compounds)	

Chlorine	19	11	13	7.5	l	--
Chloroalkyl ethers	238,000[e]	--	--	--	(see individual compounds)	
Chloroethyl ether (Bis-2)	(see Chloroalkyl ethers)				0.031 ug[c]	1.4 ug[c]
Chloroethyl vinyl ether-2	(see Chloroalkyl ethers)				--	--
Chlorodibromomethane	(see Halomethanes)				0.41 ug[c]	34 ug[c]
Chloroethoxy methane (Bis-2)	(see Chloroalkyl ethers)				--	--
Chloroform	28,900	1,240	(see Halomethanes)		5.7 ug[c]	470 ug[c]
Chloroisopropyl ether (Bis-2)	(see Chloroalkyl ethers)				1,400 ug	170,000 ug
p-Chloro-m-cresol	30	--	--	--	3,000 ug[j]	3,000 ug[j]
Chloromethyl ether (Bis)	(see Chloroalkyl ethers)				0.13 ng[c]	0.78 ng[c]
Chloronaphthalene 2	(see Chlorinated naphthalenes)				1,700 ug	4,300 ug
Chlorophenol 2	4,380	2,000	--	--	0.1 ug[j]	0.1 ug[j]
Chlorophenol 3	--	--	--	--	0.1 ug[j]	0.1 ug[j]
Chlorophenol 4	--	--	29,700	--	0.1 ug[j]	0.1 ug[j]
Chlorophenoxy herbicides (2,4,5-TP)	--	--	--	--	10 ug	--
Chlorophenoxy herbicides (2,4-D)	--	--	--	--	100 ug[l]	--
Chlorophenyl phenyl ether 4	(see Haloethers)				--	--
Chlorpyrifos	0.083	0.041	0.011	0.0056	--	--
Chloro-4 Methyl-3 Phenol	30	--	--	--	3,000 ug[j]	3,000 ug[j]
Chromium +6	16[d,i]	11[d,i]	1,100[d,i]	50[d,i]	l	--
Chromium+3	183[f,d,i]	24[f,d,i]	10,300	--	--	--
Chrysene	(see Polynuclear Aromatic Hydrocarbons)				0.0044 ug[c]	0.049 ug[c]
Copper[i]	3.6[f,d]	2.7[f,d]	4.8[d]	3.1[d]	1,000 ug[j]	1,000 ug[j]
Cyanide	22[m]	5.2[m]	1.0[m]	1.0[m]	700 ug[l]	220,000 ug
DDE(4,4')	1,050	--	14	--	0.59 ng[c]	0.59 ng[c]
DDD(4,4')	0.06	--	3.6	--	0.83 ng[c]	0.84 ng[c]
DDT(4,4')	1.1[k]	0.001[k]	0.13[k]	0.001[k]	0.59 ng[c]	0.59 ng[c]
Demeton	--	0.1	--	0.1	--	--
Dibenzo(a,h)Anthracene	(see Polynuclear Aromatic Hydrocarbons)				0.0044 ug[c]	0.049 ug[c]
Dibutyl Phthalate	(see Phthalate esters)				2.7 mg	12 mg
Dichlorobenzenes	1,120[e]	763[e]	1,970[e]	--	(see individual compounds)	
Dichlorobenzene(1,2)	(see Dichlorobenzenes)				2,700 ug[l]	17,000 ug
Dichlorobenzene(1,3)	(see Dichlorobenzenes)				400 ug	2600 ug
Dichlorobenzene(1,4)	(see Dichlorobenzenes)				400 ug[l]	2600 ug
Dichlorobenzidine(3,3')	--	--	--	--	0.04 ug[c]	0.077 ug[c]
Dichlorobromomethane	(see Halomethanes)				0.56 ug[c]	46 ug[c]
Dichlorodifluoromethane	(see Halomethanes)				6.9 mg[c]	570 mg[c]
Dichloroethane(1,2)	118,000	20,000	113,000	--	0.38 ug[c]	99 ug[c]
Dichloroethylenes	11,600[e]	--	224,000[e]	--	(see individual compounds)	
Dichloroethylene(1,1)	(see Dichloroethylenes)				0.057 ug[c]	3.2 ug[c]
Dichloroethylene(1,2-Trans)	(see Dichloroethylenes)				700 ug[l]	140,000 ug
Dichlorophenol(2,3)	--	--	--	--	0.04 ug[j]	0.04 ug[j]
Dichlorophenol(2,4)	2,020	365	--	--	93 ug	790 ug

Dichlorophenol(2,5)	--	--	--	--	0.5 ug[j]	0.5 ug[j]
Dichlorophenol(2,6)	--	--	--	--	0.2 ug[j]	0.2 ug[j]
Dichlorophenol(3,4)	--	--	--	--	0.3 ug[j]	0.3 ug[j]
Dichloropropanes	23,000[e]	5,700[e]	10,300[e]	3,040[e]	(see individual compounds)	
Dichloropropane(1,2)	(see Dichloropropanes)				0.52 ug[c]	39 ug[c]
Dichloropropenes	6,060[e]	244[e]	790[e]	--	(see individual compounds)	
Dichloropropene(1,3)	(see Dichloropropenes)				10 ug	1700 ug
Dieldrin	0.24	0.056	0.71[k]	0.0019[k]	0.14 ng[c]	0.14 ng[c]
Diethyl Phthalate	--	--	--	--	23 mg	120 mg
Dimethyl Phenol(2,4)	1,300	530	270	110	400 ug[j]	400 ug[j]
Dimethyl Phthalate	(see Phthalate esters)				313 mg	2.9 g
Di-n-butyl Phthalate	(see Phthalate esters)				2.7 mg	12 mg
Dinitrotoluenes	330[e]	230[e]	590[e]	370[e]	(see individual compounds)	
Dinitrotoluene(2,4)	(see Dinitrotoluenes)				0.11 ug[c]	9.1 ug[c]
Dinitrotoluene(2,6)	(see Dinitrotoluenes)				--	--
Dinitro-o-cresol (2,4)	(see Nitrophenols)				13.4 ug	765 ug
Dinitro-o-cresol (4,6)	(see Nitrophenols)				13.4 ug	765 ug
Dinitrophenols	(see Nitrophenols)				70 ug	14,000 ug
Dinitrophenol(2,4)	(see Nitrophenols)				70 ug	14,000 ug
Di-n-octyl phthalate	(see Phthalate esters)				--	--
Diphenylhydrazine(1,2)	270	--	--	--	0.04 ug[c]	0.54 ug[c]
Di-2-ethylhexyl phthalate	(see Phthalate esters)				1.8 ug[c]	5.9 ug[c]
alpha-Endosulfan	0.22[k]	0.056[k]	0.034[k]	0.0087[k]	110 ug	240 ug
beta-Endosulfan	0.22[k]	0.056[k]	0.034[k]	0.0087[k]	110 ug	240 ug
Endosulfan Sulfate	--	--	--	--	110 ug	240 ug
Endrin	0.086	0.036	0.037[k]	0.0023[k]	0.76 ug	0.81 ug
Endrin Aldehyde	--	--	--	--	0.76 ug	0.81 ug
Ethylbenzene	32,000	--	430	--	3,100 ug[l]	29,000 ug
Fluorene	(see Polynuclear Aromatic Hydrocarbons)				1,300 ug	14,000 ug
Guthion	--	0.01	--	0.01	--	--
Haloethers	360[e]	122[e]	--	--	(see individual compounds)	
Halomethanes	11,000[e]	--	12,000[e]	6,400[e]	(see individual compounds)	
Heptachlor	0.52[k]	0.0038[k]	0.053[k]	0.0036[k]	0.21 ng[c]	0.21 ng[c]
Heptachlor Epoxide	0.52[k]	0.0038[k]	0.053[k]	0.0036[k]	0.10 ng[c]	0.11 ng[c]
Hexachloroethane	980	540	940	--	1.9 ug[c]	8.9 ug[c]
Hexachlorobenzene	(see Chlorinated benzenes)				0.75 ng[c]	0.77 ng[c]
Hexachlorobutadiene	90	9.3	32	--	0.44 ug[c]	50 ug[c]
Hexachlorocyclo-hexane-(Technical)	(see BHC)				0.0123 ug	0.0414 ug
Hexachlorocyclopentadiene	7.0	5.2	7.0	--	1.0[j]	1.0[j]
Ideno(1,2,3-cd)Pyrene	(see Polynuclear Aromatic Hydrocarbons)				0.0044 ug[c]	0.049 ug[c]
Iron	--	1,000	--	--	0.3 mg	--
Isophorone	117,000	--	12,900	--	36 ug[c]	2,600 ug[c]
Lead[i]	14[f,d]	0.54[f,d]	210[d]	8.1[d]	--	--
Malathion	0.1	0.1		0.1	--	--
Manganese	--	--	--	--	50 ug	100 ug
Mercury	1.4[d,i,g]	0.77[d,i,g]	1.8[d,i,g]	0.94[d,i,g]	0.05 ug	0.051 ug
Methoxychlor	--	0.03	--	0.03	100 ug[l]	--
Methyl Bromide	(see Halomethanes)				48 ug	4,000 ug

Methyl Chloride	(see Halomethanes)				--	--
Methylene Chloride	(see Halomethanes)				4.7 ug[c]	1,600 ug[c]
2 Methyl-4,6-Dinitrophenol	(see Nitrophenols)				13.4 ug	765 ug
2-Methyl-4-chlorophenol	--	--	--	--	1,800 ug[j]	1,800 ug[j]
3-Methyl-4-chlorophenol	30	--	--	--	3,000 ug[j]	3,000 ug[j]
3-Methyl-6-chlorophenol	--	--	--	--	20 ug[j]	20 ug[j]
Mirex	--	0.001	--	0.001	--	--
Naphthalene	2,300	620	2,350	--	--	--
Nickel[i]	144.9 [f,d]	16.1 [f,d]	74[d]	8.2[d]	610 ug	4,600 ug
Nitrates	--	--	--	--	10 mg	--
Nitrobenzene	27,000	--	6,680	--	17 ug	30 ug[j]
Nitrophenols	230[e]	150[e]	4,850[e]	--	(see individual compounds)	
Nitrophenol 2	(see Nitrophenols)				--	--
Nitrophenol 4	(see Nitrophenols)				--	--
Nitrosamines	5,850[e]	--	3,300,000[e]	--	0.8 ng	1.24 ug
Nitrosodibutylamine N	(see Nitrosamines)				6.4 ng	587 ng
Nitrosodiethylamine N	(see Nitrosamines)				0.8 ng	1,240 ng
Nitrosodimethylamine N	(see Nitrosamines)				0.69 ng[c]	8.1 ug[c]
Nitrosodi-n-propylamine N	(see Nitrosamines)				0.005 ug[c]	1.4 ug[c]
Nitrosodiphenylamine N	(see Nitrosamines)				5.0 ug[c]	16 ug[c]
Nitrosopyrrolidine N	(see Nitrosamines)				16 ng	91,900 ng
Parathion	0.065	0.013	--	--	--	--
PCB	2.0[e]	0.014[e]	10.0[e]	0.03[e]	0.17 ng[c,n]	0.17 ng[c,n]
PCB-1242	(see PCB)				(see PCB)	(see PCB)
PCB-1254	(see PCB)				(see PCB)	(see PCB)
PCB-1221	(see PCB)				(see PCB)	(see PCB)
PCB-1248	(see PCB)				(see PCB)	(see PCB)
PCB-1260	(see PCB)				(see PCB)	(see PCB)
PCB-1016	(see PCB)				(see PCB)	(see PCB)
Pentachlorinated Ethanes	7,240	1,100	390	281	--	--
Pentachlorobenzene	(see Chlorinated benzenes)				3.5 ug	4.1 ug
Pentachlorophenol	5.28[h]	4.05[h]	13	7.9	0.28ug[c]	8.2ug[c]
Phenanthrene	(see Polynuclear Aromatic Hydrocarbons)					
Phenol	10,200	2,560	5,800	--	300 ug[j]	300 ug[j]
Phthalate Esters	940[e]	3[e]	2,944[e]	3.4[e]	--	--
Polychlorinated Biphenyls	(see PCB's)				--	--
Polynuclear Aromatic Hydrocarbons	--	--	300[e]	--	(see individual compounds)	
Pyrene	(see Polynuclear Aromatic Hydrocarbons)				960 ug	11,000 ug
Selenium		5	290[d,i]	71[d,i]	170 ug[l]	11,000 ug
Silver	0.32[f,i,g]	--	1.9[d,i,k]	--	105 ug[p]	65 mg[p]
Sulfide-Hydrogen Sulfide	--	2.0	--	2.0	--	--
Tetrachlorobenzene 1,2,4,5	(see Chlorinated benzenes)				2.3 ug	2.9 ug
Tetrachloroethane 1,1,2,2	--	2,400	9,020	--	0.17 ug[c]	11 ug[c]
	(see Tetrachloroethanes)					
Tetrachloroethanes	9,320[e]	--	--	--	(see individual compounds)	

Tetrachloroethylene	5,280	840	10,200	450	0.80 ug[c]	8.85 ug[c]
Tetrachlorophenol 2,3,5,6	--	--	440	--	--	--
Tetrachlorophenol 2,3,4,6	--	--	--	--	1.0 ug[j]	1.0 ug[j]
Thallium	1,400	40	2,130	--	1.7 ug	6.3 ug
Toluene	--	--	--	--	6.8 mg[l]	200 mg
Toxaphene	0.73	0.0002	0.21	0.0002	0.73 ng[c]	0.75 ng[c]
Tributyltin TBT	0.46	0.063	0.37	0.01	--	--
Trichlorinated Ethanes	18,000[e]	--	--	--	(see individual compounds)	
Trichlorbenzene 1,2,4	(see Chlorinated benzenes)				260 ug[l]	940 ug
Trichloroethane 1,1,1	--	--	31,200	--	l	--
Trichloroethane 1,1,2	--	9,400	--	--	0.60 ug[c]	42 ug[c]
Trichloroethylene	45,000	21,900	2,000	--	2.7 ug[c]	81 ug[c]
Trichlorofluoromethane	(see Halomethanes)				10 mg	860 mg
Trichlorophenol 2,4,5	--	--	--	--	1.0 ug[j]	1.0 ug[j]
Trichlorophenol 2,4,6	--	970	--	--	2.0 ug[j]	2.0 ug[j]
Vinyl Chloride	--	--	--	--	2.0 ug[c]	525 ug[c]
Zinc[i]	36.2[f,d]	36.5[f,d]	90[d]	81[d]	5,000 ug[j]	5,000 ug[j]

Source. (See Revision Note #1 at chapter heading for Env-Wq 1700) #7151, eff 12-10-99; ss by #9034, INTERIM, eff 12-10-07; ss by #9162, eff 5-21-08 (See Revision Note #2 at chapter heading for Env-Wq 1700)

Env-Wq 1703.22 Notes For Table 1703.1. The following shall apply to Table 1703.1:

(a) The letter "a" shall indicate that the freshwater and saltwater aquatic life criteria for ammonia are shown in Env-Wq 1703.25 through Env-Wq 1703.31.

(b) The letter "b" shall indicate that the criteria refer to the inorganic form only.

(c) The letter "c" shall indicate that these criteria for the protection of human health are based on carcinogenicity. The human health criteria without this footnote are based on systemic toxicity.

(d) The letter "d" shall indicate that criteria for these metals are expressed as a function of the water effect ratio (WER) as defined in 40 CFR 131.36(c). The values displayed in Table 1703.1 correspond to a WER of 1.0. To determine metals criteria for different WER's, the procedures described in the EPA publication "Interim Guidance on Determination and Use of Water-Effect Ratios for Metals" (EPA-823-B-94-001) shall be used. For copper, the “Streamlined Water-Effect Ratio procedure for Discharges of Copper” (EPA-822-R-01-005) or the Biotic Ligand Model (freshwater only) (EPA-822-R-07-001) may also be used.

(e) The letter "e" shall indicate that the following classes of compounds have 2 or more isomers and the sum of the concentrations of each isomer shall meet the appropriate aquatic life criteria:

(1) BHC;

(2) Chlorinated benzenes;

(3) Chlorinated naphthalenes;

(4) Chloroalkyl ethers;

(5) Dichlorobenzenes;

(6) Dichloroethylenes;

(7) Dichloropropanes;

(8) Dichloropropenes;

(9) Dinitrotoluenes;

(10) Haloethers;

(11) Halomethanes;

(12) Nitrophenols;

(13) Nitrosamines;

(14) PCB;

(15) Phthalate esters;

(16) Polynuclear aromatic hydrocarbons;

(17) Tetrachloroethanes; and

(18) Trichlorinated ethanes.

(f) The letter "f" shall indicate that the freshwater aquatic criteria for these metals are expressed as a function of the total hardness, as mg/l $CaCO_3$ of the surface water. The values displayed in Table 1703.1 correspond to a total hardness of 25 mg/l. To calculate aquatic life criteria for other hardness values between 25 mg/l and 400mg/l, expressed as calcium carbonate, the equations shown in Env-Wq 1703.24 shall be used. For hardness less than 25 mg/l, a hardness of 25 mg/l shall be used in the equations. For hardness values greater than 400 mg/l, a hardness of 400 mg/l shall be used in the equations.

(g) The letter "g" shall indicate that, if the fresh or marine chronic criteria for total mercury exceeds 0.77 ug/l more than once in a 3-year period in the ambient water, the edible portion of aquatic species of concern shall be analyzed to determine whether the concentration of methyl mercury exceeds the FDA action level of 1.0 mg/kg.

(h) The letter "h" shall indicate that the freshwater aquatic life criteria for pentachlorophenol are expressed as a function of pH. Values displayed in Table 1703.1 correspond to a pH value of 6.5. For other pH values, the formulas shown in Env-Wq 1703.32 shall be used.

(i) The letter "i" shall indicate that the values presented for aquatic life protection are dissolved metals and were based on values shown in Table 1703.2. To calculate dissolved fresh water criteria for hardness dependent metals at hardness(s) greater than 25 mg/l, Table 1703.3 shall be used to calculate the total recoverable metal and Table 1703.2 shall be used to convert the total recoverable metal to a dissolved metal.

(j) The letter "j" shall indicate that these human health criteria prevent taste and odor effects in fish and other aquatic life as prohibited in Env-Wq 1703.03(c)(3).

(k) The letter "k" shall indicate that these criteria are based on EPA's 304(a) criteria in the 1980 documents listed below and were derived to be used as instantaneous maximum values, or to be applied after division by 2, to obtain a value comparable to an acute criterion derived using the 1985 Guidelines, when assessment is done using an averaging period:

(1) Aldrin/Dieldrin, document number 440/5-80-019;

(2) Chlordane, document number 440/5-80-027;

(3) DDT, document number 440/5-80-038;

(4) Endosulfan, document number 440/5-80-046;

(5) Endrin, document number 440/5-80-047;

(6) Heptachlor, document number 440/5-80-052;

(7) Hexachlorocyclohexane, document number 440/5-80-054; or

(8) Silver, document number 440/5-80-071.

(l) The letter "1" shall indicate that a more stringent drinking water maximum contaminant level (MCL) has been issued by EPA and the department shall use the MCL if it is more limiting of the 2 criteria. The MCL for chromium is for total chromium (Cr+6 plus Cr+3).

(m) The letter "m" shall indicate that this criteria is expressed as micrograms of free cyanide per liter.

(n) The letter "n" shall indicate that this criteria applies to total PCBs or the sum of all of its congener or isomer analyses.

(o) The letter "o" shall indicate that the freshwater acute criteria for selenium shall be calculated using the values for the fraction f_1 of selenite and f_2 of selenate measured in the receiving water. To calculate the acute criteria, in ug/l, the number 1 shall be divided by the sum of the fractions f_1 divided by 185.9 and f_2 divided by 12.83, as follows:

$$Acute\ \ Criteria\ \ = \frac{1}{\frac{f_1}{185.9} + \frac{f_2}{12.83}}$$

(p) The letter "p" shall indicate that these human health criteria for silver shall be for the protection of humans from argyria.

Source. (See Revision Note #1 at chapter heading for Env-Wq 1700) #7151, eff 12-10-99; ss by #9034, INTERIM, eff 12-10-07; ss by #9162, eff 5-21-08 (See Revision Note #2 at chapter heading for Env-Wq 1700)

Env-Wq 1703.23 Conversion Factors For Metals.

(a) Dissolved metal shall be determined by multiplying total recoverable metal by the conversion factor listed in Table 1703.2 for that metal, shown in equation form as follows:

Dissolved Metal = Total Recoverable Metal x Conversion Factor

(b) Total recoverable metals shall be determined by dividing dissolved metals by the conversion factor listed. The conversion factors in Table 1703.2 shall also be used as translators to go from the dissolved metals criteria listed in Table 1703.1 to permit limits expressed as total recoverable metals by dividing dissolved metal by the conversion factor, shown in equation form as follows:

Total Recoverable Metal = Dissolved Metal / Conversion Factor

(c) If the hardness of the receiving water is different than 25 mg/l, then Table 1703.2 shall also be used to calculate the total recoverable metal for freshwater.

(d) Table 1703.2 shall be as follows:

TABLE 1703.2
Factors to Convert Total Recoverable Metals to Dissolved Metals

	FRESHWATER Conversion Factors		**MARINE Conversion Factors**
	Acute	**Chronic**	**Acute & Chronic**
Arsenic	1.0	1.0	1.0
Cadmium	1.136672 - [(Ln Hardness)(0.041838)]	1.101672 - [(Ln Hardness)(0.041838)]	0.994
Chromium (+3)	0.316	0.860	-
Chromium (+6)	0.982	0.962	0.993
Copper	0.960	0.960	0.83
Lead	1.46203 - [(Ln Hardness)(0.145712)]	1.46203 - [(Ln Hardness)(0.145712)]	0.951
Mercury	0.85	0.85	0.85
Nickel	0.998	0.997	0.990
Selenium	-	-	0.998
Silver	0.85	-	0.85
Zinc	0.978	0.986	0.946

Source. (See Revision Note #1 at chapter heading for Env-Wq 1700) #7151, eff 12-10-99; ss by #9034, INTERIM, eff 12-10-07; ss by #9162, eff 5-21-08 (See Revision Note #2 at chapter heading for Env-Wq 1700)

Env-Wq 1703.24 Freshwater Aquatic Life Criteria For Metals.

(a) To calculate freshwater aquatic life criteria for total recoverable metals, the following equations shall be used in conjunction with the coefficients shown in Table 1703.3:

(1) To calculate the acute criteria, in ug/l, for the metals shown Table 1703.3, the exponent "e" shall be raised to the power "x" where "x" is equal to the parenthetical expression "m_a" multiplied by the natural logarithm of the hardness and to which quotient the value "b_a" shall be added, as follows:

$$\text{Acute Criteria} = e^x \text{ where}$$
$$x = (m_a [\ln (\text{hardness})] + b_a)$$

(2) To calculate the chronic criteria, in ug/l, for the metals shown in Table 1703.3, the exponent "e" shall be raised to the power "x" where "x" is equal to the parenthetical expression "m_c" multiplied by the natural logarithm of the hardness and to which quotient the value "b_c" shall be added, as follows:

$$\text{Chronic Criteria} = e^x \text{ where}$$
$$x = (m_c [\ln (\text{hardness})] + b_c$$

TABLE 1703.3
Coefficients in Equations used to calculate Total Recoverable Aquatic Life Criteria for Metals

	m_a	b_a	m_c	b_c
Cadmium	1.0166	-3.924	0.7409	-4.719
Copper	0.9422	-1.700	0.8545	-1.702
Chromium+3	0.8190	3.7256	0.8190	.6848
Lead	1.273	-1.460	1.273	-4.705
Nickel	0.8460	2.255	0.8460	0.0584
Silver	1.72	-6.59	-------	-------
Zinc	0.8473	0.884	0.8473	0.884

Source. (See Revision Note #1 at chapter heading for Env-Wq 1700) #7151, eff 12-10-99; ss by #9034, INTERIM, eff 12-10-07; ss by #9162, eff 5-21-08 (See Revision Note #2 at chapter heading for Env-Wq 1700)

Env-Wq 1703.25 Freshwater Aquatic Life Criteria For Ammonia.

(a) Subject to (b) and (c) below, Table 1703.4A shall be used to calculate freshwater acute aquatic life criteria, in milligrams of nitrogen per liter, for ammonia.

(b) The acute water quality criteria for ammonia in Table 1703.4A where salmonids may be present was calculated by dividing 0.275 by the sum of one plus 10 raised to the power of 7.204 minus the pH, and adding the resulting value to the value found by dividing 39.0 by the sum of one plus 10 raised to the power of the pH minus 7.204, as shown in the following equation, which equation may also be used to calculate criteria at unlisted pH values:

$$\text{Acute Criteria (Salmonids Present)} = \{ [0.275/(1+10^{7.204-pH})] + [39.0/(1+10^{pH-7.204})] \}$$

(c) The acute water quality criteria for ammonia in Table 1703.4A where salmonids are absent was calculated by dividing 0.411 by the sum of one plus 10 raised to the power of 7.204 minus the pH, and adding the resulting value to the value found by dividing 58.4 by the sum of one plus 10 raised to the power of the pH minus 7.204, as shown in the following equation, which equation may also be used to calculate criteria at unlisted pH values:

$$\text{Acute Criteria (Salmonids Absent)} = \{ [0.411/(1+10^{7.204-pH})] + [58.4/(1+10^{pH-7.204})] \}$$

TABLE 1703.4A
Freshwater Acute Aquatic Life Criteria For Ammonia (milligrams N /liter)

pH	Acute Criteria (Salmonids present)	Acute Criteria (Salmonids absent)
6.5	32.6	48.8
6.6	31.3	46.8
6.7	29.8	44.6
6.8	28.1	42.0
6.9	26.2	39.1
7.0	24.1	36.1
7.1	22.0	32.8
7.2	19.7	29.5
7.3	17.5	26.2
7.4	15.4	23.0

Notice of Availability of 2001 Update: Aquatic Life Criteria Document for Cadmium

Note: EPA no longer updates this information, but it may be useful as a reference or resource.

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[Notices]
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ENVIRONMENTAL PROTECTION AGENCY
[FRL-6965-6]

Notice of Availability of 2001 Update: Aquatic Life Criteria Document for Cadmium

AGENCY: Environmental Protection Agency (EPA).
ACTION: Notice of Availability of 2001 Update: Aquatic Life Criteria Document for Cadmium.

SUMMARY: Section 304(a)(1) of the Clean Water Act requires the Environmental Protection Agency (EPA) to develop and publish, and from time to time revise, criteria for water accurately reflecting the latest scientific knowledge. EPA has revised its aquatic life criteria for cadmium and is notifying the public about the availability of the completed document in accordance with the Agency's new process for developing or revising criteria (63 FR 68354, December 10, 1998).

EPA notified the public about the availability of the draft document and the peer review on August 17, 2000 (65 FR 50201). At that time, the Agency solicited views from the public on issues of science pertaining to the information used in deriving the draft criteria EPA considered the comments from the peer reviewers and the public and has revised the document accordingly. The completed document is now available.

ADDRESSES: Copies of the completed criteria document entitled, 2001 Update of Ambient Water Quality Criteria for Cadmium, may be obtained from EPA's National Services Center for Environmental Publications (NSCEP formally NCEPI) by phone at 800-490-9198, or by e-mail to ncepimal@one.net or by conventional mail to U.S. EPA/NSCEP, P.O. Box 42419, Cincinnati, Ohio, USA, 45242-2419. Alternatively, the document and related fact sheet can be obtained from EPA's web site at http://www.epa.gov/waterscience/criteria/ on the Internet.

FOR FURTHER INFORMATION CONTACT: Cindy Roberts, Health and Ecological Criteria Division (4304), US EPA, Ariel Rios Building, 1200 Pennsylvania Avenue NW., Washington, DC 20460; (202) 260-2787; roberts.cindy@epa.gov

SUPPLEMENTARY INFORMATION:

What Are Water Quality Criteria?

Section 304(a)(1) of the Clean Water Act requires the EPA to develop and publish, and from time to time revise, criteria for water accurately reflecting the latest scientific knowledge. Water quality criteria developed under section 304(a) are based solely on data and scientific judgments. They do not consider economic impacts or the technological feasibility of meeting the criteria in ambient water.

Under the CWA, States and Tribes are to establish water quality criteria to protect designated uses. EPA has promulgated regulations to implement this requirement (see 40 CFR part 141). EPA's recommended water quality criteria do not substitute for the Act or regulations, nor is it a regulation itself. Thus, EPA's recommended water quality criteria cannot impose legally binding requirements on EPA, States, Tribes or any other regulated community, and may not apply to a particular situation based on the circumstances. State and Tribal decisionmakers retain the discretion to adopt approaches on a case-by-

case basis that differ from this guidance when appropriate. EPA may change this guidance in the future.

EPA emphasizes that, in the course of carrying out its responsibilities under section 303(c), it reviews State and Tribal water quality standards to assess the need for new or revised water quality criteria. EPA generally believes that five years from the date of EPA's publication of new or revised water quality criteria is a reasonable time by which States and authorized Tribes should take action to adopt new or revised water quality criteria necessary to protect the designated uses of their waters. This period is intended to accommodate those State and authorized Tribes that have begun a triennial review and wish to complete the action they have underway, deferring initiating adoption of new or revised section 304(a) criteria until the next triennial review. Thus, EPA expects State and authorized Tribes to adopt criteria for cadmium that ensure the protection of designated uses no later than 2006.

How Did EPA Involve the Public in Revising the Aquatic Life Criteria for Cadmium?

In following the Agency's new process for developing criteria, EPA notified the public of its intentions to revise the aquatic life criteria for cadmium in the Federal Register on October 29, 1999 (64 FR 58409). At that time, EPA made available to the public all references identified by a recent literature review and solicited any additional pertinent data or scientific views that would be useful in revising the aquatic life criteria. EPA revised the aquatic life criteria for cadmium based on the new data and prepared a draft document. EPA then announced the peer review and the availability of the peer review draft on August 17, 2000 (65 FR 50201). Again, EPA solicited views from the public on issues of science pertaining to the information used in deriving the draft criteria. EPA considered the comments from the peer reviewers and the public and has revised the document accordingly.

Where Can I Find More Information on EPA's Revised Process for Developing New or Revised Criteria?

The Agency published detailed information about its revised process for developing and revising criteria in the Federal Register on December 10, 1998 (63 FR 68354) and in the EPA document entitled, National Recommended Water Quality--Correction (EPA 822-Z-99-001, April 1999). The purpose of the revised process is to provide expanded opportunities for public input, and to make the criteria development process more efficient.

Is the Completed Document Different Than the Draft Document?

In addressing the peer reviewers' comments and the scientific issues raised by the public, revisions were made to the draft document. These

[[Page 18936]]

revisions resulted in no changes in the saltwater criterion maximum concentration (CMC or ``acute criterion'') or the saltwater criterion continuous concentration (CCC or ``chronic criterion''), but did result in significant changes in the freshwater CMC and CCC.

The freshwater CMC changed due to several factors including the addition of data for bull trout and rainbow trout, the elimination of some data and the recalculation of species mean acute values (SMAVs) for a few species. Two SMAVs were recalculated based on all applicable data rather than only giving preference to flow-through measured test results, as in the draft.

EPA's freshwater metals criteria are expressed as hardness dependent values because water quality characteristics such as hardness (and other parameters that covary with hardness) influence the toxicity of metals on aquatic organisms. Therefore, hardness slopes were established to normalize all freshwater acute and chronic values to the same hardness in order to derive the criteria. These hardness slopes were revised in the completed document. The revision to the acute slope was minor, but the chronic slope revision was more significant and resulted in a less stringent CCC compared to the draft document. The revised CCC, however, is still more stringent than EPA's 1995 CCC.

A number of comments were received stating that EPA should not proceed with the cadmium update until the biotic ligand model (BLM), a model that estimates the bioavailable portion of dissolved metals in the water column based on site-specific water quality parameters such as alkalinity, pH and dissolved organic carbon, is available for cadmium. To date, EPA has not completed any BLM criteria and is still in the preliminary evaluation phase of the model for cadmium and so does not agree that the update should wait for the development of the BLM. The cadmium criteria may be revised in the future based on the BLM, yet development is contingent upon resources and sufficient data

being available to develop the model.

What Are the New Criteria?

	Fresh water \1\		Salt water	
	CMC (µg/L)	CCC (µg/L)	CMC (µg/L)	CCC (µg/L)
Total	$e^{(1.0166[\ln(\text{hardness})]-3.924)}$.	$e^{(.7409[\ln(\text{hardness})]-4.719)}$.	40.28	8.846
Dissolved	1.0	0.15	40	8.8

1-@ 50 mg/L hardness measured as $CaCO_3$
CMC conversion factor = 1.136672 - [(ln hardness)(0.041838)]
CCC conversion factor = 1.101672 - [(ln hardness)(0.041838)]

Dated: April 4, 2001.
Geoffrey H. Grubbs,
Director, Office of Science and Technology.
[FR Doc. 01-9056 Filed 4-11-01; 8:45 am]
BILLING CODE 6560-50-P

Notices For 2009 2008 2007 2006 2005 2004 2003 2002 2001 2000 1999 1998 1997 1996 1995 1994

AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Federal Clean Water Act, as amended, (33 U.S.C. §§1251 et seq.; the "CWA"),

The City of Keene

is authorized to discharge from the Wastewater Treatment Plant located at

420 Airport Road
Swanzey, New Hampshire 03446

to the receiving water named

Ashuelot River (Hydrologic Code; 0108020t)

in accordance with effluent limitations, monitoring requirements, and other conditions set forth herein, including, but not limited to, conditions requiring the proper operation and maintenance of Keene's wastewater collection system.

The municipalities of Marlborough and Swanzey are Co-Permittees for activities required in Part I.B (Unauthorized Discharges), Part I.C (Operations and Maintenance of the Sewer System), and Part I.D (Alternate Power Source). The responsible Municipal Departments are:

Town of Marlborough Board of Selectmen P.O. Box 487 Marlborough, NH 03455	Swanzey Sewer Commission P.O Box 10009 Swanzey, New Hampshire 03446

This permit will become effective on November 1, 2007

This permit and the authorization to discharge expires at midnight, five (5) years from the effective date.

This permit supersedes the permit issued on April 15, 1994.

This permit consists of 14 pages in Part I including effluent limitations and monitoring requirements: Attachment A (8 pages); Attachment B (72 pages); Attachment C (2 pages); and 25 pages in Part II including General Conditions and Definitions.

Signed this 30th day of AUGUST, 2007

Stephen S. Perkins, Director
Office of Ecosystem Protection
U.S. Environmental Protection Agency (EPA)
Boston, Massachusetts

PART I. A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period from the effective date of this permit and through the expiration date, the permittee is authorized to discharge treated sanitary wastewaters from outfall Serial Number 001 (Keene Wastewater Treatment Plant) into the Ashuelot River. Such discharges shall be limited and monitored by the permittee as specified below. Samples taken in compliance with the monitoring requirements specified below shall be taken at a location that provides a representative analysis of the effluent.

Effluent Characteristic	Discharge Limitations						Monitoring Requirements[1]	
	Average Monthly	Average Weekly	Maximum Daily	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type
Flow, MGD	----	----	----	Report	----	Report	Continuous	Recorder [1]
$CBOD_5$	1252 lbs/day	2003 lbs/day	2253 lbs/day	25 mg/l	40 mg/l	45 mg/l	2/Week[2]	24-Hour Composite
TSS	1502 lbs/day	2253 lbs/day	2504 lbs/day	30 mg/l	45 mg/l	50 mg/l	2/Week[2]	24-Hour Composite
Ammonia Nitrogen[3] as N: Summer	105 lbs/day	----	155 lbs/day	2.1 mg/l	----	3.1 mg/l	2/Week	24-Hour Composite
Ammonia Nitrogen[3] as N: Winter	600 lbs/day	----	----	12 mg/l	----	----	2/Week	24-Hour Composite
pH[4]	6.5-8.0 su						1/Day	Grab
Dissolved Oxygen[4]	Not Less Than 7.0 mg/l						1/Day	Grab

PART I.A.1 (Continued)

Effluent Characteristic	Discharge Limitations		Monitoring Requirements[11]	
	Average Monthly	Maximum Daily	Measurement Frequency	Sample Type
Escherichia coli [5] (Colonies per 100 ml)	126	406	3/Week	Grab
Total Recoverable Aluminum, ug/l[12]	Report	Report	2/Month	24-Hour Composite
Total Recoverable Copper, ug/l[13]	5.9	7.9	2/Month	24-Hour Composite
Total Recoverable Lead, ug/l[14]	1.1	Report	2/Month	24-Hour Composite
Total Recoverable Zinc, ug/l	77	77	2/Month	24-Hour Composite
Total Phosphorus, mg/l (Apr. 1- Oct. 31)	0.2	Report	1/Week	24-Hour Composite
Total Phosphorus, mg/l (Nov. 1-Mar 31)	1.0	Report	1/Week	24-Hour Composite
Ortho-Phosphorus (Nov. 1-Mar. 31)	Report	Report	1/Week	24-Hour Composite

PART I.A.1 (Continued)

Effluent Characteristic	Discharge Limitations	Monitoring Requirements[14]	
		Measurement Frequency	Sample type
Whole Effluent Toxicity			
LC50 [6,7], in percent	≥100	1/Year	24-Hour Composite
C-NOEC [7,8,9]	>48	1/Year	24-Hour Composite
Ammonia Nitrogen as Nitrogen[13]	Report	1/Year	24-Hour Composite
Hardness, mg/l[19]	Report	1/Year	24-Hour Composite
Total Recoverable Cadmium[20]	Report	1/Year	24-Hour Composite
Total Recoverable Chromium[19]	Report	1/Year	24-Hour Composite
Total Recoverable Nickel[16]	Report	1/Year	24-Hour Composite

(Note: See pages 5-6 for footnotes)

FOOTNOTES:

(1) The effluent flow shall be continuously measured and recorded using a flow meter and totalizer.

(2) The influent concentrations of both $CBOD_5$ and TSS shall be monitored twice per month (2/Month) using a 24-Hour Composite sample and the results reported as average monthly values.

(3) Summer period is defined as the months June 1st - October 31st ; winter period is defined as November 1st - May 31st.

(4) Sum Certification requirement.

(5) The average monthly value for Escherichia coli shall be determined by calculating the geometric mean. Escherichia coli shall be tested using an approved method as specified in 40 CFR 136 (See list of Approved Biological Methods for Wastewater and Sewage Sludge). This monitoring shall be conducted concurrently with the TRC sampling described below.

(6) LC50 is the concentration of wastewater (effluent) causing mortality to 50 percent (%) of the test organisms. The 100% limit is defined as a sample which is composed of 100% effluent (See Part I.A.1 and Attachment A of Part I). Therefore, a 100 % limit means that a sample of 100% effluent shall cause no greater than a 50% mortality rate in that effluent sample.

(7) The permittee shall conduct chronic (and modified acute) survival and reproduction, and survival and growth WET tests on effluent samples using two species, Daphnid (Ceriodaphnia dubia) and Fathead Minnow (Pimephales promelas), respectively, following the protocol listed in Attachment A (Freshwater Chronic and Modified Acute Toxicity Test Procedure and Protocol dated December 1995). WET tests shall be conducted annually for both Daphnid and Fathead Minnow. Toxicity test samples shall be collected and tests completed during the calendar quarter ending September 30th. Toxicity test results are to be submitted by the 15th day of the month following the end of the quarter tested.

(8) C-NOEC (Chronic-No Observed Effect Concentration) is defined as the highest concentration of toxicant or effluent to which organisms are exposed in a life-cycle or partial life-cycle test which causes no adverse effect on growth, survival, or reproduction at a specific time of observation as determined from hypothesis testing where the test results (growth, survival, and/or reproduction) exhibit a linear dose-response relationship. However, where the test results do not exhibit a linear dose-response relationship, report the lowest concentration where there is no observable effect. See ATTACHMENT A (VII. TOXICITY TEST DATA ANALYSIS) on page A-8 for additional clarification.

(9) The C-NOEC limit of "equal to or greater than 46%" is defined as a sample which is composed of 46% effluent. This is the minimum percentage of effluent at which no chronic effects will be observed.

(10) For each WET test the permittee shall report on the appropriate Discharge Monitoring Report (DMR) the concentrations of Ammonia Nitrogen as Nitrogen, Hardness, and Total Recoverable Aluminum,

Cadmium, Chromium, Copper, Lead, Nickel and Zinc found in the 100 percent effluent sample. All these aforementioned chemical parameters shall be determined to at least the Minimum Quantification Level (MLs) shown in Attachment A on page A-7, or as amended. The permittee should also note that all chemical parameter results must still be reported in the appropriate WET test toxicity report. Total Aluminum, Copper, Lead and Zinc monitoring is required as noted on page three.

(11) Effluent samples shall be taken after appropriate treatment and prior to discharge to Outfall 001. All sampling shall be representative of the effluent that is discharged through Outfall 001 to the Ashuelot River. A routine sampling program shall be developed in which samples are taken at the same location, same time and same weekday(s) of every month. Any deviations from the routine sampling program shall be documented in correspondence appended to the applicable discharge monitoring report that is submitted to EPA. In addition, all samples shall be analyzed using the analytical methods found in 40 CFR §136, or alternative methods approved by EPA in accordance with the procedures in 40 CFR §136.

(12) Aluminum sampling shall be conducted concurrently with phosphorus sampling, if and when used for phosphorus removal.

(13) The minimum level (ML) for copper is defined as 3 ug/l. This value is the minimum level for copper using the Furnace Atomic Absorption analytical method (EPA Method 220.2). This method must be used to determine total copper. For effluent limitations less than 3 ug/l, compliance/non-compliance will be determined based on the ML. Sample results of 3 ug/l or less shall be reported as zero on the Discharge Monitoring Report.

(14) The ML for lead is defined as 3 ug/l. This value is the minimum level for lead using the Furnace Atomic Absorption analytical method (EPA Method 220.2). This method must be used to determine total lead. For effluent limitations less than 3 ug/l, compliance/non-compliance will be determined based on the ML. Sample results of 3 ug/l or less shall be reported as zero on the Discharge Monitoring Report.

I.A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

2. The discharge shall not cause a violation of the water quality standards of the receiving water.

3. The permittee shall not discharge into the receiving water any pollutant or combination of pollutants in toxic amounts.

4. The discharge shall be adequately treated to insure that the surface water remains free from pollutants in concentrations or combinations that settle to form harmful deposits, float as foam, debris, scum or other visible pollutants. It shall be adequately treated to insure that the surface waters remain free from pollutants which produce odor, color, taste or turbidity in the receiving waters which is not naturally occurring and would render it unsuitable for its designated uses.

5. The permittee's treatment facility shall maintain a minimum of 85 percent removal of both CBOD$_5$ and TSS. The percent removal shall be based on a comparison of average monthly influent versus effluent concentrations.

6. When the effluent discharged for a period of three consecutive months exceeds 80 percent of the 6.0 MGD design flow (4.8 MGD), the permittee shall submit to the permitting authorities a projection of loadings up to the time when the design capacity of the treatment facility will be reached, and a program for maintaining satisfactory treatment levels consistent with approved water quality management plans. Before the design flow will be reached, or whenever treatment necessary to achieve permit limits cannot be assured, the permittee may be required to submit plans for facility improvements.

7. All POTWs must provide timely and adequate notice to both EPA and the New Hampshire Department of Environmental Services, Water Division (NHDES-WD) of the following:

   a. Any new introduction of pollutants into the POTW from an indirect discharger in a primary industry category (see 40 CFR §122 Appendix A as amended) discharging process water; and

   b. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.

   c. For purposes of this paragraph, adequate notice shall include information on:

      (1) the quantity and quality of effluent introduced into the POTW; and

      (2) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

8. Limitations for Industrial Users:

   a. Pollutants discharged to the Wastewater Treatment Plant by a non-domestic source (user) shall not pass through the treatment plant or interfere with the operation or performance of the Treatment Plant.

   b. The Permittee shall develop and enforce specific effluent limits (local limits) for Industrial User(s), and all other users, as appropriate, which together with appropriate changes in the POTW Treatment Plant's facilities or operation, are necessary to ensure continued compliance with the POTW's NPDES permit or sludge use or disposal practices. Specific local limits shall not be developed and enforced without individual notice to persons or groups who have requested such notice and an opportunity to respond.

9. The Permittee shall submit to EPA and NHDES-WD the name of any Industrial User (IU) who commences discharge to the POTW after the effective date of this permit:

   a. That are subject to Categorical Pretreatment Standards pursuant to 40 CFR §403.6 and established in 40 CFR Chapter I, Subchapter N (Parts 405-415, 417-436, 439-440, 443, 446-447, 454-455, 457-461, 463-469, and 471 as amended).

b. That discharges an average of 25,000 gallons per day or more of process wastewater into the POTW (excluding sanitary, non-contact cooling and boiler blow-down wastewater).

c. That contribute a process wastewater which makes up five (5) percent or more of the average dry weather hydraulic or organic capacity of the POTW.

d. That is designated as an IU by the Control Authority as defined in 40 CFR §403.12(a) on the basis that the industrial user has a reasonable potential to adversely affect the waste water treatment facility's operation, or violate any pretreatment standard or requirement in accordance with 40 CFR §403.8(f)(6).

B. UNAUTHORIZED DISCHARGES

The permit only authorizes discharges in accordance with the terms and conditions of this permit and only from the outfall listed in Part I A.1. of this permit. Discharges of wastewater from any other point sources, including sanitary sewer overflows (SSOs) are not authorized by this permit and shall be reported in accordance with Part II, Section D.1.e. (1) of the General Requirements of this permit (Twenty-four hour reporting).

C. OPERATION AND MAINTENANCE OF THE SEWER SYSTEM

Operation and maintenance of the sewer system shall be in compliance with the General Requirements of Part II and the following terms and conditions. The permittee and co-permittees are required to complete the following activities for the collection system which it owns:

1. Maintenance Staff

The permittee and co-permittees shall provide an adequate staff to carry out the operation, maintenance, repair, and testing functions required to ensure compliance with the terms and conditions of this permit.

2. Preventative Maintenance Program

The permittee and co-permittees shall maintain an ongoing preventative maintenance program to prevent overflows and bypasses caused by malfunctions or failures of the sewer system infrastructure. The program shall include an inspection program designed to identify all potential and actual unauthorized discharges.

3. Infiltration/Inflow

The permittee and co-permittees shall control infiltration and inflow into their sewer systems as necessary to prevent high flow-related unauthorized discharges from their collection systems and high flow- related violations of the wastewater treatment plant's effluent limitations.

The permittee and co-permittees shall each submit a summary report of all actions taken to minimize I/I during the previous calendar year to EPA and the NHDES by **February 28th of each year**. The report shall also include a summary of unauthorized discharges during the previous calendar year which were caused by inadequate sewer system capacity, excessive I/I and operational/maintenance problems, including a status of action items necessary to eliminate the discharges. The information reported shall include the date, location,

duration and volume of discharge as well as the cause of the overflow and the receiving water.

D. ALTERNATE POWER SOURCE

In order to maintain compliance with the terms and conditions of this permit, the permittee and co-permittees shall provide an alternate power source with which to sufficiently operate its publicly owned treatment works, as defined at 40 CFR §122.2, which references the definition at 40 CFR 403.3(o).

E. SLUDGE CONDITIONS

1. The Permittee shall comply with all existing federal and State laws and regulations that apply to sewage sludge use and disposal practices and with the CWA Section 405(d) technical standards.

2. The Permittee shall comply with the more stringent of either State (Env-WS 800) or Federal (40 CFR Part 503) requirements.

3. The technical standards (Part 503 regulations) apply to facilities which perform one or more of the following use or disposal practices.

   a. Land application - the use of sewage sludge to condition or fertilize the soil.

   b. Surface disposal - the placement of sewage sludge in a sludge only landfill.

   c. Fired in a sewage sludge incinerator.

4. The 40 CFR 503 conditions do not apply to facilities which place sewage sludge within a municipal solid waste landfill (MSWLF). Part 503 relies on 40 CFR Part 258 criteria, which regulates landfill disposal, for sewage sludge disposed in a MSWLF. These conditions also do not apply to facilities which do not dispose of sewage sludge during the life of the permit, but rather treat the sludge or are otherwise excluded under 40 CFR Part 503.6

5. The Permittee shall use and comply with the attached Sludge Compliance Guidance document to determine appropriate conditions. Appropriate conditions contain the following elements:

   a. General requirements
   b. Pollutant limitations
   c. Operational Standards (pathogen reduction requirements and vector attraction reduction requirements)
   d. Management practices
   e. Record keeping
   f. Monitoring
   g. Reporting

   Depending upon the quality of material produced by a facility, all conditions may not apply to the facility.

6. If the sludge disposal method requires monitoring, the Permittee shall monitor the pollutant

concentrations, pathogen reduction and vector attraction reduction at the following frequency. This frequency is based upon the volume of sewage sludge generated at the facility in dry metric tons per year.

a. less than 290.....1/Year
b. 290 to less than 1,500.....1/Quarter
c. 1,500 to less than 15,000.....6/Year
d. 15,000 plus.....1/Month

7. The Permittee shall perform all required sewage sludge sampling using the procedures detailed in 40 CFR Part 503(b).

8. When the Permittee is responsible for an annual report containing the information specified in Attached B, Sludge Compliance Guidance document. Reports are due annually by February 19th. Reports shall be submitted to both addresses (EPA and NHDES-WD) contained in the reporting section of the permit.

9. Sludge monitoring is not required by the Permittee when the Permittee is not responsible for the ultimate sludge use or disposal or when sludge is disposed of in a MSWLF. The Permittee must be assured that any third party contractor is in compliance with appropriate regulatory requirements. In such cases, the Permittee is required only to submit an annual report by February 19th of each year containing the following information:

a. Name and address of the contractor responsible for sludge use and disposal.
b. Quantity of sludge in dry metric tons removed from the facility.

Reports shall be submitted to the address contained in the reporting section of the permit.

F. INDUSTRIAL PRETREATMENT

1. The Permittee shall implement the Industrial Pretreatment Program in accordance with the legal authorities, policies, procedures, and financial provisions described in the Permittee's approved Pretreatment Program, and the General Pretreatment Regulations, 40 CFR 403. At a minimum, the Permittee must perform the following duties to properly implement the Industrial Pretreatment Program (IPP):

a. Carry out inspection, surveillance, and monitoring procedures which will determine, independent of information supplied by the industrial user, whether the industrial user is in compliance with the Pretreatment Standards. At a minimum, all significant industrial users shall be sampled and inspected at the frequency established in the approved IPP but in no case less than once per year and maintain adequate records.

b. Issue or renew all necessary industrial user control mechanisms within 90 days of their expiration date or within 180 days after the industry has been determined to be a significant industrial user.

c. Obtain appropriate remedies for noncompliance by any industrial user with any pretreatment

standard and/or requirement.

d. Maintain an adequate revenue structure for continued implementation of the Pretreatment Program.

e. Within 90 days of the effective date of this permit, the permittee shall submit to NHDES-WD a copy of its current sewer use ordinance and current local limits. Submittal shall include adoption dates for the documents and a narrative indicating any anticipated changes.

f. Within 120 days of the effective date of this permit, the permittee shall submit to NHDES-WD a current list of all users discharging industrial waste to the municipal wastewater treatment plant. As a minimum, the list shall indicate the name and address of each industry, along with the following information: telephone number, contact person, facility description, production quantity, products manufactured, industrial processes used, chemicals used in processes, existing level of pretreatment, and type and class of existing discharge permit(s). Submittal shall include a blank or typical permit for each classification and a description of the classification system.

2. The Permittee shall provide the EPA and NHDES-WD with an annual report describing the Permittee's pretreatment program's activities in accordance with 40 CFR 403.12(i). The annual period is defined as October 1st - September 30th. The annual report shall be consistent with the format described in Attachment C of this permit and shall be submitted no later than November 1st of each year.

3. The Permittee must obtain approval from EPA prior to making any significant changes to the industrial pretreatment program in accordance with 40 CFR 403.18(c).

4. The Permittee must assure that applicable National Categorical Pretreatment Standards are met by all categorical industrial users of the POTW. These standards are published in 40 CFR 405 et. seq.

5. The Permittee must modify its pretreatment program to conform to all changes in the Federal Regulations that pertain to the implementation and enforcement of the industrial pretreatment program. The permittee must provide EPA, in writing, within 180 days of this permit's effective date proposed changes to the Permittee's pretreatment program deemed necessary to assure conformity with current Federal Regulations. At a minimum, the permittee must address in its written submission the following areas: (1) Enforcement response plan; (2) revised sewer use ordinances; and (3) slug control evaluations. The permittee will implement these proposed changes pending EPA New England's approval under 40 CFR 403.18. This submission is separate and distinct from any local limits analysis submission described in Part I.A.8.c. of this permit.

G. MONITORING AND REPORTING

Monitoring results shall be summarized for each calendar month and reported on separate DMR form(s) postmarked no later than the 15th day of the month following the completed reporting period.

Signed and Dated original DMRs and all other reports or notifications required herein or in Part II shall be submitted to the Director at the following address:

U.S. Environmental Protection Agency
Water Technical Unit (SEW)
P.O. Box 8127
Boston, Massachusetts 02114-8127

Duplicate signed copies of all written reports or notifications required herein or in Part II shall be submitted to the State at:

New Hampshire Department of Environmental Services (NHDES)
Water Division
Wastewater Engineering Bureau
29 Hazen Drive, P.O. Box 95
Concord, New Hampshire 03302-0095

All verbal reports or notifications shall be made to both EPA and NHDES.

H. STATE PERMIT CONDITIONS

1. The permittee shall comply with the following conditions which are included as State Certification requirements.

   a. Pursuant to State Law NH RSA 485-A:13 and the New Hampshire Code of Administrative Rules, Env-Ws 706.08(b) and Env-Ws 904.08, the following submission shall be made to the NHDES-WD by a municipality proposing to accept into its POTW (including sewers and interceptors):

      (1) A "Sewer Connection Permit Request" for:

         (a) Any proposed sewerage, whether public or private;

         (b) Any proposed wastewater connection or other discharge in excess of 5,000 gallons per day;

         (c) Any proposed wastewater connection or other discharge to a wastewater treatment facility operating in excess of 80% design flow;

         (d) Any proposed connection or other discharge of industrial wastewater, regardless of quality or quantity.

      (2) An "Industrial Discharge Permit Request Application" for new or increased loadings of industrial wastewater, in accordance with Env-Ws 904.10.

   b. The Permittee shall not at any time, either alone or in conjunction with any person or persons,

cause directly or indirectly the discharge of waste into the said receiving water unless it has been treated in such a manner as will not lower the legislated water quality classification or interfere with the uses assigned to said water by the New Hampshire Legislature (RSA 485-A:12).

c. Any modifications of the Permittee's Sewer-Use Ordinance, including local limitations on pollutant concentrations, shall be submitted to the NHDES-WD for approval prior to adoption by the Permittee.

d. Within 90 days of the effective date of this permit, the permittee shall submit to NHDES-WD a copy of its current sewer-use ordinance, if it has been revised since any previously approved submittal.

e. Within 120 days of the effective date of this permit, the permittee shall submit to NHDES-WD a current list of all industries discharging industrial waste to the municipal wastewater treatment plant. At a minimum, the list shall indicate the name and address of each industry, along with the following information: telephone number, contact person, products manufactured, industrial processes used, existing level of pretreatment, and list of existing discharge permits with effective dates.

2. This NPDES Discharge Permit is issued by the EPA under Federal law. Upon final issuance by the EPA, the NHDES-WD may adopt this permit, including all terms and conditions, as a State permit pursuant to RSA 485-A:13.

Each Agency shall have the independent right to enforce the terms and conditions of this Permit. Any modification, suspension or revocation of this Permit shall be effective only with respect to the Agency taking such action, and shall not affect the validity or status of the Permit as issued by the other Agency, unless and until each Agency has concurred in writing with such modification, suspension or revocation.

I. REOPENER CLAUSE

This permit may be modified or revoked and reissued in accordance with 40 CFR § 122.62(a) (Causes for modification) or (b) (Causes for modification or revocation and reissuance). One basis for reopening and modifying the permit during its term is the receipt of information that was not available at the time of permit issuance and that would have justified the application of different permit conditions ("New Information"). See 40 CFR §122.62(a)(2). New Information may include, but is not limited to, an applicable final Total Maximum Daily Load ("TMDL"); other relevant water quality data or studies provided by any party; and the results of ESA Section 7 consultation with the U.S. Fish and Wildlife Service and/or National Marine Fisheries Service. In addition to constituting New Information, the outcome of the ESA Section 7 consultation may also satisfy the requirements of 40 CFR § 122.62(b)(1).

J. SPECIAL CONDITION

The permittee may submit a written request to the EPA for a reduction in the frequency (to not less than once per year) of required toxicity testing, after completion of a minimum of four (4) successive

toxicity tests, all of which must demonstrate compliance with the permitted limit(s) for whole effluent toxicity. Until written notice is received from the EPA that the whole effluent testing requirement(s) has been changed, the permittee is required to continue testing at the frequency specified in this permit.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I - NEW ENGLAND
1 CONGRESS STREET, SUITE 1100
BOSTON, MA 02114-2023

CERTIFIED MAIL, RETURN RECEIPT REQUESTED

SEP 29 2004

John MacLean
City Manager
City of Keene
City Hall
580 Main Street
Keene, NH 03431-4037

Re: Keene, New Hampshire
NPDES PERMIT No. NH0100790
Administrative Order Docket No. 04-47

Dear Mr. MacLean:

Enclosed is an Administrative Order (the "AO") that the U.S. Environmental Protection Agency ("EPA") is issuing to the City of Keene, New Hampshire (the "City" or "Keene"). The AO supersedes AO (Docket No. 97-100) issued by EPA on December 30, 1996 and cites the City for violating the effluent limitations contained in its National Pollutant Discharge Elimination System ("NPDES") permit, failing to submit a final local limits report that includes technically-based local limits for dischargers to the wastewater collection system, failing to operate and maintain its publicly-owned treatment works properly and discharging untreated wastewater to waters of the United States from point sources not authorized by a NPDES permit.

The AO requires the City to prepare and submit an annual report summarizing the measures that were taken by the City during the previous calendar year to further reduce the level of copper in the City's wastewater treatment facility discharge. The Order includes a 20 ug/l interim average monthly effluent limitation for total recoverable copper effective beginning 90 days from your receipt of the Order. The interim limit is a "report only" requirement for the first 90 days of the Order to afford the City time to make necessary adjustments to comply with the 20 ug/l interim limit. The Order includes a provision that requires the preparation of a comprehensive Copper

Optimization Report in the event that the City violates the 20 ug/l interim copper limit for two consecutive months, or for three months within a twelve-month period. The Order requires Keene to prepare and submit a local industrial discharge limits report within 90 days of receipt and to incorporate the technically based local limits in its sewer use ordinance following EPA approval.

The Order also requires Keene to prepare, submit, and implement upon approval by EPA a plan for remedying the specific structural deficiencies noted in Tables 8-6, 8-7, and 9-1 of the March 2003 Keene, NH Wastewater Infrastructure Plan, prepared by Camp Dresser & McKee Inc., to evaluate the accessability of the collection system and the structural condition of all of the City's brick manholes within a year, to develop and implement a priority cleaning plan to restore and maintain the capacity of the collection system, and to develop and implement a long-term wastewater treatment facility and collection system preventative maintenance program. Finally, the City must also submit semi-annual progress and work projection reports to EPA and the New Hampshire Department of Environmental Services with the first report for the period ending December 31, 2004, due by January 15, 2005.

Violation of the terms and conditions of this Order may subject the City to further enforcement under the Clean Water Act. This Order does not constitute a waiver or a modification of the terms and conditions of your Permit. The Permit remains in full force and effect. In addition, EPA reserves the right to seek any and all remedies available under Section 309 of the Act, 33 U.S.C. § 1319, for any violation cited in this Order, including the assessment of penalties. If you have any questions, please contact Joy Hilton at (617) 918-1877 or have your attorney contact Edith Goldman, Senior Enforcement Counsel, at (617) 918-1866.

Sincerely,

Ken Moy for

Stephen S. Perkins, Director
Office of Environmental Stewardship

Enclosure

cc: Gretchen R. Hamel, Administrator-NH DES Legal Unit
Stergios Spanos, Compliance Supervisor, NH DES

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 1
5 Post Office Square, Suite 100
Boston, MA 02109-3912

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

JUL 13 2012

Mr. John A. MacLean
City Manager
City Hall
3 Washington Street
Keene, NH 03431-3191

Re: Keene, New Hampshire
NPDES Permit No. NH0100790
Administrative Order Docket No. 04-47

Dear Mr. MacLean:

In response to the City of Keene, New Hampshire's recent request, EPA is terminating the reporting requirements and the interim effluent limitations for total recoverable copper contained in Administrative Order Docket No. 04-47.

If you or your staff have any questions, please contact Joy Hilton of my staff at (617) 918-1877 or have your attorney contact Michael Wagner, Senior Enforcement Counsel, at (617) 918-1735.

Sincerely,

Susan Studlien

Susan Studlien, Director
Office of Environmental Stewardship

cc: Tracy Wood, NH DES
Norma Mason, EPA

4. MEASUREMENTS USED IN THIS STUDY

Flows

Metals loadings (present and future) are dependent on both concentration and flow values. A local limits evaluation is generally intended to retain its validity for a 5-year period. POTW flows over the past five years have remained relatively stable, without a significant increasing or decreasing trend. There are no significant changes or developments anticipated within the POTW's service area. As such, current POTW flow values were utilized in this local limits study, with the addition of an anticipated flow increase at Mountain Corporation.

Table 4-1 summarizes the calculations used to quantify the current sources and flows contributing to Keene's POTW. **Table 4-2** presents these flows summarized without the calculations.

Table 4-1 Current Flows

ITEM	SOURCE	FLOW (MGD)	COMMENTS
A	Total WWTP flow	3.100	2013 average
B	Municipal water supplied (Keene and Swanzey water supply)	2.190	2008 - 2013 average - excluding MAY - SEPT (irrigation flows)
C	Keene industrial	(0.155)	Process wastewater only
D	Swanzey	(0.039)	2012-2013 average
E	*Keene domestic*	*1.996*	Calculated **E = B - C - D**
F	Septage / Holding tanks	0.015	January 2012 -Feb 2014 average
G	Marlborough total	0.124	January 2012 - December 2013 average
H	The Mountain Corporation	(0.039)	2013 average (0.075 permitted)
I	*Marlborough domestic*	*0.085*	Calculated **I = G - H**
J	*Infiltration / Inflow*	*0.771*	Calculated **J = A - B - F - G**

Table 4-2 Flow Values Used for this Study

SOURCE	FLOW (MGD)	PERCENT OF TOTAL
Keene Sources		
Industrial (w/Mountain Corp.@ 0.075 MGD)	0.230	7.33%
Domestic	1.996	63.65%
Infiltration/Inflow	0.771	24.59%
Septage	0.010	0.32%
Holding Tank	0.005	0.16%
Keene Subtotal	*3.012*	96.05%
Satellite Communities		
Marlborough	0.085 (1)	2.71%
Swanzey	0.039	1.24%
Satellite Communities Subtotal	*0.124*	3.95%
TOTAL FLOW	**3.136**	**100%**

Note: (1) Value excludes The Mountain Corporation's anticipated permitted flow of 0.075 MGD, which is located in Marlborough but has been included with Keene's Industrial flow value. This is intended to better identify the total significant industrial flow that is used in subsequent calculations.

Sampling Programs / Analytical Data

Analytical data in support of this report was collected during each of the three updates (2007, 2012 and 2014), and data from all of these efforts is used in varying degrees.

A copy of Keene's EPA-approved sampling program for the 2012 update (three 24-hour composites) is included as an attachment to this section. That sampling programs' primary objective was to obtain updated WWTP pollutant removal efficiencies as a result of operational changes at the WWTP. The supplemental WWTP sampling completed in 2014 for lead to obtain low reporting limits results followed the same 2012 protocol. Copper and zinc POTW metals data collected approximately weekly during 2012-2013 was also used in this update since its quality was not compromised by high analytical reporting limits. These samples were all 24-hour composites.

The sampling program to support the 2012 update was completed in February 2011. Analytical data used in this 2014 update was accumulated throughout the 2012-2014 period.

The most comprehensive sampling effort in support of this project took place in 2006 when a 5-day event occurred. The lowest possible reporting limits available at that time were requested from the contract analytical laboratory to minimize the amount of non-detects, which compromise the limits calculations.

The 2006 sampling program was completed over a two-week period of relatively dry weather flow (3.0 MGD) from August 28, 2006 through September 6, 2006[2]. Since infiltration is present at the historically used "domestic" locations, that sampling program had been postponed due to uncharacteristically high flows with the objective of sampling while flows were in the 2.5 – 2.9 MGD range. Although this objective was not met, the 5-day sampling period did represent the lowest flow conditions during the AUG-SEP 2006 period. A description provided by the City of Keene regarding these flow conditions is included as an attachment to this section.

For cyanide and several other metals, a significant amount of data obtained from the 2006 sampling program has been retained in this 2014 evaluation. In general, the retained 2006 data represents unusual parameters for which more current data is unavailable, and for measurements obtained with much lower reporting limits.

Contract laboratories [AMRO Environmental Laboratories Corp. (AMRO) in 2006, and Eastern Analytical (EAI) in 2011] were utilized for analytical services, with the exception of TSS, which was analyzed by WWTP staff. Copies of the EAI analytical laboratory reports and chain-of-custody records are included in the **APPENDICES** section of this report. AMRO data, originally presented in the 2007 report is provided for this study only in the pdf (electronic) version.

In addition to the above-defined sampling programs, the WWTP maintains ongoing metals monitoring at the WWTP and collection system locations. All such data was incorporated into this 2014 update to the extent that it provided improved data quality or better represented current pollutant discharge concentrations.

Analytical data summary tables, included as attachments to this section, summarize the data collected in support of this study. The analytical data summary tables include a number of shaded cells with the notation that those values are used in the calculations. Many of the excluded values are outdated historical measurements included in the tables for informational/comparative purposes.

[2] WWTP BOD sampling was extended for three additional days to compensate for improper dilution ranges used by the analytical laboratory for WWTP secondary effluent samples.

Other values reported as "less than analytical reporting limit" were selectively excluded when those "less than" values were significantly greater than other data collected for that sampling location using lower reporting limits.

In the various sampling programs, WWTP staff sampled wastewater from the following sources:

- WWTP influent;
- WWTP primary effluent;
- WWTP secondary (final) effluent;
- WWTP dewatered sludge;
- Two domestic/residential locations; and
- Septage / holding tank samples.

The WWTP sampling locations are depicted on the WWTP schematic in **Section 2** of this document.

Sample collection times of the WWTP influent, primary effluent and secondary effluent are typically staggered to account for hydraulic detention time through the WWTP.

The two domestic monitoring locations, which were identified as representative of non-industrial flows, were selected based on the City's two types of potable water sources:

- Chlorinated, pH and alkalinity-adjusted surface water (Domestic – HE); and
- Chlorinated, pH-adjusted well water (Domestic – MM).

One domestic monitoring location was at the intersection of High Street (or more recently Union Street which is one block distant but on same sewer line) and Elm Street, hereafter referred to as "Domestic – HE".

The second domestic monitoring location was near the Monadnock Marketplace off Route 9 (also referred to as West Side), and is representative of domestic wastewater from the west side of the City. This monitoring location is referred to as "Domestic – MM" in this report.

The domestic locations include infiltration/inflow which is estimated to represent approximately 29 percent of the sampled flow. To correct for this "dilution" flow, and assuming that it contains negligible metals levels, the domestic sampling results were divided by 0.71 (71 percent) to estimate the undiluted domestic wastewater concentrations. These adjusted values were subsequently used to estimate domestic wastewater background loadings.

Analytical results for several pollutants at a number of locations were initially reported by AMRO as less than the analytical reporting limit. AMRO subsequently reissued its reports with estimated values and a "J" qualifier for many of these samples when measurements were between the method detection limit (MDL) and the reporting limit.

Analytical Quality Assurance / Quality Control

To ensure accurate, reproducible analytical data, the City performs Quality Assurance / Quality Control (QA/QC) evaluations on all its analytical work, including 13 metals, cyanide, ammonia, TSS, and BOD. QA/QC evaluations include duplicate, spike, and standard sample analysis.

The City's QA/QC analytical results and evaluations for the 2007 effort are included as an attachment to this section of the document. That level of QA/QC is representative of subsequent analytical data reported by the City's analytical measurements. Those results support the validity of the analytical measurements used for this report.

Attachments to this section:

- *EPA-Approved 2011 Local Limits Sampling Program (electronic copy only)*
- *Marlborough Interceptor Metals 2012-2013*
- *Swanzey Interceptor Metals 2012-2013*
- *Septage Copper Sampling 2012-13*
- *WWTP Influent, Effluent Lead Results 2014*
- *WWTP Influent, Effluent Copper, Zinc Results 2012-13*
- *Domestic Metals 2013*
- *Domestic Metals 2012*
- *Analytical Data Summary Tables*
- *Keene WWTP Daily Effluent Flows 2012-13*
- *Water Supply Flows*
- *Septage/Holding Tank Flows*
- *Marlborough and Swanzey Monthly Flows, 2012-13*
- *Industrial User Flows*
- *QA/QC Results / Summary of Quality Control Samples (2007 Study)*
- *Sampling Event Flow Narrative (2007 Study)*

February 11, 2011

Eric Swope
Industrial Pretreatment Coordinator
Keene WWTP/DPW
350 Marlboro Street
Keene, NH 03431

Re: Approval of Sampling & Analysis Plan for Keene's Industrial Pretreatment Program

Dear Mr. Swope:

EPA is in receipt of your recent submission of a Sampling & Analysis Plan (Plan) for Local Limits Development for the City of Keene (City). The Plan was submitted as a result of the City's proposal to revise a previously submitted Local Limit Report.

Typically, EPA requires more extensive sampling than what you have proposed, however, as previously discussed, since the City will be using extensive historical information from 2009 – 2010, the data you have proposed will suffice.

The purpose of this letter is to inform you that the Plan is hereby approved.

If you have any questions regarding this letter or any issues as you go forward with the City's Local Limit development, please feel free to contact me at (617) 918-1531.

Sincerely,

Justin Pimpare
Regional Pretreatment Coordinator
Municipal Assistance Unit

cc: Jackie LeClair, EPA
George Carlson, NH DES

City Of Keene Local Limits Re-Evaluation Sampling Plan

The City will collect samples from the following locations over a three (3) day period during time of normal influent flow (approximately 3 million gallons per day of wastewater). The samples collected at the WWTP will be timed to reflect detention time through the Plant, based on the flow of the previous day.

The analysis will be performed using EPA approved methods for wastewater and wastewater solids. The complete list of parameters and the minimum detection and quantitation levels is described on the following pages. Chain of custody forms provided by the laboratory will be used. Date, time, sampler initials, preservation type, sample location, and sample type will be recorded on the form. One duplicate sample will be collected of WWTP influent, WWTP effluent and WWTP biosolids, and submitted to the laboratory for quality control.

The City has identified the following Pollutants of Concern (POC) for its re-evaluation study of proposed local limits:

Arsenic, beryllium, cadmium, chromium, copper, lead, mercury, molybdenum, nickel, silver, zinc and cyanide.

Local Limits were proposed for these pollutants in the City's January 2007 Local Limits Report and/or they are among those that the WWTP is required to sample for annually in influent and effluent per Attachment C.5 of its NPDES permit.

Location	Sample Types	Number of samples	Parameters
WWTP influent	24-hour flow weighted composite and grab	3 – over consecutive days	Arsenic, beryllium, cadmium, chromium, copper, lead, mercury, molybdenum, nickel, silver, zinc and cyanide.
Timing of effluent sample collection will be based upon calculated WWTP detention time.			
WWTP secondary effluent	24-hour flow weighted composite and grab	3 – over consecutive days	Arsenic, beryllium, cadmium, chromium, copper, lead, mercury, molybdenum, nickel, silver, zinc and cyanide.

Supplemental recent historical information to be used in re-evaluation of local limits:

Typically, domestic sampling includes 10 samples from each site. Samplers are set up on Monday and composite samples collected each weekday until Friday morning.			
Domestic wastewater, intersection of Union and Elm Streets	24-hour time weighted composite and grab		All POC samples collected in 2009-2010
WWTP influent, effluent and biosolids metals and cyanide samples collected between 2009-2010			
WWTP influent	24-hour flow weighted composite and grab	Minimum of 40-50 influent Cu, Pb, and Zn samples from 2009-2010	All POC samples collected in 2009-2010
WWTP secondary effluent	24-hour flow weighted composite and grab	Minimum of 40-50 effluent Cu, Pb, and Zn samples from 2009-2010	All POC samples collected in 2009-2010
WWTP biosolids	Grab samples		All POC samples collected in 2009-2010
SIU self-monitoring and City of Keene results for samples collected 2009-2010			
Cheshire Medical Center; Corning Net Optix; Findings, Inc.; Janos Technology; Kingsbury Corporation; Markem-Imaje Corporation; The Mountain Corporation; Peoples Linen Rental; Timken Super Precision, Plants 1 and 2; Keene Drinking Water Treatment Facility	Composite and grab samples		All POC samples collected in 2009-2010
Septage and Holding Tank wastes results for samples collected 2009-2010			
Typically, the City lab 10 samples each/year of holding and septage wastes delivered to the Keene WWTP for metals analysis	Grab samples		Approximately 30 grab samples each of holding tank and septage wastes

Marlborough Interceptor Results 2012-2013

All values are in mg/L. Non-detects are listed at 1/2 the reporting limit in bold font.

Date	Arsenic	Cadmium	Chromium	Copper	Lead	Molybdenum	Nickel	Silver	Zinc
01/03/12	**0.00063**	**0.00013**	0.0021	0.115	0.0057	**0.00125**	**0.015**	**0.005**	0.167
01/30/12				0.166	0.0030				0.173
02/22/12				0.140	0.0050				0.236
03/19/12				0.195	0.0041				0.243
04/17/12	**0.00063**	0.00042	0.0031	0.230	0.0069	**0.00125**		**0.005**	0.238
05/15/12				0.127	< 0.003				0.225
06/13/12				0.480	< 0.003				0.261
07/11/12	**0.00063**	0.00026	0.0030	0.220	< 0.003	0.00050	**0.015**	**0.005**	0.266
08/06/12				0.269	0.0044				0.243
09/04/12				0.155	0.0034				0.155
10/03/12	**0.00063**	**0.00013**	0.0030	0.120	< 0.003	**0.00125**	0.015	**0.005**	0.253
10/23/12				0.104	< 0.003				0.257
11/14/12				0.098	< 0.003				0.229
12/11/12				0.574	< 0.003				0.211
01/09/13	**0.00063**	**0.00013**	0.0040	0.130	< 0.003	**0.00125**	**0.015**	**0.005**	0.262
02/05/13				0.113	< 0.003				0.237
03/04/13				1.128	< 0.003				0.252
04/02/13	**0.00063**	**0.00013**	0.0020	0.062	< 0.003	**0.00125**	**0.015**	**0.005**	0.189
05/01/13				0.066	< 0.003				0.196
05/29/13				0.091	< 0.003				0.173
06/25/13				0.091	< 0.003				0.235
07/23/13	**0.00063**	**0.00013**	0.0061	0.117	0.0030	**0.00125**	**0.015**	**0.005**	0.206
08/21/13				0.128	0.0030				0.206
09/16/13				0.087	0.0030				0.248
10/15/13	**0.00063**	**0.00013**	0.0040	0.135	< 0.003	**0.00125**	**0.015**	**0.005**	0.259
11/13/13				0.511	< 0.003				0.350
12/09/13				0.276	< 0.003				0.318
01/08/14				0.058	< 0.003				0.147
Averages	0.00063	0.00018	0.0034	0.214	0.0034	0.00116	0.015	0.005	0.230

* Shaded cells - values used in calculations

TeTon Environmental, PLLC

Swanzey Interceptor Results 2012-2013

All values are in mg/L. Non-detects are listed at 1/2 the reporting limit in bold font.

Date	Arsenic	Cadmium	Chromium	Copper	Lead	Molybdenum	Nickel	Silver	Zinc
01/03/12	**0.00063**	**0.00013**	0.0023	0.067	0.0038	0.00800	**0.015**	**0.005**	0.168
01/30/12				0.075	0.0040				0.154
02/22/12				0.090	0.0050				0.164
3/19/2012				0.068	0.0046				0.068
4/16/2012	**0.00063**	**0.00013**	0.0020	0.088	0.0058	0.00320	**0.015**	**0.005**	0.160
5/15/2012				0.105	0.0055				0.212
6/13/2012				0.055	0.0036				0.138
7/11/2012	**0.00063**	**0.00013**	**0.0005**	0.074	0.0040	0.00050	**0.015**	**0.005**	0.161
8/6/2012				0.074	0.0036				0.152
9/4/2012				0.074	0.0040				0.154
10/4/2012	**0.00063**	0.00029	0.0018	0.081	0.0042	**0.00125**	0.015	**0.005**	0.164
10/23/2012				0.090	0.0043				0.125
11/14/2012				0.076	0.0040				0.124
12/11/2012				0.081	0.0033				0.118
1/9/2013	**0.00063**	**0.00013**	0.0050	0.124	0.0050	**0.00125**	**0.015**	**0.005**	0.165
2/5/2013				0.108	< 0.003				0.315
3/4/2013				0.118	0.0042				0.144
4/2/2013	**0.00063**	**0.00013**	0.0040	0.100	0.0034	**0.00125**	**0.015**	**0.005**	0.123
5/1/2013				0.092	< 0.003				0.136
5/29/2013				0.093	0.0034				0.135
06/25/13				0.086	0.0050				0.151
07/23/13	**0.00063**	**0.00013**	0.0016	0.088	< 0.003	**0.00125**	**0.015**	**0.005**	0.144
08/21/13				0.092	< 0.003				0.145
09/16/13				0.083	< 0.003				0.143
10/15/13	**0.00063**	**0.00013**	0.0020	0.095	0.0040	0.00260	**0.015**	**0.005**	0.125
11/13/13				0.095	0.0030				0.140
12/09/13				0.075	0.0030				0.128
01/08/14				0.099	0.0030				0.135
Averages	0.00063	0.00015	0.0024	0.087	0.0039	0.00241	0.015	0.005	0.150

* Shaded cells - values used in calculations

Septage Copper Sampling 2013

Grab Sample by POTW Staff and Analyzed at Endyne Lab	Sample Date		TSS (%)	Copper (mg/L)	3-grab Comp Sample by NHDES at Septage Receiving	TSS (%)	Copper (mg/L)	NHDES/POTW Cu AVG
Load #1	9/27/2013		1.85	6.6	Load #1	0.96	1.9	4.25
Load #2	9/27/2013		1.06	4.3	Load #2	1.02	4.4	4.35
Load #3	9/27/2013		2.78	30	Load #3	2.37	31	30.50
Load #4	9/27/2013		1.00	1.8	Load #4	0.60	0.53	1.17
Average				10.7			9.5	

Septage Copper Sampling 2012

Sample	Sample Date	Description						Copper Flame mg/L
SEPTIC 1	9/26/2012	Septic Man Domestic						7.8
SEPTIC 2	9/27/2012	Bell Domestic						5.13
SEPTIC 3	9/27/2012	RR Domestic						2.78
SEPTIC 4	10/1/2012	Septic Man FPU						128*
SEPTIC 5	10/2/2012	PJD Toilets						0.53
SEPTIC 6	10/19/2012	Septic Man Domestic						7.28
SEPTIC 7	10/19/2012	Bell/Domestic						7.82
SEPTIC 8	10/19/2012	Bell Domestic						3.77
SEPTIC 9	10/22/2012	Bell/Mon Humane Soc						1.66
SEPTIC 10	10/25/2012	Bell/Sargent Camp						5.32
						2012, 2013 Average		6.34

* Assumed outlier - value not used in calculations

Keene WWTP Influent, Effluent, Blank and Spike Lead Results

Sample ID	Sample Source	Date Sampled	Result (mg/L)
INC052014	Influent	5/20-21/14	0.012100
SEC 052114	Effluent	5/21-22/14	0.000522
INC052114	Influent	5/21-22/14	0.004900
SEC 052214	Effluent	5/22-23/14	0.000560
INC052214	Influent	5/22-23/14	0.006320
SEC 052314	Effluent	5/23-24/14	0.000498

REF1052114	DI blank	5/22/2018	0.000016 J
REF2052114	DI spike (0.0005 mg/L)	5/22/2018	0.000565

J = Below level of quantitation but above Method Detection Limit

Influent Average	0.007773
Effluent Average	0.000527

COPPER						LEAD						ZINC					
Date	Influent ug/L	Date	Primary effluent ug/L	Date	Effluent ug/L	Date	Influent ug/L	Date	Primary effluent ug/L	Date	Effluent ug/L	Date	Influent ug/L	Date	Primary effluent ug/L	Date	Effluent ug/L
01/02/12	78	01/02/12	51	01/03/12	4.0	01/07/13	6	01/07/13	< 3	01/08/13	< 3	01/07/13	182	01/07/13	41	01/08/13	30
01/09/12	68	01/09/12	30	01/10/12	6.0	01/15/13	8	01/15/13	< 3	1/15/2013	< 3	01/15/13	280	01/15/13	135	1/15/2013	31
02/06/12	98	02/06/12	41	02/07/12	6.0	02/04/13	6	02/04/13	< 3	1/16/2013	< 3	02/04/13	134	02/04/13	42	1/16/2013	48
02/13/12	181	02/13/12	45	02/14/12	7.0	02/12/13	5	02/11/13	< 3	01/16/13	< 3	02/12/13	139	02/11/13	42	01/16/13	66
03/05/12	104	03/05/12	42	03/06/12	4.5	03/04/13	3	03/11/13	< 3	1/18/2013	< 3	03/04/13	168	03/11/13	41	1/18/2013	62
03/12/12	92	03/12/12	38	03/13/12	4.4	03/11/13	4	04/01/13	< 3	1/29/2013		03/11/13	125	04/01/13	36	1/29/2013	
04/02/12	82	04/02/12	34	04/03/12	5.0	04/01/13	4	04/08/13	< 3	02/05/13	< 3	04/01/13	144	04/08/13	76	02/05/13	33
04/09/12	84	04/09/12	33	04/10/12	5.0	04/08/13	5	05/06/13	< 3	02/12/13	< 3	04/08/13	262	05/06/13	51	02/12/13	27
05/07/12	174	05/07/12	60	05/08/12	5.0	05/06/13	5	05/13/13	< 3	03/04/13		05/06/13	182	05/13/13	43	03/04/13	
05/14/12	101	05/14/12	30	05/15/12	3.0	05/13/13	7	06/03/13	< 3	03/05/13	< 3	05/13/13	188	06/03/13	32	03/05/13	38
06/04/12	263	06/04/12	19	06/05/12	5.0	06/03/13	6	06/10/13	< 3	03/06/13		06/03/13	190	06/10/13	37	03/06/13	
06/11/12	151	06/11/12	17	06/12/12	7.0	06/10/13	6	07/01/13	< 3	03/11/13		06/10/13	186	07/01/13	36	03/11/13	
07/02/12	222	07/02/12	26	07/03/12	4.1	07/01/13	7	07/08/13	< 3	03/12/13	< 3	07/01/13	190	07/08/13	62	03/12/13	34
07/09/12	241	07/09/12	30	07/08/12	6.0	07/08/13	6	08/05/13	< 3	03/13/13		07/08/13	192	08/05/13	52	03/13/13	
08/06/12	261	08/06/12	35	07/10/12	4.9	08/05/13	8	08/12/13	< 3	03/21/13		08/05/13	233	08/12/13	40	03/21/13	
08/13/12	238	08/13/12	31	08/07/12	8.2	08/12/13	7	09/02/13	< 3	03/22/13		08/12/13	219	09/02/13	47	03/22/13	
09/03/12	135	11/05/12	31	08/14/12	7.2	09/02/13	11	09/09/13	< 3	03/23/13		09/02/13	234	09/09/13	80	03/23/13	
09/10/12	212	11/12/12	28	08/20/12	3.3	09/09/13	11	10/07/13	< 3	03/24/13		09/09/13	308	10/07/13	40	03/24/13	
10/01/12	254	12/03/12	44	08/21/12	3.7	10/07/13	8	10/14/13	< 3	03/25/13		10/07/13	284	10/14/13	35	03/25/13	
10/08/12	157	12/10/12	29	08/22/12	3.8	10/14/13	5	11/04/13	< 3	03/26/13		10/14/13	158	11/04/13	103	03/26/13	
11/05/12	188	01/07/13	40	08/23/12	4.0	11/04/13	5	11/11/13	< 3	03/27/13		11/04/13	264	11/11/13	43	03/27/13	
11/12/12	99	01/15/13	45	08/28/12	5.8	11/11/13	4	12/02/13	< 3	04/02/13	< 3	11/11/13	144	12/02/13	123	04/02/13	32
12/03/12	154	02/04/13	38	08/31/12	7.8	12/02/13	6	12/09/13	< 3	04/09/13	< 3	12/02/13	221	12/09/13	43	04/09/13	49
12/10/12	96	02/11/13	46	09/04/12	6.9	12/09/13	5			04/15/13		12/09/13	188			04/15/13	
01/07/13	136	03/11/13	30	09/11/12	7.4					04/16/13						04/16/13	
01/15/13	127	04/01/13	30	09/17/12	4.8					05/07/13	< 3					05/07/13	25
02/04/13	103	04/08/13	30	09/18/12	4.6					05/14/13	< 3					05/14/13	18
02/12/13	96	05/06/13	31	10/02/12						06/04/13	< 3					06/04/13	22
03/04/13	115	05/13/13	26	10/09/12	3.8					06/11/13	< 3					06/11/13	26
03/11/13	87	06/03/13	9.9	11/06/12	4.6					07/02/13	< 3					07/02/13	20
04/01/13	108	06/10/13	10	11/13/12	4.0					07/09/13	< 3					07/09/13	23
04/08/13	123	07/01/13	22	12/04/12	4.0					07/21/13	< 3					07/21/13	35
05/06/13	99	07/08/13	21	12/11/12	5.6					08/06/13	< 3					08/06/13	20
05/13/13	109	08/05/13	33	01/08/13	4.3					08/13/13	< 3					08/13/13	20
06/03/13	93	08/12/13	22	01/16/13	6.1					09/03/13	< 3					09/03/13	28
06/10/13	122	09/02/13	42	02/05/13	6.0					9/11/2013						9/11/2013	
07/01/13	105	09/09/13	59	02/12/13	4.4					09/11/13	< 3					09/11/13	33
07/08/13	92	10/07/13	33	03/04/13	6.8					10/08/13	< 3					10/08/13	19
08/05/13	164	10/14/13	30	03/05/13	8.0					10/15/13	< 3					10/15/13	24
08/12/13	146	11/04/13	61	03/06/13	10.7					11/05/13	< 3					11/05/13	27
09/02/13	151	11/11/13	40	03/11/13	10.3					11/12/13	< 3					11/12/13	32
09/09/13	210	12/02/13	21	03/12/13	11.3					12/03/13	< 3					12/03/13	58
10/07/13	189	12/09/13	26	03/13/13	10.9					12/10/13	< 3					12/10/13	40
10/14/13	108			03/21/13	11.4					12/23/13	< 3						
11/04/13	129			03/22/13	9.2					12/24/13	< 3						
11/11/13	93			03/23/13	10.0					12/25/13	< 3						
12/02/13	118			03/24/13	7.4					12/30/13	< 3						
12/09/13	114			03/25/13	6.9					12/31/13	< 3						
				03/26/13	6.9												
				03/27/13	10.1												
				04/02/13	7.2												
				04/09/13	6.1												
				04/15/13	4.4												
				04/16/13	4.9												
				05/07/13	2.8												
				05/14/13	2.5												
				06/04/13	2.7												
				06/11/13	3.1												
				07/02/13	2.6												
				07/09/13	2.5												
				07/21/13	7.0												
				08/06/13	2.5												
				08/13/13	2.5												
				09/03/13	3.6												
				09/11/13	5.0												
				10/08/13	2.5												
				10/15/13	3.7												
				11/05/13	4.4												
				11/12/13	5.1												
				12/03/13	5.2												
				12/10/13	10.1												
				12/23/13	7.5												
				12/24/13	5.0												
				12/25/13	6.5												
				12/30/13	3.6												
				12/31/13	4.0												
Averages	139.0		33.5		5.2		6.2		< 3		< 3		201		56		33

This data may be excluded per Jay Pimpare. Non-representative week of operation.

Domestic Sanitary Sewer Sampling Results, June 10 - 27, 2013

Union & Elm		Furnace Metals							Flame Metals			
Analyte		Antimony	Arsenic	Beryllium	Cadmium	Chromium	Lead	Molybdenum	Copper	Nickel	Silver	Zinc
Detection Limit	**Date**	**0.005 mg/L**	**0.00125 mg/L**	**0.0005 mg/L**	**0.00025 mg/L**	**0.001 mg/L**	**0.001 mg/L**	**0.0025 mg/L**	**0.01 mg/L**	**0.03 mg/L**	**0.01 mg/L**	**0.009 mg/L**
Sample												
UEC-1	6/10/13	<0.005	<0.00125	<0.0005	<0.00025	**0.003**	**0.009**	<0.0025	**0.14**	<0.03	<0.01	**0.13**
UEC-2	6/11/13	<0.005	<0.00125	<0.0005	<0.00025	**0.002**	**0.008**	<0.0025	**0.15**	<0.03	<0.01	**0.15**
UEC-3	6/12/13	<0.005	<0.00125	<0.0005	<0.00025	**0.001**	**0.006**	<0.0025	**0.11**	<0.03	<0.01	**0.10**
UEC-4	6/13/13	<0.005	<0.00125	<0.0005	<0.00025	**0.001**	**0.009**	<0.0025	**0.12**	<0.03	<0.01	**0.14**
UEC-5	6/14/13	<0.005	<0.00125	<0.0005	<0.00025	**0.002**	**0.008**	<0.0025	**0.10**	<0.03	<0.01	**0.12**
UEC-6	6/17/13	<0.005	<0.00125	<0.0005	<0.00025	**0.002**	**0.007**	<0.0025	**0.15**	<0.03	<0.01	**0.12**
UEC-7	6/18/13	<0.005	<0.00125	<0.0005	<0.00025	**0.002**	**0.007**	<0.0025	**0.16**	<0.03	<0.01	**0.12**
UEC-8	6/20/13	<0.005	<0.00125	<0.0005	<0.00025	**0.002**	**0.006**	<0.0025	**0.16**	<0.03	<0.01	**0.10**
UEC-9	6/24/13	<0.005	<0.00125	<0.0005	<0.00025	**0.002**	**0.008**	<0.0025	**0.17**	<0.03	<0.01	**0.12**
UEC-10	6/25/13	<0.005	<0.00125	<0.0005	<0.00025	**0.002**	**0.008**	<0.0025	**0.17**	<0.03	<0.01	**0.15**
	Averages	< 0.005	< 0.00125	< 0.0005	< 0.00025	**0.002**	**0.008**	< 0.0025	**0.143**	< 0.03	< 0.01	**0.125**

Monadnock Market Place		Furnace Metals							Flame Metals			
Analyte		Antimony	Arsenic	Beryllium	Cadmium	Chromium	Lead	Molybdenum	Copper	Nickel	Silver	Zinc
		Sb	**As**	**Be**	**Cd**	**Cr**	**Pb**	**Mo**	**Cu**	**Ni**	**Ag**	**Zn**
Detection Limit	**Date**	**0.005 mg/L**	**0.00125 mg/L**	**0.0005 mg/L**	**0.00025 mg/L**	**0.001 mg/L**	**0.001 mg/L**	**0.0025 mg/L**	**0.01 mg/L**	**0.03 mg/L**	**0.01 mg/L**	**0.009 mg/L**
Sample												
MMC-1	6/11/13	<0.005	<0.00125	<0.0005	< 0.00025	**0.002**	**0.002**	<0.0025	**0.05**	<0.03	<0.01	**0.09**
MMC-2	6/13/13	<0.005	<0.00125	<0.0005	< 0.00025	**0.002**	<0.001	<0.0025	**0.03**	<0.03	<0.01	**0.03**
MMC-3	6/14/13	<0.005	<0.00125	<0.0005	< 0.00025	**0.002**	**0.001**	<0.0025	**0.05**	<0.03	<0.01	**0.03**
MMC-4	6/18/13	<0.005	<0.00125	<0.0005	< 0.00025	**0.002**	**0.002**	<0.0025	**0.06**	<0.03	<0.01	**0.06**
MMC-5	6/19/13	<0.005	<0.00125	<0.0005	< 0.00025	**0.001**	**0.001**	<0.0025	**0.04**	<0.03	<0.01	**0.03**
MMC-6	6/20/13	<0.005	<0.00125	<0.0005	**0.00025**	<0.001	**0.001**	<0.0025	**0.04**	<0.03	<0.01	**0.02**
MMC-7	6/24/13	<0.005	<0.00125	<0.0005	**0.00025**	**0.002**	<0.001	<0.0025	**0.10**	<0.03	<0.01	**0.12**
MMC-8	6/26/13	<0.005	<0.00125	<0.0005	< 0.00025	<0.001	**0.001**	<0.0025	**0.05**	<0.03	<0.01	**0.04**
MMC-9	6/27/13	<0.005	<0.00125	<0.0005	< 0.00025	**0.001**	**0.002**	<0.0025	**0.05**	<0.03	<0.01	**0.07**
Date Analyzed		11/1/13	11/5/13	11/6/13	10/30/13	10/30/13	11/1/13	11/8/13	8/13/13	8/14/13	8/1/13	8/14/13
	Averages	< 0.005	< 0.00125	< 0.0005	**0.00025**	**0.002**	**0.002**	< 0.0025	**0.053**	< 0.03	< 0.01	**0.054**

Domestic Sanitary Sewer Sampling Results, October 23 - November 19, 2012

Note: sampling interrupted by Hurricane Sandy week of 10/29/12

Union & Elm		Furnace Metals								Flame Metals			
Analyte		Antimony	Arsenic	Beryllium	Cadmium	Chromium	Lead	Molybdenum	Selenium	Copper	Nickel	Silver	Zinc
Detection Limit	Date	0.005 mg/L	0.00125 mg/L	0.0005 mg/L	0.00025 mg/L	0.001 mg/L	0.003 mg/L	0.0025 mg/L	0.0025 mg/L	0.01 mg/L	0.03 mg/L	0.01 mg/L	0.009 mg/L
Sample													
UEC-1	10/23/2012	<0.005	<0.00125	<0.0005	<0.00025	**0.002**	**0.00508**	<0.0025	<0.0025	**0.11**	<0.03	<0.01	**0.10**
UEC-2	10/24/2012	<0.005	<0.00125	<0.0005	<0.00025	**0.001**	**0.00400**	<0.0025	<0.0025	**0.10**	<0.03	<0.01	**0.09**
UEC-3	10/25/2012	<0.005	<0.00125	<0.0005	<0.00025	**0.002**	**0.00365**	<0.0025	<0.0025	**0.09**	<0.03	<0.01	**0.86**
UEC-4	11/5/2012	<0.005	<0.00125	<0.0005	<0.00025	< 0.001	**0.00460**	<0.0025	<0.0025	**0.11**	<0.03	<0.01	**0.11**
UEC-5	11/6/2012	<0.005	<0.00125	<0.0005	<0.00025	**0.003**	**0.00380**	<0.0025	<0.0025	**0.09**	<0.03	<0.01	**0.08**
UEC-6	11/8/2012	<0.005	<0.00125	<0.0005	<0.00025	**0.002**	**0.00799**	<0.0025	<0.0025	**0.13**	<0.03	<0.01	**0.16**
UEC-7	11/13/2012	<0.005	<0.00125	<0.0005	<0.00025	< 0.001	**0.00469**	<0.0025	<0.0025	**0.10**	<0.03	<0.01	**0.11**
UEC-8	11/14/2012	<0.005	<0.00125	<0.0005	<0.00025	< 0.001	**0.00340**	<0.0025	<0.0025	**0.10**	<0.03	<0.01	**0.11**
UEC-9	11/15/2012	<0.005	<0.00125	<0.0005	<0.00025	**0.002**	**0.00376**	<0.0025	<0.0025	**0.09**	<0.03	<0.01	**0.11**
UEC-10	11/16/2012	<0.005	<0.00125	<0.0005	<0.00025	**0.001**	**0.00581**	<0.0025	<0.0025	**0.10**	<0.03	<0.01	**0.14**
Averages		< 0.005	< 0.00125	< 0.0005	< 0.00025	**0.002**	**0.0047**	< 0.0025	< 0.0025	**0.102**	< 0.03	< 0.01	**0.112**

Monadnock Market Place		Furnace Metals								Flame Metals			
Analyte		Antimony	Arsenic	Beryllium	Cadmium	Chromium	Lead	Molybdenum	Selenium	Copper	Nickel	Silver	Zinc
Detection Limit	Date	0.005 mg/L	0.00125 mg/L	0.0005 mg/L	0.00025 mg/L	0.001 mg/L	0.003 mg/L	0.0025 mg/L	0.0025 mg/L	0.01 mg/L	0.03 mg/L	0.01 mg/L	0.009 mg/L
Sample													
MMC-1	10/24/2012	<0.005	<0.00125	<0.005	**0.00053**	**0.005**	**0.00397**	<0.0025	<0.0025	**0.09**	< 0.03	<0.01	**0.11**
MMC-2	10/25/2012	<0.005	<0.00125	<0.005	**0.00036**	**0.004**	**0.005593**	<0.0025	<0.0025	**0.09**	< 0.03	<0.01	**0.17**
MMC-3	11/6/2012	<0.005	<0.00125	<0.005	**0.00211**	**0.003**	**0.01461**	<0.0025	<0.0025	**0.24**	**0.054**	<0.01	**0.15**
MMC-4	11/8/2012	<0.005	<0.00125	<0.005	< 0.00025	**0.002**	< 0.003	<0.0025	<0.0025	**0.06**	< 0.03	<0.01	**0.06**
MMC-5	11/13/2012	<0.005	<0.00125	<0.005	**0.00028**	**0.002**	**0.00309**	<0.0025	<0.0025	**0.10**	< 0.03	<0.01	**0.08**
MMC-6	11/14/2012	<0.005	<0.00125	<0.005	< 0.00025	**0.001**	< 0.003	<0.0025	<0.0025	**0.05**	< 0.03	<0.01	**0.05**
MMC-7	11/15/2012	<0.005	<0.00125	<0.005	< 0.00025	**0.005**	< 0.003	<0.0025	<0.0025	**0.07**	< 0.03	<0.01	**0.09**
MMC-8	11/16/2012	<0.005	<0.00125	<0.005	< 0.00025	< 0.001	< 0.003	<0.0025	<0.0025	**0.05**	< 0.03	<0.01	**0.05**
MMC-9	11/19/2012	<0.005	<0.00125	<0.005	< 0.00025	**0.003**	< 0.003	<0.0025	<0.0025	**0.07**	< 0.03	<0.01	**0.08**
Averages		< 0.005	< 0.00125	< 0.0005	**0.00050**	**0.003**	**0.0047**	< 0.0025	< 0.0025	**0.091**	< 0.03	< 0.01	**0.093**

CRITERIA: 1. No Special Allocation Allowance 2. Uniform Concentration Basis 3. Industrial Flow Basis

Proposed Limits - mg/L	0.032	100.344	0.416	0.006	3.790	0.440	0.067	0.002	0.700	0.303	0.048	1.740	0.58
						Reported Concentrations (mg/L)							
Proposed Limit Adjusted for Dilution with Sanitary - mg/L	0.017	51.177	0.2121	0.003	1.934	0.281	0.037	0.001	0.360	0.155	0.025	0.944	0.297

DATA ACCUMULATIONS as of Nov 25 14

Cheshire Medical Center START	**Date**	**Description**	**Arsenic**	**Antimony**	**Beryllium**	**Cadmium**	**Chromium**	**Copper**	**Lead**	**Mercury**	**Nickel**	**Selenium**	**Silver**	**Zinc**	**Cyanide**
Cheshire Medical Center	Jun 3 04	City monitoring	0.0018			0.005	***0.0005***	0.230	0.007		***0.015***	***0.003***	***0.005***	0.140	***0.010***
Cheshire Medical Center	Apr 14 05	City monitoring	***0.005***			< 0.001	***0.001***	0.039	0.010		***0.005***	***0.025***	0.064	0.130	
Cheshire Medical Center	Jun 7 05	Self-monitoring											0.064		
Cheshire Medical Center	Oct 11 05	Self-monitoring											0.032		
Cheshire Medical Center	Mar 21 06	Self-monitoring											0.037		
Cheshire Medical Center	May 5 06	City monitoring	***0.005***	< 0.05	< 0.004	< 0.001	0.008	0.370	***0.005***	***0.0001***	0.020	***0.025***	0.033	0.110	***0.010***
Cheshire Medical Center															
Cheshire Medical Center	Apr 3 09	Self-monitoring						0.119					< 0.01	0.163	
Cheshire Medical Center	Apr 29 09	City monitoring	< 0.001			0.0010	0.002	0.130	0.005		0.008	< 0.001	< 0.001	0.130	
Cheshire Medical Center	Jul 30 09	Self-monitoring													
Cheshire Medical Center	Oct 9 09	Self-monitoring						0.069					< 0.01	0.067	
Cheshire Medical Center	Jan 8 10	Self-monitoring						0.108						0.079	
Cheshire Medical Center	Apr 2 10	Self-monitoring						0.070					< 0.01	0.130	
Cheshire Medical Center	Apr 6 10	City monitoring	< 0.001			< 0.002	< 0.005	0.100	< 0.001		< 0.005	< 0.005	< 0.005	0.073	
Cheshire Medical Center	Jun 15 10	Self-monitoring						0.052					< 0.01	0.070	
Cheshire Medical Center	Oct 7 10	Self-monitoring						0.108					< 0.01		
Cheshire Medical Center	May 3 11	City monitoring	< 0.001			< 0.002	< 0.005	0.133	0.002		< 0.005	< 0.005	< 0.01	0.105	
Cheshire Medical Center	Jun 2 11	Self-monitoring						0.104					< 0.01	0.148	
Cheshire Medical Center															
Cheshire Medical Center	Apr 5 12	City monitoring	***0.0005***	***0.0005***		***0.0005***	***0.0005***	0.110	0.002		0.002	0.002	***0.0005***	0.110	
Cheshire Medical Center	Jun 12 12	Self-monitoring						0.114						0.147	
Cheshire Medical Center	Oct 26 12	Self-monitoring						0.171						0.112	
Cheshire Medical Center	May 3 13	Self-monitoring						0.147						0.137	
Cheshire Medical Center	May 6 13	City monitoring	***0.001***			***0.001***	***0.0025***	0.140	0.002		***0.003***	***0.001***	***0.0010***	0.170	
Cheshire Medical Center	Oct 4 13	Self-monitoring						0.105						0.112	
Cheshire Medical Center															
Cheshire Medical Center															
Cheshire Medical Center END															
Cheshire Medical Center AVERAGES			0.0005	0.00050	0.00013	0.00030	0.0005	0.131	0.002	0.0001	0.002	0.002	0.00050	0.131	0.0027
Reporting limit issue default value applied				**NO**	**YES**	**YES**							**YES**		**YES**

* Shaded cells - values used in calculations ***Bolded italic cells*** - result < MDL ; Reported values are 1/2 MDL Red shaded cells - results above uniform conc. value

DATA ACCUMULATIONS as of Nov 25 14

EVS Metals START	**Date**	**Description**	**Arsenic**	**Antimony**	**Beryllium**	**Cadmium**	**Chromium**	**Copper**	**Lead**	**Mercury**	**Nickel**	**Selenium**	**Silver**	**Zinc**	**Cyanide**
EVS Metals	Aug 17 13	Self-monitoring (BMR)			***0.0005***	***0.0010***	***0.0025***	0.030	0.005	***0.0001***	0.044	***0.0010***	***0.010***	0.023	0.140
EVS Metals	Dec 17 13	Self-monitoring			***0.0005***	***0.0010***	***0.0025***	0.085	***0.0005***	***0.0001***	0.020	***0.0010***	***0.010***	0.054	0.060
EVS Metals	Jan 22 14	City monitoring	***0.0005***	***0.0010***	***0.0005***	***0.0010***	0.009	0.089	***0.0005***		0.020	***0.0010***	***0.010***	0.056	0.700
EVS Metals															
EVS Metals															
EVS Metals END															
EVS Metals AVERAGES			< 0.001	0.00100	0.00013	0.00030	< 0.005	0.068	< 0.002	< 0.0001	0.028	0.00100	0.00050	0.044	0.300
Reporting limit issue default value applied				**NO**	**YES**	**YES**							**YES**		

* Shaded cells - values used in calculations ***Bolded italic cells*** - result < MDL ; Reported values are 1/2 MDL Red shaded cells - results above uniform conc. value

CRITERIA: 1. No Special Allocation Allowance 2. Uniform Concentration Basis 3. Industrial Flow Basis

Proposed Limits - mg/L	0.032	100.344	0.416	0.006	3.790	0.440	0.067	0.002	0.700	0.303	0.048	1.740	0.58

DATA ACCUMULATIONS as of Nov 25 14

Reported Concentrations (mg/L)

Markem Corporation (Main) STAF	Date	Description	Arsenic	Antimony	Beryllium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc	Cyanide
Markem Corporation (Main)	Apr 6 05	City monitoring	***0.005***			***0.0005***	0.002	0.260	0.030		***0.0050***	***0.025***	0.010	0.063	***0.010***
Markem Corporation (Main)	Aug 2 05	Self-monitoring				***0.00025***		0.042	0.003		0.006		***0.00025***	0.050	***0.005***
Markem Corporation (Main)	Oct 21 05	Self-monitoring				***0.0005***	0.004	0.580	0.150		0.006		***0.00025***	0.190	***0.005***
Markem Corporation (Main)	Jan 6 06	Self-monitoring				0.0014	0.003	0.210	0.036		0.006		0.011	0.110	***0.005***
Markem Corporation (Main)	Apr 4 06	Self-monitoring				***0.0005***	0.002	0.400	0.062		***0.0015***		***0.0050***	0.170	***0.005***
Markem Corporation (Main)	May 17 06	City monitoring	***0.005***	< 0.05	< 0.004	***0.0005***	***0.001***	0.040	0.020	***0.0001***	***0.0050***	***0.025***	***0.0025***	0.021	***0.010***
Markem Corporation (Main)	Jul 25 06	Self-monitoring				0.002	***0.001***	0.017	***0.0025***		***0.0015***		***0.0005***	0.011	***0.005***
Markem Corporation (Main)															
Markem Corporation (Main)	May 12 09	City monitoring	< 0.001			< 0.001	0.001	0.260	0.019		0.007	< 0.001	< 0.001	0.090	
Markem Corporation (Main)	Jul 21 09	Self-monitoring				< 0.0005	< 0.002	0.130	0.015		< 0.002		< 0.001	0.090	< 0.005
Markem Corporation (Main)	Oct 28 09	Self-monitoring				< 0.0005	< 0.002	0.073	0.019		0.002		< 0.001	0.042	< 0.005
Markem Corporation (Main)	Jan 26 10	Self-monitoring				< 0.0005	< 0.002	0.130	0.011		0.003		0.001	0.054	< 0.005
Markem Corporation (Main)	Feb 17 10	City monitoring	< 0.001			< 0.002	< 0.005	0.344	0.048		0.010	< 0.005	< 0.005	0.338	< 0.020
Markem Corporation (Main)	May 20 10	Self-monitoring				0.002	0.007	0.550	0.078		0.017		< 0.001	20.000	< 0.005
Markem Corporation (Main)	Jun 22 10	Zinc monitoring												0.580	
Markem Corporation (Main)	Jun 23 10	Zinc monitoring												0.100	
Markem Corporation (Main)	Jul 2 10	Zinc monitoring												0.230	
Markem Corporation (Main)	Jul 7 10	Zinc monitoring												0.140	
Markem Corporation (Main)	Jul 15 10	Zinc monitoring												0.160	
Markem Corporation (Main)	Jul 23 10	Zinc monitoring												1.100	
Markem Corporation (Main)	Jul 29 10	Self-monitoring				< 0.001	< 0.002	0.062	0.004		< 0.002		< 0.001	0.046	< 0.005
Markem Corporation (Main)	Oct 5 10	Self-monitoring				< 0.001	0.081	0.270	0.021		0.007		< 0.001	1.200	< 0.005
Markem Corporation (Main)	Jan 6 11	Self-monitoring				< 0.0005	< 0.002	0.120	0.011		0.004		< 0.001	0.190	0.011
Markem Corporation (Main)	Apr 5 11	City monitoring	< 0.001			< 0.002	< 0.005	0.102	0.003		< 0.005		< 0.005	0.145	0.005
Markem Corporation (Main)	Apr 8 11	Self-monitoring				< 0.001	0.002	0.180	0.012		0.005		< 0.001	1.200	< 0.005
Markem Corporation (Main)	Aug 1 11	Self-monitoring				< 0.001	< 0.002	0.100	0.009		0.007		< 0.001	0.150	< 0.005
Markem Corporation (Main)	Oct 3 11	Self-monitoring				< 0.0005	< 0.002	0.350	0.050		0.002		< 0.001	0.110	< 0.005
Markem Corporation (Main)															
Markem Corporation (Main)															
Markem Corporation (Main)	Jan 15 13	City monitoring	***0.0025***	***0.0025***		***0.0025***	***0.0025***	0.078	0.008		***0.0025***	***0.0025***	***0.0025***	0.059	**0.0100**
Markem Corporation (Main)	Jan 17 13	Self-monitoring				**0.00025**	0.0540	0.130	0.008		0.040		***0.0005***	0.160	**0.0025**
Markem Corporation (Main)	Apr 24 13	Self-monitoring				0.001	0.0030	0.300	0.034		0.011		***0.0005***	0.650	**0.0025**
Markem Corporation (Main)	Jul 24 13	Self-monitoring				**0.00025**	***0.0010***	0.190	0.006		***0.0010***		0.0005	0.110	0.0100
Markem Corporation (Main)	Oct 16 13	Self-monitoring				0.0006	***0.0020***	0.260	0.018		0.008		***0.0005***	0.330	**0.0025**
Markem Corporation (Main)	Jan 15 14	City monitoring	***0.0010***	***0.0010***	***0.0005***	**0.001**	***0.0025***	0.150	0.010		***0.0025***	***0.0010***	***0.0100***	0.100	**0.0050**
Markem Corporation (Main)	Jan 21 14	Self-monitoring				0.002	0.0030	0.280	0.026		0.017		***0.0005***	0.450	**0.0025**
Markem Corporation (Main)															
Markem Corporation (Main)															
Markem Corporation (Main) END															
Markem Corporation (Main) AVERAGES			0.001	0.001	0.00013	0.00030	0.010	0.198	0.016	0.0001	0.0117	0.00131	0.00050	0.2656	0.0050
Reporting limit issue default value applied				**NO**	**YES**	**YES**						**YES**	**YES**		

* Shaded cells - values used in calculations ***Bolded italic cells*** - result < MDL ; Reported values are 1/2 MDL Red shaded cells - results above uniform conc. value

CRITERIA: 1. No Special Allocation Allowance 2. Uniform Concentration Basis 3. Industrial Flow Basis

Proposed Limits - mg/L	0.032	100.344	0.416	0.006	3.790	0.440	0.067	0.002	0.700	0.303	0.048	1.740	0.58

DATA ACCUMULATIONS as of Nov 25 14

Reported Concentrations (mg/L)

Corning Net Optix START	Date	Description	Arsenic	Antimony	Beryllium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc	Cyanide
Corning Net Optix	Jan 18 08					< 0.010	< 0.010	1.270	< 0.050		0.029		< 0.010	0.084	< 0.020
Corning Net Optix	Apr 11 08					< 0.010	< 0.010	0.062	< 0.050		0.019		< 0.010	0.402	< 0.020
Corning Net Optix	Apr 24 08		< 0.020			0.0005	0.0050	0.240	0.004		0.031	< 0.020	< 0.005	0.540	< 0.020
Corning Net Optix	Jul 18 08					< 0.010	< 0.010	0.025	< 0.050		0.067		< 0.010	0.133	< 0.020
Corning Net Optix	Oct 3 08					< 0.010	< 0.010	0.024	< 0.050		0.047		< 0.010	0.143	< 0.020
Corning Net Optix	Jan 16 09					< 0.010	< 0.010	0.015	< 0.050		0.010		< 0.010	0.081	< 0.020
Corning Net Optix	Feb 4 09		< 0.010			< 0.010	< 0.001	0.003	< 0.001		0.003	0.010	< 0.001	0.038	< 0.020
Corning Net Optix	Apr 17 09					< 0.010	< 0.010	0.046	< 0.050		0.011		< 0.010	0.070	< 0.020
Corning Net Optix	Jul 9 09					< 0.010	< 0.010	0.027	< 0.050		0.027		< 0.010	0.070	< 0.020
Corning Net Optix	Oct 16 09					< 0.010	< 0.010	< 0.010	< 0.050		< 0.010		< 0.010	0.016	< 0.020
Corning Net Optix	Jan 15 10					< 0.010	< 0.010	0.026	< 0.050		0.558		< 0.010	0.047	< 0.020
Corning Net Optix	Feb 17 10														< 0.020
Corning Net Optix	Apr 6 10		< 0.001			< 0.002	< 0.005	0.076	0.001		0.086	< 0.005	< 0.005	0.042	
Corning Net Optix	Apr 16 10					< 0.010	< 0.010	< 0.010	< 0.050		0.301		< 0.010	0.048	< 0.020
Corning Net Optix	Jul 16 10					< 0.010	< 0.010	0.036	< 0.050		0.726		< 0.010	0.071	< 0.020
Corning Net Optix	Nov 30 10					< 0.010	< 0.010	0.012	< 0.050		0.023		< 0.010	0.029	< 0.020
Corning Net Optix	Jan 26 11					< 0.010	< 0.010	0.029	< 0.050		0.777		< 0.010	0.064	< 0.020
Corning Net Optix	Apr 5 11		< 0.001			< 0.002	< 0.005	< 0.025	< 0.001		0.012		< 0.005	0.025	< 0.010
Corning Net Optix	Apr 15 11					< 0.010	< 0.010	0.037	< 0.050		0.032		< 0.010	0.063	< 0.020
Corning Net Optix	July 22 11					< 0.010	< 0.010	0.039	< 0.050		0.178		< 0.010	0.063	< 0.020
Corning Net Optix	Oct 6 11					< 0.010	< 0.010	0.100	< 0.050		0.110		< 0.010	0.149	< 0.020
Corning Net Optix															
Corning Net Optix	Feb 5 13	Self-monitoring				***0.005***	***0.005***	0.074	***0.0250***		0.035		***0.005***	0.064	
Corning Net Optix	May 3 13	Self-monitoring				***0.005***	***0.005***	0.053	***0.0250***		0.031		***0.005***	0.037	***0.010***
Corning Net Optix	May 7 13	City monitoring	0.024			***0.001***	***0.003***	0.041	0.0020		0.190	***0.001***	***0.010***	0.029	***0.010***
Corning Net Optix	Jul 12 13	Self-monitoring				***0.005***	***0.005***	***0.005***	***0.0250***		0.023		***0.005***	***0.005***	
Corning Net Optix	Oct 4 13	Self-monitoring				***0.005***	***0.005***	0.030	***0.0250***		0.032		***0.005***	0.065	***0.010***
Corning Net Optix	Jan 22 14	City monitoring	***0.0005***	***0.001***	***0.00050***	***0.001***	0.015	0.086	***0.0005***		0.120	***0.001***	***0.005***	0.057	***0.005***
Corning Net Optix															
Corning Net Optix															
Corning Net Optix END															
Corning Net Optix AVERAGES			< 0.012	0.001	0.0005	0.0010	0.0063	0.048	0.001	#N/A	0.072	0.00100	0.00050	0.043	0.00271
		Reporting limit issue default value applied										**NO**	**YES**		**YES**

* Shaded cells - values used in calculations ***Bolded italic cells*** - result < MDL ; Reported values are 1/2 MDL Red shaded cells - results above uniform conc. value

CRITERIA: 1. No Special Allocation Allowance 2. Uniform Concentration Basis 3. Industrial Flow Basis

			Arsenic	Antimony	Beryllium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc	Cyanide
Proposed Limits - mg/L			0.032	100.344	0.416	0.006	3.790	0.440	0.067	0.002	0.700	0.303	0.048	1.740	0.58
			Reported Concentrations (mg/L)												
Proposed Limit Adjusted for Dilution with Sanitary - mg/L			0.021	64.221	0.2661	0.004	2.427	0.324	0.045	0.001	0.450	0.194	0.031	1.155	0.372
DATA ACCUMULATIONS as of Nov 25 14															
Timken (MPB-1) START	**Date**	**Description**													
Timken (MPB-1)	Jul 22 05	Self-monitoring				***0.005***	0.014	0.185	***0.025***		0.020		***0.005***	0.175	0.039
Timken (MPB-1)	Oct 27 05	Self-monitoring				***0.005***	0.020	0.078	***0.025***		***0.005***		***0.005***	0.150	***0.010***
Timken (MPB-1)	Jan 19 06	Self-monitoring				***0.005***	0.032	0.081	***0.025***		***0.005***		***0.005***	0.074	***0.010***
Timken (MPB-1)	Apr 12 06	Self-monitoring				***0.005***	0.032	0.075	***0.025***		***0.005***		***0.005***	0.061	***0.010***
Timken (MPB-1)	May 5 06	City monitoring	***0.005***	< 0.05	***0.002***	***0.005***	0.015	0.090	0.010	0.0003	< 0.01		***0.0025***	0.095	***0.010***
Timken (MPB-1)															
Timken (MPB-1)	Jan 11 08					< 0.010	0.042	0.177	< 0.050		< 0.010		< 0.010	0.218	< 0.020
Timken (MPB-1)	Apr 4 08					< 0.010	0.027	0.165	< 0.050		< 0.010		< 0.010	0.264	< 0.020
Timken (MPB-1)	Apr 8 08		< 0.001		< 0.001	< 0.001	0.018	0.110	0.003		0.005	< 0.001	< 0.001	0.054	< 0.020
Timken (MPB-1)	Jul 18 08					< 0.010	0.034	0.099	< 0.050		< 0.010		< 0.010	0.371	< 0.020
Timken (MPB-1)	Oct 3 08					< 0.010	0.024	0.087	< 0.050		< 0.010		< 0.010	0.181	< 0.020
Timken (MPB-1)	Jan 16 09					< 0.010	0.015	0.085	< 0.050		< 0.010		< 0.010	0.123	< 0.020
Timken (MPB-1)	Apr 3 09					< 0.010	0.026	0.122	< 0.050		0.021		< 0.010	0.699	< 0.020
Timken (MPB-1)	Apr 7 09		< 0.001			< 0.001	0.006	0.058	0.002		0.005	< 0.001	< 0.001	0.060	< 0.020
Timken (MPB-1)	Jul 10 09					< 0.010	0.040	0.438	< 0.050		0.015		0.005	0.255	< 0.020
Timken (MPB-1)	Oct 16 09					< 0.010	0.018	0.034	< 0.050		0.010		< 0.010	0.289	< 0.020
Timken (MPB-1)	Jan 22 10					< 0.010	0.028	0.049	< 0.050		0.010		< 0.010	0.046	< 0.020
Timken (MPB-1)	Apr 16 10					< 0.010	0.020	0.010	< 0.050		< 0.010		< 0.010	0.097	< 0.020
Timken (MPB-1)	Apr 20 10		< 0.001			0.003	0.012	0.063	0.001		< 0.005	< 0.005	< 0.005	0.107	< 0.020
Timken (MPB-1)	Sep 14 10					< 0.010	0.010	0.050	< 0.050		< 0.010		< 0.010	0.064	< 0.020
Timken (MPB-1)	Oct 15 10					< 0.010	0.020	0.048	< 0.050		0.010		< 0.010	0.098	< 0.020
Timken (MPB-1)	Feb 23 11					< 0.010	0.019	0.493	< 0.050		0.010		< 0.010	0.077	< 0.020
Timken (MPB-1)	Apr 14 11					< 0.010	0.015	0.082	< 0.050		< 0.010		< 0.010	0.072	< 0.020
Timken (MPB-1)	May 3 11		< 0.001			< 0.002	0.009	0.076	< 0.001		< 0.005	< 0.005	< 0.005	0.138	< 0.010
Timken (MPB-1)	Jul 21 11					< 0.010	0.023	0.482	< 0.050		< 0.010		< 0.010	0.131	< 0.020
Timken (MPB-1)															
Timken (MPB-1)															
Timken (MPB-1)	Jan 4 13	Self-monitoring				***0.0050***	0.0110	0.103	***0.0250***		***0.0050***		***0.0050***	0.048	***0.0100***
Timken (MPB-1)	Jan 15 13	City monitoring	***0.0025***	***0.0025***		***0.0025***	0.0070	0.059	***0.0025***		***0.0025***	***0.0025***	***0.0025***	0.049	***0.0100***
Timken (MPB-1)	Apr 26 13	Self-monitoring				***0.0050***	***0.0050***	0.063	***0.0250***		***0.0050***		***0.0050***	0.076	***0.0100***
Timken (MPB-1)	Jul 12 13	Self-monitoring				***0.0050***	***0.0050***	0.120	***0.0250***		***0.0050***		***0.0050***	0.075	***0.0100***
Timken (MPB-1)	Oct 4 13	Self-monitoring				***0.0050***	***0.0050***	0.064	***0.0250***		***0.0050***		***0.0050***	0.052	***0.0100***
Timken (MPB-1)	Jan 15 14	City monitoring	***0.0005***	***0.0010***	***0.0005***	***0.0010***	0.0110	0.120	0.0080		***0.0025***	***0.0010***	***0.0100***	0.320	***0.0050***
Timken (MPB-1)															
Timken (MPB-1) END															
Timken (MPB-1) AVERAGES			0.0005	0.00190	0.00013	0.0003	0.007	0.088	0.005	0.0003	0.004	0.001	0.00050	0.103	0.00271
Reporting limit issue default value applied				**YES**	**YES**	**YES**							**YES**		**YES**

* Shaded cells - values used in calculations ***Bolded italic cells*** - result < MDL ; Reported values are 1/2 MDL Red shaded cells - results above uniform conc. value

CRITERIA: 1. No Special Allocation Allowance 2. Uniform Concentration Basis 3. Industrial Flow Basis

Proposed Limits - mg/L			0.032	100.344	0.416	0.006	3.790	0.440	0.067	0.002	0.700	0.303	0.048	1.740	0.58
							Reported Concentrations (mg/L)								
Proposed Limit Adjusted for Dilution with Sanitary - mg/L			0.002	0.002	0.0002	0.000	0.003	0.117	0.006	0.000	0.005	0.002	0.001	0.115	0.003
DATA ACCUMULATIONS as of		Nov 25 14	**Arsenic**	**Antimony**	**Beryllium**	**Cadmium**	**Chromium**	**Copper**	**Lead**	**Mercury**	**Nickel**	**Selenium**	**Silver**	**Zinc**	**Cyanide**
Timken (MPB-2) START	**Date**	**Description**													
Timken (MPB-2)	Jul 22 05	Self-monitoring				***0.005***	0.042	0.087	***0.025***		0.032		***0.005***	0.107	***0.010***
Timken (MPB-2)	Oct 27 05	Self-monitoring				***0.005***	0.062	0.059	***0.025***		0.014		***0.005***	0.042	***0.010***
Timken (MPB-2)	Jan 19 06	Self-monitoring				***0.005***	0.019	0.122	***0.025***		0.015		***0.005***	0.068	***0.010***
Timken (MPB-2)	Apr 12 06	Self-monitoring				***0.005***	0.034	0.089	***0.025***		0.015		***0.005***	0.067	***0.010***
Timken (MPB-2)	May 5 06	City monitoring	0.02	< 0.050	***0.002***	***0.0005***	0.009	0.060	***0.005***	***0.0001***	***0.005***	***0.025***	***0.0025***	0.064	***0.010***
Timken (MPB-2)															
Timken (MPB-2)	Jan 11 08					< 0.010	0.028	0.050	< 0.050		< 0.010		< 0.010	0.068	< 0.020
Timken (MPB-2)	Apr 4 08					< 0.010	0.067	0.122	< 0.050		0.030		< 0.010	0.118	< 0.020
Timken (MPB-2)	Apr 8 08		< 0.001		< 0.001	< 0.001	0.035	0.088	0.005		0.023	< 0.001	< 0.001	0.070	< 0.020
Timken (MPB-2)	Jul 18 08					< 0.010	0.021	0.040	< 0.050		< 0.010		< 0.010	0.044	< 0.020
Timken (MPB-2)	Oct 3 08					< 0.010	< 0.010	0.046	< 0.050		< 0.010		< 0.010	0.033	< 0.020
Timken (MPB-2)	Jan 9 09					< 0.010	0.012	0.124	< 0.050		0.012		< 0.010	0.060	< 0.020
Timken (MPB-2)	Apr 3 09					< 0.010	0.111	0.498	< 0.050		0.025		< 0.010	0.297	< 0.020
Timken (MPB-2)	Apr 7 09		0.002			0.002	0.350	1.600	0.087		0.170	< 0.001	< 0.001	0.750	< 0.020
Timken (MPB-2)	May 19 09							0.216						1.610	
Timken (MPB-2)	May 20 09							0.059						0.079	
Timken (MPB-2)	May 21 09							0.071						0.132	
Timken (MPB-2)	Jun 24 09							0.021						0.034	
Timken (MPB-2)	Jul 10 09					< 0.010	0.013	0.065	< 0.050		< 0.010		< 0.010	0.070	< 0.020
Timken (MPB-2)	Oct 16 09					< 0.010	0.010	0.044	< 0.050		0.013		< 0.010	0.032	< 0.020
Timken (MPB-2)	Jan 22 10					< 0.010	0.011	0.154	< 0.050		< 0.010		< 0.010	0.059	< 0.020
Timken (MPB-2)	Apr 16 10					< 0.010	0.011	< 0.010	< 0.050		< 0.010		< 0.010	0.033	< 0.020
Timken (MPB-2)	Apr 20 10		< 0.001			< 0.002	0.009	< 0.050	< 0.001		< 0.005	< 0.005	< 0.005	< 0.025	< 0.020
Timken (MPB-2)	May 12 10													6.000	
Timken (MPB-2)	Sep 14 10					< 0.010	0.010	0.023	< 0.050		< 0.010		< 0.010	0.031	< 0.020
Timken (MPB-2)	Oct 15 10					< 0.010	0.010	0.037	< 0.050		< 0.010		< 0.010	0.085	< 0.020
Timken (MPB-2)	Feb 23 11					< 0.010	< 0.010	0.097	< 0.050		0.012		< 0.010	0.089	< 0.020
Timken (MPB-2)	Apr 14 11					< 0.010	0.064	0.157	< 0.050		0.044		< 0.005	0.253	< 0.010
Timken (MPB-2)	May 3 11		< 0.001			< 0.002	0.007	0.202	< 0.001		< 0.005	< 0.005	< 0.005	< 0.025	< 0.020
Timken (MPB-2)	Jul 21 11					< 0.010	0.022	0.252	< 0.050		0.011		< 0.010	0.082	< 0.020
Timken (MPB-2)															
Timken (MPB-2)															
Timken (MPB-2)	Jan 4 13	Self-monitoring				***0.0050***	0.0340	0.165	***0.0250***		0.0110		***0.0050***	0.101	***0.0100***
Timken (MPB-2)	Jan 15 13	City monitoring	***0.0025***	***0.0025***		***0.0025***	***0.0025***	0.048	***0.0025***		***0.0025***	***0.0025***	***0.0025***	0.055	***0.0100***
Timken (MPB-2)	Apr 26 13	Self-monitoring				***0.0050***	***0.0050***	0.067	***0.0250***		***0.0050***		***0.0050***	0.056	***0.0100***
Timken (MPB-2)	Jul 12 13	Self-monitoring				***0.0050***	0.0120	0.048	***0.0250***		***0.0050***		***0.0050***	0.103	***0.0100***
Timken (MPB-2)	Oct 4 13	Self-monitoring				***0.0050***	***0.0050***	0.025	***0.0250***		***0.0050***		***0.0050***	0.177	***0.0100***
Timken (MPB-2)	Jan 15 14	City monitoring	***0.0005***	***0.0010***	***0.0005***	***0.0010***	***0.0025***	0.037	0.0010		***0.0025***	***0.0010***	***0.0100***	0.067	***0.0050***
Timken (MPB-2)															
Timken (MPB-2) END															
Timken (MPB-2) AVERAGES			0.00050	0.00100	0.00013	0.0003	0.010	0.065	0.002	0.0001	0.005	0.002	0.001	0.093	0.00271
Reporting limit issue default value applied					**YES**	**YES**							**YES**		**YES**

* Shaded cells - values used in calculations ***Bolded italic cells*** - result < MDL ; Reported values are 1/2 MDL Red shaded cells - results above uniform conc. value

CRITERIA: 1. No Special Allocation Allowance 2. Uniform Concentration Basis 3. Industrial Flow Basis

Proposed Limits - mg/L	0.032	100.344	0.416	0.006	3.790	0.440	0.067	0.002	0.700	0.303	0.048	1.740	0.58

Reported Concentrations (mg/L)

DATA ACCUMULATIONS as of Nov 25 14

People's Linen START	**Date**	**Description**	**Arsenic**	**Antimony**	**Beryllium**	**Cadmium**	**Chromium**	**Copper**	**Lead**	**Mercury**	**Nickel**	**Selenium**	**Silver**	**Zinc**	**Cyanide**
People's Linen	May 13 04	City monitoring	0.0045			***0.005***	0.011	0.140	0.003		***0.015***	0.003	***0.005***	0.280	0.040
People's Linen	Apr 8 05	City monitoring	***0.005***			***0.0005***	0.004	0.060	0.010		***0.005***	***0.025***	***0.0025***	0.150	
People's Linen	May 3 06	City monitoring	***0.005***	< 0.05	***0.002***	***0.0005***	0.007	0.080	0.010	***0.0001***	0.010	***0.025***	***0.0025***	0.180	0.010
People's Linen															
People's Linen	Feb 26 08		< 0.001		< 0.001	< 0.001	0.005	0.060	0.006		0.008	< 0.001	< 0.001	0.180	
People's Linen	Feb 25 09		0.002			< 0.001	0.012	0.094	0.006		0.008	< 0.001	< 0.001	0.150	
People's Linen	Mar 2 10		< 0.001			< 0.002	0.008	0.069	0.004		0.006	< 0.005	< 0.005	0.119	
People's Linen	Feb 8 11		< 0.005			< 0.005	0.006	0.038	0.006		0.013		< 0.005	0.170	
People's Linen															
People's Linen	Feb 15 12	City monitoring	***0.0005***	0.001		***0.0005***	0.003	0.040	0.003		0.005	***0.0005***	***0.0005***	0.120	
People's Linen	May 7 13	City monitoring	0.0110			***0.0010***	0.010	0.084	0.009		0.009	***0.0010***	***0.0100***	0.200	
People's Linen	Jan 22 14	City monitoring	***0.0005***	0.003	***0.0005***	***0.0010***	0.007	0.065	0.006		0.006	***0.0010***	***0.0100***	0.200	
People's Linen															
People's Linen END															
People's Linen AVERAGES			0.0005	0.00200	0.0001	0.00030	0.007	0.063	0.006	0.0001	0.007	0.0005	0.0005	0.173	0.025
		Reporting limit issue default value applied			**YES**	**YES**							**YES**		

* Shaded cells - values used in calculations ***Bolded italic cells*** - result < MDL ; Reported values are 1/2 MDL Red shaded cells - results above uniform conc. value

DATA ACCUMULATIONS as of Nov 25 14

Keene WTP START	**Date**	**Description**	**Arsenic**	**Antimony**	**Beryllium**	**Cadmium**	**Chromium**	**Copper**	**Lead**	**Mercury**	**Nickel**	**Selenium**	**Silver**	**Zinc**	**Cyanide**
Keene WTP	Apr 12 05	City monitoring	***0.005***			0.002	***0.001***	0.030	***0.005***		***0.005***	***0.025***	***0.0025***	0.029	***0.05***
Keene WTP	May 3 06	City monitoring	***0.005***	< 0.05	***0.002***	0.003	0.007	0.020	0.020	0.0001	0.020	***0.025***	***0.0025***	0.110	
Keene WTP															
Keene WTP	Apr 9 08	City monitoring	0.002		0.001	< 0.001	0.004	0.042	0.017		0.012	< 0.001	< 0.001	0.054	
Keene WTP	May 13 09	City monitoring	< 0.001			< 0.001	0.001	0.025	0.005		0.007	0.001	< 0.001	0.025	
Keene WTP	Mar 1 10	City monitoring	< 0.001			< 0.002	< 0.005	< 0.050	0.005		< 0.005	< 0.005	< 0.005	< 0.025	
Keene WTP	May 10 11	City monitoring	0.002			< 0.002	0.007	< 0.050	0.018		0.011	< 0.005	< 0.005	0.039	
Keene WTP															
Keene WTP	Apr 10 12	City monitoring		***0.0005***		***0.0005***	0.009	0.036	0.032		0.012	0.003	***0.0005***		
Keene WTP	May 7 13	City monitoring	***0.0005***			***0.0100***	***0.025***	***0.1***	0.007		***0.025***	0.003	***0.1***	***0.1***	
Keene WTP															
Keene WTP															
Keene WTP END															
Keene WTP AVERAGES			0.0005	0.00050	0.00100	0.00030	0.009	0.036	0.020	0.0001	0.012	0.003	0.00050	0.036	0.00271
		Reporting limit issue default value applied		**NO**		**YES**							**NO**		**YES**

* Shaded cells - values used in calculations ***Bolded italic cells*** - result < MDL ; Reported values are 1/2 MDL Red shaded cells - results above uniform conc. value

CRITERIA: 1. No Special Allocation Allowance 2. Uniform Concentration Basis 3. Industrial Flow Basis

Proposed Limits - mg/L			0.032	100.344	0.416	0.006	3.790	0.440	0.067	0.002	0.700	0.303	0.048	1.740	0.58
							Reported Concentrations (mg/L)								
DATA ACCUMULATIONS as of		Nov 25 14	Arsenic	Antimony	Beryllium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc	Cyanide
Janos Technology START	**Date**	**Description**													
Janos Technology	Nov 1 05	Self Monitoring	0.275			0.004	0.011	0.973	0.033		0.03	0.613	***0.002***	6.830	
Janos Technology	Dec 5 05	Self Monitoring				***0.001***	***0.005***	0.152	***0.005***		***0.005***	0.011	***0.002***	0.151	
Janos Technology	Jan 25 06	Self Monitoring	0.022	0.039		***0.001***	***0.005***	0.046	0.015		***0.005***	0.028	***0.002***	0.165	
Janos Technology	Feb 27 06	Self Monitoring	0.038	0.035		***0.001***	***0.005***	0.073	***0.005***		0.011	0.043	***0.002***	0.163	
Janos Technology	Mar 24 06	Copper, selenium, zinc only						0.072				0.066		0.372	
Janos Technology	Apr 27 06	Zinc only												0.230	
Janos Technology	May 3 06	City monitoring	***0.005***	< 0.05	***0.002***	***0.0005***	***0.001***	0.130	***0.005***	***0.0001***	***0.005***	0.370	***0.0025***	***1.000***	
Janos Technology	May 16 06	Copper, selenium, zinc only						0.098				0.452		0.279	
Janos Technology	Jun 13 06	Zinc only												0.746	
Janos Technology															
Janos Technology	Apr 29 09		< 0.01			< 0.001	0.001	0.042	0.002		0.011	<0.05	< 0.001	0.370	
Janos Technology	Jun 4 09							0.032				0.141		1.240	
Janos Technology	Sep 9 09							< 0.020				0.006		0.270	
Janos Technology	Dec 7 09							< 0.020				0.015		0.870	
Janos Technology	Mar 2 10		0.024			0.001	< 0.005	< 0.020	< 0.001		0.009	0.054	< 0.005	0.608	
Janos Technology	Mar 4 10							< 0.020				0.029		0.190	
Janos Technology	Apr 13 10							< 0.020				0.017		0.160	
Janos Technology	Jul 10 10							< 0.020				0.033		0.088	
Janos Technology	Oct 20 10							0.028				0.039		6.500	
Janos Technology	Nov 4 10							< 0.020				0.006		0.150	
Janos Technology	Nov 9 10							< 0.020				0.007		0.120	
Janos Technology	Nov 16 10							< 0.020				0.005		0.210	
Janos Technology	Nov 23 10							< 0.020				0.006		0.120	
Janos Technology	Nov 30 10							< 0.020				0.001		0.098	
Janos Technology	Feb 8 11		< 0.01			< 0.005	< 0.005	0.013	0.007		0.017	< 0.050	< 0.005	0.280	
Janos Technology	Feb 16 11		0.023					0.077				0.001		0.440	
Janos Technology	Apr 22 11		0.008					0.025				0.006		0.300	
Janos Technology	Jul 12 11		0.011					< 0.020				0.046			
Janos Technology															
Janos Technology	Feb 9 12	Self Monitoring	0.007					0.062				0.036		0.210	
Janos Technology	Feb 15 12	City monitoring	***0.025***	***0.0005***		***0.0005***	***0.0005***	0.020	0.003		0.009	0.070	***0.0005***	0.140	
Janos Technology	Apr 25 12	Self Monitoring	0.005					0.018				0.028		0.240	
Janos Technology	Jul 10 12	Self Monitoring	0.034					0.032				0.018		0.130	
Janos Technology	Oct 16 12	Self Monitoring	0.010					***0.010***				0.008		0.100	
Janos Technology	Jan 30 13	Self Monitoring	0.023					***0.010***				0.036		0.130	
Janos Technology	Feb 12 13	City monitoring	0.012	0.008		***0.0025***	***0.0025***	***0.003***	***0.0025***		0.016	0.024	***0.0025***	0.056	
Janos Technology	May 7 13	Self Monitoring	0.025					***0.010***				0.016		0.050	
Janos Technology	Jul 31 13	Self Monitoring	***0.010***					***0.010***				0.013		0.089	
Janos Technology	Oct 15 13	Self Monitoring	0.014					0.026				0.007		0.100	
Janos Technology	Jan 16 14	Self Monitoring	0.021					***0.010***				0.019		0.041	
Janos Technology															
Janos Technology END															
Janos Technology AVERAGES			0.017	0.004	0.00013	0.002	0.002	0.019	0.003	0.0001	0.013	0.025	0.00050	0.117	#N/A
	Reporting limit issue default value applied				**YES**								**YES**		

* Shaded cells - values used in calculations ***Bolded italic cells*** - result < MDL ; Reported values are 1/2 MDL Red shaded cells - results above uniform conc. value

CRITERIA: 1. No Special Allocation Allowance 2. Uniform Concentration Basis 3. Industrial Flow Basis

Proposed Limits - mg/L		0.032	100.344	0.416	0.006	3.790	0.440	0.067	0.002	0.700	0.303	0.048	1.740	0.58
							Reported Concentrations (mg/L)							
DATA ACCUMULATIONS as of	Nov 25 14													
The Mountain Corp. START	**Date**	**Description**	**Arsenic**	**Antimony**	**Beryllium**	**Cadmium**	**Chromium**	**Copper**	**Lead**	**Mercury**	**Nickel**	**Selenium**	**Silver**	**Zinc**	**Cyanide**
The Mountain Corp.	Mar 13 08							0.338						0.639	
The Mountain Corp.	Apr 24 08		0.003		< 0.001	< 0.010	0.004	0.120	0.009		0.007	0.008	< 0.001	0.330	
The Mountain Corp.	Jun 26 08							0.212						0.219	
The Mountain Corp.	Sep 18 08							0.136						0.473	
The Mountain Corp.	Dec 15 08							0.316						0.567	
The Mountain Corp.	Jan 22 09							0.165						1.140	
The Mountain Corp.	Feb 18 09		0.004			< 0.001	0.007	0.150	0.002		0.004	0.003	< 0.001	0.610	
The Mountain Corp.	Apr 16 09							0.164						0.511	
The Mountain Corp.	Jul 30 09							0.364						0.543	
The Mountain Corp.	Nov 4 09							0.191						0.304	
The Mountain Corp.	Feb 4 10							0.046						0.244	
The Mountain Corp.	Feb 17 10		< 0.010			< 0.020	0.052	0.567	< 0.010		< 0.050	< 0.050	< 0.050	0.567	
The Mountain Corp.	Apr 15 10							0.422						0.271	
The Mountain Corp.	Jul 21 10							0.062						0.341	
The Mountain Corp.	Oct 21 10							0.073						0.258	
The Mountain Corp.	Feb 9 11		< 0.005			< 0.005	< 0.005	0.170	< 0.005		0.015		< 0.005	0.450	
The Mountain Corp.	Feb 24 11							0.213						0.616	
The Mountain Corp.															
The Mountain Corp.	Jan 9 13							0.182							
The Mountain Corp.	Jan 10 13							0.567							
The Mountain Corp.	Feb 6 13							0.242						0.533	
The Mountain Corp.	Feb 12 13		***0.0025***	***0.0025***		***0.0025***	0.013	0.167	0.007		0.007	0.018	***0.0025***	0.982	
The Mountain Corp.	Mar 15 13							1.050						0.478	
The Mountain Corp.	Apr 24 13							0.271						0.674	
The Mountain Corp.	May 28 13							0.150						0.593	
The Mountain Corp.	Jun 18 13							0.152						0.448	
The Mountain Corp.	Jul 31 13							0.064						0.463	
The Mountain Corp.	Aug 28 13							0.155						0.591	
The Mountain Corp.	Sep 18 13							0.087						0.850	
The Mountain Corp.	Oct 4 13							0.491						0.409	
The Mountain Corp.	Nov 22 13							0.125						1.230	
The Mountain Corp.	Dec 20 13							0.098						0.419	
The Mountain Corp.	Jan 15 14		***0.0005***	***0.0010***	***0.0005***	***0.0010***	0.006	0.096	***0.0005***		***0.0025***	***0.0010***	***0.0100***	0.430	
The Mountain Corp.	Feb 21 14		***0.0500***	***0.0500***	***0.0050***	***0.0050***	***0.0050***	0.606	***0.0250***	***0.0001***	***0.0050***	***0.0500***	***0.0050***	0.459	
The Mountain Corp.	Feb 24 14		***0.0500***	***0.0500***	***0.0050***	***0.0050***	***0.0050***	0.390	***0.0250***	***0.0001***	***0.0050***	***0.0500***	***0.0050***	0.659	
The Mountain Corp.	Feb 25 14		***0.0500***	***0.0500***	***0.0050***	0.035	0.014	0.954	***0.0250***	***0.0001***	0.016	***0.0500***	0.070	0.855	
The Mountain Corp.	Feb 26 14		***0.0500***	***0.0500***	***0.0050***	***0.0050***	***0.0050***	0.884	***0.0250***	***0.0001***	***0.0050***	***0.0500***	***0.0050***	0.640	
The Mountain Corp.	Feb 27 14		***0.0500***	***0.0500***	***0.0050***	***0.0050***	0.011	0.374	***0.0250***	***0.0001***	***0.0050***	***0.0500***	***0.0050***	0.846	
The Mountain Corp.							.								
The Mountain Corp. END															
The Mountain Corp. AVERAGES			0.00150	0.00175	0.00013	0.00030	0.008	0.355	0.00375	0.0001	0.007	0.010	0.00050	0.642	0.00271
Reporting limit issue default value applied					**YES**	**YES**							**YES**		**YES**

* Shaded cells - values used in calculations ***Bolded italic cells*** - result < MDL ; Reported values are 1/2 MDL Red shaded cells - results above uniform conc. value

CRITERIA: 1. No Special Allocation Allowance 2. Uniform Concentration Basis 3. Industrial Flow Basis

Proposed Limits - mg/L			0.032	100.344	0.416	0.006	3.790	0.440	0.067	0.002	0.700	0.303	0.048	1.740	0.58
								Reported Concentrations (mg/L)							
DATA ACCUMULATIONS as of		Nov 25 14	Arsenic	Antimony	Beryllium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc	Cyanide
WWTP Influent START	**Date**	**Description**													
WWTP Influent		4 year average ('99-'02)				0.005	0.007	0.105	0.009		0.019		0.006	0.158	
WWTP Influent															
WWTP Influent	Aug 28 06	2006 Local Limits sampling	< 0.00156	< 0.0019	0.00150 J	0.00096 J	0.010	0.160	0.016	0.00170	0.0130 J	< 0.00086	0.0034 J	0.220	0.003 J
WWTP Influent	Aug 29 06	2006 Local Limits sampling	< 0.00156	< 0.0019	0.00021 J	< 0.0001	0.0024 J	0.120	0.029	0.00027	0.0047 J	< 0.00086	< 0.002	0.170	< 0.002
WWTP Influent	Aug 30 06	2006 Local Limits sampling	< 0.00156	< 0.0019	0.00025 J	< 0.0001	0.0023 J	0.130	0.0055 J	0.00018 J	0.0057 J	< 0.00086	< 0.002	0.150	< 0.002
WWTP Influent	Sep 5 06	2006 Local Limits sampling	< 0.00156	< 0.0019	< 0.0001	0.00050 J	0.0038 J	0.110	0.0094 J	0.00017 J	0.0052 J	0.0019 J	< 0.002	0.210	0.003 J
WWTP Influent	Sep 6 06	2006 Local Limits sampling	< 0.00156	< 0.0019	< 0.0001	0.00045 J	0.0013 J	0.088	0.0084 J	0.00013 J	0.0046 J	0.0020 J	< 0.002	0.140	0.003 J
WWTP Influent															
WWTP Influent	Jan 12 09		<0.00125			0.00080	<0.001	0.087	0.004	<0.0001	<0.03		<0.01	0.106	<0.02
WWTP Influent	Feb 9 09							0.111	0.0054					0.160	
WWTP Influent	Mar 2 09							0.118	0.0064					0.159	
WWTP Influent	Apr 13 09							0.110	0.011					0.170	
WWTP Influent	May 4 09							0.094	0.008					0.190	
WWTP Influent	Jun 1 09							0.110	0.008					0.200	
WWTP Influent	Jul 6 09							0.150	0.011					0.210	
WWTP Influent	Aug 3 09							0.098	0.014					0.170	
WWTP Influent	Aug 31 09							0.160	0.023					0.220	
WWTP Influent	Oct 5 09							0.120	0.008					0.200	
WWTP Influent	Oct 12 09							0.200	0.013					0.240	
WWTP Influent	Nov 2 09							0.260	0.018					0.290	
WWTP Influent	Nov 9 09							0.064	0.003					0.100	
WWTP Influent	Dec 7 09							0.069	0.003					0.100	
WWTP Influent	Dec 14 09							0.140	0.009					0.190	
WWTP Influent	Jan 4 10							0.082	0.005					0.127	
WWTP Influent	Jan 11 10							0.096	0.0054					0.136	
WWTP Influent	Feb 1 10							0.125	0.0082					0.184	
WWTP Influent	Feb 8 10							0.130	0.0122					0.170	
WWTP Influent	Mar 1 10					0.00044	0.004	0.072	0.0091	0.0002	<0.03		<0.01	0.131	<0.02
WWTP Influent	Mar 8 10							0.251	0.0146					0.216	
WWTP Influent	Apr 5 10		<0.00125			0.00110	0.006	0.121	0.0078	<0.0002	<0.03		<0.01	0.155	
WWTP Influent	Apr 12 10							0.146	0.0096					0.178	
WWTP Influent	May 3 10							0.166	0.0111					0.272	
WWTP Influent	May 10 10							0.193	0.0093					0.390	
WWTP Influent	May 31 10							0.150	0.0083					0.240	
WWTP Influent	Jun 7 10							0.132	0.008					0.211	
WWTP Influent	Jun 14 10							0.134	0.0175					0.225	
WWTP Influent	Jul 5 10							0.221	0.0112					0.198	
WWTP Influent	Jul 12 10							0.207	0.0161					0.269	
WWTP Influent	Aug 2 10		0.0200			0.00088	0.004	0.230	0.027	0.0003	<0.03		<0.01	0.431	
WWTP Influent	Aug 9 10							0.396	0.036					0.608	
WWTP Influent	Aug 18 10							0.070	0.005					0.120	
WWTP Influent	Aug 30 10							0.332	0.016					0.642	
WWTP Influent	Aug 31 10							0.200	0.014					0.492	
WWTP Influent	Sep 6 10							0.120	0.01					0.170	
WWTP Influent	Sep 13 10							0.160	0.012					0.230	
WWTP Influent	Oct 4 10							0.251	0.0113	<0.0002				0.309	
WWTP Influent	Oct 11 10							0.157	0.0074					0.206	
WWTP Influent	Nov 1 10							0.158	0.0096					0.277	
WWTP Influent	Nov 8 10							0.193	0.0133					0.296	
WWTP Influent	Dec 6 10							0.072	0.0045					0.106	

CRITERIA: 1. No Special Allocation Allowance 2. Uniform Concentration Basis 3. Industrial Flow Basis

			Proposed Limits - mg/L	0.032	100.344	0.416	0.006	3.790	0.440	0.067	0.002	0.700	0.303	0.048	1.740	0.58
										Reported Concentrations (mg/L)							
WWTP Influent	Dec 13 10								0.062	0.0048					0.108	
WWTP Influent	Jan 3 11								0.087	0.0053					0.511	
WWTP Influent	Jan 10 11								0.093	0.0043					0.143	
WWTP Influent	Feb 7 11								0.116	0.0056					0.142	
WWTP Influent	Feb 14 11								0.100	0.0042					0.128	
WWTP Influent	Feb 15 11	2011 Local Limits sampling		<0.0005		<0.0005	<0.0005	0.0009	0.064	0.0021	<0.0002	0.0033		<0.0005		<0.01
WWTP Influent	Feb 16 11	2011 Local Limits sampling		<0.0005		<0.0005	<0.0005	0.0010	0.066	0.0023	<0.0002	0.0030		<0.0005		<0.01
WWTP Influent	Feb 17 11	2011 Local Limits sampling		<0.0005		<0.0005	<0.0005	0.0013	0.059	0.0018	<0.0002	0.0027		<0.0005		<0.01
WWTP Influent	Feb 18 11														0.085	
WWTP Influent	Mar 7 11								0.196	0.026					0.34	
WWTP Influent	Mar 14 11								0.068	0.005					0.094	
WWTP Influent	Apr 4 11			<0.00125			0.00071	0.003	0.086	0.0058		<0.03		<0.01	0.121	
WWTP Influent	Apr 11 11								0.078	0.0049					0.122	
WWTP Influent	May 2 11														0.241	
WWTP Influent	May 9 11														0.228	
WWTP Influent	Jun 6 11														0.348	
WWTP Influent	Jun 13 11														0.282	
WWTP Influent																
WWTP Influent																
WWTP Influent	Jan 25 13			<0.00125			< 0.00025	0.0051			<0.0002	<0.03				
WWTP Influent	Apr 8 13			<0.00125			0.00060	0.0033			<0.0002	<0.03		<0.01		
WWTP Influent	Jul 1 13			<0.00125			0.00063	0.0050			<0.0002	<0.03		<0.01		
WWTP Influent	Oct 14 13			<0.00125			0.00050	0.0050			<0.0002	<0.03		<0.01		
WWTP Influent	2013 avg.								0.139	0.0062					0.201	
WWTP Influent	2014 average	Special low level lead event								0.0078						
WWTP Influent																
WWTP Influent END																
WWTP Influent AVERAGES				< 0.00050	< 0.00190	0.00017	0.0005	0.0046	0.139	0.0078	0.00019	0.0030	0.0013	< 0.0005	0.201	0.0025

* Shaded cells - values used in calculations

Bolded italic cells - result < MDL ; Reported values are 1/2 MDL

"J" data qualifier: value >= MDL, but < quantitation limit

CRITERIA: 1. No Special Allocation Allowance 2. Uniform Concentration Basis 3. Industrial Flow Basis

Proposed Limits - mg/L			0.032	100.344	0.416	0.006	3.790	0.440	0.067	0.002	0.700	0.303	0.048	1.740	0.58
								Reported Concentrations (mg/L)							
DATA ACCUMULATIONS as of		Nov 25 14	Arsenic	Antimony	Beryllium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc	Cyanide
WWTP Primary Effluent START	**Date**	**Description**													
WWTP Primary Effluent															
WWTP Primary Effluent	Aug 28 06	2006 Local Limits sampling	< 0.00156	< 0.0019	0.00049 J	< 0.0001	0.0024 J	0.073	0.0051 J	0.00015 J	0.0055 J	< 0.00086	< 0.002	0.100	0.003 J
WWTP Primary Effluent	Aug 29 06	2006 Local Limits sampling	< 0.00156	< 0.0019	0.00031 J	< 0.0001	0.0016 J	0.066	0.0042 J	0.00012 J	0.0046 J	< 0.00086	< 0.002	0.089	< 0.002
WWTP Primary Effluent	Aug 30 06	2006 Local Limits sampling	< 0.00156	< 0.0019	0.00018 J	< 0.0001	0.0012 J	0.078	< 0.004	0.00009 J	0.0043 J	< 0.00086	< 0.002	0.087	< 0.002
WWTP Primary Effluent	Sep 5 06	2006 Local Limits sampling (average using duplicate)	< 0.00156	< 0.0019	< 0.0001	0.00028 J	< 0.001	0.060	0.0014 J	0.00009 J	0.0042 J	< 0.00086	< 0.002	0.097	0.002 J
WWTP Primary Effluent	Sep 6 06	2006 Local Limits sampling	< 0.00156	< 0.0019	< 0.0001	0.00029 J	< 0.001	0.061	0.0019 J	0.00006 J	0.0037 J	< 0.00086	< 0.002	0.087	0.003 J
WWTP Primary Effluent	Feb 1 10							0.059	<0.003					0.060	
WWTP Primary Effluent	Feb 8 10							0.068	<0.003					0.065	
WWTP Primary Effluent	Mar 1 10							0.040	<0.003					0.062	
WWTP Primary Effluent	Mar 8 10							0.065	<0.003					0.067	
WWTP Primary Effluent	Apr 5 10							0.027	<0.003					0.047	
WWTP Primary Effluent	Apr 12 10							0.055	<0.003					0.074	
WWTP Primary Effluent	May 3 10							0.067	<0.003					0.095	
WWTP Primary Effluent	May 10 10							0.067	<0.003					0.090	
WWTP Primary Effluent	May 31 10							0.053	<0.003					0.099	
WWTP Primary Effluent	Jun 7 10							0.048	<0.003					0.097	
WWTP Primary Effluent	Jun 14 10							0.057	<0.003					0.085	
WWTP Primary Effluent	Jul 5 10							0.059	<0.003						
WWTP Primary Effluent	Jul 12 10							0.075	0.0039					0.100	
WWTP Primary Effluent	Aug 2 10							0.033	<0.003		< 0.03		< 0.01	0.076	
WWTP Primary Effluent	Oct 4 10							0.080	<0.003					0.086	
WWTP Primary Effluent	Oct 11 10							0.037	<0.003					0.049	
WWTP Primary Effluent	Nov 1 10							0.057	<0.003					0.086	
WWTP Primary Effluent	Nov 8 10							0.064	<0.003					0.090	
WWTP Primary Effluent	Dec 6 10							0.045	<0.003					0.063	
WWTP Primary Effluent	Dec 13 10							0.046	<0.003					0.084	
WWTP Primary Effluent	Jan 3 11							0.054						0.283	
WWTP Primary Effluent	Jan 10 11							0.068						0.081	
WWTP Primary Effluent	Feb 7 11							0.074	<0.003					0.098	
WWTP Primary Effluent	Feb 14 11							0.083	<0.003					0.091	
WWTP Primary Effluent	Mar 7 11							0.038	0.0040					0.111	
WWTP Primary Effluent	Mar 14 11							0.042	<0.003					0.055	
WWTP Primary Effluent	Apr 4 11		< 0.00125			0.00048	0.0015	0.050	<0.003		< 0.03		< 0.01	0.070	
WWTP Primary Effluent	May 2 11													0.165	
WWTP Primary Effluent	May 9 11													0.096	
WWTP Primary Effluent	Jun 6 11													0.165	
WWTP Primary Effluent	Jun 13 11													0.145	
WWTP Primary Effluent	Jan 25 13		< 0.00125			< 0.00025	0.0046				<0.03		<0.01		
WWTP Primary Effluent	Apr 8 13		< 0.00125			< 0.00025	0.0024				<0.03		<0.01		
WWTP Primary Effluent	Jul 1 13		< 0.00125			< 0.00025	< 0.0010				<0.03		<0.01		
WWTP Primary Effluent	Oct 14 13		< 0.00125			< 0.00025	0.0017				<0.03		<0.01		
WWTP Primary Effluent	2012/2013 avg.							0.0335							
WWTP Primary Effluent	2013 avg.								< 0.003					0.056	
WWTP Primary Effluent END															
WWTP Primary Effluent AVERAGES			< 0.00125	< 0.00190	0.00024	< 0.00025	0.0024	0.033	< 0.003	0.00010	0.0045	< 0.00086	< 0.002	0.056	0.0024

* Shaded cells - values used in calculations

Bolded italic cells - result < MDL ; Reported values are 1/2 MDL

"J" data qualifier: value >= MDL, but < quantitation limit

CRITERIA: 1. No Special Allocation Allowance 2. Uniform Concentration Basis 3. Industrial Flow Basis

Proposed Limits - mg/L			0.032	100.344	0.416	0.006	3.790	0.440	0.067	0.002	0.700	0.303	0.048	1.740	0.58
									Reported Concentrations (mg/L)						
DATA ACCUMULATIONS as of		Nov 25 14	Arsenic	Antimony	Beryllium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc	Cyanide
WWTP Secondary Effluent STAR	Date	Description													
WWTP Secondary Effluent		4 year average ('99-'02)				0.005	0.003	0.064	0.003		0.015		0.005	0.088	
WWTP Secondary Effluent	Aug 29 06	Local Limits sampling	< 0.00156	< 0.0019	0.00011 J	< 0.0001	< 0.001	0.014 J	0.00083 J	0.00006 J	0.0025 J	< 0.00086	< 0.002	0.059	< 0.002
WWTP Secondary Effluent	Aug 30 06	Local Limits sampling	< 0.00156	< 0.0019	0.00011 J	< 0.0001	< 0.001	0.012 J	0.00082 J	0.00010 J	0.0025 J	< 0.00086	< 0.002	0.054	0.005 J
WWTP Secondary Effluent	Aug 31 06	Local Limits sampling	< 0.00156	< 0.0019	< 0.0001	< 0.0001	< 0.001	0.014 J	0.00120 J	0.00011 J	0.0018 J	< 0.00086	< 0.002	0.057	0.003 J
WWTP Secondary Effluent	Sep 6 06	Local Limits sampling	< 0.00156	< 0.0019	0.00061 J	0.00085 J	0.0041 J	0.016 J	0.00130 J	< 0.000052	0.0063 J	< 0.00086	< 0.002	0.055	0.006 J
WWTP Secondary Effluent	Sep 7 06	Local Limits sampling	< 0.00156	< 0.0019	0.00012 J	0.00026 J	< 0.001	0.013 J	< 0.00057	< 0.000052	0.0033 J	< 0.00086	< 0.002	0.062	0.003 J
WWTP Secondary Effluent	Jan 6 09		< 0.00125			< 0.00025	< 0.001	0.0085	<0.003		<0.03		<0.01	0.038	
WWTP Secondary Effluent	Jan 13 09		< 0.00125			< 0.00025	< 0.001	0.0086	<0.003	<0.0001	<0.03		<0.01	0.041	< 0.02
WWTP Secondary Effluent	Feb 3 09							0.0139	<0.003					0.047	
WWTP Secondary Effluent	Feb 10 09							0.0134	<0.003					0.044	
WWTP Secondary Effluent	Mar 3 09							0.0239	<0.003					0.053	
WWTP Secondary Effluent	Mar 4 09							0.0090	<0.003					0.047	
WWTP Secondary Effluent	Mar 10 09							0.0062	<0.003					0.039	
WWTP Secondary Effluent	Apr 7 09							0.0050	<0.001					0.022	
WWTP Secondary Effluent	Apr 14 09							0.0040	<0.001					0.031	
WWTP Secondary Effluent	May 5 09							0.0130	<0.001					0.048	
WWTP Secondary Effluent	May 12 09							0.0190	0.001					0.037	
WWTP Secondary Effluent	Jun 2 09							0.0130	<0.001					0.040	
WWTP Secondary Effluent	Jun 9 09							0.0090	<0.001					0.035	
WWTP Secondary Effluent	Jul 7 09							0.0090	<0.001					0.026	
WWTP Secondary Effluent	Jul 14 09							0.0080	<0.001					0.027	
WWTP Secondary Effluent	Jul 19 09					< 0.00025		0.0110	0.0009		<0.03			0.026	
WWTP Secondary Effluent	Aug 4 09							0.0030	<0.001					0.018	
WWTP Secondary Effluent	Aug 11 09							0.0030	<0.001					0.024	
WWTP Secondary Effluent	Sep 1 09							0.0050	<0.001					0.020	
WWTP Secondary Effluent	Sep 8 09							0.0050	<0.001					0.018	
WWTP Secondary Effluent	Oct 6 09							0.0090	<0.003					0.025	
WWTP Secondary Effluent	Oct 13 09							0.0040	<0.003					0.014	
WWTP Secondary Effluent	Nov 3 09							0.0230	0.001					0.047	
WWTP Secondary Effluent	Nov 10 09							0.0180	0.001					0.039	
WWTP Secondary Effluent	Dec 8 09							0.0052	<0.003					0.021	
WWTP Secondary Effluent	Dec 15 09							0.0052	<0.003					0.020	
WWTP Secondary Effluent	Dec 21 09							0.0050							
WWTP Secondary Effluent	Dec 22 09							0.0070							
WWTP Secondary Effluent	Dec 23 09							0.0080							
WWTP Secondary Effluent	Dec 24 09							0.0070							
WWTP Secondary Effluent	Dec 25 09							0.0040							
WWTP Secondary Effluent	Dec 26 09							0.0030							
WWTP Secondary Effluent	Dec 27 09							0.0040							
WWTP Secondary Effluent	Dec 29 09							0.0040							
WWTP Secondary Effluent	Dec 30 09							0.0050							
WWTP Secondary Effluent	Dec 31 09							0.0060							
WWTP Secondary Effluent	Jan 5 10							0.0144	<0.003					0.046	
WWTP Secondary Effluent	Jan 12 10							0.0118	<0.003					0.062	
WWTP Secondary Effluent	Feb 2 10							0.0069	<0.003					0.033	
WWTP Secondary Effluent	Feb 9 10							0.0063	<0.003					0.043	
WWTP Secondary Effluent	Mar 2 10		< 0.00125			< 0.00025	< 0.001	0.0036	<0.003	<0.0001	<0.03		<0.01	0.039	< 0.2
WWTP Secondary Effluent	Mar 9 10							0.0082	<0.003					0.050	
WWTP Secondary Effluent	Apr 6 10		< 0.00125			< 0.00025	< 0.001	0.0054	<0.003	<0.0002	<0.03		<0.01	0.040	
WWTP Secondary Effluent	Apr 13 10							0.0056	<0.003					0.040	

CRITERIA: 1. No Special Allocation Allowance 2. Uniform Concentration Basis 3. Industrial Flow Basis

			Proposed Limits - mg/L	0.032	100.344	0.416	0.006	3.790	0.440	0.067	0.002	0.700	0.303	0.048	1.740	0.58
										Reported Concentrations (mg/L)							
WWTP Secondary Effluent	May 4 10								0.0061	<0.003					0.028	
WWTP Secondary Effluent	May 11 10								0.0036	<0.003					0.027	
WWTP Secondary Effluent	Jun 1 10								0.0054	<0.003					0.026	
WWTP Secondary Effluent	Jun 8 10								0.0058	<0.003					0.030	
WWTP Secondary Effluent	Jun 15 10								0.0042	<0.003					0.030	
WWTP Secondary Effluent	Jul 6 10								0.0116	<0.003					0.062	
WWTP Secondary Effluent	Jul 11 10						< 0.00025		0.0070	<0.003		<0.03			0.054	
WWTP Secondary Effluent	Jul 13 10								0.0060	<0.003					0.042	
WWTP Secondary Effluent	Aug 3 10			< 0.00125			< 0.00025	< 0.001	0.0082	<0.003	<0.0001	<0.03		<0.01	0.040	
WWTP Secondary Effluent	Aug 10 10								0.0131	<0.003					0.055	
WWTP Secondary Effluent	Sep 7 10								0.0110	<0.003					0.050	
WWTP Secondary Effluent	Sep 14 10								0.0100	<0.003					0.047	
WWTP Secondary Effluent	Oct 5 10								0.0043	<0.003	<0.0002				0.021	
WWTP Secondary Effluent	Oct 12 10								0.0042	<0.003					0.026	
WWTP Secondary Effluent	Nov 2 10								0.0041	<0.003					0.020	
WWTP Secondary Effluent	Nov 9 10								0.0058	<0.003					0.033	
WWTP Secondary Effluent	Dec 7 10								0.0057	<0.003					0.027	
WWTP Secondary Effluent	Dec 14 10									<0.003					0.016	
WWTP Secondary Effluent	Jan 4 11								0.0040	<0.003					0.056	
WWTP Secondary Effluent	Jan 11 11								0.0060	<0.003					0.046	
WWTP Secondary Effluent	Feb 8 11								0.0056	<0.003					0.032	
WWTP Secondary Effluent	Feb 15 11								0.0053	<0.003					0.036	
WWTP Secondary Effluent	Feb 16 11	Local Limits sampling		<0.0005		<0.0005	<0.0005	<0.0005	0.0058	<0.0005	<0.0002	0.0023		<0.0005	0.045	< 0.01
WWTP Secondary Effluent	Feb 17 11	Local Limits sampling		<0.0005		<0.0005	<0.0005	<0.0005	0.0065	0.0005	<0.0002	0.0024		<0.0005	0.048	< 0.01
WWTP Secondary Effluent	Feb 18 11	Local Limits sampling		<0.0005		<0.0005	<0.0005	<0.0005	0.0053	0.0006	<0.0002	0.0022		<0.0005		< 0.01
WWTP Secondary Effluent	Mar 1 11								0.0070	<0.003					0.044	
WWTP Secondary Effluent	Mar 2 11								0.0090	<0.003					0.050	
WWTP Secondary Effluent	Mar 8 11								0.0120	<0.003					0.044	
WWTP Secondary Effluent	Mar 15 11								0.0110	<0.003					0.047	
WWTP Secondary Effluent	Apr 5 11			< 0.00125			< 0.00025	< 0.001	0.0170	<0.003		<0.03		<0.01	0.053	
WWTP Secondary Effluent	Apr 12 11								0.0200	<0.003					0.054	
WWTP Secondary Effluent	May 3 11														0.060	
WWTP Secondary Effluent	May 10 11														0.066	
WWTP Secondary Effluent	May 23 11														0.028	
WWTP Secondary Effluent	May 24 11														0.051	
WWTP Secondary Effluent	May 25 11														0.049	
WWTP Secondary Effluent	May 26 11														0.055	
WWTP Secondary Effluent	Jun 7 11														0.058	
WWTP Secondary Effluent	Jun 14 11														0.062	
WWTP Secondary Effluent	Jan 16 13			<0.00125			< 0.00025				<0.0002	<0.03		<0.01		
WWTP Secondary Effluent	Apr 2 13			<0.00125			< 0.00025	< 0.0010				<0.03				
WWTP Secondary Effluent	Apr 9 13			<0.00125			< 0.00025	< 0.0010			<0.0002	<0.03		<0.01		
WWTP Secondary Effluent	Jul 2 13			<0.00125		< 0.5	< 0.00025	< 0.0010			<0.0002	<0.03		<0.01		
WWTP Secondary Effluent	Oct 15 13			<0.00125			< 0.00025				<0.0002	<0.03		<0.01		
WWTP Secondary Effluent	2013 average								0.0052	< 0.003					0.033	
WWTP Secondary Effluent	2014 average	Special low level lead event								0.00053						
WWTP Secondary Effluent																
WWTP Secondary Effluent END																
WWTP Secondary Effluent AVERAGES				< 0.0005	< 0.0019	0.0001	< 0.00025	< 0.0005	0.0052	0.00053	0.00007	0.0023	< 0.00086	< 0.0005	0.033	0.004

* Shaded cells - values used in calculations

Bolded italic cells - result < MDL ; Reported values are 1/2 MDL

"J" data qualifier: value >= MDL, but < quantitation limit

CRITERIA: 1. No Special Allocation Allowance 2. Uniform Concentration Basis 3. Industrial Flow Basis

Proposed Limits - mg/L	0.032	100.344	0.416	0.006	3.790	0.440	0.067	0.002	0.700	0.303	0.048	1.740	0.58

Reported Concentrations (mg/L)

DATA ACCUMULATIONS as of Nov 25 14

Domestic Levels - MM START	Date	Description	Arsenic	Antimony	Beryllium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc	Cyanide
Domestic Levels - MM															
Domestic Levels - MM	Aug 28 06	2006 Local Limits sampling													0.003 J
Domestic Levels - MM	Aug 29 06	2006 Local Limits sampling	< 0.00156	< 0.0019	< 0.0001	< 0.0001	0.0046 J	0.120	0.0046 J	0.00038	0.0037 J	< 0.00086	< 0.002	0.140	< 0.002
Domestic Levels - MM	Aug 30 06	2006 Local Limits sampling													< 0.002
Domestic Levels - MM	Aug 31 06	2006 Local Limits sampling	< 0.00156	< 0.0019	< 0.0001	< 0.0001	0.0016 J	0.060	0.0019 J	0.00006 J	0.0026 J	< 0.00086	< 0.002	0.082	0.002 J
Domestic Levels - MM	Sep 5 06	2006 Local Limits sampling (average using duplicate)	< 0.00156	< 0.0019	0.00042 J	0.00060 J	0.0057 J	0.105	0.0034 J	0.00025 J	0.0059 J	< 0.00086	< 0.002	0.155	0.003 J
Domestic Levels - MM	Sep 6 06	2006 Local Limits sampling													0.004 J
Domestic Levels - MM	Sep 7 06	2006 Local Limits sampling	< 0.00156	< 0.0019	< 0.0001	0.00019 J	0.0041 J	0.044	0.0018 J	< 0.0002	0.0039 J	0.0029 J	< 0.002	0.081	
Domestic Levels - MM	Sep 11 06	2006 Local Limits sampling	< 0.00156	< 0.0019	< 0.0001	< 0.0001	0.0017 J	0.067	0.0018 J	0.00006 J	0.0031 J	0.0010 J	< 0.002	0.078	
Domestic Levels - MM															
Domestic Levels - MM	Oct 19 09	2009 City sampling	< 0.0025	< 0.0050	< 0.0010	0.0015	0.001	0.101	0.003		< 0.030	< 0.0025	< 0.010	0.082	
Domestic Levels - MM	Oct 20 09	2009 City sampling	< 0.0025	< 0.0050	< 0.0010	< 0.00025	0.001	0.198	0.034		< 0.030	< 0.0025	< 0.010	0.198	
Domestic Levels - MM	Oct 21 09	2009 City sampling	< 0.0025	< 0.0050	< 0.0010	< 0.00025	0.002	0.135	0.004		< 0.030	< 0.0025	< 0.010	0.160	
Domestic Levels - MM	Oct 22 09	2009 City sampling	< 0.0025	< 0.0050	< 0.0010	< 0.00025	0.001	0.091	0.004		< 0.030	< 0.0025	< 0.010	0.076	
Domestic Levels - MM	Oct 27 09	2009 City sampling	< 0.0025	< 0.0050	< 0.0010	< 0.00025	0.002	0.110	0.003		< 0.030	< 0.0025	< 0.010	0.117	
Domestic Levels - MM	Oct 28 09	2009 City sampling	< 0.0025	< 0.0050	< 0.0010	< 0.00025	0.003	0.279	0.004		< 0.030	< 0.0025	< 0.010	0.162	
Domestic Levels - MM	Oct 29 09	2009 City sampling	< 0.0025	< 0.0050	< 0.0010	0.0004	0.002	0.237	0.008		< 0.030	< 0.0025	< 0.010	0.217	
Domestic Levels - MM	Nov 3 09	2009 City sampling	< 0.0025	< 0.0050	< 0.0010	0.0004	0.002	0.074	0.002		< 0.030	< 0.0025	< 0.010	0.216	
Domestic Levels - MM	Nov 5 09	2009 City sampling	< 0.0025	< 0.0050	< 0.0010	0.0003	0.001	0.121	0.017		< 0.030	< 0.0025	< 0.010	0.154	
Domestic Levels - MM	Sep 27 10	2010 City sampling	< 0.0025	< 0.0050	< 0.0010	< 0.00025	0.002	0.060	0.001		< 0.030	< 0.0025	< 0.010	0.069	
Domestic Levels - MM	Sep 28 10	2010 City sampling	< 0.0025	< 0.0050	< 0.0010	< 0.00025	0.004	0.060	0.002		< 0.030	< 0.0025	< 0.010	0.075	
Domestic Levels - MM	Sep 29 10	2010 City sampling	< 0.0025	< 0.0050	< 0.0010	< 0.00025	0.003	0.110	0.005		< 0.030	< 0.0025	< 0.010	0.110	
Domestic Levels - MM	Sep 30 10	2010 City sampling	< 0.0025	< 0.0050	< 0.0010	0.0004	0.008	0.200	0.002		< 0.030	< 0.0025	< 0.010	0.237	
Domestic Levels - MM	Oct 4 10	2010 City sampling	< 0.0025	< 0.0050	< 0.0010	0.0003	0.002	0.110	0.002		< 0.030	< 0.0025	< 0.010	0.094	
Domestic Levels - MM	Oct 5 10	2010 City sampling	< 0.0025	< 0.0050	< 0.0010	< 0.00025	0.002	0.090	0.002		< 0.030	< 0.0025	< 0.010	0.093	
Domestic Levels - MM	Oct 6 10	2010 City sampling	< 0.0025	< 0.0050	< 0.0010	0.0003	0.005	0.130	0.003		< 0.030	< 0.0025	< 0.010	0.182	
Domestic Levels - MM	Oct 12 10	2010 City sampling	< 0.0025	< 0.0050	< 0.0010	< 0.00025	0.003	0.070	0.002		< 0.030	< 0.0025	< 0.010	0.091	
Domestic Levels - MM	Oct 13 10	2010 City sampling	< 0.0025	< 0.0050	< 0.0010	0.0003	0.003	0.100	0.003		< 0.030	< 0.0025	< 0.010	0.145	
Domestic Levels - MM	Oct 14 10	2010 City sampling	< 0.0025	< 0.0050	< 0.0010	0.0003	0.004	0.080	0.013		< 0.030	< 0.0025	< 0.010	0.101	
Domestic Levels - MM															
Domestic Levels - MM		2012 City sampling	< 0.00125	< 0.0050	< 0.0005	< 0.0005	< 0.003	0.091	0.005		< 0.033	< 0.0025	< 0.010	0.093	
Domestic Levels - MM		2013 City sampling	< 0.00125	< 0.0050	< 0.0005	< 0.0003	< 0.002	0.053	0.002		< 0.030		< 0.010	0.054	
Domestic Levels - MM END															
Domestic Levels - MM AVERAGES			0.00125	0.00190	0.00016	0.0003	0.0027	0.0717	0.0031	0.0002	0.0038	0.0013	0.0020	0.073	0.0026

CRITERIA: 1. No Special Allocation Allowance 2. Uniform Concentration Basis 3. Industrial Flow Basis

Proposed Limits - mg/L			0.032	100.344	0.416	0.006	3.790	0.440	0.067	0.002	0.700	0.303	0.048	1.740	0.58
													Reported Concentrations (mg/L)		
DATA ACCUMULATIONS as of		Nov 25 14	Arsenic	Antimony	Beryllium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc	Cyanide
Domestic Levels - HE START	**Date**	**Description**													
Domestic Levels - HE															
Domestic Levels - HE	Aug 28 06	2006 Local Limits sampling	< 0.00156	< 0.0019	< 0.0001	< 0.0001	0.0082 J	0.210	0.0079 J	0.00021	0.0057 J	< 0.00086	< 0.002	0.170	0.003 J
Domestic Levels - HE	Aug 29 06	2006 Local Limits sampling													< 0.002
Domestic Levels - HE	Aug 30 06	2006 Local Limits sampling	< 0.00156	< 0.0019	< 0.0001	< 0.0001	0.0011 J	0.150	0.0076 J	0.000090 J	0.0030 J	< 0.00086	< 0.002	0.092	< 0.002
Domestic Levels - HE	Aug 31 06	2006 Local Limits sampling	< 0.00156	< 0.0019	< 0.0001	< 0.0001	0.0011 J	0.150	0.0092 J	0.000095 J	0.0070 J	< 0.00086	< 0.002	0.110	0.003 J
Domestic Levels - HE	Sep 5 06	2006 Local Limits sampling (average using duplicate)	< 0.00156	< 0.0019	< 0.0001	0.00020 J	< 0.001	0.110	0.0046 J	< 0.000052	0.0045 J	0.0016 J	< 0.002	0.130	0.003 J
Domestic Levels - HE	Sep 6 06	2006 Local Limits sampling	< 0.00156	< 0.0019	< 0.0001	< 0.0001	0.0010 J	0.160	0.016	0.000058 J	0.0042 J	0.0024 J	< 0.002	0.150	0.004 J
Domestic Levels - HE															
Domestic Levels - HE	Oct 19 09	2009 City sampling	< 0.0025	< 0.0050	< 0.0010	0.00033	0.0021	0.114	0.019		< 0.030	< 0.0025	< 0.010	0.148	
Domestic Levels - HE	Oct 20 09	2009 City sampling	< 0.0025	< 0.0050	< 0.0010	< 0.00025	0.0012	0.114	0.010		< 0.030	< 0.0025	< 0.010	0.130	
Domestic Levels - HE	Oct 22 09	2009 City sampling	< 0.0025	< 0.0050	< 0.0010	< 0.00025	0.0015	0.108	0.012		< 0.030	< 0.0025	< 0.010	0.141	
Domestic Levels - HE	Oct 27 09	2009 City sampling	< 0.0025	< 0.0050	< 0.0010	< 0.00025	0.0020	0.087	0.011		< 0.030	< 0.0025	< 0.010	0.151	
Domestic Levels - HE	Oct 28 09	2009 City sampling	< 0.0025	< 0.0050	< 0.0010	< 0.00025	0.0014	0.082	0.008		< 0.030	< 0.0025	< 0.010	0.122	
Domestic Levels - HE	Oct 29 09	2009 City sampling	< 0.0025	< 0.0050	< 0.0010	< 0.00025	0.0021	0.085	0.015		< 0.030	< 0.0025	< 0.010	0.245	
Domestic Levels - HE	Nov 2 09	2009 City sampling	< 0.0025	< 0.0050	< 0.0010	< 0.00025	0.0025	0.101	0.011		< 0.030	< 0.0025	< 0.010	0.148	
Domestic Levels - HE	Nov 3 09	2009 City sampling	< 0.0025	< 0.0050	< 0.0010	< 0.00025	0.0016	0.093	0.010		< 0.030	< 0.0025	< 0.010	0.121	
Domestic Levels - HE	Nov 4 09	2009 City sampling	< 0.0025	< 0.0050	< 0.0010	< 0.00025	0.0021	0.096	0.033		< 0.030	< 0.0025	< 0.010	0.134	
Domestic Levels - HE	Sep 27 10	2010 City sampling	< 0.0025	< 0.0050	< 0.0010	0.00072	0.0070	0.220	0.032		< 0.030	< 0.0025	< 0.010	0.366	
Domestic Levels - HE	Sep 28 10	2010 City sampling	< 0.0025	< 0.0050	< 0.0010	0.00025	0.0030	0.090	0.009		< 0.030	< 0.0025	< 0.010	0.140	
Domestic Levels - HE	Sep 29 10	2010 City sampling	< 0.0025	< 0.0050	< 0.0010	0.00025	0.0020	0.090	0.009		< 0.030	< 0.0025	< 0.010	0.136	
Domestic Levels - HE	Sep 30 10	2010 City sampling	< 0.0025	< 0.0050	< 0.0010	< 0.00025	0.0030	0.090	0.008		< 0.030	< 0.0025	< 0.010	0.118	
Domestic Levels - HE	Oct 4 10	2010 City sampling	< 0.0025	< 0.0050	< 0.0010	< 0.00025	0.0020	0.090	0.006		< 0.030	< 0.0025	< 0.010	0.127	
Domestic Levels - HE	Oct 5 10	2010 City sampling	< 0.0025	< 0.0050	< 0.0010	0.00043	0.0030	0.170	0.015		< 0.030	< 0.0025	< 0.010	0.315	
Domestic Levels - HE	Oct 7 10	2010 City sampling	< 0.0025	< 0.0050	< 0.0010	0.00037	0.0040	0.280	0.018		< 0.030	0.0032	< 0.010	0.220	
Domestic Levels - HE	Oct 12 10	2010 City sampling	< 0.0025	< 0.0050	< 0.0010	0.00025	0.0030	0.150	0.010		< 0.030	< 0.0025	< 0.010	0.156	
Domestic Levels - HE	Oct 13 10	2010 City sampling	< 0.0025	< 0.0050	< 0.0010	< 0.00025	0.0020	0.120	0.009		< 0.030	< 0.0025	< 0.010	0.100	
Domestic Levels - HE	Oct 14 10	2010 City sampling	< 0.0025	< 0.0050	< 0.0010	< 0.00025	0.0030	0.210	0.012		< 0.030	< 0.0025	< 0.010	0.131	
Domestic Levels - HE															
Domestic Levels - HE		2012 City sampling	< 0.00125	< 0.0050	< 0.0005	< 0.00025	< 0.002	0.102	0.005		< 0.030	< 0.0025	< 0.010	0.112	
Domestic Levels - HE		2013 City sampling	< 0.00125	< 0.0050	< 0.0005	< 0.00025	0.002	0.143	0.008		< 0.030		< 0.010	0.125	
Domestic Levels - HE END															
Domestic Levels - HE AVERAGES			0.00125	0.0019	0.0001	0.00025	0.00180	0.1226	0.0061	0.0001	0.0049	0.0013	0.0020	0.1186	0.0028
Domestic Levels - Both Locations AVERAGES			0.00125	0.0019	0.00013	0.00030	0.0022	0.0971	0.0046	0.00014	0.0044	0.0013	0.0005	0.0960	0.0027
Adjusted Domestic Level Averages (factoring out I/I)		71.5%	0.00175	0.00266	0.00018	0.00042	0.0031	0.136	0.0065	0.00020	0.0061	0.0018	0.0007	0.1341	0.0038

* Shaded cells - values used in calculations

Bolded italic cells - result < MDL ; Reported values are 1/2 MDL

"J" data qualifier: value >= MDL, but < quantitation limit

CRITERIA: 1. No Special Allocation Allowance 2. Uniform Concentration Basis 3. Industrial Flow Basis

Proposed Limits - mg/L			0.032	100.344	0.416	0.006	3.790	0.440	0.067	0.002	0.700	0.303	0.048	1.740	0.58
										Reported Concentrations (mg/L)					
DATA ACCUMULATIONS as of		Nov 25 14	Arsenic	Antimony	Beryllium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc	Cyanide
WWTP Biosolids START	**Date**	**Description**													
WWTP Biosolids		6 year avg ('99-'04) - mg/kg	2.5			3.5	20.5	361	37	1.0	9.4	0.26	13.0	418	
WWTP Biosolids															
WWTP Biosolids	Sep 8 05	Keene/EAI avg. - mg/kg	1.2	1.2		3.1	13	536	34		7.0	4.5	12.0	586	
WWTP Biosolids	Oct 24 05	monthly sampling - mg/kg	1.6	0.8	< 0.5	2.9	10	243	57		8.0	1.5	9.0	372	
WWTP Biosolids	Nov 15 05	monthly sampling - mg/kg	1.9	1.0	< 0.5	4.1	10	384	75		14.0	10.6	10.0	468	
WWTP Biosolids	Dec 30 05	monthly sampling - mg/kg	1.3	< 1.1	0.4	4.0	7	322	27		< 7.0	3.6	8.0	331	
WWTP Biosolids	Jan 13 06	monthly sampling - mg/kg	0.9	1.1	1.2	2.7	8	346	27		8.0	2.9	9.0	330	
WWTP Biosolids	Feb 13 06	Keene/EAI avg. - mg/kg	0.6	0.7	< 0.5	2.6	9	342	30	0.800	8.0	2.0	9.0	330	
WWTP Biosolids	Mar 6 06	monthly sampling - mg/kg	0.7	1.1	0.3	3.0	10	374	31		6.0	2.3	11.0	342	
WWTP Biosolids	Apr 13 06	monthly sampling - mg/kg	0.8	1.1	0.3	3.4	10	412	29		7.0	2.6	10.0	417	
WWTP Biosolids	May 5 06	NHDES sampling - mg/kg	< 4.0	< 4.0	< 0.12	< 4.6	16	449	26	1.070	< 18.0	< 4.6	12.0	389	
WWTP Biosolids	Aug 16 06	Keene/EAI avg. - mg/kg	1.0			2.57	11.5	403	37.1	1.400	10.3	2.9		480	
WWTP Biosolids															
WWTP Biosolids	Aug 28 06	Local Limits sampling - mg/kg	13.4 J	< 25.4	0.370 J	0.939 J	20.9	489	40.8	0.948	13.4 J	8.75 J	13.4	565	< 2
WWTP Biosolids	Aug 30 06	Local Limits sampling - mg/kg	20.8 J	9.65 J	1.210 J	1.760 J	25.3	504	49.5	0.887	18.4 J	21.5 J	12.3	587	< 1.5
WWTP Biosolids	Sep 1 06	Local Limits sampling - mg/kg	17.1 J	< 27.5	0.356 J	0.851 J	19.5	525	42.2	0.748	10.7 J	17.8 J	12.6	568	< 1.6
WWTP Biosolids	Sep 5 06	Local Limits sampling - mg/kg	< 13.0	< 25.9	0.284 J	1.400 J	22.4	565	50.4	1.570	13.8 J	< 6.5	11.0	652	< 1.7
WWTP Biosolids	Sep 6 06	Local Limits sampling - mg/kg	< 13.9	< 27.7	0.257 J	1.040 J	19.2	509	37.8	0.930	10.0 J	< 6.9	10.7	555	< 1.7
WWTP Biosolids	Sep 8 06	Local Limits sampling - mg/kg (average using duplicate)	< 13.2	5.31 J	0.258 J	0.778 J	18.3	501	38.6	1.050	10.3 J	< 6.6	11.1	542	< 1.95
WWTP Biosolids															
WWTP Biosolids	Feb 4 09		1.7	1.3		1.7	9.4	360	17	0.5	7.1	3.2		290	
WWTP Biosolids	May 4 09		<3	<3	<1.7	3.6	12.1	407	26	0.5	<13.7	4.8	<5.13	482	
WWTP Biosolids	Aug 7 09		3.3			1.5	9.7	280	33	1.0	8.9	2.1		400	
WWTP Biosolids	Nov 4 09		1.9			1.7	9.7	450	33	0.9	8.3	<0.5		430	
WWTP Biosolids	Feb 3 10		1.7	0.8	<0.5	0.9	11.0	240	16	0.5	8.4	1.7	<0.5	220	
WWTP Biosolids	Apr 26 10		2.6	0.8	<0.5	3.2	10.3	369	18	0.4	6.2	3.8	2.1	349	
WWTP Biosolids	Aug 4 10		10.0	1.5	<0.8	1.5	12.0	360	30	0.7	8.8	3.9	50	460	
WWTP Biosolids	Nov 17 10		1.7	1.2	<0.5	3.5	8.9	360	19	0.6	8.3	2.2	2.9	440	
WWTP Biosolids	Feb 7 11		1.0	1.1	<0.5	0.7	7.1	260	13	0.4	5.1	<0.5	3.2	260	
WWTP Biosolids	Apr 18 11		3.0	1.6	<0.1	4.2	19	360	25	0.8	17.0	<7	1.6	400	
WWTP Biosolids															
WWTP Biosolids	Jan 23 13			1.3	< 0.5	0.7	9.0	325	15	0.5	7.0		3.0	375	
WWTP Biosolids	Apr 3 13		1.5	1.3	< 0.5	1.3	10.0	240	12	1.2	8.0	3.3	4.0	230	
WWTP Biosolids	Jul 24 13		3.0	1.0	< 1	1.0	13.0	350	34	6.4	11.0	3.0	8.0	480	
WWTP Biosolids	Oct 16 13		< 8.2	< 16	< 3.3	< 6.6	< 16	490	< 66	0.4	< 16	< 66		630	
WWTP Biosolids	Jan 15 14		< 6.6	< 5	0.15	< 1	12.0	270	56	0.4	< 10	< 16	6.0	390	
WWTP Biosolids															
WWTP Biosolids															
WWTP Biosolids END		1462													
WWTP Biosolids AVERAGES			2.3	1.2	0.15	1.0	11.0	335	29.3	0.6	8.7	3.2	5.3	421	1.74
		TCLP-Based Max Limit @ 100% Leaching	100.0			20.0	100.0		100.0	4.0		20.0	100.0		

* Shaded cells - values used in calculations

Bolded italic cells - result < MDL ; Reported values are 1/2 MDL

"J" data qualifier: value >= MDL, but < quantitation limit

CRITERIA: 1. No Special Allocation Allowance 2. Uniform Concentration Basis 3. Industrial Flow Basis

Proposed Limits - mg/L			0.032	100.344	0.416	0.006	3.790	0.440	0.067	0.002	0.700	0.303	0.048	1.740	0.58
								Reported Concentrations (mg/L)							
DATA ACCUMULATIONS as of		Nov 25 14	Arsenic	Antimony	Beryllium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc	Cyanide
Marlborough START	**Date**	**Description**													
Marlborough	Jan 17 06	Monthly sampling				0.010	0.003	0.090	0.006		***0.015***		***0.005***	0.260	
Marlborough	Feb 15 06	Monthly sampling				0.010	0.003	0.150	0.009		***0.015***		***0.005***	0.340	
Marlborough	Mar 16 06	Monthly sampling				***0.005***	0.007	0.130	0.018		***0.015***		***0.005***	0.420	
Marlborough	Apr 11 06	Monthly sampling				***0.005***	***0.002***	0.160	0.007		***0.015***		***0.005***	0.250	
Marlborough	May 10 06	Monthly sampling				***0.005***	***0.002***	0.120	0.008		***0.015***		***0.005***	0.310	
Marlborough	Jun 8 06	Monthly sampling				0.010	0.003	0.310	0.006		***0.015***		***0.005***	0.270	
Marlborough	Jan 14 09		< 0.0013			0.0009	< 0.004	0.110	0.004		< 0.030		< 0.010	0.200	
Marlborough	Feb 10 09							0.450	0.006					0.211	
Marlborough	Mar 10 09							0.450	0.006					0.230	
Marlborough	Apr 8 09							0.160	0.005					0.120	
Marlborough	May 5 09							0.082	0.006					0.160	
Marlborough	Jun 3 09							0.110	0.008					0.230	
Marlborough	Jun 22 09							0.078	0.006					0.130	
Marlborough	Jul 15 09							0.150	0.007					0.200	
Marlborough	Aug 10 09							0.180	0.010					0.300	
Marlborough	Sep 15 09							0.610	0.006					0.140	
Marlborough	Oct 13 09							0.180	0.013					0.110	
Marlborough	Nov 3 09							0.740	< 0.010					0.250	
Marlborough	Nov 30 09							0.210	0.007					0.150	
Marlborough	Dec 15 09							0.140	0.003					0.120	
Marlborough	Jan 12 10							0.151	0.010					0.158	
Marlborough	Feb 9 10							0.286	0.007					0.188	
Marlborough	Mar 10 10		< 0.0025			0.0004	0.004	0.217	0.014		< 0.030		< 0.010	0.241	
Marlborough	Apr 19 10							0.168	0.004					0.792	
Marlborough	May 11 10							0.166	0.007					0.294	
Marlborough	Jun 8 10							0.520	0.006					0.250	
Marlborough	Jul 1 10							0.260	0.009					0.270	
Marlborough	Jul 26 10		< 0.0013			0.0004	0.006	0.260	0.008		< 0.030		< 0.010	0.260	
Marlborough	Aug 24 10							0.234	0.008					0.361	
Marlborough	Sep 14 10							0.460	0.008					0.260	
Marlborough	Oct 12 10							0.280	0.005					0.160	
Marlborough	Nov 8 10							0.540	0.006					0.197	
Marlborough	Dec 7 10							0.150	0.007					0.320	
Marlborough	Jan 4 11		< 0.0013			0.0005	0.004	0.174	0.007		< 0.030		< 0.010	0.273	
Marlborough	Feb 9 11							0.189	0.007					0.252	
Marlborough	Mar 2 11							0.153	0.006					0.332	
Marlborough	Mar 29 11							0.496	0.006					0.302	
Marlborough	Apr 19 11		< 0.0013			0.0003	0.003	0.106	0.004		< 0.030		< 0.010	0.267	
Marlborough	May 10 11							0.198	0.007					0.252	
Marlborough	2012/2013	City sampling averages					0.003	0.214	0.003					0.230	
Marlborough END															
Marlborough AVERAGES			< 0.0013	#N/A	#N/A	0.0004	0.003	0.214	0.003	#N/A	< 0.0300	#N/A	< 0.0100	0.230	#N/A

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Bolded italic cells - result < MDL ; Reported values are 1/2 MDL

"J" data qualifier: value >= MDL, but < quantitation limit

CRITERIA: 1. No Special Allocation Allowance 2. Uniform Concentration Basis 3. Industrial Flow Basis

Proposed Limits - mg/L	0.032	100.344	0.416	0.006	3.790	0.440	0.067	0.002	0.700	0.303	0.048	1.740	0.58

DATA ACCUMULATIONS as of Nov 25 14

Swanzey START	Date	Description	Reported Concentrations (mg/L) Arsenic	Antimony	Beryllium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc	Cyanide
Swanzey	Jun 8 06					***0.005***	0.002	0.070	0.005		***0.015***		***0.005***	0.130	
Swanzey	May 10 06					***0.005***	***0.002***	0.080	0.006		***0.015***		***0.005***	0.110	
Swanzey	Apr 12 06					***0.005***	0.007	0.080	0.007		***0.015***		***0.005***	0.140	
Swanzey	Mar 16 06					***0.005***	***0.002***	0.080	0.006		***0.015***		***0.005***	0.140	
Swanzey	Feb 15 06					***0.005***	0.007	0.080	0.006		***0.015***		***0.005***	0.270	
Swanzey	Jan 17 06					***0.005***	0.015	0.110	0.010		***0.015***		***0.005***	0.220	
Swanzey	Jan 13 09		< 0.0013			< 0.00025	< 0.004	0.060	<0.003		< 0.030		< 0.010	0.009	
Swanzey	Feb 11 09							0.110	0.008					0.190	
Swanzey	Mar 10 09							0.750	0.003					0.100	
Swanzey	Mar 24 09														
Swanzey	Apr 8 09							0.049	0.003					0.069	
Swanzey	May 5 09							0.060	0.007					0.100	
Swanzey	Jun 3 09							0.170	0.006					0.160	
Swanzey	Jun 22 09							0.130	0.012					0.200	
Swanzey	Jul 15 09							0.097	0.007					0.150	
Swanzey	Aug 10 09							0.083	0.008					0.150	
Swanzey	Sep 15 09							0.180	0.018					0.310	
Swanzey	Oct 13 09							0.120	0.004					0.094	
Swanzey	Oct 20 09														
Swanzey	Nov 3 09							0.310	0.010					0.210	
Swanzey	Nov 30 09							0.150	0.007					0.210	
Swanzey	Dec 15 09							0.150	0.004					0.110	
Swanzey	Jan 12 10							0.131	0.012					0.305	
Swanzey	Feb 9 10							0.107	0.006					0.700	
Swanzey	Mar 10 10		< 0.0025			< 0.00025	0.0005	0.122	0.006		< 0.030		< 0.010	0.171	
Swanzey	Mar 30 10							0.000	0.000					0.000	
Swanzey	Apr 19 10							0.096	0.008					0.187	
Swanzey	May 11 10							0.084	0.005					0.135	
Swanzey	May 18 10														
Swanzey	Jun 8 10							0.080	0.006					0.200	
Swanzey	Jul 1 10							0.100	0.006					0.150	
Swanzey	Jul 26 10		< 0.0013			0.00025	0.002	0.080	0.005		< 0.030		< 0.010	0.190	
Swanzey	Aug 24 10							0.090	0.005					0.173	
Swanzey	Sep 14 10							0.090	0.003					0.140	
Swanzey	Oct 12 10							0.070	0.005					0.160	
Swanzey	Nov 8 10							0.097	0.006					0.182	
Swanzey	Dec 7 10							0.094	0.004					0.184	
Swanzey	Jan 4 11		< 0.0013			< 0.00025	0.003	0.092	0.007		< 0.030		< 0.010	0.177	
Swanzey	Feb 9 11							0.118	0.004					0.152	
Swanzey	Mar 2 11							0.156	0.004					0.170	
Swanzey	Mar 29 11							0.096	0.004					0.136	
Swanzey	Apr 19 11		< 0.0013			< 0.00025	0.004	0.084	0.004		< 0.030		< 0.010	0.138	
Swanzey	May 10 11							0.078	0.004					0.130	
Swanzey	2012/2013	City sampling averages					0.002	0.087	0.004					0.150	
Swanzey END															
Swanzey AVERAGES			< 0.0013	#N/A	#N/A	< 0.00025	0.002	0.087	0.004	#N/A	< 0.0300	#N/A	< 0.0100	0.150	#N/A

* Shaded cells - values used in calculations

Bolded italic cells - result < MDL ; Reported values are 1/2 MDL

"J" data qualifier: value >= MDL, but < quantitation limit

CRITERIA: 1. No Special Allocation Allowance 2. Uniform Concentration Basis 3. Industrial Flow Basis

Proposed Limits - mg/L	0.032	100.344	0.416	0.006	3.790	0.440	0.067	0.002	0.700	0.303	0.048	1.740	0.58

DATA ACCUMULATIONS as of Nov 25 14

Reported Concentrations (mg/L)

Septage&Holding Tank START	Date	Description	Arsenic	Antimony	Beryllium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc	Cyanide
Septage&Holding Tank	Aug 28 06	Local Limits sampling	0.320	0.042	0.0028 J	0.029	0.240	12.0	2.20	0.0230	0.290	0.023	0.170	18.0	0.020
Septage&Holding Tank	Aug 29 06	Local Limits sampling	0.220	0.036	0.0016 J	0.014	0.110	4.9	0.27	0.0084	0.100	0.014	0.036	8.1	0.011
Septage&Holding Tank	Aug 30 06	Local Limits sampling	0.220	0.085	0.0079	0.034	0.810	40.0	1.40	0.0230	1.500	0.012	0.075	17.0	0.012
Septage&Holding Tank	Aug 31 06	Local Limits sampling	0.160	0.030	0.0020 J	0.019	0.160	7.3	0.41	0.0074	0.170	0.017	0.027	11.0	0.008 J
Septage&Holding Tank	Sep 5 06	Local Limits sampling	0.0050 J	0.046	0.0013 J	0.024	0.210	5.9	0.65	0.0072	0.190	0.0094 J	0.020	15.0	0.026
Septage&Holding Tank	Sep 6 06	Local Limits sampling	0.0069 J	0.024	0.0014 J	0.066	0.240	5.4	0.90	0.0110	0.270	0.0096 J	0.032	15.0	0.005 J
Septage&Holding Tank	Sep 12 06	Local Limits sampling (average using duplicate)	0.018 J	0.017	0.0032	0.022	0.210	7.2	0.41	0.0076	0.245	0.0067 J	0.031	11.5	0.010
Septage&Holding Tank															
Septage&Holding Tank END															
Septage&Holding Tank AVERAGES			0.136	0.040	0.003	0.030	0.283	11.814	0.891	0.013	0.395	0.013	0.056	13.657	0.013

DATA ACCUMULATIONS as of Nov 25 14

Septage START	Date	Description	Arsenic	Antimony	Beryllium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc	Cyanide
Septage	8/15 - 10/10/02	avg. - multiple residence	0.133	0.045	0.014	0.059	0.565	17.61	1.444		0.512	0.020	0.074	21.14	
Septage	9/19 - 10/1/03	avg. - multiple residence	0.089	0.045	0.004	0.054	0.341	8.48	0.576		0.318	0.018	0.053	19.55	
Septage	9/29 - 10/5/04	avg. - multiple residence	0.066	0.019	***0.002***	0.046	0.301	7.72	0.452		0.280	0.012	0.085	15.13	
Septage	Nov 10 05	avg. - multiple residence	0.037	0.020	0.004	0.040	0.283	17.62	0.986		0.586	***0.002***	0.012	19.72	
Septage	10/19 - 11/9/09	avg. - multiple residence	0.097			0.024	0.253	24.91	0.776		0.404		0.040	18.85	
Septage	9/1 - 11/4/10	avg. - multiple residence	0.270	0.015	0.005	0.020	0.265	10.76	0.498		0.494	0.005	0.042	25.25	
Septage															
Septage	2012, 2013 samp							6.34							
Septage END															
Septage AVERAGES			0.184	0.015	0.005	0.022	0.259	6.335	0.637	0.013	0.449	0.005	0.041	22.053	0.013

DATA ACCUMULATIONS as of Nov 25 14

Holding Tank START	Date	Description	Arsenic	Antimony	Beryllium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc	Cyanide
Holding Tank	8/14 - 10/25/02	avg. - multiple residence	0.029	0.026	***0.002***	0.033	0.090	2.242	0.177		0.162	***0.0025***	0.022	3.039	
Holding Tank	9/17 - 10/8/03	avg. - multiple residence	0.025	0.016	***0.003***	0.023	0.115	1.682	0.172		0.097	***0.0024***	0.007	3.439	
Holding Tank	9/29 - 10/29/04	avg. - multiple residence	0.015	***0.007***	***0.002***	0.023	0.428	2.840	0.148		0.150	0.004	0.273	3.801	
Holding Tank	9/13 - 12/8/05	avg. - multiple residence	0.014	0.021	***0.003***	0.013	0.174	5.328	0.393		0.365	***0.0016***	***0.0025***	6.641	
Holding Tank	10/16 - 9/7/09	avg. - multiple residence	0.012			0.006	0.086	2.557	0.389		0.147		0.015	3.445	
Holding Tank	9/7 - 11/5/10	avg. - multiple residence	0.004	0.006	0.001	0.001	0.024	0.776	0.084		0.039	0.004	0.015	0.941	
Holding Tank															
Holding Tank END															
Holding Tank AVERAGES			0.008	0.006	0.001	0.004	0.055	1.667	0.236	0.013	0.093	0.004	0.015	2.193	0.013

Septage avg annual flow = 3.7 Holding tank avg annual flow = 1.8

Septage & Holding Tank AVERAGES	AVERAGE	0.126	0.012	0.004	0.016	0.193	4.816	0.507	0.013	0.333	0.005	0.032	15.589

* Shaded cells - values used in calculations

Bolded italic cells - result < MDL ; Reported values are 1/2 MDL

"J" data qualifier: value >= MDL, but < quantitation limit

Keene WWTP daily effluent flows 2012-13

Date	EFFLUENT FLOW MGD	Date	EFFLUENT FLOW MGD
1/1/2012	3.586	1/1/2013	2.465
1/2/2012	3.415	1/2/2013	2.347
1/3/2012	3.749	1/3/2013	2.381
1/4/2012	3.673	1/4/2013	2.386
1/5/2012	3.493	1/5/2013	2.479
1/6/2012	3.392	1/6/2013	2.194
1/7/2012	3.341	1/7/2013	2.168
1/8/2012	3.114	1/8/2013	2.375
1/9/2012	3.01	1/9/2013	2.29
1/10/2012	3.181	1/10/2013	2.34
1/11/2012	3.12	1/11/2013	2.283
1/12/2012	3.132	1/12/2013	2.289
1/13/2012	3.01	1/13/2013	2.197
1/14/2012	3.1	1/14/2013	2.22
1/15/2012	2.82	1/15/2013	2.503
1/16/2012	2.734	1/16/2013	2.58
1/17/2012	2.96	1/17/2013	2.462
1/18/2012	3.096	1/18/2013	2.536
1/19/2012	3.03	1/19/2013	2.539
1/20/2012	2.868	1/20/2013	2.362
1/21/2012	2.918	1/21/2013	2.338
1/22/2012	2.675	1/22/2013	2.534
1/23/2012	2.587	1/23/2013	2.563
1/24/2012	2.957	1/24/2013	2.583
1/25/2012	3.116	1/25/2013	2.476
1/26/2012	2.956	1/26/2013	2.457
1/27/2012	2.887	1/27/2013	2.247
1/28/2012	4.391	1/28/2013	2.236
1/29/2012	3.591	1/29/2013	2.465
1/30/2012	3.459	1/30/2013	2.471
1/31/2012	3.531	1/31/2013	2.524
2/1/2012	3.38	2/1/2013	3.476
2/2/2012	3.383	2/2/2013	2.972
2/3/2012	3.229	2/3/2013	2.965
2/4/2012	3.204	2/4/2013	2.832
2/5/2012	3.067	2/5/2013	2.988
2/6/2012	2.921	2/6/2013	2.742
2/7/2012	3.128	2/7/2013	2.692
2/8/2012	3.057	2/8/2013	2.683
2/9/2012	2.963	2/9/2013	2.557
2/10/2012	2.896	2/10/2013	2.329
2/11/2012	2.866	2/11/2013	2.389
2/12/2012	2.689	2/12/2013	2.72
2/13/2012	2.695	2/13/2013	2.669
2/14/2012	2.863	2/14/2013	2.545
2/15/2012	2.738	2/15/2013	2.622
2/16/2012	2.769	2/16/2013	2.592
2/17/2012	2.705	2/17/2013	2.419
2/18/2012	2.745	2/18/2013	2.436
2/19/2012	2.559	2/19/2013	2.615
2/20/2012	2.445	2/20/2013	2.572
2/21/2012	2.649	2/21/2013	2.57
2/22/2012	2.685	2/22/2013	2.621
2/23/2012	2.656	2/23/2013	2.493
2/24/2012	2.718	2/24/2013	2.234
2/25/2012	2.909	2/25/2013	2.368
2/26/2012	2.82	2/26/2013	2.501
2/27/2012	2.579	2/27/2013	2.484
2/28/2012	2.79	2/28/2013	2.851
2/29/2012	2.81	3/1/2013	2.852
3/1/2012	2.769	3/2/2013	2.751
3/2/2012	2.815	3/3/2013	2.576
3/3/2012	2.792	3/4/2013	2.603
3/4/2012	2.674	3/5/2013	2.769
3/5/2012	2.656	3/6/2013	2.729
3/6/2012	2.835	3/7/2013	2.844
3/7/2012	2.722	3/8/2013	2.843
3/8/2012	2.84	3/9/2013	2.74
3/9/2012	2.914	3/10/2013	2.556
3/10/2012	3.038	3/11/2013	2.473
3/11/2012	2.808	3/12/2013	2.881
3/12/2012	2.578	3/13/2013	3.449

3/13/2012	2.832	3/14/2013	3.911
3/14/2012	2.858	3/15/2013	3.911
3/15/2012	2.869	3/16/2013	3.652
3/16/2012	2.75	3/17/2013	3.307
3/17/2012	2.999	3/18/2013	3.313
3/18/2012	2.715	3/19/2013	3.374
3/19/2012	2.669	3/20/2013	3.343
3/20/2012	2.995	3/21/2013	3.339
3/21/2012	2.797	3/22/2013	3.232
3/22/2012	3.028	3/23/2013	3.175
3/23/2012	3.467	3/24/2013	2.991
3/24/2012	2.837	3/25/2013	3.037
3/25/2012	2.521	3/26/2013	3.241
3/26/2012	2.689	3/27/2013	3.222
3/27/2012	2.738	3/28/2013	3.124
3/28/2012	2.663	3/29/2013	3.314
3/29/2012	2.708	3/30/2013	3.182
3/30/2012	2.718	3/31/2013	2.949
3/31/2012	2.608	4/1/2013	2.933
4/1/2012	2.455	4/2/2013	3.424
4/2/2012	2.409	4/3/2013	3.465
4/3/2012	2.561	4/4/2013	3.292
4/4/2012	2.497	4/5/2013	3.184
4/5/2012	2.633	4/6/2013	3.255
4/6/2012	2.697	4/7/2013	3.026
4/7/2012	2.647	4/8/2013	2.973
4/8/2012	2.233	4/9/2013	3.045
4/9/2012	2.166	4/10/2013	3.093
4/10/2012	2.624	4/11/2013	3.391
4/11/2012	2.501	4/12/2013	3.597
4/12/2012	2.395	4/13/2013	4.073
4/13/2012	2.471	4/14/2013	3.855
4/14/2012	2.466	4/15/2013	3.788
4/15/2012	2.153	4/16/2013	3.855
4/16/2012	2.21	4/17/2013	3.782
4/17/2012	2.383	4/18/2013	3.716
4/18/2012	2.382	4/19/2013	3.56
4/19/2012	2.445	4/20/2013	3.56
4/20/2012	2.296	4/21/2013	3.664
4/21/2012	2.419	4/22/2013	3.351
4/22/2012	2.14	4/23/2013	3.49
4/23/2012	2.192	4/24/2013	3.498
4/24/2012	2.865	4/25/2013	3.422
4/25/2012	2.524	4/26/2013	3.26
4/26/2012	2.428	4/27/2013	3.13
4/27/2012	2.625	4/28/2013	2.839
4/28/2012	2.777	4/29/2013	2.853
4/29/2012	2.446	4/30/2013	3.024
4/30/2012	2.54	5/1/2013	3.011
5/1/2012	2.439	5/2/2013	2.942
5/2/2012	2.718	5/3/2013	2.861
5/3/2012	2.606	5/4/2013	2.829
5/4/2012	2.668	5/5/2013	2.6
5/5/2012	2.642	5/6/2013	2.573
5/6/2012	2.445	5/7/2013	2.687
5/7/2012	2.393	5/8/2013	2.734
5/8/2012	2.526	5/9/2013	2.695
5/9/2012	2.905	5/10/2013	2.612
5/10/2012	2.742	5/11/2013	2.548
5/11/2012	3.252	5/12/2013	2.562
5/12/2012	2.991	5/13/2013	2.403
5/13/2012	2.682	5/14/2013	2.518
5/14/2012	2.674	5/15/2013	2.469
5/15/2012	3.052	5/16/2013	2.489
5/16/2012	3.19	5/17/2013	2.48
5/17/2012	3.257	5/18/2013	2.376
5/18/2012	3.01	5/19/2013	2.129
5/19/2012	3.002	5/20/2013	2.219
5/20/2012	2.723	5/21/2013	2.361
5/21/2012	2.113	5/22/2013	2.411
5/22/2012	3.021	5/23/2013	2.999
5/23/2012	3.11	5/24/2013	3.062
5/24/2012	2.868	5/25/2013	3.205
5/25/2012	2.801	5/26/2013	3.308
5/26/2012	2.743	5/27/2013	3.161
5/27/2012	2.364	5/28/2013	3.049

5/28/2012	2.289	5/29/2013	3.215
5/29/2012	2.302	5/30/2013	3.234
5/30/2012	10.434	5/31/2013	3.215
5/31/2012	10.539	6/1/2013	3.128
6/1/2012	5.378	6/2/2013	2.771
6/2/2012	4.326	6/3/2013	2.843
6/3/2012	4.875	6/4/2013	3.136
6/4/2012	5.486	6/5/2013	2.976
6/5/2012	4.813	6/6/2013	2.873
6/6/2012	4.457	6/7/2013	2.873
6/7/2012	4.407	6/8/2013	3.306
6/8/2012	4.377	6/9/2013	3.756
6/9/2012	4.209	6/10/2013	3.4
6/10/2012	3.707	6/11/2013	3.666
6/11/2012	3.489	6/12/2013	4.402
6/12/2012	3.577	6/13/2013	4.272
6/13/2012	3.472	6/14/2013	4.332
6/14/2012	3.788	6/15/2013	4.833
6/15/2012	3.454	6/16/2013	4.135
6/16/2012	3.285	6/17/2013	3.842
6/17/2012	2.898	6/18/2013	3.942
6/18/2012	2.876	6/19/2013	3.825
6/19/2012	3.019	6/20/2013	3.608
6/20/2012	2.989	6/21/2013	3.449
6/21/2012	2.885	6/22/2013	3.305
6/22/2012	2.867	6/23/2013	2.975
6/23/2012	2.801	6/24/2013	2.883
6/24/2012	2.572	6/25/2013	3.058
6/25/2012	2.486	6/26/2013	3.121
6/26/2012	2.787	6/27/2013	3.044
6/27/2012	2.851	6/28/2013	2.958
6/28/2012	2.626	6/29/2013	3.427
6/29/2012	2.511	6/30/2013	3.427
6/30/2012	2.485	7/1/2013	3.584
7/1/2012	2.265	7/2/2013	3.827
7/2/2012	2.146	7/3/2013	3.657
7/3/2012	2.441	7/4/2013	4.418
7/4/2012	2.409	7/5/2013	4.022
7/5/2012	2.414	7/6/2013	3.869
7/6/2012	2.42	7/7/2013	3.436
7/7/2012	2.39	7/8/2013	3.348
7/8/2012	2.17	7/9/2013	3.333
7/9/2012	2.072	7/10/2013	4
7/10/2012	2.375	7/11/2013	5.17
7/11/2012	2.277	7/12/2013	5.246
7/12/2012	2.164	7/13/2013	4.568
7/13/2012	2.229	7/14/2013	4.036
7/14/2012	2.248	7/15/2013	3.741
7/15/2012	1.943	7/16/2013	3.893
7/16/2012	2.062	7/17/2013	3.642
7/17/2012	2.292	7/18/2013	3.617
7/18/2012	2.263	7/19/2013	3.355
7/19/2012	2.271	7/20/2013	3.369
7/20/2012	2.216	7/21/2013	3.023
7/21/2012	2.166	7/22/2013	2.844
7/22/2012	1.901	7/23/2013	3.021
7/23/2012	1.975	7/24/2013	4.864
7/24/2012	2.252	7/25/2013	4.339
7/25/2012	2.24	7/26/2013	3.924
7/26/2012	2.062	7/27/2013	4.363
7/27/2012	2.266	7/28/2013	3.587
7/28/2012	2.27	7/29/2013	3.195
7/29/2012	1.943	7/30/2013	3.479
7/30/2012	1.914	7/31/2013	3.121
7/31/2012	2.188	8/1/2013	3.114
8/1/2012	2.111	8/2/2013	3.076
8/2/2012	2.156	8/3/2013	3.048
8/3/2012	2.089	8/4/2013	2.724
8/4/2012	2.022	8/5/2013	2.645
8/5/2012	1.876	8/6/2013	2.813
8/6/2012	1.953	8/7/2013	2.813
8/7/2012	2.111	8/8/2013	2.895
8/8/2012	2.047	8/9/2013	2.875
8/9/2012	2.048	8/10/2013	3.423
8/10/2012	2.106	8/11/2013	2.88
8/11/2012	2.264	8/12/2013	2.743

8/12/2012	2.507	8/13/2013	2.863
8/13/2012	2.451	8/14/2013	3.039
8/14/2012	2.515	8/15/2013	2.885
8/15/2012	2.551	8/16/2013	2.807
8/16/2012	2.582	8/17/2013	2.723
8/17/2012	2.523	8/18/2013	2.483
8/18/2012	2.403	8/19/2013	2.414
8/19/2012	2.081	8/20/2013	2.673
8/20/2012	1.961	8/21/2013	2.786
8/21/2012	2.321	8/22/2013	2.028
8/22/2012	2.271	8/23/2013	2.661
8/23/2012	2.175	8/24/2013	2.671
8/24/2012	2.31	8/25/2013	2.453
8/25/2012	2.197	8/26/2013	2.41
8/26/2012	2.023	8/27/2013	2.767
8/27/2012	1.977	8/28/2013	2.547
8/28/2012	2.273	8/29/2013	3.038
8/29/2012	2.469	8/30/2013	3.298
8/30/2012	2.169	8/31/2013	3.081
8/31/2012	2.273	9/1/2013	2.785
9/1/2012	2.237	9/2/2013	3.266
9/2/2012	2.038	9/3/2013	3.377
9/3/2012	1.931	9/4/2013	3.432
9/4/2012	2.061	9/5/2013	3.185
9/5/2012	2.368	9/6/2013	3.034
9/6/2012	2.405	9/7/2013	2.901
9/7/2012	2.367	9/8/2013	2.74
9/8/2012	2.186	9/9/2013	2.755
9/9/2012	2.224	9/10/2013	2.807
9/10/2012	2.12	9/11/2013	2.847
9/11/2012	2.331	9/12/2013	5.405
9/12/2012	2.275	9/13/2013	7.32
9/13/2012	2.301	9/14/2013	7.407
9/14/2012	2.397	9/15/2013	5.502
9/15/2012	2.317	9/16/2013	4.782
9/16/2012	2.075	9/17/2013	4.713
9/17/2012	2.025	9/18/2013	4.16
9/18/2012	2.204	9/19/2013	4.202
9/19/2012	2.7	9/20/2013	4.041
9/20/2012	3.068	9/21/2013	3.895
9/21/2012	2.603	9/22/2013	3.71
9/22/2012	2.567	9/23/2013	3.762
9/23/2012	2.363	9/24/2013	3.719
9/24/2012	2.51	9/25/2013	3.743
9/25/2012	2.593	9/26/2013	3.441
9/26/2012	2.559	9/27/2013	3.316
9/27/2012	2.593	9/28/2013	3.215
9/28/2012	2.551	9/29/2013	2.892
9/29/2012	2.859	9/30/2013	2.844
9/30/2012	2.666	10/1/2013	3.343
10/1/2012	2.633	10/2/2013	3.301
10/2/2012	2.887	10/3/2013	3.395
10/3/2012	2.747	10/4/2013	2.948
10/4/2012	2.933	10/5/2013	3.465
10/5/2012	3.021	10/6/2013	2.977
10/6/2012	2.776	10/7/2013	3.067
10/7/2012	2.426	10/8/2013	3.47
10/8/2012	2.371	10/9/2013	3.451
10/9/2012	2.659	10/10/2013	3.414
10/10/2012	2.732	10/11/2013	3.277
10/11/2012	2.701	10/12/2013	2.395
10/12/2012	2.708	10/13/2013	2.964
10/13/2012	2.744	10/14/2013	2.818
10/14/2012	2.354	10/15/2013	3.092
10/15/2012	1.797	10/16/2013	2.754
10/16/2012	2.576	10/17/2013	2.622
10/17/2012	2.509	10/18/2013	3.121
10/18/2012	2.524	10/19/2013	3.267
10/19/2012	2.485	10/20/2013	3.062
10/20/2012	2.606	10/21/2013	2.969
10/21/2012	2.572	10/22/2013	3.056
10/22/2012	2.422	10/23/2013	3.112
10/23/2012	2.56	10/24/2013	2.927
10/24/2012	2.591	10/25/2013	2.983
10/25/2012	2.424	10/26/2013	2.971
10/26/2012	2.473	10/27/2013	2.743

10/27/2012	2.385	10/28/2013	2.669
10/28/2012	2.135	10/29/2013	3.041
10/29/2012	2.159	10/30/2013	2.908
10/30/2012	2.867	10/31/2013	2.92
10/31/2012	3.798	11/1/2013	2.991
11/1/2012	6.038	11/2/2013	3.193
11/2/2012	4.364	11/3/2013	2.953
11/3/2012	3.645	11/4/2013	2.869
11/4/2012	3.41	11/5/2013	2.99
11/5/2012	3.189	11/6/2013	2.993
11/6/2012	3.272	11/7/2013	2.909
11/7/2012	3.081	11/8/2013	3.035
11/8/2012	2.865	11/9/2013	2.886
11/9/2012	2.853	11/10/2013	2.641
11/10/2012	2.825	11/11/2013	2.638
11/11/2012	2.521	11/12/2013	2.746
11/12/2012	2.528	11/13/2013	2.867
11/13/2012	2.661	11/14/2013	2.901
11/14/2012	2.778	11/15/2013	2.833
11/15/2012	2.71	11/16/2013	2.834
11/16/2012	2.573	11/17/2013	2.538
11/17/2012	2.61	11/18/2013	2.647
11/18/2012	2.338	11/19/2013	3.002
11/19/2012	2.324	11/20/2013	3.845
11/20/2012	2.598	11/21/2013	1.788
11/21/2012	2.501	11/22/2013	2.719
11/22/2012	2.419	11/23/2013	2.839
11/23/2012	2.006	11/24/2013	2.612
11/24/2012	2.1	11/25/2013	2.596
11/25/2012	2.048	11/26/2013	3.333
11/26/2012	2.166	11/27/2013	2.23
11/27/2012	2.457	11/28/2013	3.688
11/28/2012	2.496	11/29/2013	3.174
11/29/2012	2.428	11/30/2013	3.205
11/30/2012	2.462	12/1/2013	3.09
12/1/2012	2.333	12/2/2013	3.136
12/2/2012	2.092	12/3/2013	3.295
12/3/2012	2.14	12/4/2013	3.348
12/4/2012	2.434	12/5/2013	3.196
12/5/2012	2.408	12/6/2013	3.15
12/6/2012	2.382	12/7/2013	3.194
12/7/2012	2.317	12/8/2013	2.998
12/8/2012	2.216	12/9/2013	2.963
12/9/2012	2.325	12/10/2013	3.133
12/10/2012	2.159	12/11/2013	3.18
12/11/2012	2.592	12/12/2013	3.066
12/12/2012	2.467	12/13/2013	2.963
12/13/2012	2.47	12/14/2013	2.97
12/14/2012	2.253	12/15/2013	2.72
12/15/2012	2.334	12/16/2013	2.596
12/16/2012	2.092	12/17/2013	2.87
12/17/2012	2.093	12/18/2013	2.836
12/18/2012	2.345	12/19/2013	2.658
12/19/2012	2.499	12/20/2013	2.856
12/20/2012	2.348	12/21/2013	2.778
12/21/2012	2.356	12/22/2013	2.612
12/22/2012	2.855	12/23/2013	2.794
12/23/2012	2.575	12/24/2013	3.399
12/24/2012	2.568	12/25/2013	3.563
12/25/2012	2.664	12/26/2013	3.078
12/26/2012	2.253	12/27/2013	3.348
12/27/2012	2.614	12/28/2013	3.289
12/28/2012	2.534	12/29/2013	3.179
12/29/2012	2.525	12/30/2013	3.431
12/30/2012	2.32	12/31/2013	3.969
12/31/2012	2.268		
Averages	**2.72**		**3.10**

Water Supply	2008	2009	2010	2011	2012	2013	Average	Non-Summer
JANUARY	71.61	70.85	71.84	66.27	59.73	62.09	67.06	67.06
FEBRUARY	71.85	66.30	68.38	62.35	54.86	54.69	63.07	63.07
MARCH	72.59	68.36	77.98	65.12	57.16	60.91	67.02	67.02
APRIL	79.39	69.04	78.99	61.55	63.17	62.37	69.08	69.08
MAY	80.32	77.59	83.84	68.04	60.98	67.92	73.12	(exclude)
JUNE	83.98	71.03	78.89	66.84	64.17	64.68	71.60	(exclude)
JULY	80.98	70.14	86.90	76.60	76.10	72.43	77.19	(exclude)
AUGUST	74.63	73.80	82.21	69.23	76.03	81.09	76.16	(exclude)
SEPTEMBER	77.94	75.38	81.40	71.48	74.92	77.18	76.38	(exclude)
OCTOBER	76.12	70.89	76.31	68.25	75.23	67.40	72.37	72.37
NOVEMBER	64.91	65.38	70.95	57.14	67.25	57.56	63.86	63.86
DECEMBER	70.42	68.50	68.51	58.35	58.69	58.29	63.79	63.79
TOTAL	904.75	847.26	926.20	791.22	788.29	786.60	840.72	466.27
Average day (MGD)	2.47	2.32	2.54	2.17	2.16	2.16	2.30	2.19
Total annual effl gallons at WWTP (MGY)	1298	1195	1131	1363	996	1130	1186	3.25 MGD
% Inflow/Infiltration	30%	29%	18%	42%	21%	30%	29%	33%

% I/I calculation does not account for water lost to leakage in water system, sewer exfiltration, evaporation, irrigation, water discharged to ground or other locations, or any private wells.

SEPTAGE/HOLDING TANK FLOWS

Month	Septage Gal	Holding Tank
Jan '12	101,550	103,300
Feb '12	112,050	125,150
Mar '12	157,650	106,750
Apr '12	364,300	118,050
May '12	441,870	232,100
Jun '12	411,850	242,350
Jul '12	458,940	277,650
Aug '12	463,835	208,350
Sep '12	421,000	191,050
Oct '12	510,800	157,100
Nov '12	384,600	192,000
Dec '12	133,950	123,400
Jan '13	90,850	136,350
Feb '13	56,850	108,600
Mar '13	88,850	112,700
Apr '13	273,300	109,850
May '13	420,570	149,594
Jun '13	342,590	117,600
Jul '13	438,790	155,030
Aug '13	467,515	213,433
Sep '13	533,914	130,650
Oct '13	608,650	124,845
Nov '13	414,250	82,805
Dec '13	146,400	108,650
Jan '14	99,950	136,925
Feb '14	75,350	105,895
Average Month	308,470	148,853
Average GPD	10,141	4,894

Marlborough and Swanzey Monthly Flows, 2012-13

	Marlborough	Swanzey
Month Ending	MG	MG
1/31/2012	4.30	1.36
2/29/2012	3.93	1.04
3/31/2012	4.27	1.08
4/30/2012	3.58	1.07
5/31/2012	3.97	1.33
6/30/2012	3.62	0.91
7/31/2012	3.33	1.43
8/31/2012	3.42	1.09
9/30/2012	3.41	1.00
10/31/2012	3.87	1.30
11/30/2012	3.73	1.01
12/31/2012	3.52	1.26
1/31/2013	3.79	1.07
2/28/2013	3.48	1.07
3/31/2013	4.23	1.09
4/30/2013	4.47	1.37
5/31/2013	3.94	1.05
6/30/2013	4.21	1.15
7/31/2013	3.59	1.49
8/31/2013	3.41	1.13
9/30/2013	3.67	1.36
10/31/2013	3.50	1.07
11/30/2013	3.45	1.07
12/31/2013	3.63	1.40
Average MGM	3.763	1.175
Average MGD	0.124	0.039

Industry	Flows Present at Monitoring Location	Monitored Flow (avg. gpd)			Total Permitted	% Process	Process Permitted	Notes
		2010	2011	2014				
Cheshire Oil Car Wash	industrial	2,400	2,400	0	0			closed
Cheshire Medical Center	industrial/domestic	40,531	30,553	33,405	30,000	51%	15,300	Approx. 6,800 gpd from laundering
Corning Net Optix	industrial	1,165	1,165	668	1,165	100%	1,165	
EVS Metals	industrial	-	-	23	50	100%	50	New IU - Fall 2014
Findings (closed)	industrial	33	33	0	0		0	
Janos	industrial	127	127	127	150	100%	150	
Kingsbury (closed)	industrial	244	244	0	0		0	
Markem-Imaje	industrial	1,673	1,673	1,343	1,730	81%	1,400	Peak= 2800
People's	industrial/domestic	69,354	69,354	72,619	80,000	100%	80,000	
SNF Finishing	industrial				3,840	100%	3,840	New IU - Permitting in process
The Mountain Corp	industrial/domestic	20,839	26,999	38,674	75,000	100%	75,000	2014 - Increased flow by 25,000 gpd for pending IDR
Timken 1	industrial/domestic	16,755	8,974	25,223	25,000	64.0%	16,000	Actual estimated combined flows: process=13847; non-process=11376. Flow values are from meter measurements at both plants for past 12 months - Timken 1 & 2 consolidated into a single location in 2014
Timken 2	industrial/domestic	4,864	4,864	0	0	0.0%	0	All operations have now been transferred to Timken 1
WTF	industrial	26,300	26,300	51,000	37,000	100%	37,000	WTF discharge is now usually daily
	TOTALS	184,285	172,686	223,082	253,935		229,905	

2006 Local Pollutant Controls Study - QA/QC results

All information below was tabulated by the City of Keene.
All results in mg/L unless otherwise noted.
"J" flagged results = Values reported between RL and MDL are indicated as J-result

Wastewater metals, ammonia and cyanide results = If not detected, indicated as **<Method Detection Limit**

	9/6/2006	True Value	Acceptable range	9/12/2006	True Value	Acceptable range	9/15/2006	True Value	Acceptable range
Sample ID =	STD090606			STD091206			STD091506		
Parameter									
TSS									
BOD	163	240	see narrative				144	200	see narrative
Ammonia	9.4								
Antimony	0.026	0.0284	0.0240 - 0.0322						
Arsenic	0.074	0.0766	0.0632 - 0.0856						
Beryllium	0.0054	0.00562	0.0469 - 0.0659						
Cadmium	0.021	0.00214	0.0184 - 0.0228						
Chromium	0.057	0.0592	0.0528 - 0.0646						
Copper	0.27	0.281	0.255 - 0.305						
Lead	0.024	0.022	0.0197 - 0.0247						
Mercury				0.0049	0.00447	0.00342 - 0.00552			
Molybdenum	**J** 0.022	0.023	0.0194 - 0.0266						
Nickel	0.19	0.190	0.171 - 0.209						
Selenium	0.026	0.0277	0.0230 - 0.0322						
Silver	0.32	0.329	0.298 - 0.364						
Zinc	0.65	0.631	0.580 - 0.676						
Cyanide				0.48	0.529	0.394 - 0.664			

Primary effluent		**Duplicate**	RPD %	**Influent**	**Inf Duplicate**	RPD %	**Secondary effluent**		**Spiked sample**	**Rec %**
	9/5-6/06 1510-1510	9/5-6/06 1510-1510		9/5-6/06 0850-0850	9/5-6/06 0850-0850			9/6-7/06 1055-1055	9/6-7/06 1055-1055	
Parameter							Parameter			
TSS	50	51.6	3.1				TSS			
BOD	140	137	2.2				BOD			
Ammonia	22	23	4.4				Ammonia	**<0.166**	5.7	97
Cyanide	**J** 0.0020			**J** 0.0030	**J** 0.0020	40	Cyanide			
Antimony	**<0.0019**	**<0.0019**					Antimony	**<0.0019**	0.021	66.5
Arsenic	**<0.00156**	**<0.00156**					Arsenic	**<0.00156**	0.042	81.9
Beryllium	**<0.0001**	**<0.0001**					Beryllium	**J** 0.00061	0.027	92.9
Cadmium	**J** 0.00019	**J** 0.00037	64.3				Cadmium	**J** 0.00085	0.009	86.1
Chromium	**<0.001**	**<0.001**					Chromium	**J** 0.0041	0.022	74.9
Copper	0.063	0.057	10				Copper	**J** 0.016	0.062	82.3
Lead	**J** 0.0013	**J** 0.0014	7.4				Lead	**J** 0.0013	0.033	95.5
Mercury	**J** 0.000094	**J** 0.000078	18.6				Mercury	**<0.00005176**		
Molybdenum	**J** 0.012	**J** 0.012	0				Molybdenum	**J** 0.013	**<0.025**	26
Nickel	**J** 0.0039	**J** 0.0044	12				Nickel	**J** 0.0063	**<0.040**	84.9
Selenium	**<0.00086**	**<0.00086**					Selenium	**<0.00086**	0.06	83.2
Silver	**<0.002**	**<0.002**					Silver	**<0.002**	0.033	83.1
Zinc	0.093	0.100	7.3				Zinc	0.055	0.072	75.9

Septage	9/12/2006	9/12/2006		9/12/2006						
	10 (Received 9/8-12/06)	**duplicate**	RPD %	**spiked sample**	Rec %					
	9-sept; 1-Car Wash HT						**Sludge**			
	18,200-sept; 3,500-HT							**Duplicate**	RPD %	
							9/8/2006	9/8/2006		
TSS	10050	9730	3.2							
BOD	4020	3931	2.2							
Ammonia	100	100	0	120	80		8900	8500	4.6	
Cyanide	0.010	0.010	0	2.4	90.5		**<1.9**	**<2.0**	below detection	
Antimony	0.016	0.018	11.8	2.3	69.5		**J** 5.31	**<27.0**		
Arsenic	0.021	0.014	40	3.3	82.3		**J** 17.9	**J** 11.8	41	
Beryllium	0.0044	**J** 0.002		1.4	86.7		**J** 0.270	**J** 0.245	9.7	
Cadmium	0.023	0.02	14	2.5	82.6		**J** 0.777	**J** 0.779	0.25	
Chromium	0.21	0.21	0	4.2	89.2		19	17.6	7.65	
Copper	7.3	7.1	2.8	10	65.9		516	486	5.99	
Lead	0.41	0.40	2.5	4.4	86.4		39.6	37.6	5.18	
Mercury	0.0063	0.0089	34.2	0.023	74.6		1.06	1.04	1.9	
Molybdenum	0.100	0.100	0	2	82.8		**J** 11.7	**J** 11.2	4.37	
Nickel	0.26	0.23	12.2	0.83	84.4		**J** 10.0	**J** 10.5	4.89	
Selenium	**J** 0.0094	**J** 0.004		0.98	76.3		**J** 15.2	**J** 13.6	11.11	
Silver	0.031	0.03	3.3	1.9	91.6		11.5	10.7	7.2	
Zinc	12	11	8.7	15	57.7		556	528	5.17	
						% moisture	81.9	82.1		

Monadnock Marketplace-West Keene	9/5-6/06	**duplicate** 9/5-6/06	RPD %	9/11-12/06	**spiked** 9/11-12/06	9/6/2006	**duplicate 9/6/06**	RPD %	**spiked sample 9/6/06**	REC %
Parameter										
TSS	312	384	20.7			**J** 0.0030	**J** 0.0040	0.3	0.92	109.5
BOD	202	178	12.6							
Ammonia	12	12	0							
Antimony	**<0.0019**	**<0.0019**								
Arsenic	**<0.00156**	**<0.00156**								
Beryllium	**J** 0.00042	**<0.0001**								
Cadmium	**J** 0.00060	**< 0.0001**								
Chromium	**J** 0.0063	**J** 0.0051	21.1							
Copper	0.10	0.11	9.5							
Lead	**J** 0.0048	**J** 0.0019	86.6			Recovery %				
Mercury	**J** 0.00012	0.00037	102	**J** 0.000055	0.0074	145				
Molybdenum	**J** 0.011	**J** 0.0035	103							
Nickel	**J** 0.0070	**J** 0.0048	37.3							
Selenium	**<0.00086**	**J** 0.0028								
Silver	**<0.002**	**<0.002**								
Zinc	0.16	0.15	6.4							

High and Elm Street intersection-East/central Keene	09/5-6/2006	**duplicate** 09/5-6/2006	RPD %
Parameter			
TSS	69.6	341	132
BOD	243	143	51.8
Ammonia	24	24	0
Antimony	**<0.0019**	**<0.0019**	
Arsenic	**<0.00156**	**<0.00156**	
Beryllium	**<0.0001**	**J** 0.00015	
Cadmium	**J** 0.00016	**J** 0.00024	40
Chromium	**<0.001**	**<0.001**	
Copper	0.11	0.11	0
Lead	**J** 0.0032	**J** 0.0059	59
Mercury	**<0.00005176**	**<0.00005176**	
Molybdenum	**J** 0.0029	**J** 0.0037	34
Nickel	**J** 0.0045	**J** 0.0044	2.2
Selenium	**J** 0.0016	**<0.00086**	
Silver	**<0.002**	**<0.002**	
Zinc	0.14	0.12	15.4
		duplicate	
	9/6/2006	9/6/2006	
Cyanide	**J** 0.0030	**J** 0.0050	50

WWTF Split sample results

	Influent - 09/06/06			Primary effluent - 09/07/06			Secondary effluent - 09/07/06		
	Keene City Lab	AMRO	RPD %	Keene City Lab	AMRO	RPD %	Keene City Lab	AMRO	RPD %
	ug/L	ug/L		ug/L	ug/L		ug/L	ug/L	
Copper	94	80	16.1	59	61	3.3	16.9	13	26
Lead	6.0	8.4	33.3	2.2	J 1.9	14.6	0.9	< 0.57	
Zinc	131	140	6.6	59	87	38.4	51	67	see narrative

Summary of Quality Control Samples (2007 Study)

The City of Keene selected AMRO Laboratory and EAI Analytical Laboratory to perform the majority of analytical work for the 2006/2007 Local Limits project. Keene City Laboratory (KCL) performed the Total Suspended Solids (TSS) analysis for this project. To verify data quality the laboratories were sent a variety of quality control samples such as standards, spikes and duplicates. A duplicate was collected from each site location and a known standard and spike was tested for each parameter. Split samples from the influent, primary effluent and secondary effluent were analyzed by KCL and AMRO for lead, copper and zinc.

Known quality control standards:

For the known quality control standards KCL used standards from outside sources as well as in-house standards.

The metals quality control sample was purchased from Environmental Resources Associates (ERA). ERA is a vendor that provides proficiency and quality control standards. All the metals analyzed by AMRO were acceptable according to ERA's acceptance criteria.

The ammonia quality control sample was made in house at a concentration of 10 ppm and AMRO reported a result that was within +/-10 % of the true value.

EAI Analytical Labs was selected to perform the BOD analysis. The BOD quality control sample was also purchased from an outside vendor. The initial quality control sample sent to EAI was manufactured by Alpha-Trol Inc. EAI reported a result that was lower than the acceptable range deemed appropriate by Alpha-Trol Inc. Therefore, it was necessary to send EAI another quality control standard. This standard was made in house and consisted of glucose and glutamic acid at a concentration of 200 mg/L. EAI reported a value that was lower than acceptable range (using +/- 20 % from the true value). Staff members from the City of Keene met with EAI to discuss the results. During the meeting EAI staff presented historical proficiency data as well as the results of a recently performed rapid proficiency test to prove that EAI generates quality data. EAI argued the proficiency samples have a larger acceptable range than that of Alpha-Trol Inc. Therefore, the proficiency ranges were applied to the two BOD quality control samples and both fell within those acceptable ranges.

The cyanide and mercury quality control samples were purchased from ERA and the results for both parameters were acceptable according to ERA's acceptance criteria.

Spikes:

The lab staff spiked a septage (Sep091206) sample for cyanide, ammonia and metals. For the metals and cyanide the staff used an ERA standard for the spike. The ammonia spike was made from an in-house standard. The City of Keene staff evaluated the results

using 80 to 120 percent as acceptable levels of recovery. The spike recoveries for the metals antimony (69.5 %), copper (65.9 %), mercury (74.6 %), selenium (76.3%) and zinc all fell below the 80 percent recovery with zinc having the lowest percent recovery at 57.7 percent.

Keene lab staff spiked a sample of secondary effluent (SEC090606) for metals and ammonia. Using the same acceptance criteria the results were evaluated and the metals antimony (66.5%), chromium (74.9%), molybdenum and zinc (75.9 %) were all below the 80 percent recovery level with molybdenum having the lowest percent recovery at 26 percent. The results for molybdenum were below the reporting limit and therefore the results were reported as J qualified.

Keene lab staff spiked a sample from the domestic site Monadnock Marketplace for cyanide with a reported percent recovery of 110 percent.

Duplicates:

Keene lab staff collected a field duplicate sample from the primary effluent (PEC090606) for metals, BOD, TSS and ammonia. The results were evaluated using a relative percent difference (RPD) of less than 20 as acceptance criteria. Cadmium was the only analyte that fell outside the acceptable range with a duplicate RPD of 64.3 percent. The result for cadmium was below the reporting limit and therefore the results were reported as J qualified.

Keene lab staff collected a field duplicate sample from septage (SEP091206) for metals, BOD, TSS, cyanide and ammonia. The results were evaluated using the same acceptance criteria. The results for arsenic (40 %) and mercury (34.2 %) did not meet the acceptance criteria.

Keene lab staff collected a sample of sludge (CAK090806) and split the sample into different containers and analyzed both for metals, cyanide and ammonia. The results were evaluated using the same acceptance criteria. Arsenic was the only analyte with a reported result outside the acceptable range with a duplicate RPD of 41 percent.

Keene lab staff collected samples from the domestic location High and Elm Street (HEG090606) and from the wastewater treatment plant's influent (ING090506) and split the samples into different containers and analyzed both for cyanide with a reported duplicate RPD of 50 and 40 percent. Both samples were below the reporting limit and therefore the results were reported as J qualified.

Keene lab staff collected a field duplicate from the domestic location sample High and Elm Street (HEC 090506) for metals, BOD, TSS and ammonia. Cadmium (40 %), molybdenum (34 %) and lead (59 %) were not within the acceptable range. However, all the results were below the reporting limit and therefore the results were reported as J qualified.

The results for BOD (51.8 %) and TSS (132 %) were also greater than the acceptable range. The number reported for the sample was 69.6 mg/L and the duplicate sample was 341 mg/L. The TSS numbers were used for calculating mass balance and for determining screening levels, not limits, and therefore further investigation was not performed.

Keene lab staff collected a field duplicate sample from the domestic location Monadnock Marketplace for metals, BOD, TSS and ammonia. The metals chromium (21.1 %), lead (86.6 %), mercury (102 %), molybdenum (103 %) and nickel (37.3 %) were not within the acceptable range. However, all the results were below the reporting limit and therefore the results were reported as J qualified. The TSS duplicate RPD was calculated at 20.7 percent.

Split Samples:

KCL and AMRO Laboratory split samples of influent, primary effluent and secondary effluent for lead, copper and zinc.

The results were evaluated using the same acceptance criteria of less than 20 % RPD. The results for the influent split sample for lead are as follows: AMRO reported 8.4 ppb and KCL reported 6.0 ppb for a calculated duplicate RPD of 33.3 %.

The results for the primary effluent split sample for zinc are as follows: AMRO reported 87 ppb and KCL reported 59 ppb for a calculated duplicate RPD of 38.4%.

The results for the secondary effluent split sample for copper are as follows: AMRO reported 13 ppb and KCL reported 16.9 ppb with a calculated duplicate RPD of 26 %. For zinc, AMRO reported two sets of results; 67 ppb and then reran the sample and reported 57.4 ppb. KCL reported 51 ppb for zinc.

Conclusions:

AMRO Laboratory passed all of the quality control standards for metals, ammonia and cyanide. EAI proved by providing copies of its proficiency reports that historically they have never failed a proficiency test for BOD.

Overall, 63.3 percent of the spike recoveries were within the acceptable range of 80 to 120 percent and 83.3 percent of the spike recoveries were within the range of 70-120 percent recovery. Factors including detection limits, sample matrix, matrix interference and the spike concentration can all influence the spike recovery.

Overall, 72.9 percent of the duplicate RPD’s had a relative percent difference of less than 20 percent. Factors such as sample matrix and detection limits can all influence the duplicate RPD results. After reviewing the quality control data the City of Keene has determined that the data provided adequate quality control verification for the Local Limits project.

The City of Keene planned to conduct its local limits sampling program at a time when WWTP flows were at a level consistent with what would be considered dry weather flows. Based upon historical flow measurements, the City set a target of 2.5-2.9 MGD as a range typical of dry weather flows. Due to a wet summer, flows remained above this level for most of the year. On Friday, August 25, secondary effluent flows had come down to 2.837 MGD. The two day average for Aug-25-26 was 2.918, right at the high end of the low flow target range. With no forecast for significant rainfall, and concern over meeting the Report deadline, this was deemed appropriate for beginning the sampling. Table 1 below shows the WWTP flows in the days leading up to each sampling week.

The main portion of the sampling occurred during the weeks of August 28-September 1, and September 5-8. Although the flows during the sampling days ended up being slightly above 2.9 MGD, they were not substantially greater (see Table 2 below). The City believes that it took the appropriate action to sample at this time.

Table 1. Keene WWTP secondary effluent flows used to determine dry weather flow

	MGD	Avg. MGD
Friday, August 25	2.837	
Saturday, August 26	2.999	2.918
Friday, September 1	3.003	
Saturday, September 2	2.869	
Sunday, September 3	2.731	
Monday, September 4	2.833	2.859

Table 2. Keene WWTP secondary effluent flows

		MGD	Avg. MGD	
Friday	08/25/2006	2.837		
Saturday	08/26/2006	2.999		
Sunday	08/27/2006	2.698		
Monday	**08/28/2006**	**2.837**		
Tuesday	**08/29/2006**	**3.087**		
Wednesday	**08/30/2006**	**3**		
Thursday	**08/31/2006**	**3.022**		
Friday	**09/01/2006**	**3.003**	2.9898	M-F avg
Saturday	09/02/2006	2.869		
Sunday	09/03/2006	2.731		
Monday	09/04/2006	2.833		
Tuesday	**09/05/2006**	**2.867**		
Wednesday	**09/06/2006**	**3.003**		
Thursday	**09/07/2006**	**2.854**		
Friday	**09/08/2006**	**2.86**	2.896	T-F avg

5. REMOVAL EFFICIENCIES

A major element required for determining the WWTP's Maximum Allowable Headworks Loadings (MAHLs) – the maximum pollutant loading at the WWTP headworks intended to prevent pass through or inference – is removal efficiency values.

The primary methodology chosen for this local limits evaluation to determine removal efficiencies is the mean removal efficiency (MRE) method, which is one of three methodologies described in EPA's 2004 Local Limits Development Guidance document. Using MRE, all influent sample results are averaged and all effluent sample results are averaged. These average values are then used to calculate the WWTP's removal efficiency from the headworks to the final effluent. In this study, primary and secondary effluent concentrations were obtained to calculate both primary and secondary removal efficiency values.

The 2007 Local Limits study used the average daily removal efficiency (ADRE) method. At that time, the ADRE was selected after communications with EPA Region 1 indicating a preference for that approach, on the basis that it better reflected performance changes due to varying wastewater flow rates. Using ADRE, an influent sample result is paired with an effluent sample result to calculate a daily removal rate. The average of all daily removal rates is then calculated to determine the WWTP's removal efficiency from the headworks to the WWTP's effluent. In this and the 2012 study, a significant quantity of unpaired influent/effluent data are included in the calculations, which for the most part precludes using ADREs. However, the 2007 data for antimony, beryllium, cyanide, mercury and selenium were obtained using lower reporting limit methods, and that data was retained for this update. Since that data was paired and the ADRE method was used for that data, those 2007 study removal rates have been carried forward into this report.

For the MRE method, the removal efficiency calculation is:

$$R_{wwtf} = (C_{INF} - C_{EFF}) \div (C_{INF})$$

where:

R_{wwtf} = WWTF overall removal efficiency (as decimal)
C_{INF} = Average influent concentration (mg/L)
C_{EFF} = Average effluent concentration (mg/L)

When the influent/effluent or effluent results were less than the analytical reporting limits, meaningful removal efficiency values could not be calculated. When this occurred, several alternative approaches to selecting a removal efficiency value were considered.

The only approach selected was to fall back on the default removal efficiency values from EPA's 2004 guidance document (Appendix R), if available.

Removal efficiencies were also previously calculated using sludge data and influent pollutant concentrations, and determining on a mass basis the percentage of the influent loadings that fraction into the WWTP sludge. The significant time period of measurements used in this third iteration of this study, resulted in inappropriate analyses, such as 2006 influent data being evaluated against recent sludge measurements. A consistent approach to using or rejecting specific data could not be formulated. Therefore, this assessment method was discontinued.

A general discussion regarding the removal efficiency values finally incorporated into this local limits study is provided in the removal efficiency tables.

Attachments to this section:

- *Removal Efficiency Tables*
- *EPA Guidance Manual Removal Efficiencies*

ANTIMONY

Dates Sampled	Influent (mg/L)	Primary Effluent* (mg/L)	Secondary Effluent* (mg/L)	Primary Removal Efficiency %	Secondary Removal Efficiency %
8/28/2006	< 0.0019	< 0.0019	< 0.0019	NA	NA
8/29/2006	< 0.0019	< 0.0019	< 0.0019	NA	NA
8/30/2006	< 0.0019	< 0.0019	< 0.0019	NA	NA
9/5/2006	< 0.0019	< 0.0019	< 0.0019	NA	NA
9/6/2006	< 0.0019	< 0.0019	< 0.0019	NA	NA
			Average Calculated Removal Rates	**NA**	**NA**

*Primary and secondary effluent samples were staggered after the influent samples to reflect detention time through WWTP

NA = The measurements are inadequate to allow a calculated removal efficiency

OTHER REMOVAL EFFICIENCY DATA

EPA Local Limits Guidance Removal Rates	**NA**	**NA**

DISCUSSION

The field sampling program results reported above are less than analytical method reporting limits, which does not allow for the direct calculation of removal efficiencies. EPA Local Limits Guidance default data is not available for antimony. The lowest reported EPA Guidance removal efficiency for other metals is 42%. The lower removal efficiency will be used in this study (more conservative for water quality-based calculations). This is a conservative approach, since antimony's limiting headworks loading is driven by water quality-based criteria, which is more stringent when lower removal rates are applied. The primary removal rate was estimated to be one third of the secondary rate. This is consistent with the EPA Guidance primary/secondary removal efficiency ratios calculated for other metals. This approach yields values as follow:

ANTIMONY REMOVAL EFFICIENCIES USED FOR FURTHER EVALUATIONS

Primary	Secondary
14%	**42%**

ARSENIC

Dates Sampled	Influent (mg/L)	Primary Effluent (mg/L)	Secondary Effluent (mg/L)	Primary Removal Efficiency %	Secondary Removal Efficiency %
Feb 2011	< 0.0005	< 0.00125	< 0.0005	NA	NA
			Average Calculated Removal Rates	**NA**	**NA**

NA = The measurements are inadequate to allow a calculated removal efficiency

OTHER REMOVAL EFFICIENCY DATA

EPA Local Limits Guidance Removal Rates	**NA**	**45%**

DISCUSSION

The field sampling program results are less than analytical method reporting limits, which does not allow for the direct calculation of removal efficiencies. The secondary removal rate for arsenic from EPA Guidance data is 45%. The primary removal rate is estimated to be one third of the secondary rate. This is consistent with the EPA Guidance reported average primary/secondary removal efficiency ratio calculated for other metals.

ARSENIC REMOVAL EFFICIENCIES USED FOR FURTHER EVALUATIONS

Primary	Secondary
15%	**45%**

BERYLLIUM

Dates Sampled	Influent (mg/L)	Primary Effluent* (mg/L)	Secondary Effluent* (mg/L)	Primary Removal Efficiency %	Secondary Removal Efficiency %
8/28/2006	0.00150 J	0.00049 J	0.00011 J	67.3%**	92.7%**
8/29/2006	0.00021 J	0.00031 J	0.00011 J	NA	47.6%
8/30/2006	0.00025 J	0.00018 J	< 0.0001	28.0%	> 60.0%
9/5/2006	< 0.0001	< 0.0001	0.00061 J	NA	NA
9/6/2006	< 0.0001	< 0.0001	0.00012 J	NA	NA
			Average Calculated Removal Rates	**28%**	**54%**

*Primary and secondary effluent samples were staggered after the influent samples to reflect detention time through WWTP

J = estimated value that is less than the reporting limit (RL) but greater than the method detection limit (MDL)

** = Excluded due to questionable influent measurement

NA = The measurements are inadequate to allow a calculated removal efficiency

OTHER REMOVAL EFFICIENCY DATA

EPA Local Limits Guidance Removal Rates	**NA**	**NA**

DISCUSSION

The field sampling program results reported above include measurements greater than analytical method reporting limits. As a result, the average calculated beryllium primary and secondary removal rates were used.

BERYLLIUM REMOVAL EFFICIENCIES USED FOR FURTHER EVALUATIONS

Primary	Secondary
28%	**54%**

CADMIUM

Dates Sampled	Influent (mg/L)	Primary Effluent (mg/L)	Secondary Effluent (mg/L)	Primary Removal Efficiency %	Secondary Removal Efficiency %
Jan 2013 - Dec 2013	0.00050	< 0.00025	< 0.00025	> 49.5%	> 49.5%
			Average Calculated Removal Rates	**> 49%**	**> 49%**

NA = The measurements are inadequate to allow a calculated removal efficiency

OTHER REMOVAL EFFICIENCY DATA

EPA Local Limits Guidance Removal Rates	**15%**	**67%**

DISCUSSION

The field sampling program results for influent cadmium concentrations are generally greater than analytical reporting limits, while the effluent locations were "less than" values. As a result, the average cadmium removal rates are "greater than" values. The EPA secondary removal rate is 67%. The secondary removal efficiency may be considered to fall within a range of 49.5 - 67%. However, since the secondary removal rate is usually significantly greater than the primary rate, the upper value of this range, the EPA default value, was used for the secondary removal rate, and the primary rate was conservatively left at the calculated value.

CADMIUM REMOVAL EFFICIENCIES USED FOR FURTHER EVALUATIONS

Primary	Secondary
49%	**67%**

CHROMIUM

Dates Sampled	Influent (mg/L)	Primary Effluent (mg/L)	Secondary Effluent (mg/L)	Primary Removal Efficiency %	Secondary Removal Efficiency %
Jan 2013 - Dec 2013	0.0046	0.0024	< 0.0005	47.3%	> 89.1%
			Average Calculated Removal Rates	**47%**	**> 89%**

NA = The measurements are inadequate to allow a calculated removal efficiency

OTHER REMOVAL EFFICIENCY DATA

EPA Local Limits Guidance Removal Rates	**27%**	**82%**

DISCUSSION

The field sampling program results for influent and primary effluent chromium concentrations are generally both greater than analytical reporting limits. As a result, the average chromium primary removal rate is considered to be valid. The calculated secondary removal efficiency is a "greater than" value. The EPA secondary removal rate is 82%. Since the calculated removal effficiency indicates a "greater than" value which is higher than the EPA rate of 82%, the calculated rate was used in this study.

CHROMIUM REMOVAL EFFICIENCIES USED FOR FURTHER EVALUATIONS

Primary	Secondary
47%	**89%**

COPPER

Dates Sampled	Influent (mg/L)	Primary Effluent (mg/L)	Secondary Effluent (mg/L)	Primary Removal Efficiency %	Secondary Removal Efficiency %
Jan 2012 - Dec 2013	0.139	0.033	0.0052	75.9%	96.3%
			Average Calculated Removal Rates	**76%**	**96.3%**

NA = The measurements are inadequate to allow a calculated removal efficiency

OTHER REMOVAL EFFICIENCY DATA

	Primary	Secondary
EPA Local Limits Guidance Removal Rates	**22%**	**86%**

DISCUSSION

The reported field sampling program results for copper are all greater than analytical method reporting limits. As a result, the copper primary and secondary removal rates are considered valid.

COPPER REMOVAL EFFICIENCIES USED FOR FURTHER EVALUATIONS

Primary	Secondary
76%	**96.3%**

LEAD

Dates Sampled	Influent (mg/L)	Primary Effluent (mg/L)	Secondary Effluent (mg/L)	Primary Removal Efficiency %	Secondary Removal Efficiency %
May 2014	0.0078	< 0.0030	0.00053	> 61.4%	93.2%
			Average Calculated Removal Rates	**> 61%**	**93%**

NA = The measurements are inadequate to allow a calculated removal efficiency

OTHER REMOVAL EFFICIENCY DATA

EPA Local Limits Guidance Removal Rates	**57%**	**61%**

DISCUSSION

The field sampling program results for lead are generally greater than analytical method reporting limits. As a result, the average lead primary and secondary removal rates are considered to be valid.

LEAD REMOVAL EFFICIENCIES USED FOR FURTHER EVALUATIONS

Primary	Secondary
61%	**93%**

MERCURY

Dates Sampled	Influent (mg/L)	Primary Effluent (mg/L)	Secondary Effluent (mg/L)	Primary Removal Efficiency %	Secondary Removal Efficiency %
Aug - Sep 2006	0.00019	0.00010	0.00007	45.6%	60.2%
			Average Calculated Removal Rates	**46%**	**60%**

NA = The measurements are inadequate to allow a calculated removal efficiency

OTHER REMOVAL EFFICIENCY DATA

EPA Local Limits Guidance Removal Rates	**10%**	**60%**

DISCUSSION

The influent and secondary effluent concentrations reported above are greater than analytical method reporting limits . Since site specific removal data can be calculated, those values are used in this evaluation.

MERCURY REMOVAL EFFICIENCIES USED FOR FURTHER EVALUATIONS

Primary	Secondary
46%	**60%**

MERCURY

NICKEL

Dates Sampled	Influent (mg/L)	Primary Effluent (mg/L)	Secondary Effluent (mg/L)	Primary Removal Efficiency %	Secondary Removal Efficiency %
February 2011	0.0030	NA	0.0023	NA	23.3%
			Average Calculated Removal Rates	**NA**	**23%**

NA = The measurements are inadequate to allow a calculated removal efficiency

OTHER REMOVAL EFFICIENCY DATA

EPA Local Limits Guidance Removal Rates	**14%**	**42%**

DISCUSSION

The field sampling program nickel concentrations are all greater than analytical method reporting limits. Corresponding primary effluent concentrations using similar reporting limits are not available, which does not allow for the direct calculation of primary removal efficiency. As a result, only the nickel secondary removal rate is meaningful. A primary removal efficiency of one-third the secondary removal efficiency is estimated - consistent with the EPA Guidance reported average primary/secondary removal efficiency ratio calculated for other metals.

NICKEL REMOVAL EFFICIENCIES USED FOR FURTHER EVALUATIONS

Primary	Secondary
8%	**23%**

SELENIUM

Dates Sampled	Influent (mg/L)	Primary Effluent* (mg/L)	Secondary Effluent* (mg/L)	Primary Removal Efficiency %	Secondary Removal Efficiency %
8/28/2006	< 0.00086	< 0.00086	< 0.00086	NA	NA
8/29/2006	< 0.00086	< 0.00086	< 0.00086	NA	NA
8/30/2006	< 0.00086	< 0.00086	< 0.00086	NA	NA
9/5/2006	0.0019 J	< 0.00086	< 0.00086	> 54.7%	> 54.7%
9/6/2006	0.0020 J	< 0.00086	< 0.00086	> 57.0%	> 57.0%
		Average Calculated Removal Rates		**>56%**	**>56%**

*Primary and secondary effluent samples were staggered after the influent samples to reflect detention time through WWTP

J = estimated value that is less than the reporting limit (RL) but greater than the method detection limit (MDL)

NA = The measurements are inadequate to allow a calculated removal efficiency

OTHER REMOVAL EFFICIENCY DATA

EPA Local Limits Guidance Removal Rates	**14%**	**42%**

DISCUSSION

The concentrations reported from the 2006 field sampling program are generally less than analytical method reporting limits, with the exception of two estimated influent selenium values. In these cases, primary and secondary removal efficiences were calculated . Due to the limited quality of this data, the EPA default values were used for further calculations.

SELENIUM REMOVAL EFFICIENCIES USED FOR FURTHER EVALUATIONS

Primary	Secondary
14%	**42%**

SILVER

Dates Sampled	Influent (mg/L)	Primary Effluent (mg/L)	Secondary Effluent (mg/L)	Primary Removal Efficiency %	Secondary Removal Efficiency %
February 2011	< 0.0005	NA	< 0.0005	NA	NA
			Average Calculated Removal Rates	**NA**	**NA**

NA = The measurements are inadequate to allow a calculated removal efficiency

OTHER REMOVAL EFFICIENCY DATA

	Primary	Secondary
EPA Local Limits Guidance Removal Rates	**20%**	**75%**

DISCUSSION

The concentrations obtained were all less than analytical method reporting limits. Since site specific removal data is not available, the EPA Guidance default values are used in this study.

SILVER REMOVAL EFFICIENCIES USED FOR FURTHER EVALUATIONS

Primary	Secondary
20%	**75%**

ZINC

Dates Sampled	Influent (mg/L)	Primary Effluent (mg/L)	Secondary Effluent (mg/L)	Primary Removal Efficiency %	Secondary Removal Efficiency %
Jan 2013 - Dec 2013	0.201	0.056	0.033	72.3%	83.6%
			Average Calculated Removal Rates	**72%**	**84%**

NA = The measurements are inadequate to allow a calculated removal efficiency

OTHER REMOVAL EFFICIENCY DATA

EPA Local Limits Guidance Removal Rates	**27%**	**79%**

DISCUSSION

The field sampling program influent and effluent zinc concentrations are all greater than analytical method reporting limits. As a result, the zinc primary and secondary removal rates are considered to be valid.

ZINC REMOVAL EFFICIENCIES USED FOR FURTHER EVALUATIONS

Primary	Secondary
72%	**84%**

CYANIDE

Dates Sampled	Influent (mg/L)	Primary Effluent* (mg/L)	Secondary Effluent* (mg/L)	Primary Removal Efficiency %	Secondary Removal Efficiency %
8/28/2006	0.0030 J	0.0030 J	0.0020 J	NA	> 33.3%
8/29/2006	< 0.002	< 0.002	0.0050 J	NA	NA
8/30/2006	< 0.002	< 0.002	0.0030 J	NA	NA
9/5/2006	0.0025 J	0.0020 J	0.0060 J	20.0%	NA
9/6/2006	0.0030 J	0.0030 J	0.0030 J	NA	NA
			Average Calculated Removal Rates	**20%**	**>33%**

*Primary and secondary effluent samples were staggered after the influent samples to reflect detention time through WWTP

J = estimated value that is less than the reporting limit (RL) but greater than the method detection limit (MDL)

NA = The measurements are inadequate to allow a calculated removal efficiency

OTHER REMOVAL EFFICIENCY DATA

	Primary	Secondary
EPA Local Limits Guidance Removal Rates	**27%**	**69%**

DISCUSSION

The concentrations reported from the field sampling program are generally greater than analytical method reporting limits. However, a majority of the effluent concentrations exceeded the corresponding influent concentrations, which does not allow for the direct calculation of removal efficiencies. Since limited site specific removal data is available, the EPA Guidance default values are used in this study.

CYANIDE REMOVAL EFFICIENCIES USED FOR FURTHER EVALUATIONS

Primary	Secondary
27%	**69%**

Priority Pollutant Percent Removal Efficiencies (%) Through Activated Sludge Treatment*

Priority Pollutant	Range	Second Decile	Median	Eight Decile	Number of POTWs with Removal Data
METALS/NONMETAL INORGANICS**					
Arsenic	11-78	31	45	53	5 of 26
Cadmium	25-99	33	67	91	19 of 26
Chromium	25-97	68	82	91	25 of 26
Copper	2-99	67	86	95	26 of 26
Cyanide	3-99	41	69	84	25 of 26
Lead	1-92	39	61	76	23 of 26
Mercury	1-95	50	60	79	20 of 26
Nickel	2-99	25	42	62	23 of 26
Selenium	25-89	33	50	67	4 of 26
Silver	17-95	50	75	88	24 of 26
Zinc	23-99	64	79	88	26 of 26
ORGANICS**					
Anthracene	29-99	44	67	91	5 of 26
Benzene	25-99	50	80	96	18 of 26
Chloroform	17-99	50	67	83	24 of 26
1,2-trans-Dichloroethylene	17-99	50	67	91	17 of 26
Ethylbenzene	25-99	67	86	97	25 of 26
Methylene chloride	2-99	36	62	77	26 of 26
Naphthalene	25-98	40	78	90	16 of 26
Phenanthrene	29-99	37	68	86	6 of 26
Phenol	3-99	75	90	98	19 of 26
Bis (2-ethylhexyl) phthalate	17-99	47	72	87	25 of 26
Butyl benzyl phthalate	25-99	50	67	92	16 of 26
Di-n-butyl phthalate	11-97	39	64	87	19 of 26
Diethyl phthalate	17-98	39	62	90	15 of 26
Pyrene	73-95	76	86	95	2 of 26
Tetrachloroethylene	15-99	50	80	93	26 of 26
Toluene	25-99	80	93	98	26 of 26
1,1,1-Trichloroethane	18-99	75	85	94	23 of 26
Trichloroethylene	20-99	75	89	98	25 of 26

* Pollutant removals between POTW influent and secondary effluent (including secondary clarification). Based on a computer analysis of POTW removal efficiency data (derived from actual POTW influent and effluent sampling data) provided in U.S. EPA's *Fate of Priority Pollutants in Publicly Owned Treatment Works, Volume II* (EPA 440/1-82/303), September 1982.

** For the purpose of deriving removal efficiencies, effluent levels reported as below detection were set equal to the reported detection limits. All secondary activated sludge treatment plants sampled as part of the study were considered.

Source: U.S. EPA's *Guidance Manual on the Development and Implementation of Local Discharger Limitations Under the Pretreatment Program*, December 1987, p. 3-56.

6. MAXIMUM ALLOWABLE INDUSTRIAL HEADWORKS LOADINGS FOR METALS AND CYANIDE

As described in EPA's 2004 Local Limits Development Guidance document, calculating MAHLs for each pollutant is a three step process that involves the following:

- Calculating WWTP removal efficiencies;
- Calculating Allowable Headworks Loadings (AHLs) for each environmental criterion; and
- Selecting the most restrictive (or lowest) AHL as the MAHL.

WWTP removal efficiencies were calculated in **Section 5** of this local pollutant controls development document. **Section 3** of this document describes each of the environmental criteria evaluated as part of this study. The next step described in the text that follows is calculating AHLs.

Surface Water-Quality-Based Allowable Headworks Loadings (AHLs)

As described in **Section 3**, applicable surface water quality standards are promulgated by NHDES in Chapter Env-1700. Accordingly, the New Hampshire surface water quality standard values presented in **Table 3-1** were used to calculate surface water-quality-based AHLs. In accordance with NHDES policy, river background concentrations were assumed to be zero.

AHLs based on surface water quality criteria were calculated using the following formula:

$$AHL_{wq} = [8.34 \times (C_{wq} \times ((Q_{str} \times \%Alloc) + Q_{potw}))] \div [1{,}000 \times (1 - R_{wwtf})]$$

where:

AHL_{wq}	=	AHL based on water quality criteria (lb/day)
C_{wq}	=	Surface water quality standard (mg/L)
Q_{str}	=	Receiving stream flow (MGD) – 7Q10 or Harmonic Mean Q
%Alloc	=	Percentage of stream capacity allocated to City (90%, as decimal, per NHDES policy)
Q_{potw}	=	POTW average flow rate (MGD)
R_{wwtf}	=	WWTP overall removal efficiency (as decimal)

Surface water-quality-based AHLs developed for this study are presented in **Table 6-1**.

Table 6-1 Allowable Headworks Loadings Based on Surface Water Quality Criteria (1)

POLLUTANT	WWTP OVERALL REMOVAL EFFICIENCY (2)	ACUTE LOADING @ 7Q10(7.9 MGD) AND 90% ALLOCATION (lb/day)	CHRONIC LOADING @ 7Q10(7.9 MGD) AND 90% ALLOCATION (lb/day)	HEALTH LOADING (lb/day) @ HARMONIC MEAN(50 MGD) or 7Q10 (7.9 MGD) and 90% ALLOCATION	CONTROLLING WATER QUALITY CRITERIA (lb/day)
Antimony	42%	1,323	235	632	235
Arsenic *	45%	52.7	23.3	0.101	0.101
Beryllium	54%	24.0	0.98	#N/A	0.98
Cadmium	67%	0.13	0.025	#N/A	0.025
Chromium (III)	89%	454	21.7	#N/A	21.72
Chromium (VI)	89%	12.78	8.97	#N/A	8.97
Copper	96%	8.72	6.56	2300	6.56
Cyanide (T)	69%	6.05	1.43	60,510	1.43
Lead	93%	17.6	0.686	#N/A	0.686
Mercury	60%	0.352	0.194	0.011	0.011
Nickel	23%	16.1	1.80	512	1.80
Selenium	42%	#N/A	0.74	1,617	0.74
Silver	75%	0.128	#N/A	22,169	0.128
Zinc	84%	18.82	17.05	2,603	17.05

NOTES:

(1) See Table 3-1 for surface water quality criteria values.

(2) Values developed in Section 5 - Removal Efficiencies of this document.

* = Carcinogen; Health criteria evaluated at Harmonic Mean

"#N/A" = Data is not available to support a value for this item

Sludge TCLP Limitations

One objective of local pollutant controls is to avoid triggering a hazardous waste determination of the WWTP's sludge, as measured by the Toxicity Characteristic Leaching Procedure (TCLP). The TCLP test is intended to simulate how much of a pollutant will "leach" from a material and subsequently be able to be conveyed to groundwater or surface water. TCLP-based local limits can be calculated if measured sludge TCLP concentrations and corresponding total recoverable metals levels are available.

However, EPA's local limits guidance document states: "in general, POTWs will not generate sludge that exceeds TCLP limits." Accordingly, resources were not allocated in this project to obtain site-specific data for TCLP-based calculations.

As a preliminary screening tool, the sludge total recoverable metals concentrations themselves can be compared to their corresponding TCLP values (see **Table 3-2)** as a worst-case scenario. Since the TCLP analytical method dilutes a sample twenty-fold, the allowable mg/kg sludge concentrations could be established by multiplying the TCLP values by 20. This assumes (unrealistically) that all of the metals in the sludge will leach. These 20x TCLP values are included on the data tables with the sludge results and a comparison shows that all actual measurements are well below the worst-case TCLP non-compliance point.

Process Inhibition-Based AHLs

Activated sludge inhibition and nitrification inhibition have both been considered as part of this evaluation. In general, the inhibition data presented in Appendix G of EPA's 2004 guidance document has been used as default values in this evaluation. Discussion regarding inhibition values used in this study is presented in **Section 3**, **Table 3-3**.

AHLs based on process inhibition criteria were calculated using the following formula:

$$AHL_{inhib} = [8.34 \times C_{inhib} \times Q_{potw}] \div [1 - R_{prim}]$$

where:

AHL_{inhib} = AHL based on process inhibition criteria (lb/day)
C_{inhib} = Process inhibition standard (mg/L)
Q_{potw} = POTW average flow rate (MGD)
R_{prim} = WWTP primary removal efficiency (as decimal)

Process inhibition-based AHLs developed for this study are presented in **Table 6-2**.

Table 6-2 Allowable Headworks Loadings Based on Process Inhibition

POLLUTANT	WWTP PRIMARY REMOVAL EFFICIENCY (1)	ACTIVATED SLUDGE INHIBITION LEVELS (2) (mg/L)	NITRIFICATION INHIBITION LEVELS (2) (mg/L)	PROCESS INHIBITION HEADWORKS LOAD CONSIDERING PRIMARY REMOVAL (3) (lb/day)
Antimony	14%	#N/A	#N/A	#N/A
Arsenic	15%	0.10	1.5	3.07
Beryllium	28%	#N/A	#N/A	#N/A
Cadmium	49%	1.00	5.2	51.7
Chromium (III)	47%	10.00	0.25	12.4
Chromium (VI)	47%	1.00	0.25	12.4
Copper	76%	1.00	0.104 (6)	11.28
Cyanide (T)	27%	0.10	0.34	3.58
Lead	61%	1.00	0.50	33.9
Mercury	46%	0.10	#N/A	4.80
Nickel	8%	1.00	0.25	7.08
Selenium	14%	#N/A	#N/A	#N/A
Silver	20%	0.25 (4)	0.25 (5)	8.2
Zinc	72%	0.30	0.135 (6)	12.72

NOTES:

(1) Values developed in Section 5 - Removal Efficiencies of this document.

(2) Most restrictive default value used, EPA Local Limits Development Guidance, July 2004, Appendix G unless otherwise noted.

(3) The most restrictive limit was used in calculating the allowable headworks loading.

(4) Default values, Prelim Version 4 User's Guide (May 1991), Table 3-2, p.14

(5) Default value, EPA Guidance Manual for Preventing Interference at POTWs (Sept. 1987), Table 2-1, p.20

(6) Used maximum primary effluent value observed during prior year. EPA ranges are 0.05 - 0.48 for copper and 0.08 - 0.5 for zinc.

"#N/A" = An applicable inhibition value has not been published

NPDES Permit Limits-Based AHLs

The NPDES permit limit values for copper, lead and zinc used in this local limits study are based on the City's 1994 NPDES permit. NPDES limits for these metals in the 2007 permit were revoked. And, as discussed in **Section 3**, an Administrative Order interim copper limit of 0.020 mg/L was also substituted for the NPDES copper permit limit in prior iterations of this report.

AHLs based on NPDES permit limit criteria were calculated using the following formula:

$$AHL_{npdes} = [8.34 \times C_{npdes} \times Q_{potw}] \div [1 - R_{wwtf}]$$

where:

AHL_{npdes} = AHL based on NPDES permit limit criteria (lb/day)
C_{npdes} = NPDES permit limit (mg/L)
Q_{potw} = POTW average flow rate (MGD)
R_{wwtf} = WWTP overall removal efficiency (as decimal)

NPDES permit limits-based AHLs developed for this study are presented in **Table 6-3**.

Determination of Maximum Allowable Headworks Loadings (MAHLs)

To determine the MAHL for each pollutant, the lowest (or most restrictive) AHL is selected as the MAHL for that particular pollutant. A 10 percent safety factor is then applied to the MAHL, which is standard practice consistent with NHDES and EPA guidance. This value which represents 90 percent of the MAHL is then used in subsequent local limits calculations.

A summary of the City's calculated AHLs, limiting environmental criteria and designated MAHLs are presented in **Table 6-4**.

Table 6-3 Allowable Headworks Loadings Based on NPDES Permit Limits

POLLUTANT	NPDES AVERAGE MONTHLY PERMIT LIMIT (1) (mg/L)	NPDES MAXIMUM DAILY PERMIT LIMIT (1) (mg/L)	ALLOWABLE HEADWORKS LOAD CONSIDERING OVERALL POTW REMOVAL (lb/day)
Antimony	#N/A	#N/A	#N/A
Arsenic	#N/A	#N/A	#N/A
Beryllium	#N/A	#N/A	#N/A
Cadmium	#N/A	#N/A	#N/A
Chromium (III)	#N/A	#N/A	#N/A
Chromium (VI)	#N/A	#N/A	#N/A
Copper	0.006 (2)	0.008 (2)	4.37
Cyanide (T)	#N/A	#N/A	#N/A
Lead	0.00092	0.0238	0.35
Mercury	#N/A	#N/A	#N/A
Nickel	#N/A	#N/A	#N/A
Selenium	#N/A	#N/A	#N/A
Silver	#N/A	#N/A	#N/A
Zinc	0.0557	0.0615	8.89

NOTES:
(1) Values are limits from the City of Keene's 1994 NPDES permit.
(2) Loadings calculations are based on the more restrictive average monthly limits.
"#N/A" = Not Applicable

Table 6-4 Summary of Allowable Headworks Loadings (AHLs) and MAHLs

POLLUTANT	PROCESS INHIBITION AHL (lb/day)	NPDES PERMIT LIMIT AHL (lb/day)	WATER QUALITY AHL* (lb/day)	LAND APPLICATION AHL (lb/day)	LIMITING FACTOR	MAXIMUM ALLOWABLE HEADWORKS LOADING (1) (lb/day)
Antimony	#N/A	#N/A	235	NA	WQ	235.210
Arsenic	3.07	#N/A	0.101	NA	WQ	0.101
Beryllium	#N/A	#N/A	0.98	NA	WQ	0.978
Cadmium	51.7	#N/A	0.025	NA	WQ	0.025
Chromium (III)	12.4	#N/A	21.7	NA	Inhib	12.391
Chromium (VI)	12.4	#N/A	8.97	NA	WQ	8.970
Copper	11.28	4.37	6.56	NA	NPDES_Permit	4.370
Cyanide (T)	3.58	#N/A	1.43	NA	WQ	1.430
Lead	33.9	0.355	0.686	NA	NPDES_Permit	0.355
Mercury	4.80	#N/A	0.011	NA	WQ	0.011
Nickel	7.08	#N/A	1.80	NA	WQ	1.795
Selenium	#N/A	#N/A	0.74	NA	WQ	0.735
Silver	8.2	#N/A	0.128	NA	WQ	0.128
Zinc	12.72	8.89	17.05	NA	NPDES_Permit	8.886

NOTES:

(1) The lowest (or most restrictive) AHL is selected as the MAHL.

(2) Value allowed to be superceded by NPDES interim limit.

Bold italic values represent the most restrictive AHLs [or maximum allowable headworks loadings (MAHLs)]

"#N/A" = Data is not available to support a value for this item

* Water quality AHL was calculated excluding background river concentrations

Determination of Maximum Allowable Industrial Headworks Loadings (MAIHLs)

Uncontrolled Loadings

The WWTP's allowable loadings fall within one of two categories:

- *Uncontrolled (residential locations in Keene and the satellite communities including sanitary wastewater from industrial and commercial locations, and hauled waste); and*
- *Controllable (industrial wastewater).*

Uncontrolled sources represent those over which Keene does not intend to exercise regulatory control. After calculating MAHLs for each pollutant, loadings from uncontrolled sources must be determined so that they can be deducted to obtain the allowable loadings from industrial sources.

For this study, data from two domestic/residential locations within Keene and multiple septage and holding receiving tank truck loads were utilized to characterize the City's uncontrolled sources. It should be noted that data from two domestic/residential locations and one septage / holding receiving tank location was obtained during the 5-day August/September 2006 monitoring program. However, this historical data was not used as part of the calculations presented in this study on the basis that it is no longer representative.

The City's WWTP also receives wastewater from the communities of Marlborough and Swanzey in accordance with Intermunicipal Agreements (IMAs). The IMAs require each community to implement a Sewer Use Ordinance applying the industrial wastewater concentration limits developed by Keene. Accordingly, this local limits report incorporates the identified satellite community industrial flows as part of the calculations. Approximately 70 percent of Marlborough's wastewater can be characterized as domestic wastewater, while the balance (approximately 30 percent) consists of industrial flow from one industrial user, The Mountain Corporation. All of the wastewater from Swanzey consists of domestic wastewater and non-significant "industrial" sources (*e.g.*, car wash). The IMAs provide each community access to 280,000 gpd of flow, each with approximately 4.7 percent of the WWTP design flow. With the exception of BOD and TSS, pollutant loading limitations have not been included in the IMAs between the City and these communities. In the absence of such allocations, the domestic loadings of these towns were calculated using the same concentration values as for domestic sources in Keene. The calculated loadings assigned to each satellite community are presented in **Table 6-5.**

Based on the uncontrolled source sampling program in Keene and the allocated loadings for the satellite communities calculated in **Table 6-5**, the total uncontrolled loadings were determined by addition and are presented in **Table 6-6**.

Table 6-5 Allocated Loadings to Satellite Communities

POLLUTANT	MARLBOROUGH CONCENTRATION (1) (mg/L)	MARLBOROUGH ALLOCATIONS @ 0.085 MGD (2) (lb/day)	SWANZEY CONCENTRATION (1) (mg/L)	SWANZEY ALLOCATIONS @ 0.039 MGD (lb/day)	SATELLITE COMMUNITY TOTAL (lb/day)
Antimony	0.0027	0.0019	0.0027	0.00086	0.0027
Arsenic	0.0005	0.0004	0.0005	0.00016	0.0005
Beryllium	0.0002	0.0001	0.0002	0.00006	0.0002
Cadmium	0.0004	0.0003	0.0004	0.00013	0.0004
Chromium (III)	0.0031	0.0022	0.0031	0.00101	0.0032
Chromium (VI)	0.0031	0.0022	0.0031	0.00101	0.0032
Copper	0.1357	0.0963	0.1357	0.04373	0.1400
Cyanide (T)	0.0038	0.0027	0.0038	0.00122	0.0039
Lead	0.0065	0.0046	0.0065	0.00208	0.0067
Mercury	0.0002	0.0001	0.0002	0.00006	0.0002
Nickel	0.0061	0.0043	0.0061	0.00196	0.0063
Selenium	0.0013	0.0009	0.0013	0.00042	0.0013
Silver	0.0005	0.0004	0.0005	0.00016	0.0005
Zinc	0.1341	0.0951	0.1341	0.04321	0.1383

NOTES:

(1) Domestic concentrations assumed to be same as Keene domestic concentrations - see Table 6-6.

(2) Domestic sources only. Allocation excludes The Mountain Corporation.

Table 6-6 Non-controllable Sources and Loadings Contributing to the POTW

POLLUTANT	DOMESTIC CONTRIBUTIONS MEASURED CONC. (mg/L)	LITERATURE [1] REPORTED CONC. (mg/L)	VALUE USED IN STUDY (mg/L)	FLOWS & LOADINGS (BASELINE: 2.00 MGD) FLOWS (MGD)	LOADING (lb/day)	SEPTAGE & H.T. CONTRIBUTIONS [4] MEASURED CONC. (mg/L)	LITERATURE [2] REPORTED CONC. (mg/L)	LOADING @ 0.01504 MGD (lb/day)	SATELLITE COMMUNITY ALLOCATED LOADING [3] (lb/day)	TOTAL SATELLITE & UNREGULATED LOADING (lb/day)
Antimony	< 0.0027	#N/A	0.0027	2.00	0.044	0.012	#N/A	0.002	0.0027	0.048
Arsenic	< 0.0017	0.007	0.0005 (7)	2.00	0.008	0.126	0.141	0.016	0.0005	0.025
Beryllium	< 0.0002	#N/A	0.0002	2.00	0.003	0.004	#N/A	0.0004	0.0002	0.004
Cadmium	0.0004	0.008	0.0004	2.00	0.007	0.016	0.097	0.002	0.0004	0.009
Chromium (III)	0.0031	0.006	0.0031	2.00	0.052	0.193	0.490 (5)	0.024	0.0032	0.079
Chromium (VI)	0.0031	0.034 (5)	0.0031	2.00	0.052	0.193	0.490 (5)	0.024	0.0032	0.079
Copper	0.1357	0.140	0.1357	2.00	2.260	4.816	4.835	0.606	0.1400	3.006
Cyanide (T)	0.0038	0.082	0.0038	2.00	0.063	0.000	0.469	0.000	0.0039	0.067
Lead	0.0065	0.058	0.0065	2.00	0.107	0.507	1.210	0.064	0.0067	0.178
Mercury	0.0002	0.002	0.0002	2.00	0.003	0.013	0.005	0.002	0.0002	0.005
Nickel	0.0061	0.047	0.0061	2.00	0.101	0.333	0.526	0.042	0.0063	0.149
Selenium	< 0.0018	0.004	0.0013 (7)	2.00	0.022	0.005	0.100 (6)	0.001	0.0013	0.023
Silver	< 0.0007	0.019	0.0005 (7)	2.00	0.008	0.032	0.099	0.004	0.0005	0.013
Zinc	0.1341	0.231	0.1341	2.00	2.233	15.589	9.971	1.955	0.1383	4.326

NOTES:

(1) Default values, Local Limits Development Guidance, July 2004, Appendix V.
(2) Default values, EPA Local Limits Development Guidance, July 2004, Appendix L.
(3) From Table 6-5
(4) H.T. = Holding Tank
(5) Concentrations reported as total chromium.
(6) Suggested design values; "Septage Treatment and Disposal," EPA-625/6-84-009, Table 3-5.
(7) Due to detection limit issues, WWTP influent values used.
"#N/A" = Data is not available to support a value for this item.

Calculation of Maximum Allowable Industrial Headworks Loadings (MAIHLs)

To calculate the MAIHLs, the uncontrolled loads are subtracted from 90 percent (consistent with NHDES and EPA guidance) of the MAHL values. The result of the subtraction represents the allowable mass loadings that may be permitted to industrial sources. These loadings and corresponding uniform industrial concentration values are presented in **Table 6-7**.

The MAIHL calculation is as follows:

MAIHL (lb/day) = 0.9 x MAHL (lb/day) - Uncontrolled loads (lb/day)

The uniform industrial concentration calculation is as follows:

Conc. (mg/L) = MAIHL (lb/day) ÷ [(Industrial Flow (MGD) + 10% Growth Allowance) x 8.34]

Table 6-7 Allocation of Maximum Allowable Headworks Loadings (MAHLs)

POLLUTANT	90% OF MAXIMUM ALLOWABLE HEADWORKS LOADING[1] (lb/day)	TOWNS AND UNREGULATED LOADS[4] (lb/day)	MAXIMUM ALLOWABLE INDUSTRIAL LOAD (lb/day)	INDUSTRIAL FLOWS WITH SAFETY FACTOR OF 10% OF TOTAL IU FLOW[2, 3] (MGD)	UNIFORM INDUSTRIAL CONCENTRATION VALUE (mg/L)
Antimony	211.689	0.048	211.641	0.253	100.344
Arsenic	0.091	0.025	0.067	0.253	0.032
Beryllium	0.881	0.004	0.877	0.253	0.416
Cadmium	0.023	0.009	0.013	0.253	0.006
Chromium (III)	11.152	0.079	11.072	0.253	5.250
Chromium (VI)	8.073	0.079	7.993	0.253	3.790
Copper	3.933	3.006	0.927	0.253	0.440
Cyanide (T)	1.287	0.067	1.220	0.253	0.580
Lead	0.319	0.178	0.142	0.253	0.067
Mercury	0.010	0.005	0.005	0.253	0.002
Nickel	1.616	0.149	1.467	0.253	0.700
Selenium	0.662	0.023	0.638	0.253	0.303
Silver	0.115	0.013	0.102	0.253	0.048
Zinc	7.998	4.326	3.672	0.253	1.740

NOTES:

(1) NHDES policy allows the City to allocate a maximum of 90 percent of the controlling headworks loading.

(2) The year 2014 industrial flow is 0.230 MGD.

(3) The growth allowance of 0.0230 MGD is added to the industrial flows.

(4) From Table 6-6

7. CONTROLS FOR METALS AND CYANIDE

In accordance with EPA guidance, a POTW can consider several approaches to assign regulatory values to its controlled industrial users. After determining the maximum allowable industrial headworks loadings (MAIHLs), the following options were considered for allocating the available loadings to the regulated industrial users:

1. Uniform Concentration Limits: The MAIHLs are divided by the total permitted industrial flow.
2. Contributory Flow Method: Divides the MAIHLs among only the industrial users that discharge a particular pollutant at greater than background (i.e., domestic) levels.
3. Basis of Needs / Case-by-Case: Relies on POTW's judgment to determine the allocation of the MAIHLs to each industrial user.

Of the three options evaluated, including input from the City's regulated community, Option 3 was selected on the basis that it offers the greatest flexibility during permitting-writing efforts and will result in the least amount of compliance-related issues within the regulated community. It should be noted that Option 1 establishes limits based on an "everyone-gets-the-same-share" basis, but can be overly restrictive and does not take into account the differing needs of permitted industries. This "fair-share" model does however have value by providing a reference value that can be used to guide permit-writing decisions. Accordingly, "uniform concentration values" equivalent to uniform concentration limits have been calculated and are recommended for administrative purposes as discussed below.

The proposed approach is to adopt MAIHLs values into the Sewer Use Ordinance (SUO) as an enforceable provision. These will be published for the nine pollutants that are present in the WWTF influent at greater than 20 percent of their MAHLs or subject to the metal finishing categorical standards on the basis that these industries are commonly encountered in the Northeast (*i.e.,* cadmium, chromium, copper, cyanide, lead, mercury, nickel, silver and zinc). **Table 7-1** attached to this section itemizes the present headworks loading status. For arsenic and selenium, the City will publish in the SUO concentration values ("screening levels") that are numerically equivalent to uniform concentration limits to provide formal notice to the City's industrial users that these pollutants are subject to regulatory review. Due to the relatively high calculated limits for antimony and beryllium, published values are not recommended as a measure to avoid an "invitation to pollute."

Table 7-1 Percentages of Maximum Allowable Headworks Loadings (MAHLs)

POLLUTANT	AVERAGE INFLUENT CONCENTRATION (mg/L)	POTW LOADING @ 3.10 MGD (1) (lb/day)	PERCENT OF MAHL (2,3)
Antimony	0.0019	0.049	0.021%
Arsenic	0.0005	0.013	12.7%
Beryllium	0.0002	0.004	0.4%
Cadmium	0.0005	0.013	64.6%
Chromium (III)	0.0046	0.119	1.0%
Chromium (VI)	0.0046	0.119	1.3%
Copper	0.1390	3.589	82.1%
Cyanide (T)	0.0025	0.065	4.5%
Lead	0.0078	0.201	56.6%
Mercury	0.0005	0.013	44.4%
Nickel	0.0030	0.077	4.3%
Selenium	0.0013	0.033	4.6%
Silver	0.0005	0.013	10.1%
Zinc	0.2006	5.181	58.3%

NOTES:

(1) Loadings represent conditions based on the average POTW effluent flow in 2013.

(2) Reference Table 6-4 for maximum allowable headworks loadings.

(3) NHDES policy limits the City to using 90% of its MAHL.

The MAIHL values represent the combined total quantities of pollutant discharges that may be permitted to industrial sources. Keene will allocate these mass loadings to discharging industrial sources on a case-by-case basis through the permitting process. Uniform concentration values that are numerically equivalent to uniform concentration limits have been developed in this report and are intended to remain separate from the SUO to provide baseline reference values to be used for comparative purposes during permitting. Uniform concentration values allow for regulatory flexibility to adjust for specific economic or operational circumstances where strict imposition of a concentration limit may be disproportionate to the environmental benefit.

Uniform concentration values (as opposed to uniform concentration "limits") also facilitate implementing a State of New Hampshire requirement [Env-Wq 904.05 (c)] that municipalities possess the authority to apply limits on a mass basis. This State regulation is intended to promote implementation of water conservation measures at industrial locations, which could result in metals concentrations that would exceed fixed concentration limits, even when the mass of pollutants from a source remains unchanged. Uniform concentration values avoid the enforcement obligation for published concentration limits and allow the City to write permits using mass limits with corresponding concentrations greater than the uniform concentration values.

To confirm that Keene's MAIHLs are not exceeded, all permits for metals discharges will be tracked. A Microsoft® Excel-based spreadsheet entitled *Flow and Loading Tracking Worksheet* has been developed for the pollutants with MAIHLs. This worksheet is attached at the end of this section to demonstrate how the City initially intends to allocate its available capacity for the pollutants with MAIHLs published in the SUO. The *Flow and Loading Tracking Worksheet* includes links to the local limits development calculations for background concentrations, the uniform concentration values, and MAIHLs.

The *Flow and Loading Tracking Worksheet* is maintained and updated during the permitting process. On a pollutant-by-pollutant basis, pollutants will either be identified as present (*i.e.,* they are being added by the permittee's activities), or absent. This pollutant-by-pollutant analysis is performed by comparing analytical laboratory results for the industry to the values in **Table 7-2** of this section.

Table 7-2 Determining Whether a Pollutant is Present

Pollutants	Actual (or Estimated) Background Concentrations (mg/L)[1]	Typical Analytical Reporting Limits[2] (mg/L)	Present / Absent Threshold [3] (mg/L)	Uniform Concentration Value [4] (mg/L)
Antimony	0.0027	<0.003	0.003	100
Arsenic	0.0005	<0.001	0.001	0.032
Beryllium	0.0002	<0.001	0.001	0.416
Cadmium	0.0004	<0.001	0.001	0.006
Chromium	0.0031	<0.001	0.006	5.25
Copper	0.1357	<0.001	0.247	0.44
Cyanide (T)	0.0038	<0.02	0.020	0.58
Lead	0.0065	<0.001	0.012	0.067
Mercury	0.0002	<0.0001	0.0004	0.002
Nickel	0.0061	<0.001	0.011	0.70
Selenium	0.0013	<0.001	0.002	0.303
Silver	0.0005	<0.001	0.001	0.048
Zinc	0.1341	<0.001	0.244	1.74

NOTES:
(1) All values in the above table are expressed as milligrams per liter (mg/L).
(2) Utilizing ICP-MS analytical testing method or equivalent.
(3) This is the concentration that determines if an industry is discharging at greater than background concentrations. These values are 82.0% (which represents the average standard deviation of domestic concentrations for pollutants reported above reporting limits) above average measured domestic concentrations or the analytical reporting limit, whichever is greater.
(4) Uniform concentration values are as developed in the City's current *Development of Local Pollutant Controls* document.
(5) Monitoring and tracking on the "*Flow and Loading Tracking Worksheet*" are generally required when pollutant discharges greater than present/absent thresholds are expected.

If a pollutant is expected to be present, the industry is listed on the *Flow and Loading Tracking Worksheet* under that pollutant along with its permitted discharge information (flow and allowable concentration). For pollutants expected to be present, the allowable concentration written into an industrial user's permit should generally be the lowest possible value that avoids compliance issues (see text below for permitting at concentrations greater than the uniform concentration values). This approach retains pollutant capacity for other sources where it may be needed more. If surplus loading is available for a pollutant, the uniform concentration value can be used to simplify administration. If a permittee is not itemized on the worksheet for a pollutant, it is assumed to be discharging at the background concentration value used for this local pollutant controls study. The industrial flow for non-itemized users is calculated by the worksheet (total industrial flow minus tracked industrial flow). The permitted loadings on a pollutant-by-pollutant basis are tracked. The worksheet displays an updated value for the pounds remaining that may be allocated for each pollutant.

Permitting a discharge at greater than the uniform concentration value is considered to be a "special allocation." If an industrial user requests approval to discharge at concentrations exceeding the uniform concentration value, then the industrial user will be required to apply for a special allocation using Keene's Standard Application process.

Special allocations are subject to the following requirements:

1. Excess capacity must be available (*i.e.*, the MAIHL has not been completely allocated).
2. They are applicable only to Keene's pollutant discharge control values - federal Categorical Pretreatment Standards and the associated requirements cannot be waived.
3. The permitted value is administered as a limit, and exceedances are subject to Keene's full noncompliance management procedures.
4. The allocation is identified in the permit as a revocable privilege subject to reduction if Keene's growth diminishes the "excess capacity."
5. Implementation of a Best Management Practices Plan, which may at the discretion of Keene include the following:

    - A detailed process flow diagram identifying and characterizing the input of raw materials, the flow of products, and the generation of wastes;
    - Estimates of the amounts of waste generated; and

- Best management practices currently implemented and scheduled for implementation to control, reduce or eliminate these wastes.

Based on the attached *Example Flow and Loading Tracking Worksheet*, the City anticipates that adequate allocation capacity will be available for all pollutants.

A flow-chart summarization of the overall permitting strategy is presented in **Table 7-3** attached to this section.

Enforcement Management

The City's intended policy for compliance determinations will be to manage as violations:

- Any result (mass or concentration) greater than would be allowable if the IU possessed the uniform concentration value in its permit, unless specifically permitted by a "special allocation"
- Any exceedance of a permitted "special allocation" *(i.e.*, concentration or mass limit)
- A discharge that is a slug load, as defined by the Keene City Code
- A discharge that would cause an exceedance of the City's MAIHL (can be determined using the City's *Flow and Loading Tracking Worksheet)*
- If an industry is not permitted for a pollutant because it is deemed absent, then the discharge of that pollutant at a value greater than the City's uniform concentration value will be a violation (Note: Periodic monitoring is not typically required for pollutants expected to be absent).

The City will manage as screening level exceedances:

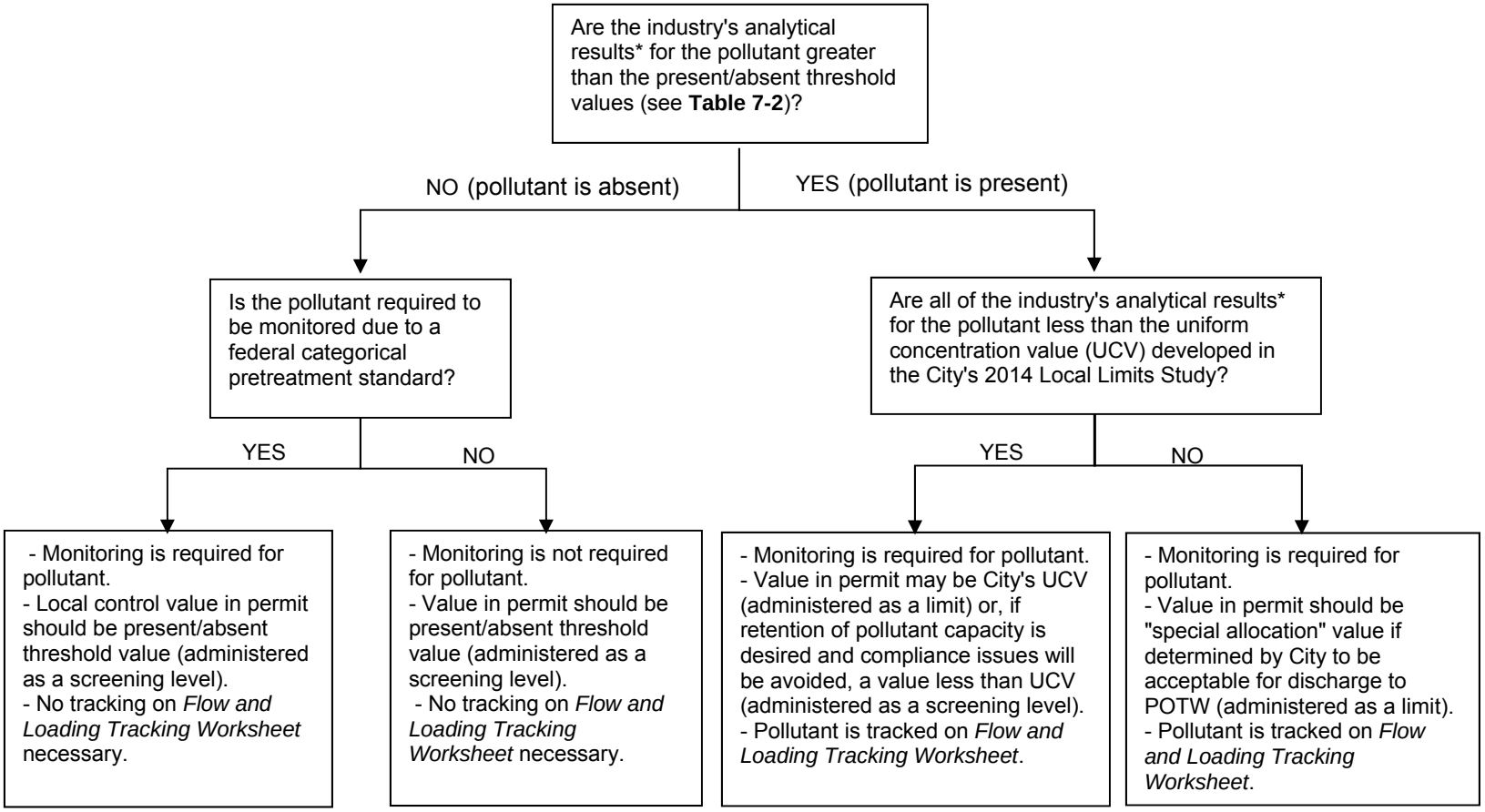
- Any result (mass or concentration) greater than a screening level value in its permit and that is less than would be allowed if the IU was permitted at the uniform concentration value
- If an industry is not permitted for a pollutant because it is deemed absent, any value greater than background concentration and less than the uniform concentration value (Note: Periodic monitoring is not typically required for pollutants expected to be absent).

Attachments to this section:

- *Table 7-3 Determining Permit Limitations, Monitoring, and Pollutant Tracking Requirements*
- *Example Flow and Loading Tracking Worksheet*

TABLE 7-3 DETERMINING PERMIT LIMITATIONS, MONITORING, AND POLLUTANT TRACKING REQUIREMENTS

THE FOLLOWING EVALUATION SHOULD BE PERFORMED ON A POLLUTANT-BY-POLLUTANT BASIS FOR EACH PERMIT



*Comparison will be performed on data for at least the two most recent events when the pollutant was analyzed using appropriate reporting limits. A best professional judgment will be used when determining whether minor exceedances of the present/absent threshold value should result in a determination that the pollutant is “present.”

Flow and Loading Tracking Worksheet

input required calculated value

Total Permitted Regulated Flow: 0.254 MGD

Pollutant	Uniform Concentration Value (mg/L)	Allowable Industrial Loading (lb/day)	Pounds Allocated (lb)	Pounds Remaining (lb)	INDUSTRIAL USER INFORMATION: Tracked Industries	Average Permitted Industrial Flow (MGD)	Site-Specific Regulatory Concentration[1] (mg/L)	Permitted Loading (lb/day)	Percent of Allowable Industrial Load Used (%)
Cadmium	0.006	0.013	0.0009	0.012	Corning	0.001165	0.006	0.00006	0.444%
					Janos	0.000150	0.006	0.0000	0.06%
								0.0000	NA
								0.0000	NA
								0.0000	NA
					All Other IUs	0.253	0.0004	0.0009	6.7%
					TOTALS:	0.254	0.0004	0.0009	7.2%
Chromium	5.250	11.07	0.1400	10.932	Markem	0.001400	0.100	0.00117	0.01%
					Corning	0.001165	0.050	0.00049	0.004%
					Timken (MPB-1)	0.016000	0.100	0.0133	0.12%
					People's Linen	0.070000	0.100	0.05838	0.53%
					Keene WTP	0.030000	0.010	0.0025	0.02%
					Mtn. Corp.	0.075000	0.100	0.0626	0.56%
					EVS Metals	0.00005	0.100	0.0000	0.00%
								0.0000	NA
								0.0000	NA
								0.0000	NA
					All Other IUs	0.060	0.0031	0.0016	0.0%
					TOTALS:	0.254	0.066	0.1400	1.3%
Copper	0.440	0.93	0.6642	0.263	Markem	0.001400	0.670	0.00782	0.84%
					Timken (MPB-1)	0.016000	0.440	0.05871	6.336%
					Mtn. Corp.	0.075000	0.670	0.4191	45.22%
					EVS Metals	0.00005	0.200	0.0001	0.01%
					SNF Finishing	0.003840		0.0000	NA
								0.0000	NA
								0.0000	NA
								0.0000	NA
								0.0000	NA
					All Other IUs	0.158	0.136	0.1785	19.3%
					TOTALS:	0.254	0.314	0.6642	71.7%
Cyanide (T)	0.580	1.220	0.0657	1.155	Markem	0.001400	0.100	0.00117	0.10%
					People's Linen	0.070000	0.050	0.0292	2.39%
					EVS Metals	0.00005	1.000	0.0004	0.03%
								0.029	2.4%
					All Other IUs	0.182	0.0038	0.0058	0.5%
					TOTALS:	0.254	0.031	0.0657	5.4%
Lead	0.067	0.142	0.0148	0.127	Markem	0.001400	0.100	0.00117	0.82%
					EVS Metals	0.00005	0.100	0.00004	0.029%
								0.0000	NA
								0.0000	NA
								0.0000	NA
								0.0000	NA
								0.0000	NA
					All Other IUs	0.252	0.006	0.0136	9.6%
					TOTALS:	0.254	0.007	0.0148	10.4%
Mercury	0.0020	0.005	0.0007	0.004	Timken (MPB-1)	0.016000	0.002	0.0003	5.49%
								0.0000	NA
								0.0000	NA
					All Other IUs	0.238	0.0002	0.0004	8.5%
					TOTALS:	0.254	0.000	0.0007	14.0%

Flow and Loading Tracking Worksheet

input required calculated value

Total Permitted Regulated Flow: 0.254 MGD

					INDUSTRIAL USER INFORMATION				
Pollutant	**Uniform Concentration Value (mg/L)**	**Allowable Industrial Loading (lb/day)**	**Pounds Allocated (lb)**	**Pounds Remaining (lb)**	**Tracked Industries**	**Average Permitted Industrial Flow (MGD)**	**Site-Specific Regulatory Concentration[1] (mg/L)**	**Permitted Loading (lb/day)**	**Percent of Allowable Industrial Load Used (%)**
Nickel	0.700	1.467	0.1352	1.331	CMC	0.030000	0.100	0.025	1.70%
					Markem	0.001400	0.050	0.00058	0.04%
					Corning	0.001165	0.810	0.00787	0.537%
					Timken (MPB-1)	0.016000	0.100	0.0133	0.91%
					People's Linen	0.070000	0.020	0.012	0.80%
					Keene WTP	0.030000	0.050	0.0125	0.85%
					Janos	0.000150	0.050	0.0001	0.00%
					Mtn. Corp.	0.075000	0.100	0.0626	4.27%
					EVS Metals	0.00005	0.200	0.0001	0.01%
								0.0000	NA
								0.0000	NA
								0.000	NA
					All Other IUs	0.030	0.006	0.002	0.1%
					TOTALS:	0.254	0.064	0.135	9.2%
Silver	0.048	0.102	0.0074	0.094	Timken (MPB-1)	0.016000	0.048	0.00641	6.29%
								0.00000	NA
					All Other IUs	0.238	0.0005	0.0010	1.0%
					TOTALS:	0.254	0.003	0.0074	7.3%
Zinc	1.740	3.672	1.0931	2.579	Kingsbury	0.000240	2.000	0.00400	0.11%
					Markem	0.001400	2.000	0.02335	0.636%
					Timken (MPB-1)	0.016000	1.000	0.1334	3.63%
					Janos	0.000150	0.920	0.0012	0.03%
					Mtn. Corp.	0.075000	1.200	0.7506	20.44%
					EVS Metals	0.00005	1.000	0.0004	0.01%
								0.0000	NA
					All Other IUs	0.161	0.134	0.1802	4.9%
					TOTALS:	0.254	0.516	1.0931	29.8%

Notes:

1. "All Other IUs" are assumed to be discharging at background concentration levels

Red Highlight = Special Allocation

8. NONCONSERVATIVE POLLUTANT CONTROLS

Nonconservative pollutants are those that may be transformed during transport with wastewater in the collection system. The primary mechanisms include biodegradation, volatilization, chemical reaction with other wastewater constituents, and dilution. Because of this characteristic, a mass balance approach for developing controls as used for metals is not generally appropriate. Differing methodologies are applied for establishing controls, as described below.

The nonconservative pollutants evaluated as part of the 2007 edition of this study were biochemical oxygen demand, total suspended solids, and ammonia. Other nonconservative pollutants were evaluated and are controlled as described in the City of Keene December 2004 Local Limits Evaluation report (applicable sections included as a reference in Section 10 of this report).

Biochemical Oxygen Demand (BOD), Total Suspended Solids (TSS)

The Keene WWTP design loadings are 9,300 lb/day for BOD and 11,800 lb/day for TSS at an average design flow value of 6.0 million gallons per day (MGD). The WWTP influent averaged 5,254 lb/day for BOD and 6,255 lb/day for TSS during the 2007 local limits study – well below design values.

The WWTP has achieved consistent compliance with National Pollutant Discharge Elimination System (NPDES) permit limits for carbonaceous BOD and TSS. Accordingly, the City will continue to monitor SIUs to screen discharges for BOD and TSS and will develop a local limit if loading becomes a limiting factor in the WWTP's capacity or operation.

Nitrogen (Ammonia)

The WWTP's NPDES permit (draft and current) contains an ammonia nitrogen (NH_3) limit of 2.1 mg/L (summer [May 1 through September 30] monthly average). Actual secondary effluent concentrations during the 2007 local limits sampling program averaged 0.35 mg/L, with a maximum of 0.56 mg/L. WWTP influent design loadings for NH_3 are currently not established. Based on the 98 percent removal efficiency calculated from the sampling program results, an allowable influent concentration value of 111 mg/L is calculated for a 2.1 mg/L secondary effluent.

Actual influent concentrations during the local limits sampling program averaged 18.6 mg/L. Influent concentrations for the period May 1 through September 30 averaged 11.5 mg/L, the yearly average in 2006 (through November 20) was 11.6 mg/L, and the peak observed concentration was 24.8 mg/L on October 17.

The City currently does not have an NH_3 local limit, but evaluated it because EPA recommends its review as a potential pollutant of concern for WWTP's that accept non-domestic sources of NH_3. Currently Keene has no known significant industrial discharges of NH_3. Therefore, development of a local limit for NH_3 is not necessary at this time. Keene WWTP personnel will continue to evaluate SIUs for potential NH_3 concerns through inspections and review of raw material usage.

Implementation of Screening Levels for Other Nonconservative Pollutants

As stated above, other nonconservative pollutants were evaluated in the City of Keene December 2004 Local Limits Evaluation report. For sulfite, sulfide, sulfate, and Total Toxic Organics (TTO), a screening level regulatory mechanism was developed and was submitted to EPA as part of the 2007 report. No comment was received pertaining to those proposed values, which are retained in this edition.

Screening levels are concentration-based values that, if exceeded, represent a potential to compromise worker safety, create flammability or chemical reactivity conditions in the collection system, or result in operational issues such as excessive organic/solids loadings. In most cases, the potential adverse impacts are dependent on site-specific wastewater collection system conditions, including available dilution, temperature, pH, and ventilation.

Exceedance of a screening level should trigger an investigative response from the City, unlike exceedance of a limit, which must initiate an enforcement response. The potential impact of a discharge that exceeds a screening level value usually warrants administrative review or investigation, which is different than the compliance-based strategy for mass or concentration-based limits. Investigation of a screening level exceedance should include an evaluation of the related site-specific conditions that affect the behavior of the specific pollutant (*e.g.*, temperature, pH, sewer construction, ventilation, other toxic gases present, and dilution by other wastestreams). Accordingly, follow-up actions in response to a screening level exceedance are determined on a case-by-case basis.

9. MASS BALANCE

A mass balance model provides a tool for assessing the quality of information available to and utilized by the City in the development of its local pollutant controls. Ideally, the domestic and industrial pollutant sources (for conservative pollutants) will approximate the loadings observed at the WWTP. Also, the WWTP influent loadings should balance with the outputs (biosolids and effluent). In practice, the accuracy of sampling and measurement methods and the potentially significant variations in wastewater discharge quality on a daily and seasonal basis introduce a moderate level of error that limits the use of this mass balance as an accounting tool. However, this effort remains valuable as a tool for identifying significant discrepancies that would warrant concern or additional investigation.

In several cases, the mass balance model was used to selectively include or exclude data to correct significantly "out-of-balance" conditions. For example, an influent mercury value of 1.7 ug/L, where the average was otherwise approximately 0.19 ug/L, skewed the influent loadings up considerably, and resulted in a significantly greater value for WWTP influent than could be accounted for by the "known" sources. These judgment decisions do impact the local limits calculations since in the case of mercury, a lower removal efficiency calculation resulted, with a lower loading allocation to the MAIHL.

With the exception of several cases where high reporting limits were noted (see yellow highlighted values on Mass Balance attachments), a review of the City's mass balance model indicates that influent loadings are generally comparable to known sources. For those metals where most measurements were greater than reporting limits (cadmium, chromium, copper, lead, mercury, nickel, and zinc), on average 104 percent of the WWTP influent loadings could be accounted for. The most significant exception in this group was nickel. The POTW receives approximately 28.3 pounds per year of nickel based on the February 2011 influent monitoring data (WWTP lab data with a significantly greater reporting limit was excluded). However, the mass balance model indicates approximately 59.8 pounds of nickel from known sources. After further review of this discrepancy, the likely cause of this difference is the fact that the influent data was based on three days of results in February 2011, while the domestic loading calculations were based on year 2006 data. All more recent domestic nickel data collected and analyzed by the WWTP lab had a significantly greater reporting limit and were excluded. Including those results would have further skewed this mass balance for nickel.

A balance was also completed comparing WWTP influent loadings to the facility's outputs (biosolids plus effluent). Deviations for those metals where most

measurements were greater than reporting limits (beryllium, copper, lead, mercury, nickel, and zinc) as a percentage of influent range from negative (-)27 percent (more is leaving the WWTP than entering) to positive (+)54 percent, with an average deviation of +20 percent. A review of the influent, effluent and biosolids data could not identify a consistent explanation for this relatively wide range of deviations. Since both positive and negative values were observed, this would exclude a basic measurement error, such as underestimating the pounds of biosolids produced. For the analytes with the greatest imbalance, chromium, copper and zinc, TeTon notes that the lab measurements for biosolids metals in 2006 had significantly greater measurements for most metals than at present. Since higher biosolids levels should be expected now that greater removal efficiencies are being achieved, the present decrease in metals is counterintuitive. One possible explanation worthy of additional investigation is that all the metals in the solids are not being completely recovered by the digestion process utilized by the current analytical laboratory. Since the biosolids results are not directly related to the local limits calculations, a possible error in the biosolids metals measurements would not be expected to impact the conclusions of this report.

Attachment to this section:

- *Mass Balance Concentrations*
- *Mass Balance Loadings*

Keene IU Sources	Process AVG MGD	Sampled AVG MGD	Days/ Year	MGY	Average Reported & Measured Concentrations (mg/L) Arsenic	Antimony	Beryllium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc	Cyanide
Cheshire Medical Center	0.016703	0.033405	365	12.19	0.001	0.001	0.000	0.000	0.001	0.131	0.002	0.0001	0.002	0.002	0.0005	0.131	0.003
EVS Metals	0.000023	0.000023	256	0.01	0.001	0.001	0.000	0.000	0.005	0.068	0.002	0.0001	0.028	0.001	0.001	0.044	0.300
Markem Corporation (Main)	0.001343	0.001343	256	0.34	0.001	0.001	0.000	0.000	0.010	0.198	0.016	0.0001	0.012	0.001	0.001	0.266	0.005
Corning Net Optix	0.000668	0.000668	256	0.17	0.012	0.001	0.001	0.001	0.006	0.048	0.001	#N/A	0.072	0.001	0.001	0.043	0.003
Timken (MPB-1)	0.025223	0.025223	308	7.77	0.001	0.002	0.000	0.000	0.007	0.088	0.005	0.0003	0.004	0.001	0.001	0.103	0.003
Timken (MPB-2)	0.000000	0.000000	308	0.00	0.001	0.001	0.000	0.000	0.010	0.065	0.002	0.0001	0.005	0.002	0.001	0.093	0.003
People's Linen	0.072619	0.072619	288	20.91	0.001	0.002	0.000	0.000	0.007	0.063	0.006	0.0001	0.007	0.001	0.001	0.173	0.025
Keene WTP	0.051000	0.051000	365	18.62	0.001	0.001	0.001	0.000	0.009	0.036	0.020	0.0001	0.012	0.003	0.001	0.036	0.003
Janos Technology	0.000127	0.000127	256	0.03	0.017	0.004	0.000	0.002	0.002	0.019	0.003	0.0001	0.013	0.025	0.001	0.117	#N/A
The Mountain Corp.	Included in Marl. for mass ba		256	0.00	0.002	0.002	0.000	0.000	0.008	0.355	0.004	0.0001	0.007	0.010	0.001	0.642	0.00
	-------	-------		-------													
Total Keene Industries Tied to POTW	0.167706	0.184408		60.04													

Keene Sources	Flow MGD	Percent of Total	MGY	Average Reported & Measured Concentrations (mg/L) Arsenic	Antimony	Beryllium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc	Cyanide
Industries (excludes The Mountain Corp.)	0.168	5.4%	61.21	0.001	0.001	0.0004	0.0003	0.006	0.071	0.009	0.0001	0.007	0.002	0.000	0.111	0.010
Infiltration/Inflow	0.783	25.3%	285.78	0.001	0.002	0.0001	0.0003	0.002	0.097	0.005	0.0001	0.004	0.001	0.0005	0.096	0.003
Domestic Sources	1.969	63.6%	718.51	0.001	0.002	0.0001	0.0003	0.002	0.097	0.005	0.0001	0.004	0.001	0.0005	0.096	0.003
Septage	0.0101	0.33%	3.702	0.184	0.015	0.0050	0.0220	0.259	6.335	0.637	0.0125	0.449	0.005	0.041	22.053	0.013
HoldingTank	0.0049	0.16%	1.786	0.008	0.006	0.0006	0.0038	0.055	1.667	0.236	0.0125	0.093	0.004	0.015	2.193	0.013
Marlborough (sanitary & industrial flow)	0.1237	4.0%	45.16	0.0013	#N/A	#N/A	0.0004	0.003	0.214	0.003	#N/A	0.030	#N/A	0.010	0.230	#N/A
Swanzey (sanitary - no industrial flow is present)	0.0386	1.25%	14.10	0.0013	#N/A	#N/A	0.0003	0.002	0.087	0.004	#N/A	0.030	#N/A	0.010	0.150	#N/A
Keene POTW Source Totals	3.10	100.0%	1,130.25	0.002	0.002	0.0002	0.0004	0.003	0.115	0.007	0.0002	0.006	0.001	0.001	0.170	0.003
WWTP Influent	3.10		1,130.25	0.001	0.002	0.0002	0.0005	0.005	0.139	0.008	0.0002	0.003	0.001	0.001	0.201	0.003

				Arsenic	Antimony	Beryllium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc	Cyanide
Treatment Plant Influent	3.10		1,130.25	0.001	0.002	0.0002	0.0005	0.005	0.1390	0.008	0.0002	0.003	0.001	0.001	0.201	0.003
WWTP Dewatered Biosolids (ppm - dry basis) (2012/2013)			820 tons	2.3	1.2	0.2	1.0	11.0	335.0	29.3	0.6	8.7	3.2	5.3	421.0	1.7
(less plant effluent)	3.10		1,130.25	0.001	0.002	0.0001	0.0003	0.001	0.0052	0.0005	0.0001	0.002	0.001	0.001	0.033	0.004

Contributions - Pounds per Year

Source	Arsenic	Antimony	Beryllium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc	Cyanide
Cheshire Medical Center	0.051	0.051	0.013	0.030	0.051	13.338	0.203	0.0102	0.203	0.153	0.051	13.355	0.275
EVS Metals	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.0000	0.001	0.000	0.000	0.002	0.015
Markem Corporation (Main)	0.003	0.003	0.000	0.001	0.028	0.569	0.045	0.0003	0.034	0.004	0.001	0.761	0.014
Corning Net Optix	0.017	0.001	0.001	0.001	0.009	0.069	0.002	0.0002	0.102	0.001	0.001	0.061	0.004
Timken (MPB-1)	0.032	0.123	0.009	0.019	0.475	5.712	0.340	0.0194	0.289	0.065	0.032	6.695	0.175
Timken (MPB-2)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000
People's Linen	0.087	0.349	0.023	0.052	1.163	10.989	1.047	0.0174	1.163	0.087	0.087	30.234	4.361
Keene WTP	0.078	0.078	0.155	0.046	1.397	5.589	3.027	0.0155	1.863	0.466	0.078	5.550	0.420
Janos Technology	0.005	0.001	0.000	0.000	0.000	0.005	0.001	0.0000	0.003	0.007	0.000	0.032	0.001
The Mountain Corp.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000
	---	---	---	---	---	---	---	---	---	---	---	---	---
Total Keene Industries Tied to POTW	0.27	0.61	0.20	0.15	3.12	36.27	4.67	0.06	3.66	0.78	0.25	56.69	5.27
The Mountain Corp.	0.01	0.01	0.00	0.00	0.04	1.90	0.02	0.001	0.03	0.05	0.00	3.43	0.01

Contributions - Pounds per Year

Yellow highlighted cells = high reporting limits

Keene Sources	Arsenic	Antimony	Beryllium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc	Cyanide
Industries (excludes The Mountain Corp.)	0.27	0.61	0.20	0.15	3.12	36.27	4.67	0.06	3.66	0.78	0.25	56.69	5.27
Infiltration/Inflow	2.98	4.53	0.31	0.71	5.33	231.45	11.01	0.34	10.38	3.11	1.19	228.69	6.45
Domestic Sources	7.49	11.39	0.79	1.79	13.40	581.91	27.67	0.86	26.10	7.83	3.00	574.97	16.23
Septage	5.66	0.46	0.15	0.68	8.00	195.57	19.67	0.39	13.86	0.15	1.27	680.81	0.41
HoldingTank	0.11	0.09	0.01	0.06	0.82	24.83	3.52	0.39	1.39	0.05	0.22	32.67	0.41
Marlborough (sanitary & industrial flow)	0.47	NA	NA	0.01	0.11	6.60	0.11	NA	0.93	NA	0.31	7.09	NA
Swanzey (sanitary - no industrial flow is present)	0.15	NA	NA	0.03	0.28	10.27	0.46	NA	3.53	NA	1.18	17.60	NA
Keene POTW Source Totals	**17.1**	**17.1**	**1.5**	**3.4**	**31.0**	**1,086.9**	**67.1**	**2.0**	**59.8**	**11.9**	**7.4**	**1,598.5**	**28.8**
WWTP Influent	4.7	17.9	1.6	4.7	43.4	1,309.9	73.3	1.8	28.3	12.2	4.7	1,891.2	23.6
% accounted for (% of actual):	363.6%	95.3%	94.5%	73.5%	71.6%	83.0%	91.6%	115.7%	211.6%	97.6%	157.2%	84.5%	122.0%
Target (80% - 120%) met?	Not Met	Met	Met	Not Met	Not Met	Met	Met	Met	Not Met	Met	Not Met	Met	Not Met
Treatment Plant Influent	**4.7**	**17.9**	**1.6**	**4.7**	**43.4**	**1,309.9**	**73.3**	**1.8**	**28.3**	**12.2**	**4.7**	**1,891.2**	**23.6**
(less WWTP biosolids)	3.7	2.0	0.2	1.6	18.0	549.7	48.0	1.0	14.2	5.2	8.6	690.8	2.9
(less plant effluent)	4.7	17.9	1.0	2.4	4.7	48.6	5.0	0.7	21.7	8.1	4.7	309.7	35.8
Unaccounted for difference	-3.7	-2.0	0.3	0.7	20.6	711.6	20.3	0.0	-7.6	-1.1	-8.6	890.6	-15.1
Difference (as % of influent)	-78%	-11%	18%	14%	48%	54%	28%	2%	-27%	-9%	-183%	47%	-64%

10. APPENDICES

References

EPA Local Limits Development Guidance – July 2004
http://www.epa.gov/npdes/pubs/final_local_limits_guidance.pdf

NHDES Administrative Rules
http://des.nh.gov/organization/commissioner/legal/rules/index.htm

Recommended Sewer Use Ordinance Text

Excerpt – City of Keene December 2004 Local Limits Report (nonconservative pollutant controls) (electronic copies only)

Analytical Laboratory Reports (electronic copies only)

(a) Maximum Allowable Industrial Loadings. For all users connected to sewer lines that are tributary to the City of Keene POTW, the director will not issue permits that in combination with other industrial loads exceed the values in the following table:

POLLUTANT	MAXIMUM ALLOWABLE INDUSTRIAL LOADING (lb/day)	POLLUTANT	MAXIMUM ALLOWABLE INDUSTRIAL LOADING (lb/day)
Cadmium	0.013	Mercury	0.005
Chromium (total)	7.99	Nickel	1.47
Copper	0.93	Silver	0.10
Cyanide	1.22	Zinc	3.67
Lead	0.14	-	-

All limitations for metals represent total metals, regardless of the valance state, or the physical or chemical form of the metal. To administer these allowable loadings through IDPs, the director may impose concentration-based limitations, or mass limitations. For industrial users, the values written into IDPs for the above pollutants shall apply at the end of the industrial wastestream and prior to dilution with non-industrial wastewaters.

Unless specifically identified in an IDP, an industrial user is not allowed to discharge the locally limited pollutants at concentrations greater than background concentrations.

Representative Sampling. Daily concentration (or mass loading) is the concentration (or mass) of a pollutant discharged, determined from the analysis of a flow-composited sample (or other sampling procedure approved by the director) representative of the discharge over the duration of a 24-hour day or industrial operating schedule of less than 24 hours.

(b) Screening Levels. Screening levels are numerical values above which actions are initiated to evaluate, prevent or reduce potential adverse impacts on the POTW, the environment, and/or human health and safety. Screening levels are developed as needed using the methodology of the director. The pollutants in the following table (list is not all inclusive) are representative of concentrations above which pollutants shall not be discharged to the POTW without approval of the director:

POLLUTANT	SCREENING LEVEL
Arsenic	0.032 mg/L
Selenium	0.30 mg/L
Total toxic organics	5.0 mg/L
Sulfite	2.0 mg/L
Sulfate	20.0 mg/L
Sulfide	20.0 mg/L

If any of the screening levels are exceeded, repeat analysis may be required by the director to verify compliance or noncompliance with that screening level. If noncompliance is indicated, then the industrial user may be required, at the discretion of the director, to conduct an appropriate engineering evaluation at the industrial user's expense to determine the potential impact of the discharge of this pollutant to the POTW or alternatively, to develop a Best Management Practices plan specifically addressing the pollutant that exceeds the screening level. This study or plan shall be approved by and conducted under the supervision of the director. Should the evaluation indicate the impact to be unsatisfactory, the industrial user shall reduce the pollutant concentration

to a satisfactory level. If the evaluation supports development of an alternate site-specific limitation, then the screening level may, at the discretion of the director, be adjusted as a special agreement for the industrial user and administered as a permit limitation for the specific discharge.

If an industrial user proposes to discharge at concentrations greater than the concentration-based screening level maintained by the director, then the industrial user may be required to conduct the evaluations described in the previous paragraph. Should the evaluations support an alternate site-specific limitation, then the screening level may, at the discretion of the director, be adjusted as a special agreement for the industrial user and administered as a permit limitation for the specific discharge.

Non-POC Summary

The City has determined it is appropriate to remove the local limit for a number of parameters for which it currently has local limits. When a parameter is removed from the local limit list, the City can continue to regulate it under Section 98-329.(4) of the Keene City Code. New industrial discharges will be screened for Pollutants of Concern, and/or any other pollutants which the City identifies which may impact or endanger worker health and safety, the WWTP, Ashuelot River, collection system, or the sludge. As industrial discharges are proposed that contain parameters not included in the City's local limits, a limit may be adopted through either, recalculation of a local limit as described in this document, or, on a case-by-case basis as appropriate.

1. Iron

The current local limit is 5.0 mg/L. Iron will be removed from the local limit list because City does not consider it a POC. The following considerations were used in making this determination:

- Activated sludge inhibition is the limiting MAHL factor.
- The literature inhibition criteria are listed in a range from 5-500 mg/L. Keene has had no known occurrences of activated sludge inhibition due to iron.
- A review of the available data for the last two years reveals that the WWTP has not had any measured instances of iron in its influent or primary effluent at, or near to, the most stringent activated sludge inhibition concentration.
- The only large source of loading for iron is the City of Keene's Drinking Water Treatment Facility (WTF). At this source, naturally occurring iron from the City's surface water source is removed from the drinking water and discharged to the sewer system. This iron is mainly in a solid form that has settled out at the WTF and would be expected to settle out in the WWTP's primary clarifier.
- The WTF's iron discharge is controlled through an Industrial Discharge Agreement (IDA).

2. Manganese

The current local limit for manganese is 0.5 mg/L. Because it does not consider manganese to be a pollutant of concern, the City will remove manganese from its list of local limits. The following considerations were used in making this determination:

- The only large source for manganese is the City of Keene's Drinking Water Treatment Facility. At this source, naturally occurring manganese from the City's surface water source is removed from the drinking water and discharged to the sewer system. This manganese is mainly in a solid form that has settled out at the WTF and would be expected to settle out in the WWTP's primary clarifier.

- If the WTF were not removing the manganese from the raw water, it would be discharged to the sewer through the domestic wastewater.

- The WTF's manganese discharge is controlled through an Industrial Discharge Agreement (IDA).

3. Mineral oil and grease

The City's current local limit is 25 mg/L. Because the WWTP does not have any known issues with mineral oil and grease, and because the approved EPA method for its detection is fraught with interferences and a positive bias, the City will adopt the standard 100 mg/L for mineral oil and grease as described in the EPA Local Limits Development Guidance Manual, July 2004.

4. Non-mineral fats, oils, and grease

Currently the City has no numerical discharge limit in place for non-mineral oil and grease, and will not adopt one in this local limit evaluation process. The City Code currently prohibits the discharge of floating oil and grease in quantities sufficient to interfere with the flow of sewers. No numerical limit will be established due to difficulties with monitoring and enforcement. The City will continue to encourage Best Management Practices (BMPs) for non-mineral fats, oils, and grease for both commercial and residential discharges. For non-domestic discharges, BMPs will include well-maintained grease traps or interceptors where appropriate. For domestic dischargers, the City will continue to engage in public education to address this issue.

5. pH

The City's current regulation requires wastewater to have a pH between 5.5 and 12.0 s.u. and will not change this range in this local limits evaluation. The City believes that this range of acceptable pH is protective of the sanitary sewer infrastructure and will retain this standard.

6. Total toxic organic compounds (TTO)

The current limit for TTO is 5.0 mg/L. Because it can use the screening levels method detailed in EPA's June 2002 "Guidance To Protect POTW Workers From Toxic And Reactive Gases And Vapors", to screen for potential problems, the City will keep the current local limit for total toxic organics in place as a screening level for compounds listed in the table below. Other compounds will be evaluated on a case-by case basis.

Total Toxic Organics List from Keene City Code.

Acenaphthene.	1,2-dichloropropane (1,3-dichloropropene).	-nitrosodimethylamine.	Vinyl chloride [chloroethylene].
Acrolein.	2,4-dimethylphenol.	N-nitrosodiphenylamine.	Aldrin.
Acrylonitrile.	2,4-dinitrotoluene.	N-nitrosodi-n-propylamine.	Dieldrin.
Benzene.	2,6-dinitrotoluene.	Pentachlorophenol.	Chlordane (technical mixture and metabolites).
Benzidine.	1,2-diphenylhydrazine.	Phenol.	4,4-DDT.
Carbon tetrachloride (tetrachloromethane).	Ethylbenzene.	Bis (2-ethylhexyl) phthalate.	4,4-DDE (p,p-DDX).

Total Toxic Organics List from Keene City Code (continued).

Chlorobenzene.	Fluoranthene.	Butyl benzyl phthalate.	4,4-DDD (p,p-TDE).
1,2,4-trichlorobenzene.	4-chlorophenyl phenyl ether.	Di-n-butyl phthalate.	Alpha endosulfan.
Hexachlorobenzene.	4-bromophenyl phenyl ether.	Di-n-octyl phthalate.	Endosulfan sulfate.
1,2-dichloroethane.	Bis (2-chloroisopropyl) ether.	Diethyl phthalate.	Endrin.
1,1,1-trichloroethane.	Bis (2-chloroethoxy) methane.	Dimethyl phthalate.	Endrin aldehyde.
Hexachloroethane.	Methylene chloride (dichloromethane).	1,2-benzanthracene [benzo(a)anthracene].	Heptachlor.
1,1-dichloroethane.	Methyl chloride (chloromethane).	Benzo(a)pyrene [3,4-benzopyrene].	Heptachlor epoxide (BHC-hexachlorocyclohexane).
1,1,2-trichloroethane.	Methyl bromide (bromomethane).	3,4-benzofluoranthene [benzo(b)fluoranthene].	Alpha-BHC.
1,1,2,2-tetrachloroethane.	Bromoform (tribromomethane).	11,12-benzofluoranthene [benzo(k)fluoranthene].	Beta-BHC.
Chloroethane.	Dichlorobromomethane.	Chrysene.	Gamma-BHC.
Bis (2-chloroethyl) ether.	Chlorodibromomethane.	Acenaphthylene.	Delta-BHC.
2-chloroethyl vinyl ether (mixed).	Hexachlorobutadiene.	Anthracene.	PCB's (polychlorinate biphenyls).
2-chloronaphthalene.	Hexachlorocyclopentadiene.	1,12-benzoperlene.	PCB-1242 (arochlor 1242).
2,4,6-trichlorophenol.	Isophorone.	Fluorene.	PCB-1254 (arochlor 1254).
Parachlorometa cresol.	Naphthalene.	Phenanthrene.	PCB-1221 (arochlor 1221).
Chloroform (trichloromethane).	Nitrobenzene.	1,2,5,6-dibenzanthracene [dibenzo(a, h)anthracene].	PCB-1232 (arochlor 1232).
2-chlorophenol.	2-nitrophenol.	Indeno(1,2,3-cd)pyrene [2,3-o-phenylene pyrene].	PCB-1248 (arochlor 1248).
1,2-dichlorobenzene.	4-nitrophenol.	Pyrene.	PCB-1260 (arochlor 1260).
1,3-dichlorobenzene.	2,4-dinitrophenol.	Tetrachloroethylene.	PCB-1016 (arochlor 1016).
1,4-dichlorobenzene.	4,6-dinitrophenol.	Toluene.	Toxaphene.
3,3-dichlorobenzidine.	4,6-dinitro-o-cresol	Trichloroethylene.	2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD).
1,1-dichloroethylene.	1,2-dichloropropane (1,3-dichloropropene).	-nitrosodimethylamine.	Vinyl chloride [chloroethylene].
1,2-trans dichloroethylene.	2,4-dimethylphenol.	N-nitrosodiphenylamine.	Aldrin.
2,4-dichlorophenol.	2,4-dinitrotoluene.	N-nitrosodi-n-propylamine.	Dieldrin.

7. Total suspended solids

Currently the City of Keene does not have local limit for TSS. Because the WWTP can adequately treat more pounds than it currently receives, a local limit for TSS is unnecessary. The City will continue to monitor SIUs to screen discharges and will develop a local limit if loading becomes a limiting factor in the WWTP's capacity or operation (see Development of Local Pollutant Controls report by Teton Environmental, Section 8 for loading information).

8. Biochemical Oxygen Demand (BOD)

Currently the City of Keene does not have a local limit for BOD. Because the WWTP can adequately treat more pounds than it currently receives, a local limit for BOD is unnecessary. It will continue to monitor SIUs to screen discharges and will develop a local limit if loading becomes a limiting factor in the WWTP's capacity or operation (see Development of Local Pollutant Controls report by Teton Environmental, Section 8 for loading information).

9. Ammonia

The City currently has no local limit for ammonia, but evaluated it because EPA recommends its review for a potential POC for WWTP's that accept non-domestic sources of ammonia. Currently the City of Keene has no known industrial discharges of ammonia. Therefore, development of a local limit for ammonia is not necessary at this time. Staff will continue to evaluate SIUs through inspections and review of MSDS (see Development of Local Pollutant Controls report by Teton Environmental, Section 8).

10. Sulfite, Sulfate and Sulfide

The current local limits for sulfide and sulfate are each set at 20.0 mg/L. The current local limit for sulfite is 2.0 mg/L. Because neither the WWTP, nor its collection system has any known history of problems due to sulfide, sulfite, or sulfate discharges, the City does not consider these parameters to be POC. Therefore, the City will remove local discharge limits for sulfide, sulfite, and sulfate, and will set the current limits as screening levels for discharge. This decision was based on the following considerations:

- Currently, two SIUs have a variance from NHDES for sulfite discharge based upon the determination that the discharges were not impacting the collection system.

- One of these SIUs uses sodium meta-bisulfite as part of its wastewater pretreatment process for color removal. Investigation of the sanitary sewer lines revealed no evidence of unusual corrosion. The SIUs wastewater has a relatively high pH and no atmospheric hydrogen sulfide was detected at discharge point or points downstream.

11. Sodium, chlorides, boron, phenol

Although the City currently has local limits for each of these parameters, it does not believe that any of these pollutants are POCs for this WWTP. Therefore, the City will remove local limits for sodium, chlorides, boron, and phenol, and will address each as the need arises. This decision was made using the following considerations:

- The WWTP has no toxicity problems with its effluent

- There have been no known inhibition problems due to any of these pollutants.

Eric Swope
Keene WWTP
350 Marlboro Street
Keene NH 03431

Subject: Laboratory Report
Eastern Analytical, Inc. ID: 97113
Client Identification: Local Limits Sampling
Date Received: 2/23/2011

Report revision/reissue: Revision, replaces report dated 4/18/11

Revision information: Lower Reporting Limits have been revised on all samples for Metals analysis

Dear Mr. Swope:

Enclosed please find the laboratory report for the above identified project. All analyses were performed in accordance with our QA/QC Program. Unless otherwise stated, holding times, preservation techniques, container types, and sample conditions adhered to EPA Protocol. Samples which were collected by Eastern Analytical, Inc. (EAI) were collected in accordance with approved EPA procedures. Eastern Analytical, Inc. certifies that the enclosed test results meet all requirements of NELAP and other applicable state certifications. Please refer to our website at www.eailabs.com for a copy of our NELAP certificate and accredited parameters.

The following standard abbreviations and conventions apply to all EAI reports:
Solid samples are reported on a dry weight basis, unless otherwise noted.
< : "less than" followed by the reporting limit
> : "greater than" followed by the reporting limit
%R : % Recovery

Eastern Analytical Inc. maintains certification in the following states: Connecticut (PH-0492), Maine (NH005), Massachusetts (M-NH005), New Hampshire/NELAP (1012), Rhode Island (269) and Vermont (VT1012).

The following information is contained within this report: Sample Conditions summary, Analytical Results/Data, Quality Control data (if requested) and copies of the Chain of Custody. This report may not be reproduced except in full, without the the written approval of the laboratory.

If you have any questions regarding the results contained within, please feel free to directly contact me or the chemist(s) who performed the testing in question. Unless otherwise requested, we will dispose of the sample(s) 30 days from the sample receipt date.

We appreciate this opportunity to be of service and look forward to your continued patronage.

Sincerely,

Lorraine Olashaw

Lorraine Olashaw, Lab Director

4.8.11
Date

21
# of pages (excluding cover letter)

SAMPLE CONDITIONS PAGE

EAI ID#: 97113

Client: **Keene WWTP**

Client Designation: **Local Limits Sampling**

Temperature upon receipt (°C): 4

Received on ice or cold packs (Yes/No): Y

Acceptable temperature range (°C): 0-6

Lab ID	Sample ID	Date Received	Date Sampled	Sample Matrix	% Dry Weight	Exceptions/Comments (other than thermal preservation)
97113 01	INC021511 A-D	2/23/11	2/15/11	aqueous		Adheres to Sample Acceptance Policy
97113 02	INC021511 E-H	2/23/11	2/15/11	aqueous		Adheres to Sample Acceptance Policy
97113 03	INC021511	2/23/11	2/16/11	aqueous		Adheres to Sample Acceptance Policy
97113 04	INC021611 A-D	2/23/11	2/16/11	aqueous		Adheres to Sample Acceptance Policy
97113 05	SEC021611 A-D	2/23/11	2/17/11	aqueous		Adheres to Sample Acceptance Policy
97113 06	INC021711 A-D	2/23/11	2/17/11	aqueous		Adheres to Sample Acceptance Policy
97113 07	SEC021711 A-D	2/23/11	2/18/11	aqueous		Adheres to Sample Acceptance Policy
97113 08	SEC021811 E	2/23/11	2/18/11	aqueous		Adheres to Sample Acceptance Policy
97113 09	INC021611	2/23/11	2/17/11	aqueous		Adheres to Sample Acceptance Policy
97113 10	INC021711	2/23/11	2/18/11	aqueous		Adheres to Sample Acceptance Policy
97113 11	SEC021611	2/23/11	2/17/11	aqueous		Adheres to Sample Acceptance Policy
97113 12	SEC021711	2/23/11	2/18/11	aqueous		Adheres to Sample Acceptance Policy
97113 13	SEC021711 D	2/23/11	2/16/11	aqueous		Adheres to Sample Acceptance Policy
97113 14	SEC021811	2/23/11	2/19/11	aqueous		Adheres to Sample Acceptance Policy
97113 15	SEC021811 A-D	2/23/11	2/19/11	aqueous		Adheres to Sample Acceptance Policy

Samples were properly preserved and the pH measured when applicable unless otherwise noted. Analysis of solids for pH, Flashpoint Ignitability, Paint Filter, Corrosivity, Conductivity and Specific Gravity are reported on an "as received" basis.

All results contained in this report relate only to the above listed samples.

References include:

1) EPA 600/4-79-020, 1983

2) Standard Methods for Examination of Water and Wastewater. Inorganics, 19th Edition, 1995, Microbiology, 20th Edition, 1998

3) Test Methods for Evaluating Solid Waste SW 846 3rd Edition including updates IVA and IVB

4) Hach Water Analysis Handbook, 2nd edition, 1992

Client: **Keene WWTP**

Client Designation: **Local Limits Sampling**

Sample ID:	INC021511 A-D	INC021511 E-H	ING021611 A-D	SEG021611 A-D					
Lab Sample ID:	97113.01	97113.02	97113.04	97113.05					
Matrix:	aqueous	aqueous	aqueous	aqueous					
Date Sampled:	2/15/11	2/15/11	2/16/11	2/17/11		Analysis			
Date Received:	2/23/11	2/23/11	2/23/11	2/23/11	**Units**	**Date**	**Time**	**Method**	**Analyst**
Cyanide Total	< 0.01	< 0.01	< 0.01	< 0.01	mg/L	02/28/11	16:00	4500CNE	KJR

Sample ID:	ING021711 A-D	SEG021711 A-D	SEG021811 E	SEG021811 A-D					
Lab Sample ID:	97113.06	97113.07	97113.08	97113.15					
Matrix:	aqueous	aqueous	aqueous	aqueous					
Date Sampled:	2/17/11	2/18/11	2/18/11	2/19/11		Analysis			
Date Received:	2/23/11	2/23/11	2/23/11	2/23/11	**Units**	**Date**	**Time**	**Method**	**Analyst**
Cyanide Total	< 0.01	< 0.01	< 0.01	< 0.01	mg/L	02/28/11	16:00	4500CNE	KJR

QC REPORT

EAI ID#: 97113

Client: **Keene WWTP**

Client Designation: **Local Limits Sampling**

Parameter Name	Blank	LCS	LCSD	Units	Date of Analysis	Limits	RPD	Method
Cyanide Total	< 0.01	0.028 (114 %R)		NA mg/L	2/28/11	85 - 115	20	4500CNE

Parameter Name	MS/MSD Parent ID	MS/MSD Parent	Matrix Spike	MSD	Units	Date of Analysis	Limits	RPD	Method
Cyanide Total	97113-05	< 0.01	0.028 (81 %R)	0.031 (90 %R) (11 RPD)	mg/L	2/28/11	75-125	20	4500CNE

Samples were analyzed within holding times unless noted on the sample results page
Instrumentation was calibrated in accordance with the method requirements
The method blanks were free of contamination at the reporting limits
The associated matrix spikes and/or Laboratory Control Samples met the above stated criteria
Exceptions to the above statements are flagged or noted above or on the QC Narrative page
* Flagged analyte recoveries deviated from the QA/QC limits

Client: **Keene WWTP**

Client Designation: **Local Limits Sampling**

Sample ID:	INC021511	SEC021811 E	INC021511	INC021711					
Lab Sample ID:	97113 03	97113 08	97113 09	97113 1					
Matrix:	aqueous	aqueous	aqueous	aqueous					
Date Sampled:	2/16/11	2/18/11	2/17/11	2/18/11	**Analytical Matrix**	**Units**	**Date of Analysis**	**Method**	**Analyst**
Date Received:	2/23/11	2/23/11	2/23/11	2/23/11					
Arsenic	< 0 0005	< 0 0005	< 0 0005	< 0 0005	AqTot	mg/L	2/28/11	200 8	DS
Beryllium	< 0 0005	< 0 0005	< 0 0005	< 0 0005	AqTot	mg/L	2/28/11	200 8	DS
Cadmium	< 0 0005	< 0 0005	< 0 0005	< 0 0005	AqTot	mg/L	2/28/11	200 8	DS
Chromium	0 0009	< 0 0005	0.0010	0.0013	AqTot	mg/L	2/28/11	200 8	DS
Copper	0.064	< 0 0005	0.066	0.059	AqTot	mg/L	2/28/11	200 8	DS
Lead	0 0021	< 0 0005	0.0023	0.0018	AqTot	mg/L	2/28/11	200 8	DS
Molybdenum	0.0060	< 0 0005	0.0062	0.0059	AqTot	mg/L	2/28/11	200 8	DS
Nickel	0.0033	< 0 0005	0.0030	0.0027	AqTot	mg/L	2/28/11	200 8	DS
Silver	< 0 0005	< 0 0005	0.0005	< 0 0005	AqTot	mg/L	2/28/11	200 8	DS
Zinc	0.086	< 0 005	0.093	0.070	AqTot	mg/L	2/28/11	200 8	DS

Sample ID:	SEC021611	SE C021711	SE C021711 D	SE C021811					
Lab Sample ID:	97113 11	97113.12	97113.13	97113 14					
Matrix:	aqueous	aqueous	aqueous	aqueous					
Date Sampled:	2/17/11	2/18/11	2/18/11	2/19/11	**Analytical Matrix**	**Units**	**Date of Analysis**	**Method**	**Analyst**
Date Received:	2/23/11	2/23/11	2/23/11	2/23/11					
Arsenic	< 0 0005	< 0 0005	< 0 0005	< 0 0005	AqTot	mg/L	2/28/11	200 8	DS
Beryllium	< 0 0005	< 0 0005	< 0 0005	< 0 0005	AqTot	mg/L	2/28/11	200 8	DS
Cadmium	< 0 0005	< 0 0005	< 0 0005	< 0 0005	AqTot	mg/L	2/28/11	200 8	DS
Chromium	< 0 0005	< 0 0005	< 0 0005	< 0 0005	AqTot	mg/L	2/28/11	200 8	DS
Copper	0.0058	0.0065	0.0064	0.0053	AqTot	mg/L	2/28/11	200 8	DS
Lead	< 0 0005	0.0005	0.0005	0.0006	AqTot	mg/L	2/28/11	200 8	DS
Molybdenum	0.0053	0.0060	0.0058	0.0060	AqTot	mg/L	2/28/11	200 8	DS
Nickel	0.0023	0.0024	0.0024	0.0022	AqTot	mg/L	2/28/11	200 8	DS
Silver	< 0 0005	< 0 0005	< 0 0005	< 0 0005	AqTot	mg/L	2/28/11	200 8	DS
Zinc	0.040	0.043	0.042	0.072	AqTot	mg/L	2/28/11	200 8	DS

QC REPORT

EAI ID#: 97113

Client: **Keene WWTP**

Client Designation: **Local Limits Sampling**

Parameter Name	Blank	LCS	LCSD	Units	Date of Analysis	Limits	RPD	Method
Arsenic	< 0.0005	1.0 (103 %R)		NA	mg/L	2/28/11	85 - 115	20	200.8
Beryllium	< 0.0005	1.0 (105 %R)		NA	mg/L	2/28/11	85 - 115	20	200.8
Cadmium	< 0.0005	0.98 (98 %R)		NA	mg/L	2/28/11	85 - 115	20	200.8
Chromium	< 0.0005	0.99 (99 %R)		NA	mg/L	2/28/11	85 - 115	20	200.8
Copper	< 0.0005	0.90 (90 %R)		NA	mg/L	2/28/11	85 - 115	20	200.8
Lead	< 0.0005	0.95 (95 %R)		NA	mg/L	2/28/11	85 - 115	20	200.8
Molybdenum	< 0.0005	1.0 (103 %R)		NA	mg/L	2/28/11	85 - 115	20	200.8
Nickel	< 0.0005	0.98 (98 %R)		NA	mg/L	2/28/11	85 - 115	20	200.8
Silver	< 0.0005	0.11 (109 %R)		NA	mg/L	2/28/11	85 - 115	20	200.8
Zinc	< 0.005	0.86 (86 %R)		NA	mg/L	2/28/11	85 - 115	20	200.8

Parameter Name	MS/MSD Parent ID	MS/MSD Parent	Matrix Spike	MSD	Units	Date of Analysis	Limits	RPD	Method
Arsenic	97115-02	< 0.0005	0.96 (96 %R)	0.97 (97 %R) (1 RPD)	mg/L	2/28/11	70-130	20	200.8
Beryllium	97115-02	< 0.0005	0.75 (75 %R)	0.78 (78 %R) (4 RPD)	mg/L	2/28/11	70-130	20	200.8
Cadmium	97115-02	< 0.0005	0.90 (90 %R)	0.92 (92 %R) (2 RPD)	mg/L	2/28/11	70-130	20	200.8
Chromium	97115-02	< 0.0005	0.85 (85 %R)	0.84 (84 %R) (1 RPD)	mg/L	2/28/11	70-130	20	200.8
Copper	97115-02	0.0053	0.77 (77 %R)	0.76 (76 %R) (1 RPD)	mg/L	2/28/11	70-130	20	200.8
Lead	97115-02	< 0.0005	0.89 (89 %R)	0.89 (89 %R) (0 RPD)	mg/L	2/28/11	70-130	20	200.8
Molybdenum	97115-02	0.0051	1.0 (104 %R)	1.0 (103 %R) (1 RPD)	mg/L	2/28/11	70-130	20	200.8
Nickel	97115-02	0.0072	0.84 (83 %R)	0.82 (82 %R) (1 RPD)	mg/L	2/28/11	70-130	20	200.8
Silver	97115-02	< 0.0005	0.84 (84 %R)	0.86 (86 %R) (2 RPD)	mg/L	2/28/11	70-130	20	200.8
Zinc	97115-02	0.031	0.76 (73 %R)	0.76 (73 %R) (0 RPD)	mg/L	2/28/11	70-130	20	200.8

Samples were analyzed within holding times unless noted on the sample results page
Instrumentation was calibrated in accordance with the method requirements
The method blanks were free of contamination at the reporting limits
The associated matrix spikes and/or Laboratory Control Samples met the above stated criteria
Exceptions to the above statements are flagged or noted above or on the QC Narrative page
N Flagged analyte recoveries deviated from the QA/QC limits

PHOENIX
Environmental Laboratories, Inc

Wednesday, March 02, 2011

Attn: Front Office
Eastern Analytical
25 Chenell Drive
Concord, NH 03301

Project ID: 3697
Sample ID#s: BA06474 - BA06481

This laboratory is in compliance with the QA/QC procedures outlined in EPA 600/4-79-019, Handbook for Analytical Quality in Water and Waste Water, March 1979, SW846 QA/QC and NELAC requirements of procedures used.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext. 200.

Sincerely yours,

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #MA-CT-007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
VT Lab Registration #VT11301

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

March 02, 2011

FOR: Attn: Front Office
Eastern Analytical
25 Chenell Drive
Concord, NH 03301

Sample Information		Custody Information		Date	Time
Matrix:	WATER	Collected by:		02/16/11	6:27
Location Code:	EASTANAL	Received by:	LB	03/01/11	11:06
Rush Request:		Analyzed by:	see "By" below		
P.O.#:	26505				

Laboratory Data

SDG ID: GBA06474
Phoenix ID: BA06474

Project ID: 3697
Client ID: INC021511

Parameter	Result	RL	Units	Date	Time	By	Reference
Mercury	< 0.0002	0.0002	mg/L	03/02/11		RS	7470/E245.1
Mercury Digestion	Completed			03/02/11		X	7471/245.1

Comments:

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

ND=Not detected BDL=Below Detection Level RL=Reporting Level

Phyllis Shiller, Laboratory Director
March 05, 2011

PHOENIX
Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

Analysis Report

March 02, 2011

FOR: Attn: Front Office
Eastern Analytical
25 Chenell Drive
Concord, NH 03301

Sample Information		Custody Information		Date	Time
Matrix:	WATER	Collected by:		02/18/11	15:30
Location Code:	EASTANAL	Received by:	LB	03/01/11	11:06
Rush Request:		Analyzed by:	see "By" below		
P.O.#:	26505				

Laboratory Data

SDG ID: GBA06474
Phoenix ID: BA06475

Project ID: 3697
Client ID: SEG021811 E

Parameter	Result	RL	Units	Date	Time	By	Reference
Mercury	< 0.0002	0.0002	mg/L	03/02/11		RS	7470/E245.1
Mercury Digestion	Completed			03/02/11		X	7471/245.1

Comments:

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

ND=Not detected BDL=Below Detection Level RL=Reporting Level

Phyllis Shiller, Laboratory Director
March 03, 2011

PHOENIX
Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

March 02, 2011

FOR: Attn: Front Office
Eastern Analytical
25 Chenell Drive
Concord, NH 03301

Sample Information		Custody Information		Date	Time
Matrix:	WATER	Collected by:		02/17/11	6:27
Location Code:	EASTANAL	Received by:	LB	03/01/11	11:06
Rush Request:		Analyzed by:	see "By" below		
P.O.#:	26505				

Laboratory Data

SDG ID: GBA06474
Phoenix ID: BA06476

Project ID: 3697
Client ID: INC021611

Parameter	Result	RL	Units	Date	Time	By	Reference
Mercury	< 0.0002	0.0002	mg/L	03/02/11		RS	7470/E245.1
Mercury Digestion	Completed			03/02/11		X	7471/245.1

Comments:

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

ND=Not detected BDL=Below Detection Level RL=Reporting Level

Phyllis Shiller, Laboratory Director
March 03, 2011

PHOENIX
Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

Analysis Report

March 02, 2011

FOR: Attn: Front Office
Eastern Analytical
25 Chenell Drive
Concord, NH 03301

Sample Information		Custody Information		Date	Time
Matrix:	WATER	Collected by:		02/18/11	6:20
Location Code:	EASTANAL	Received by:	LB	03/01/11	11:06
Rush Request:		Analyzed by:	see "By" below		
P.O.#:	26505				

Laboratory Data

SDG ID: GBA06474
Phoenix ID: BA06477

Project ID: 3697
Client ID: INC021711

Parameter	Result	RL	Units	Date	Time	By	Reference
Mercury	< 0.0002	0.0002	mg/L	03/02/11		RS	7470/E245.1
Mercury Digestion	Completed			03/02/11		X	7471/Z45.1

Comments:

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

ND=Not detected BDL=Below Detection Level RL=Reporting Level

Phyllis Shiller, Laboratory Director
March 03, 2011

PHOENIX
Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

Analysis Report

March 02, 2011

FOR: Attn: Front Office
Eastern Analytical
25 Chenell Drive
Concord, NH 03301

Sample Information		Custody Information		Date	Time
Matrix:	WATER	Collected by:		02/17/11	11:55
Location Code:	EASTANAL	Received by:	LB	03/01/11	11:06
Rush Request:		Analyzed by:	see "By" below		
P.O.#:	26505				

Laboratory Data

SDG ID: GBA06474
Phoenix ID: BA06478

Project ID: 3697
Client ID: SEC021611

Parameter	Result	RL	Units	Date	Time	By	Reference
Mercury	< 0.0002	0.0002	mg/L	03/02/11		RS	7470/E245.1
Mercury Digestion	Completed			03/02/11		X	7471/245.1

Comments:

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

ND=Not detected BDL=Below Detection Level RL=Reporting Level

Phyllis Shiller, Laboratory Director
March 03, 2011

PHOENIX
Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

Analysis Report

March 02, 2011

FOR: Attn: Front Office
Eastern Analytical
25 Chenell Drive
Concord, NH 03301

Sample Information		Custody Information		Date	Time
Matrix:	WATER	Collected by:		02/18/11	12:00
Location Code:	EASTANAL	Received by:	LB	03/01/11	11:06
Rush Request:		Analyzed by:	see "By" below		
P.O.#:	26505				

Laboratory Data

SDG ID: GBA06474
Phoenix ID: BA06479

Project ID: 3697
Client ID: SEC021711

Parameter	Result	RL	Units	Date	Time	By	Reference
Mercury	< 0.0002	0.0002	mg/L	03/02/11		RS	7470/E245.1
Mercury Digestion	Completed			03/02/11		X	7471/245.1

Comments:

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

ND=Not detected BDL=Below Detection Level RL=Reporting Level

Phyllis Shiller, Laboratory Director
March 03, 2011

PHOENIX
Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

Analysis Report

March 02, 2011

FOR: Attn: Front Office
Eastern Analytical
25 Chenell Drive
Concord, NH 03301

Sample Information		Custody Information		Date	Time
Matrix:	WATER	Collected by:		02/18/11	12:00
Location Code:	EASTANAL	Received by:	LB	03/01/11	11:06
Rush Request:		Analyzed by:	see "By" below		
P.O.#:	26505				

Laboratory Data

SDG ID: GBA06474
Phoenix ID: BA06480

Project ID: 3697
Client ID: SEC021711 D

Parameter	Result	RL	Units	Date	Time	By	Reference
Mercury	< 0.0002	0.0002	mg/L	03/02/11		RS	7470/E245.1
Mercury Digestion	Completed			03/02/11		X	7471/245.1

Comments:

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

ND=Not detected BDL=Below Detection Level RL=Reporting Level

Phyllis Shiller, Laboratory Director
March 03, 2011

PHOENIX
Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

Analysis Report

March 02, 2011

FOR: Attn: Front Office
Eastern Analytical
25 Chenell Drive
Concord, NH 03301

Sample Information		Custody Information		Date	Time
Matrix:	WATER	Collected by:		02/19/11	12:00
Location Code:	EASTANAL	Received by:	LB	03/01/11	11:05
Rush Request:		Analyzed by:	see "By" below		
P.O.#:	26505				

Laboratory Data

SDG ID: GBA06474
Phoenix ID: BA06481

Project ID: 3697
Client ID: SEC021811

Parameter	Result	RL	Units	Date	Time	By	Reference
Mercury	< 0.0002	0.0002	mg/L	03/02/11		RS	7470/E245.1
Mercury Digestion	Completed			03/02/11		X	7471/245.1

Comments:

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

ND=Not detected BDL=Below Detection Level RL=Reporting Level

Phyllis Shiller, Laboratory Director
March 03, 2011

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

QA/QC Report

March 03, 2011

QA/QC Data

SDG I.D.: GBA06474

Parameter	Blank	Dup RPD	LCS %	LCSD %	LCS RPD	MS Rec %	MS Dup Rec %	RPD
QA/QC Batch 171594, QC Sample No: BA03642 (BA06476, BA06477, BA06478, BA06479, BA06480, BA06481)								
Mercury - Water	BDL	NC	89.9	90.2	0.3	76.0	77.9	2.5
QA/QC Batch 171593, QC Sample No: BA06466 (BA06474, BA06475)								
Mercury - Water	BDL	NC	91.9	94.5	2.8	81.6	84.0	2.9

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria

Phyllis Shiller, Laboratory Director
March 03, 2011

CHAIN-OF-CUSTODY RECORD

eastern analytical
professional laboratory services

Sample ID	Date Sampled	Matrix	aParameters	Sample Notes
INC021611	2/16/2011 09:27	aqueous	Mercury Cold Vapor (Phoenix)	06474
SEG021611 E	2/16/2011 15:30	aqueous	Mercury Cold Vapor (Phoenix)	06475
INC021611	2/17/2011 08:27	aqueous	Mercury Cold Vapor (Phoenix)	06476
INC021711	2/16/2011 09:20	aqueous	Mercury Cold Vapor (Phoenix)	06477
SEC021611	2/17/2011 11:55	aqueous	Mercury Cold Vapor (Phoenix)	06478
SEC021711	2/18/2011 12:03	aqueous	Mercury Cold Vapor (Phoenix)	06479

EAI SRB# **97113** Project State: NH
Project ID: 1697

Company Phoenix Environmental Labs
Address 587 East Middle Turnpike
Address Manchester, CT 06040
Account #
Phone # (860) 645-1102
Fax Number 860 645-0823

Results Needed by: Preferred date
QC Deliverables
☐A ☐A- ☒B ☐B+ ☐C ☐CC

Notes about project:
Email pdf of results and invoice to customerservice@eelabs.com

Eastern Analytical Inc. PO Number: 26505

Please call prior to analyzing. If RUSH surcharges will be applied.

Samples Collected by:

Relinquished by	Date/Time	Received by
UPS	2/18 11:00	
Relinquished by	Date/Time	Received by

CHAIN-OF-CUSTODY RECORD

eastern analytical
professional laboratory services

Sample ID	Date Sampled	Matrix	aParameters	Sample Notes
SEC0217-11 B	2/15/2011 12:00	aqueous	Mercury Cold Vapor (Phoenix)	06480
SEC0217-11	2/15/2011 12:00	aqueous	Mercury Cold Vapor (Phoenix)	06481

EAI SRB# 97113 Project State: NH
Project ID: 3697

Company: Phoenix Environmental Labs
Address: 587 East Middle Turnpike
Address: Manchester, CT 06040
Account #:
Phone #: (860) 645-1102
Fax Number: 860 645-0823

Results Needed by: Preferred date
QC Deliverables
☐A ☐A+ ☒B ☐S+ ☐C ☐PC
Notes about project:
Email pdf of results and invoice to customerservice@eailabs.com.

Eastern Analytical Inc PO Number: 26505
Please call prior to analyzing, if RUSH surcharges will be applied.

Samples Collected by: UPS

Relinquished by	Date/Time	Received by
UPS	3/1/11 1:30	
Relinquished by	Date/Time	Received by

Eastern Analytical Inc. 25 Chemell Dr. Concord, NH 03301 Phone: (603)228-0525 1-800-287-0525 Fax: (603)228-4591

9713

Eastern Analytical, INC.
MDL and MRLs for
Keene WWTP's Influent Effluent EPA Project

Parameter	Method	MDL	MRL	Units
Antimony	EPA 200 8	0 008	0.50	ug/L
Arsenic	EPA 200 8	0 120	0.50	ug/L
Beryllium	EPA 200 8	0.019	0.50	ug/L
Cadmium	EPA 200 8	0.006	0.50	ug/L
Chromium	EPA 200 8	0 063	1 00	ug/L
Copper	EPA 200 8	0 074	0.50	ug/L
Lead	EPA 200 8	0.006	0.50	ug/L
Mercury	EPA 200 8	0.008	0 10	ug/L
Molybdenum	EPA 200 8	0.011	0.50	ug/L
Nickel	EPA 200 8	0.016	0.50	ug/L
Selenium	EPA 200 8	0 259	0 50	ug/L
Silver	EPA 200 8	0.017	0.50	ug/L
Zinc	EPA 200 8	0.203	5 00	ug/L
Cyanide	SM 4500CN E	1	1.00	ug/L
Mercury*	245 1	0.02	0 2	ug/L

*Mercury by 245 1 is a subcontracted analysis The MDL and MRL have been provided by Phoenix Environmental Laboratories.

Page 1 of 4

CHAIN-OF-CUSTODY RECORD

97113

BOLD FIELDS REQUIRED PLEASE CIRCLE REQUESTED ANALYSIS.

SAMPLE I.D.	SAMPLING DATE/TIME *IF COMPOSITE, INDICATE BOT-START & FINISH DATE/TIME	MATRIX (SEE BELOW)	GRAB/COMPOSITE	VOC	SVOC	TCLP METALS	INORGANICS	MICRO	OTHER	# OF CONTAINERS	NOTES MICH Yes #
INC0215 - A	2-15-11 / 0815	WW	G						X	1	
" - B	" / 1015									1	2-D composite
" - C	" / 1215									1	2 samples
" - D	" / 1430									1	
INC0215 - E	" / 0815									1	
" - F	" / 1015									1	Eight composite
" - G	" / 1215									1	into 1 sample
" - H	" / 1430	V	V						V	1	
	2-15-11 / 0815										
INC03151	2-16-11 / 0820	WW	C			X				2	

MATRIX: SOIL, SOLID; DW-DRINKING WATER; GW-GROUND WATER; SW-SURFACE WATER; WW-WASTE WATER

PRESERVATIVE: H-HCL; N-HNO3; S-H2SO4; Na-NaOH; M-MEOH

N N

* Cyanide has been Revised Jan 4/16/12

PROJECT MANAGER: Eric Snapp

COMPANY: Keene City Loop

ADDRESS: 352 Marlboro St

CITY: Keene STATE: NH ZIP: 03431

PHONE: 357-9836 FAX: 6504

CELL: 357-9854

E-MAIL: esnapp@ci.keene.nh.us

SITE NAME:

PROJECT #: Local Limits Sampling

STATE: NH MA ME VT OTHER

REGULATORY PROGRAM: NPDES: RCP POTW SEMIVOLATILE GW?, OIL & GAS, REMEDIAL OTHER

QUOTE #: 109709 PO #:

DATE NEEDED:

QA/QC REPORTING LEVEL: A B C OR MA MCP

PRESUMPTIVE CERTAINTY

REPORTING OPTIONS: FAX? YES NO; E-MAIL? YES NO; PDF? YES NO

ELECTRONIC OPTIONS: EQUIS E-MAIL PDF EDD

SAMPLED BY: Eric Snapp Eric Snapp

RELINQUISHED BY: [signature] 2/23/11 11:55 RECEIVED BY: K Keen

RELINQUISHED BY: K Keen 2/23/11 13:32 RECEIVED BY: [signature]

RELINQUISHED BY: DATE: TIME: RECEIVED BY:

TEMP: 4 °C

RCP? YES NO

METALS: 8 RCRA 13 PP 8 MA 9 MI, CT

OTHER NOTES:

DISSOLVED METALS FIELD FILTERED? YES NO

NOTES: SPECIAL DETECTION LIMITS, SCREENING LEVELS, ETC.

Metals = Hg method 245.1, RL = 0.2 ug/L

Method 200.7: As, Cd, Cr, Cu, Pb, Ni, Mo, Ag, Ba, Be - RL = 0.5 ug/L

Zn - RL = 5.0 ug/L

SPECIAL Cyanide RL = 0.01 mg/L

SAMPLE CONTAINER(S):

FIELD READINGS:

eastern analytical, inc.

(WHITE: ORIGINAL GREEN: PROJECT MANAGER)

CHAIN-OF-CUSTODY RECORD

97113

BOLD FIELDS REQUIRED. PLEASE CIRCLE REQUESTED ANALYSIS

SAMPLE I.D.	SAMPLING DATE/TIME (If Composite, Indicate Both Start & Finish Date/Time)	Matrix	Grab/*Composite	VOC	SVOC	TCLP/Metals	INORGANICS	Micro	OTHER	# of Containers	NOTES MeOH Vial #
ING021611-A	2-16-11 / 0815						X		A-D Composite into 1 Sample	1	
ING021611-B	2-16-11 / 1015						X			1	
ING021611-C	2-16-11 / 1210						X				
ING021611-D	2-16-11 / 1415						X			1	
SES021611-A	2-16-11 / 1240						X		A-D Composite into 1 Sample	1	
SES021611-B	2-16-11 / 1410						X				
SES021711-C	2-17-11 / 0804						X				
SES021711-D	2-17-11 / 1001						X			1	

Matrix: A-Air; S-Soil; GW-Ground Water; SW-Surface Water; DW-Drinking Water; WW-Waste Water

Preservative: H-HCl; N-HNO3; S-H2SO4; Na-NaOH; M-MeOH

Na

Project Manager:
Company:
Address:
City: State: Zip:
Phone: Ext:
Fax:
E-Mail:
Site Name:
Project #:
State: NH MA ME VT Other:
Regulatory Program: NPDES: RGP POTW Stormwater
GWP Oil Fund Brownfield Other
Quote #: PO #:

DATE NEEDED:

QA/QC Reporting Level: A B C or MA MCP Presumptive Certainty

Reporting Options: Preliminary: Yes or No; Report: Fax or PDF

Electronic Options: No Data E-Mail PDF Equis

Temp 4 °C; Ice: Yes No

Metals: 8 RCRA 13 PP Fe, Mn Pb, Cu
Other Metals:
Dissolved Metals Field Filtered? Yes No
Notes: (ie: Special Detection Limits, Billing Info, If Different)

See notes on P. 1

Sampled by: ES

Relinquished By: [signature] Date: 2/23/11 Time: 11:55 Received By: [signature]

Relinquished By: [signature] Date: 2/23/11 Time: 13:32 Received By: [signature]

Relinquished By: Date: Time: Received By:

Received By:
Shipping Confirmation:
Field Blanks:

eastern analytical, inc.

(WHITE: ORIGINAL GREEN: PROJECT MANAGER)

Page 3 of 4

CHAIN-OF-CUSTODY RECORD

97113

BOLD FIELDS REQUIRED PLEASE CIRCLE REQUESTED ANALYSIS

SAMPLE I.D.	SAMPLING DATE/TIME *IF COMPOSITE, INDICATE BOT-START & FINISH DATE/TIME	MATRIX (SEE BELOW)	GRAB/* COMPOSITE	VOC	SVOC	TCLP METALS	INORGANICS	MICRO	OTHER	# OF CONTAINERS	NOTES MICH YUL #
ING021711-A	2-17-11 / 0757						X				
ING021711-B	2-17-11 / 1005						X				
INS021711-C	2-17-11 / 1217						X				
INS021711-D	2-17-11 / 1423						X				
SEG021711-A	2-17-11 / 1210						X				
SEG021711-B	2-17-11 / 1417						X				
SEG021811-C	2-18-11 / 0905						X				
SEG021811-D	2-18-11 / 1145						X				
SEG021811-E	2-15-11 / 1530					X	X			3	

MATRIX: A-AIR; B-SOIL; SW-SURFACE WATER; GW-GROUND WATER; DW-DRINKING WATER; WW-WASTE WATER; O-OIL; S-SLUDGE; P-WIPE; L-LIQUID; V-VEGETATION; W-WIPE

PRESERVATIVE: H-HCL; N-HNO3; S-H2SO4; Z-ZnAc; O-NaOH; M-MeOH

1 & 2 composite into one sample bottle

3 composite into one sample bottle

Do not discard samples prior to review of results by Eric Snapp!

PROJECT MANAGER: _____

COMPANY: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

PHONE: _____ FAX: _____

EMAIL: _____

INVOICE TO: _____

PROJECT #: _____

STATE: NH MA ME VT OTHER _____

REGULATORY PROGRAM: NPDES; RCP RGW (CIRCLE ONE) DWP OTHER (CIRCLE ONE OR OTHER) _____

QUOTE #: _____ PO #: _____

DATE NEEDED: _____

QA/QC REPORTING LEVEL: A B C OR MA MCP

PRESUMPTIVE CERTAINTY

SAMPLER: _____

REPORTING OPTIONS: FAX EMAIL HARD COPY

ELECTRONIC OPTIONS: NONE EMAIL PDF EDD

TEMP. 4°C ICE? (Y) N

METALS: AS BA CD CR PB MG SE AG

OTHER: _____

DISSOLVED METALS FILTERED? (Y) (N)

SPECIAL INSTRUCTIONS/COMMENTS/REMARKS: See notes on P. 1

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:
[signature]	2/23/11	11:55	[signature]
[signature]	2/24/11	13:32	[signature]

COOLER #: _____

SPECIAL CONDITIONS: _____

FIELD READINGS: _____

eastern analytical, inc.

(WHITE: ORIGINAL GREEN: PROJECT MANAGER)

EAI
Analytical Labs

640 Marlboro Street / Route 101, Keene NH 03431
Phone: (603) 357-2577 / Toll Free: (800) 760-4246 / Fax: (603) 352-3899

Donna Hanscom
City of Keene, WWTP
350 Marlboro Street
Keene, NH 03431

October 13, 2006

Dear Donna,

In response to our meeting yesterday, I would like to outline the criteria I have used to evaluate the blind standards that were analyzed in conjunction with the local limits study for your WWTP, as well as, review related proficiency testing and the associated internal quality control measures for the BOD testing performed by EAI Analytical Labs.

As required by the standards set forth by NELAC, EAI Analytical Labs has participated in two routine proficiency tests (PTs) a year. The results are evaluated according to two sets of control limits. The first is termed the acceptance limit, having control limits of +/- 30% and the second is the warning limit, having control limits of +/- 33% for the BOD analysis. EAI Analytical Labs has demonstrated its proficiency by passing every consecutive study since bringing the analysis online several years ago. All results were determined to have met both the acceptance and warning criteria. An additional quick response blind PT was performed at the completion of your project and was also found to meet both sets of evaluation criteria. I have provided you with the results for the past three PTs, conducted by EAI Analytical Labs.

Environmental Resource Associates (ERA), our PT provider has established its Acceptance and Warning Limits per the USEPA's guidelines contained in the National Standards for Water Proficiency Testing Studies Criteria Document, December 1998, the NELAC PT program criteria, or ERA's SOP for the generation of Performance Acceptance Limits as applicable EAI Analytical Labs has used the same criteria to evaluate the two blind standards submitted with your study samples, EAI Analytical Labs' sample numbers 22473 and 22586. The results generated by our laboratory have met both the acceptance and warning limits for both blind standards, submitted from your facility.

All the internal quality controls, as prescribed by the NELAC standards and Standard Method 5210B, were performed and found to have met all control limits. A laboratory control spike (LCS), seed control and method blank (MB) were prepared and analyzed with every analytical batch and a matrix spike (MS) and a duplicate analysis were performed on a 5% basis. All of the above mentioned internal quality control measures were found to have met the method specified acceptance criteria and all sample results were reported free of any qualifying statements. I have provided you with all the associated bench logs

Please let me know if I can be of any further assistance and thanks for your business.

Sincerely,

Daniel Crosby
Laboratory Director

EAI
Analytical Labs

640 Marlboro Street / Route 101, Keene NH 03431
Phone: (603) 357-2577 / Toll Free: (800) 760-4246 / Fax: (603) 352-3899

Donna Hanscom
City of Keene, WWTP
350 Marlboro Street
Keene, NH 03431

September 21, 2006

Dear Donna,

Thank you for utilizing the services of EAI Analytical Labs to perform a portion of the testing for your WWTP local limits study. Enclosed, please find the data packs for the all the BOD samples we processed, a CD-ROM containing the electronic copies of the final reports, in MS-Excel format and a single itemized invoice for all the BOD testing for this study.

The data packs are bound by Sample Delivery Group (SDG), they are comprised of the original Chain of Custody, copies of the laboratory bench logs and the final report.

The invoice takes into account the nine repeat analyses that had to be performed and credits them towards the project total.

Please let us know if we can be of any further assistance to you and thanks again for your business.

Sincerely,

Daniel Crosby
Laboratory Director

EAI
Analytical Labs

640 Marlboro Street / Route 101, Keene NH 03431
Phone: (603) 357-2577 / Toll Free: (800) 760-4246 / Fax: (603) 352-3899

Analytical Report Form

Client:	City of Keene WWTP	Project Description:	WWTP Local Limits
Contact:	Eric Swope	Sampling Site:	listed below
Address:	350 Marlboro Street	Sample Type:	Wastewater
Phone:	(603) 357-9836 ext. 8504	Sampled By:	A. Costa, E. Swope
Fax:	(603) 357-9854	Report Date:	September 11, 2006

Sample ID #	Sample Location	Composite / Grab	Date and Time Collected	Date and Time Analysis Completed	Analyst	Analyte	Method #	Detection Limit	Result	Unit of Measure
22470	Septage, SEP060606	G	9/05/06 1320	9/11/06 1530	DC	BOD_5	SM 5210 B	200	**4,800**	mg / L
22471	Monadnock Mkt. Place, MMC060606	C	9/06/06 0820	9/11/06 1530	DC	BOD_5	SM 5210 B	50	**202**	mg / L
22472	High + Elm St., HEC060606	C	9/06/06 0750	9/11/06 1530	DC	BOD_5	SM 5210 B	50	**243**	mg / L
22473	Keene Lab, STD060606	NA	9/06/06 1035	9/11/06 1530	DC	BOD_5	SM 5210 B	12	**183**	mg / L
22474	High + Elm St., HEC060606D	C	9/06/06 0750	9/11/06 1530	DC	BOD_5	SM 5210 B	50	**143**	mg / L
22475	Monadnock Mkt. Place, MMC060606D	C	9/06/06 0820	9/11/06 1530	DC	BOD_5	SM 5210 B	50	**178**	mg / L
22476	Influent WWTP, INC060606	C	9/06/06 0650	9/11/06 1530	DC	BOD_5	SM 5210 B	50	**228**	mg / L
22477	Septage, SEP060606	G	9/06/06 1320	9/11/06 1530	DC	BOD_5	SM 5210 B	200	**5,420**	mg / L

EAI Analytical Labs maintains accreditation with the State of New Hampshire Environmental Laboratory Accreditation Program (NHELAP), adhering to all standards put forth by the National Environmental Laboratory Accreditation Conference (NELAC).

NH Laboratory Certification Number: 1007
US EPA ID Code: NH01013

Reviewed by:

ACCREDITED IN ACCORDANCE WITH nelac

Chain of Custody 1 of 1

Client Information

Client: Keene City Lab
Contact: Eric Sept
Address: 350 Marlboro Street
City / State / Zip: Keene, NH 03431
Telephone: 357-9831 x 650Y
Fax: 352-9857

AEAI
Analytical Labs
[illegible]

Project Information

System/Client Name: City of Keene
System/Client Location:
EPA ID or Permit #:
Project Description: Local Limits
Chlorinated Y (N) Water Source: Drinking / Surface (Waste)
Sampler Name: AC, ES Phone #: 357-9836

	Sample ID	Sample Location	Date/Time Collected	Composite or Grab (C/G)	Containers	Preservative	Bacteria	IOC	Nitrate	Nitrite	SOC	VOC	BOD	TSS					Comments
																			pH
2470	SEP090506	Septage	9-5-06/1300	G	1	—							X						0.1, 0.15, 0.5, 1
2471	MMC090506	Monadnock Mobile Estates - Sanitary	9-5-06 0330 9-6-06 1800	C	1	—													
2472	HEC090506	High & Elm Streets - Sanitary	9-5-06 0750 9-6-06 0750	C	1	—													
2473	STD090606	Keene Lab	9-6-06/1035	WG	1	—													
2474	HEC090506D	High & Elm Streets to	9-5-06, 0750 9-6-06, 0750	C	1	—													
2475	MMC090506D	Monadnock Mkt.	9-5-06, 0820 9-6-06, 0820	C	1	—													
2476	INF090506	Influent-MWTP	9-5-06 0800 9-6-06 0800	C	1	—													
2477	SEP090606	Septage	9-6-06/1300	G	1	—							↓						0.1, 0.15, 0.5, 1

Custody	Date:	Time:
Sampled by: Eric Sept, Aaron Cole		
Relinquished by:	9-6-06	1346
Received by:	9-6-06	1346
Relinquished by:		
Received by:		

Packing Checklist	
Received within hold time?	(Y) N
Received enough volume for analysis?	(Y) N
Received within acceptable temperature range?	(Y) N
Received with appropriate preservative?	(Y) N
Received in acceptable condition for analysis?	(Y) N

EAI Analytical Labs

Biochemical Oxygen Demand

Sample ID 21471, 72, 73 Date/Time Incubation Initiated 9/16/16 1600 Date/Time Incubation Complete: 9/21/16 1530 Analyst: DL 421: 6.95 422: 6.98 pH: 421: 6.50 Adjusted pH: not

Probe calibrated prior to use? Y / N Nutrient Buffer Lot #: 15863 Seed Lot #: 20161005 Standard Lot #: A16267 H2O Lot #: 0609

For chlorinated samples and samples requiring pH adjustment: Nitrification Inhibitor Lot #:

Potassium Iodide Lot #: Starch Indicator Lot #: Sodium Hydroxide Lot #: 2981 Sulfuric Acid Lot #:

Vol. of sample (mL)	D_1 Init. DO of diluted sample (mg/L) (B_1 for seed control)	D_2 Final DO of diluted sample after 5 days incubation at 20.0 C (mg/L) (B_2 for seed control)	P (P = decimal fraction of sample used)	f (f = vol. seed in dil. smpl. / vol. seed in seed control)	BOD (mg/L)	Comments
Method Blank			Not applicable	Not applicable	Not applicable	
Seed Control for dil. seed			Not applicable	Not applicable	Not applicable	$(B_1 - B_2)f$ = 0.9
LCS, Init. spike, diln. seed				1		
21471 10 mL	5.1	6.0	0.10	NA	310	
6.0 mL	9.1	4.9	11-62		145	$\bar{x}$ = 202 mg/L BOD
4.0 mL	8.0	1.7	0.04		210	
2.0 mL	9.0	0.9	0.02		MA	
21472 3.0 mL	9.1	5.6	0.01		250	
6.0 mL	9.1	2.9	0.01		360	$\bar{x}$ = 243 mg/L BOD
9.0 mL	9.0	1.4	0.03		220	
12.0 mL	7.9	<1	0.04	✓	MA	
21473 3.0 mL	8.1	6.3	0.01	1	MA	
6.0 mL	8.1	4.0	0.03	1	165	
9.0 mL	8.2	2.2	0.03	1	173	$\bar{x}$ = 163 mg/L BOD
12.0 mL	8.2	1.4	0.04	1	150	
30 mL	8.1	<1	0.1	1	MA	
50 mL	8.3	<1	0.166	1	MA	
100 mL			0.33	1		
150 mL			0.5	1		

Standard Method calculation for unseeded dilution water
BOD, mg/L = $(D_1 - D_2) / P$
where:
D_1 = initial DO of diluted sample (mg/L)
D_2 = final DO of diluted sample (mg/L)
P = decimal volumetric fraction of sample used

Standard Method calculation for seeded dilution water
BOD, mg/L = $[(D_1 - D_2) - (B_1 - B_2) f] / P$
where:
B_1 = initial DO of seed control (mg/L)
B_2 = final DO of seed control (mg/L)
f = ratio of seed in diluted sample to seed in seed control

reviewed by: KM

EAI Analytical Labs

Biochemical Oxygen Demand

Sample ID: 22474 25,% Date/Time Incubation Initiated: 9/4/05 1600 Date/Time Incubation Complete: 9/4/05 1530 Analyst: DC pH: 7: 6.88 11: 6.92 Adjusted pH: N/A

Probe calibrated prior to use?: Y / N Nutrient Buffet Lot #: 150663 Seed Lot #: [illegible] Standard Lot #: A6309 H2O Lot #: D0046

For chlorinated samples and samples requiring pH adjustment: Nitrification Inhibitor Lot #:

Potassium Iodide Lot #: Starch Indicator Lot #: Sodium Hydroxide Lot #: 2982 Sulfuric Acid Lot #:

Vol. of sample (mL)	D_1 Init. DO of diluted sample (mg/L) (B_1 for seed control)	D_2 Final DO of diluted sample after 5 days incubation at 20.0 C (mg/L) (B_2 for seed control)	P (P = decimal fraction of sample used)	f (f = vol. seed in dil. smpl. / vol. seed in seed control)	BOD (mg/L)	Comments
Method Blank			Not applicable	Not applicable	Not applicable	
Seed Control for dil. seed			Not applicable	Not applicable	Not applicable	$\lvert B_1 - B_2 \rvert$ =
100% dil. water, no seed				1		
22474 1.0 mL	9.1	6.9	0.01	N/A	N/A	
5.0 mL	8.0	5.9	0.05	1	130	
10 mL	8.1	3.6	0.03		150	$\bar{x}$ = 143 mg/L BOD
15.0 mL	8.1	2.1	0.05		150	
22475 3.0 mL	8.2	6.1	0.01		210	
6.0 mL	8.1	4.9	0.02		165	$\bar{x}$ = 179 mg/L BOD
9.0 mL	8.1	3.1	0.03		167	
12.0 mL	8.0	1.3	0.04		166	
22476 3.0 mL	8.1	5.6	0.01		350	
6.0 mL	8.1	4.0	0.02		205	$\bar{x}$ = 276 mg/L BOD
9.0 mL	8.0	1.4	0.03		220	
12.0 mL	7.9	<1	0.04		N/A	

Standard Method calculation for unseeded dilution water:
BOD, mg/L = $(D_1 - D_2) / P$
where:
D_1 = initial DO of diluted sample (mg/L)
D_2 = final DO of diluted sample (mg/L)
P = decimal volumetric fraction of sample used

Standard Method calculation for seeded dilution water:
BOD, mg/L = $[(D_1 - D_2) - (B_1 - B_2)f] / P$
where:
B_1 = initial DO of seed control (mg/L)
B_2 = final DO of seed control (mg/L)
f = ratio of seed in diluted sample to seed in seed control

reviewed by: [signature]

EAI Analytical Labs

Biochemical Oxygen Demand

ample ID 324470, 77 Date/Time Incubation Initiated 9/6/06 1100 Date/Time Incubation Complete 9/11/06 1510 Analyst AC pH: 7.2-7.6 Adjusted pH: N/A

obe calibrated prior to use? Y / N Nutrient Buffer Lot #: A5026 Seed Lot #: EA1on1106 Standard Lot #: AC.2007 H2O Lot #: 0605

r chlorinated samples and samples requiring pH adjustment: Nitrification Inhibitor Lot #:

otassium Iodide Lot # Starch Indicator Lot #: Sodium Hydroxide Lot #: Sulfuric Acid Lot #:

Vol. of sample (mL)	D_1 Init. DO of diluted sample (mg/L) (B_1 for seed control)	D_2 Final DO of diluted sample after 5 days incubation at 20.0 C (mg/L) (B_2 for seed control)	P (P = decimal fraction of sample used)	f (f = vol. seed in dil. smpl / vol. seed in seed control)	BOD (mg/L)	Comments
Method Blank			Not applicable	Not applicable	Not applicable	
Seed Control (by dil. seed			Not applicable	Not applicable	Not applicable	$(B_1 - B_2)f =$
Diluted sples, thru seed			α	1		
324470 0.1	8.3	6.9	0.100	N/A	N/A	
0.15	8.2	3.7	0.0667	1	5,400	$\bar{x}$ = 4,500 mg/L BOD
0.5	7.3	1.4	0.0167		4,200	
1.0	8.3	<1	0.0033		N/A	
324477 0.1	8.2	6.2	0.0033		1600	
0.15	8.3	2.6	0.00467		6,500	$\bar{x}$ = 6,450 mg/L BOD
0.5	8.2	<1	0.0167		N/A	
1.0	8.1	<1	0.033		N/A	

AC 9/16/06

Standard Method calculation for unseeded dilution water
OD, mg/L = $(D_1 - D_2) / P$
here:
$_1$ = initial DO of diluted sample (mg/L)
$_2$ = final DO of diluted sample (mg/L)
= decimal volumetric fraction of sample used

Standard Method calculation for seeded dilution water
BOD, mg/L = $[(D_1 - D_2) - (B_1 - B_2)f] / P$
where:
B_1 = initial DO of seed control (mg/L)
B_2 = final DO of seed control (mg/L)
f = ratio of seed in diluted sample to seed in seed control

reviewed by:

EAL Analytical Labs

Biochemical Oxygen Demand

Sample ID: [illegible] Date/Time Incubation Initiated: 9/16/16 1620 Date/Time Incubator Complete: 9/21/16 1530 Analyst: DK pH: 7.23 Adjusted pH: NA

Probe calibrated prior to use: Y/N Nutrient Buffer Lot #: A 9063 Seed Lot #: [illegible] Standard Lot #: 16209 HgO Lot #: 0605

For chlorinated samples and samples requiring pH adjustment: Nitrification Inhibitor Lot #: 51353

Potassium Iodide Lot #: Starch Indicator Lot #: Sodium Hydroxide Lot #: Sulfuric Acid Lot #:

Vol. of sample (mL)	D_1 Init. DO of diluted sample (mg/L) (B_1 in seed control)	D_2 Final DO of diluted sample after 5 days incubation at 20.0 C (mg/L) (B_2 in seed control)	P (P = decimal fraction of sample used)	f (f = vol. seed in dil. smpl. / vol. seed in seed control)	BOD (mg/L)	Comments
Method Blank	8.1	8.0	Not applicable	Not applicable	Not applicable	ok
Seed Control (Bo and seed	8.1	7.3	Not applicable	Not applicable	Not applicable	$\lvert B_1 - B_2 \rvert f = 0.9$
LCS, 3mL H2SO4 Acc. meet	8.1	3.4	0.01	1	350 ± 17.5	ok
22496 20 mL	8.0	5.4	0.05	NA	280	}
1 6.0 mL	8.1	3.3	0.03	1	240	} $\bar{x}$ = 250 mg/L BOD
9.0 mL	8.2	1.3	0.07	1	270	}
22496 3 mL	8.2	6.0	0.01	1	220	}
1 6.0 mL	8.3	5.1	0.03	1	160	} $\bar{x}$ = 173 mg/L BOD
9.0 mL	8.3	4.1	0.07	1	140	}
22496 30 mL	8.4	~~5.3~~ 6.5	0.1	1	~~3.5~~ NA	
1 45 mL	8.5	5.3	0.15	1	~~24~~ 14	} $\bar{x}$ = 15 mg/L BOD
1 60 mL	8.6	5.0	0.2	1	14	}
22497 100 mL	8.4	4.0	0.333	1	11	}
1 150 mL	8.4	1.9	0.5	1	9	} $\bar{x}$ = 10 mg/L CBOD
1 200 mL	8.5	1.1	0.666	1	10	}
22495 3.0 mL	8.5	~~5.3~~ 5.3	0.01	NA	240	?
1 6.0 mL	8.5	2.4	0.02	1	265	} $\bar{x}$ = 241 mg/L CBOD
1 5.0 mL	8.4	1.1	0.03	0	217	}

Standard Method calculation for unseeded dilution water

BOD, mg/L = $(D_1 - D_2) / P$

where:

D_1 = initial DO of diluted sample (mg/L)

D_2 = final DO of diluted sample (mg/L)

P = decimal volumetric fraction of sample used

Standard Method calculation for seeded dilution water

BOD, mg/L = $[(D_1 - D_2) - (B_1 - B_2) f] / P$

where:

B_1 = Initial DO of seed control (mg/L)

B_2 = final DO of seed control (mg/L)

f = ratio of seed in diluted sample to seed in seed control

reviewed by:

EAI
Analytical Labs

640 Marlboro Street / Route 101, Keene NH 03431
Phone: (603) 357-2577 / Toll Free: (800) 760-4246 / Fax: (603) 352-3899

Analytical Report Form

Client:	City of Keene WWTP	Project Description:	WWTP Local Limits
Contact:	Eric Swope	Sampling Site:	listed below
Address:	350 Marlboro Street	Sample Type:	Wastewater Composites
Phone:	(603) 357-9836 ext. 6504	Sampled By:	A. Costa, E. Swope
Fax:	(603) 357-9854	Report Date:	September 13, 2006

Sample ID #	Sample Location	Composite / Grab	Date and Time Collected	Date and Time Analysis Completed	Analyst	Analyte	Method #	Detection Limit	Result	Unit of Measure
22505	Secondary Effluent, SEC090706	C	9/06/06 1101	9/13/06 1620	DC	BOD_5	SM 5210 B	3	<3	mg / L
22506	Primary Effluent, PEC090706	C	9/07/06 1530	9/13/06 1620	DC	BOD_5	SM 5210 B	20	102	mg / L
22507	Sanitary Sewer WW, MMC090706	C	9/06/06 0940	9/13/06 1620	DC	BOD_5	SM 5210 B	50	100	mg / L

EAI Analytical Labs maintains accreditation with the State of New Hampshire Environmental Laboratory Accreditation Program (NHELAP), adhering to all standards put forth by the National Environmental Laboratory Accreditation Conference (NELAC).

NH Laboratory Certification Number: 1007
US EPA ID Code: NH01013

Reviewed by:

12:50
13:30
NR

Chain of Custody 1 of 1

Client Information

Client:	Keene City Lab
Contact:	Eric Swope
Address:	350 Marlboro St.
City / State / Zip:	Keene, NH 03431
Telephone:	357-1836, x 6504
Fax:	352-9854

EAI Analytical Labs

540 Marlboro Street / Route 101 Keene NH 03431
(603) 357-2577 / (800) 780-4246 / Fax: (603) 352-9688

Project Information

System/Client Name:	Keene, City of
System/Client Location:	Keene WWTP
EPA ID or Permit #	
Project Description:	Local Limits sampling
Chlorinated: Y / N;	Water Source: Drinking / Surface / Waste
Sampler Name:	ES, AC Phone #: 357-1836 x 6504

Sample ID	Sample Location	Date/Time Collected	Composite or Grab (C/G)	Containers	Preservative	Bacteria	IOC	Nitrate	Nitrite	SOC	VOC	BOD	TSS					Comments
1345 SEC 090706	WWTP - Secondary Effluent	9-7-06, 1101 9-8-06, 1101	C	1								X						Check dilutions
1350 PEC 090706	WWTP - Primary Effluent	9-7-06, 1330 9-8-06, 1330	C	1								X						Check hold-time
1351 MHC 090706	Sanitary Sewer Wastewater	9-7-06, 0840 9-8-06 0840	C	1								X						

Custody	Date:	Time:
Sampled by: ES, AC	9-7-06	
Relinquished by:	9-8-06	1301
Received by:	9-8-06	1301
Relinquished by:		
Received by:		

Project Checklist	
Received within hold time?	(Y) N
Received enough volume for analysis?	(Y) N
Received within acceptable temperature range?	(Y) N
Received with appropriate preservatives?	(Y) N
Received in acceptable condition for analysis?	(Y) N

EAI
Analytical Labs

640 Marlboro Street / Route 101, Keene NH 03431
Phone: (603) 357-2577 / Toll Free: (800) 760-4246 / Fax: (603) 352-3899

Analytical Report Form

Client: City of Keene WWTP
Contact: Eric Swope
Address: 350 Marlboro Street
Phone: (603) 357-9838 ext. 6504
Fax: (603) 357-9854

Project Description: WWTP Local Limits
Sampling Site: listed below
Sample Type: Wastewater Composites
Sampled By: A. Costa, E. Swope
Report Date: September 20, 2006

Sample ID #	Sample Location	Composite / Grab	Date and Time Collected	Date and Time Analysis Completed	Analyst	Analyte	Method #	Detection Limit	Result	Unit of Measure
22585	WWTP Secondary, SEC091406	C	9/15/06 1025	9/20/06 1515	DC	BOD_5	SM 5210 B	2	2	mg / L
22586	QC Standard, STD091506	NA	9/15/06 1130	9/20/06 1515	DC	BOD_5	SM 5210 B	50	144	mg / L

EAI Analytical Labs maintains accreditation with the State of New Hampshire Environmental Laboratory Accreditation Program (NHELAP), adhering to all standards put forth by the National Environmental Laboratory Accreditation Conference (NELAC).

NH Laboratory Certification Number: 1007
US EPA ID Code: NH01013

Reviewed by:

ACCREDITED IN ACCORDANCE WITH NELAC

Chain of Custody 1 / 1

Client Information

Client: Keene City Lab
Contact: Aaron Costa
Address: 350 Marlboro St
City / State / Zip: Keene, NH 03431
Telephone: 357-9836 x 6502
Fax: 357-4254

EAI Analytical Labs

Project Information

System/Client Name:
System/Client Location:
EPA ID or Permit #:
Project Description: Local Utility Wastewater sampling
Chlorinated: Y / N; Water Source: Drinking / Surface / Waste
Sampler Name: Aaron Costa Phone #: 357-9836, 6502

Sample ID	Sample Location	Date/Time Collected	Composite or Grab (C/G)	Containers	Preservative	Bacteria	IOC	Nitrate	Nitrite	SOC	VOC	BOD	TSS					Comments
SEL 091406	WWTP- Secondary	9-14-06, 1035 9-15-06 1020	C	1	—							X						22585
TD 091506	24 Standard	9-15-06 1130	NA	1	—							V						Range 100-300 mg/L
																		22586

Custody	Date:	Time:
Sampled by: Aaron Costa		
Relinquished by:	9-15-06	1252
Received by: DMSmith	9.15.06	13:30
Relinquished by: DMSmith	9.15.06	12:55
Received by:		

Receipt Checklist

Received within hold time?	(Y) N
Received enough volume for analysis?	(Y) N
Received within acceptable temperature range?	(Y) N
Received with appropriate preservative?	(Y) N
Received in acceptable condition for analysis?	(Y) N

EAI
Analytical Labs

640 Marlboro Street / Route 101, Keene NH 03431
Phone: (603) 357-2577 / Toll Free: (800) 760-4246 / Fax: (603) 352-3899

Analytical Report Form

Client:	City of Keene WWTP	Project Description:	WWTP Local Limits
Contact:	Eric Swope	Sampling Site:	listed below
Address:	350 Marlboro Street	Sample Type:	Wastewater Composites
Phone:	(603) 357-9836 ext. 6504	Sampled By:	A. Costa, E. Swope
Fax:	(603) 357-9854	Report Date:	September 18, 2006

Sample ID #	Sample Location	Composite / Grab	Date and Time Collected	Date and Time Analysis Completed	Analyst	Analyte	Method #	Detection Limit	Result	Unit of Measure
22555	Secondary Effluent, SEC091206	C	9/13/06 1015	9/18/06 1500	DC	BOD_5	SM 5210 B	3	<3	mg / L
22556	Influent, INC091206	C	9/13/06 0820	9/18/06 1500	DC	BOD_5	SM 5210 B	50	219	mg / L
22557	Primary Effluent, PEC091306	C	9/13/06 1340	9/18/06 1500	DC	BOD_5	SM 5210 B	20	151	mg / L

EAI Analytical Labs maintains accreditation with the State of New Hampshire Environmental Laboratory Accreditation Program (NHELAP), adhering to all standards put forth by the National Environmental Laboratory Accreditation Conference (NELAC).

NH Laboratory Certification Number: 1007
US EPA ID Code: NH01013

Reviewed by:

ACCREDITED IN ACCORDANCE WITH NELAC

Chain of Custody 1 of 1

Client Information

Client: City of Keene
Contact: Aaron Costa, Eric Swope
Address: 350 Marlboro St
City / State / Zip: Keene, NH 03431
Telephone: 357-9836 x 16502
Fax: 357-9853

EAI Analytical Labs

340 Marlboro Street / Route 101 Keene NH 03431
(603) 357-2577 / (800) 730-4248 / Fax (603) 352-0888

Project Information

System/Client Name: City of Keene
System/Client Location:
EPA ID or Permit #:
Project Description: Local Limits
Chlorinated: Y / N Water Source: Drinking / Surface / Waste
Sampler Name: AC, ES Phone #: 357-9836

Sample ID	Sample Location	Date/Time Collected	Composite or Grab (C/G)	Containers	Preservative	Bacteria	TOC	Nitrate	Nitrite	SOC	VOC	BOD	TSS					Comments
																		Etc 9/14/06
EC 091206	2° Effluent	9-12-06 10:15 9-13-06 10:15	C	1								✓						[redacted] 22555
INC 091206	Influent	9-12-06 0820 9-13-06 0840	C	1								✓						[redacted] 22556
EC 091306	1° Effluent	9-12-06 1405 9-13-06 1340	C	1								✓						[redacted] 22557

Contact:	Date:	Time:
Sampled by: Aaron Costa, Eric Swope		
Relinquished by:	9-13-06	1407
Received by:	9-13-06	1407
Relinquished by:		
Received by:		

Project Checklist

Received within hold time?	Y / N
Received enough volume for analysis?	Y / N
Received within acceptable temperature range?	Y / N
Received with appropriate preservative?	Y / N
Received in acceptable condition for analysis?	Y / N

EAI
Analytical Labs

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Phone: (603) 357-2577 / Toll Free: (800) 760-4246 / Fax: (603) 352-3849

Analytical Report Form

Client:	City of Keene WWTP	Project Description:	WWTP Local Limits
Contact:	Eric Swope	Sampling Site:	listed below
Address:	350 Marlboro Street	Sample Type:	Wastewater
Phone:	(603) 357-9836 ext. 6504	Sampled By:	A. Costa, E. Swope
Fax:	(603) 357-9854	Report Date:	September 11, 2006

Sample ID #	Sample Location	Composite / Grab	Date and Time Collected	Date and Time Analysis Completed	Analyst	Analyte	Method #	Detection Limit	Result	Unit of Measure
22418	Monadnock Mkt. Place, MMC083106	C	9/01/06 1020	9/06/06 1520	DC	BOD_5	SM 5210 B	50	78	mg / L
22419	Primary Effluent, PEC083106	C	8/31/06 1715	9/06/06 1520	DC	BOD_5	SM 5210 B	50	103	mg / L
22420	High + Elm St., HEC083106	C	9/01/06 0945	9/06/06 1520	DC	BOD_5	SM 5210 B	50	160	mg / L
22421	Secondary Effluent, SEC090106	C	9/01/06 1325	9/06/06 1520	DC	BOD_5	SM 5210 B	50	<50	mg / L

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NH Laboratory Certification Number: 1007
US EPA ID Code: NH01013

Reviewed by:

ACCREDITED IN ACCORDANCE WITH nelac

Chain of Custody 1 of 1

Client Information

Client: City of Keene
Contact: Aaron Costa
Address: 350 Marlboro St
City / State / Zip: Keene, NH 03431
Telephone: 603-357-9836 x 16502
Fax: 357-9852

EAI Analytical Labs
640 Marlboro Street / Route 101 Keene NH 03431
(603) 357-2577 / (800) 790-4248 / Fax: (603) 352-3699

Project Information

System/Client Name: City of Keene
System/Client Location: Keene WWTP
EPA ID or Permit #:
Project Description: Local Limits
Chlorinated: Y / N; Water Source: Drinking / Surface / Waste
Sampler Name: AGES Phone #: 357-9836

Sample ID	Sample Location	Date/Time Collected	Composite or Grab (C/G)	Containers	Preservative	Bacteria	IDC	Nitrate	Nitrite	SOC	VOC	BOD	TSS					Comments
2418	Monadnock Market Place	5-31-06 1020 9-1-06 1020	C	1								✓						2418
419	1° Effluent	5-31-06 1715 9-31-06 1715	C	1								✓						419
420	High & Elm St	5-31-06 1995 9-1-06 0945	C	1								✓						420
421	2° Effluent	5-31-06 1725 9-1-06 1345	C	1								✓						421

Custody	Date:	Time:
Sampled by: Aaron Costa, Eric Swope	9.1.06	1405
Relinquished by:	9.1.06	1415
Received by:		
Relinquished by:		
Received by:		

Receipt Checklist

Received within hold time?	Y / N
Received enough volume for analysis?	Y / N
Received within acceptable temperature range?	Y / N
Received with appropriate preservative?	Y / N
Received in acceptable condition for analysis?	Y / N

EAI
Analytical Labs

640 Marlboro Street / Route 101, Keene NH 03431
Phone: (603) 357-2577 / Toll Free: (800) 760-4246 / Fax: (603) 352-3899

Analytical Report Form

Client:	City of Keene WWTP	Project Description:	WWTP Local Limits
Contact:	Eric Swope	Sampling Site:	listed below
Address:	350 Marlboro Street	Sample Type:	Wastewater Composites
Phone:	(603) 357-9836 ext. 6504	Sampled By:	A. Costa, E. Swope
Fax:	(603) 357-9854	Report Date:	September 19, 2006

Sample ID #	Sample Location	Composite / Grab	Date and Time Collected	Date and Time Analysis Completed	Analyst	Analyte	Method #	Detection Limit	Result	Unit of Measure
22576	Influent, INC091306	C	9/14/06 0815	9/19/06 1600	DC	BOD_5	SM 5210 B	50	221	mg / L
22577	Secondary Effluent, SEC091306	C	9/14/06 1020	9/19/06 1600	DC	BOD_5	SM 5210 B	3	3	mg / L
22578	Primary Effluent, PEC091406	C	9/14/06 1340	9/19/06 1600	DC	BOD_5	SM 5210 B	20	137	mg / L

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NH Laboratory Certification Number: 1007
US EPA ID Code: NH01013

Reviewed by:

ACCREDITED IN ACCORDANCE WITH

14:18

Chain of Custody 1 1 1

Client Information	
Client:	City of Keene
Contact:	Aaron Costa, Eric Swope
Address:	350 Marlboro St
City / State / Zip:	Keene, NH 03431
Telephone:	357-9836
Fax:	357-9854

EAI Analytical Labs

340 Marlboro Street / Route 101 Keene NH 03431
(603) 357-2777 / (800) 140-4268 / Fax: (603) 352-3868

Project Information	
System/Client Name:	City of Keene
System/Client Location:	
EPA ID or Permit #:	
Project Description:	local limits
Chlorinated: Y (N)	Water Source: Drinking / Surface / Waste
Sampler Name:	ALES Phone #: 357-9836

Sample ID	Sample Location	Date/Time Collected	Compatible or Grab (C/G)	Containers	Preservative	Blackwhite	IOC	Nitrate	Nitrite	SOC	VOC	BOD	TSS					Comments	
INC 091306	Influent	9-13-06 0815 9-14-06 0813	C	1								✓							22576
KEC 091306	2° Effluent	9-13-06 1030 9-14-06 0830	C	1								✓						Note dilution in comments	22577
REC 091406	1° Effluent	9-13-06 1405 9-14-06 1500	C	1								✓							22578

Custody	Date:	Time:
Sampled by: Aaron Costa, Eric Swope		
Relinquished by: [signature]	9-14-06	1418
Received by: [signature]	9.14.06	14:18
Relinquished by: [signature]	9-14-06	14:18
Received by:		

Project Checklist	
Received within hold time?	(Y) N
Received enough volume for analysis?	(Y) N
Received within acceptable temperature range?	(Y) N
Received with appropriate preservative?	(Y) N
Received in acceptable condition for analysis?	(Y) N

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Analytical Labs

640 Marlboro Street / Route 101, Keene NH 03431
Phone: (603) 357-2577 / Toll Free: (800) 760-4246 / Fax: (603) 352-3899

Analytical Report Form

Client:	City of Keene WWTP	Project Description:	WWTP Local Limits
Contact:	Eric Swope	Sampling Site:	listed below
Address:	350 Marlboro Street	Sample Type:	Wastewater
Phone:	(603) 357-9828 ext. 6504	Sampled By:	A. Costa, E. Swope
Fax:	(603) 357-9854	Report Date:	September 13, 2006

Sample ID #	Sample Location	Composite / Grab	Date and Time Collected	Date and Time Analysis Completed	Analyst	Analyte	Method #	Detection Limit	Result	Unit of Measure
22487	Primary Effluent, PEC090606	C	9/06/06 1510	9/12/06 1620	DC	BOD_5	SM 5210 B	20	**140**	mg / L
22488	Primary Effluent, PEC090606D	C	9/06/06 1510	9/12/06 1620	DC	BOD_5	SM 5210 B	20	**137**	mg / L
22489	Secondary Effluent, SEC090606	C	9/07/06 1055	9/12/06 1620	DC	BOD_5	SM 5210 B	3	**3**	mg / L
22490	High + Elm St., HEC090606	C	9/07/06 0855	9/12/06 1620	DC	BOD_5	SM 5210 B	50	**163**	mg / L
22491	Influent, INC090606	C	9/07/06 1006	9/12/06 1620	DC	BOD5	SM 5210 B	50	**158**	mg / L

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NH Laboratory Certification Number: 1007
US EPA ID Code: NH01013

Reviewed by:

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Chain of Custody 1 / 1

Client Information

Client: City of Keene
Contact: Aaron Costa, Eric Swope
Address: 350 Marlboro St
City / State / Zip: Keene, NH 03431
Telephone: (603-357-9836 X 16502
Fax: 357-9854

EAI Analytical Labs
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(603) 357-2577 / (800) 780-6246 | Fax: (603) 352-3849

Project Information

System/Client Name: City of Keene
System/Client Location: Keene WWTP
EPA ID or Permit #: tbac
Project Description: Local Limits
Chlorinated: Y / (N) Water Source: Drinking / Surface / (Waste)
Sampler Name: A. E's Phone #: 357-9836

	Sample ID	Sample Location	Date/Time Collected	Composite or Grab (C/G)	Containers	Preservative	Bacteria	IOC	Nitrate	Nitrite	SOC	VOC	BOD	TSS					Comments
PEC	090606	1° Effluent	9-5-06 1510 9-6-06 1510	C	1								✓						22487
PEC	090606 #	1° Effluent	9-5-06 1510 9-6-06 1510	C	1								✓						22488
SEC	090606	2° Effluent	9-6-06 1055 9-7-06 1055	C	1								✓						22489
HEC	090606	High + Elm Street	9-6-06 0835 9-7-06 0835	C	1								✓						22490
INL	090606	Influent	9-6-06 1006 9-7-06 1006	C	1								✓						22491

Custody:		Date:	Time:
Sampled by:	Aaron Costa, Eric Swope		
Relinquished by:		9-7-06	1336
Received by:	Melinda Dutton	9.7.06	13:36
Relinquished by:	Melinda Dutton	9.7.06	13:36
Received by:			

Receipt Checklist	
Received within hold time?	(Y) N
Received enough volume for analysis?	(Y) N
Received within acceptable temperature range?	(Y) N
Received with appropriate preservative?	(Y) N
Received in acceptable condition for analysis?	(Y) N

EAI
Analytical Labs

640 Marlboro Street / Route 101, Keene NH 03431
Phone: (603) 357-2577 / Toll Free: (800) 760-4246 / Fax: (603) 352-3899

Analytical Report Form

Client:	City of Keene WWTP	Project Description:	WWTP Local Limits
Contact:	Eric Swope	Sampling Site:	listed below
Address:	350 Marlboro Street	Sample Type:	Wastewater
Phone:	(603) 357-9836 ext. 6504	Sampled By:	A. Costa, E. Swope
Fax:	(603) 357-9854	Report Date:	September 18, 2006

Sample ID #	Sample Location	Composite / Grab	Date and Time Collected	Date and Time Analysis Completed	Analyst	Analyte	Method #	Detection Limit	Result	Unit of Measure
22528	Septage, SEP091206	G	9/12/06 1218	9/18/06 0805	DC	BOD_5	SM 5210 B	600	**4,020**	mg / L
22529	Septage, SEP091206D	G	9/12/06 1218	9/18/06 0805	DC	BOD_5	SM 5210 B	600	**3,831**	mg / L
22530	Monadnock Market Pt., MMC091106	C	9/12/06 0755	9/18/06 0805	DC	BOD_5	SM 5210 B	50	**104**	mg / L
22531	Influent, INC091106	C	9/12/06 0615	9/18/06 0805	DC	BOD_5	SM 5210 B	50	**241**	mg / L
22532	Primary Effluent, PEC091206	C	9/12/06 1345	9/18/06 0805	DC	BOD5	SM 5210 B	20	**122**	mg / L

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NH Laboratory Certification Number: 1007
US EPA ID Code: NH01013

Reviewed by:

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Chain of Custody 1 / 1

Client Information	
Client:	City of Keene
Contact:	Aaron Costa
Address:	350 Marlboro St
City / State / Zip:	Keene, NH 03431
Telephone:	357-9856 x 16502
Fax:	357-9853

EAI Analytical Labs

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(603) 357-2577 / (800) 780-4246 / Fax: (603) 352-3849

Project Information	
System/Client Name:	City of Keene
System/Client Location:	
EPA ID or Permit #:	
Project Description:	Local Limits
Chlorinated: Y (N)	Water Source: Drinking / Surface / (Waste)
Sampler Name:	AC, KS Phone #: 357-9856

Sample ID	Sample Location	Date/Time Collected	Composite or Grab (C/G)	Containers	Preservative	Bacteria	IOC	Nitrate	Nitrite	SOC	VOC	BOD	TSS					Comments
Sep 091206	Septage	9-12-06 1210	G	1	–							✓						22528
Sep 091206 D	Septage	9-12-06 1310	G	1								✓						22529
MMC 091106	Monadnock Market	0755 9-11-06 – 0755 9-12-06	C	1								✓						22530
INC 091106	Influent	0815 – 0815 9-11-06 – 9-12-06	C	1								✓						22531
PEC 091206	1° Effluent	1345 – 1345 9-11-06 – 9-12-06	C	1								✓						22532

Custody	Date:	Time:
Sampled by:	Aaron Costa, Eric Savage	
Relinquished by:	9-12-06	1425
Received by:	9.12.06	14:25
Relinquished by:		
Received by:		

Receipt Checklist	
Received within hold time?	(Y) N
Received enough volume for analysis?	(Y) N
Received within acceptable temperature range?	(Y) N
Received with appropriate preservative?	(Y) N
Received in acceptable condition for analysis?	(Y) N

EAI
Analytical Labs
640 Marlboro Street / Route 101, Keene NH 03431
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Analytical Report Form

Client:	City of Keene WWTP	Project Description:	WWTP Local Limits
Contact:	Eric Swope	Sampling Site:	listed below
Address:	350 Marlboro Street	Sample Type:	Wastewater
Phone:	(603) 357-9838 ext. 6504	Sampled By:	A. Costa, E. Swope
Fax:	(603) 357-9854	Report Date:	September 5, 2006

Sample ID #	Sample Location	Composite / Grab	Date and Time Collected	Date and Time Analysis Completed	Analyst	Analyte	Method #	Detection Limit	Result	Unit of Measure
22402	Influent, INC083006	C	8/31/06 1125	9/05/06 1515	DC	BOD_5	SM 5210 B	50	130	mg / L
22403	Primary Effluent, PEC083006	C	8/30/06 1645	9/05/06 1515	DC	BOD_5	SM 5210 B	50	81	mg / L
22404	Domestic, HEC083006	C	8/31/06 0930	9/05/06 1515	DC	BOD_5	SM 5210 B	50	129	mg / L
22405	Secondary Effluent, SEC083106	C	8/31/06 1320	9/05/06 1515	DC	BOD_5	SM 5210 B	50	<50	mg / L
22406	Septage, SEP083106	G	8/31/06 1310	9/05/06 1515	DC	BOD5	SM 5210 B	200	4,170	mg / L

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NH Laboratory Certification Number: 1007
US EPA ID Code: NH01013

Reviewed by:

ACCREDITED IN ACCORDANCE WITH nelac

Chain of Custody 1 / 1

Client Information	
Client:	City of Keene
Contact:	Aaron Costa
Address:	350 Marlboro St
City / State / Zip:	Keene, NH 03431
Telephone:	357-9836 x6502
Fax:	352-9854

EAI Analytical Labs

643 Marlboro Street / Route 101 Keene NH 03431
(603) 357-2577 / (800) 780-4248 / Fax: (603) 352-3699

Project Information	
System/Client Name:	City of Keene
System/Client Location:	WWTP
EPA ID or Permit #:	
Project Description:	Local Limits
Chlorinated Y / N.	Water Source: Drinking / Surface / Waste
Sampler Name:	Aaron Costa, ES Phone #: 357-9836

Sample ID	Sample Location	Date/Time Collected	Composite or Grab (C/G)	Containers	Preservative	Bacteria	IOC	Nitrate	Nitrite	SOC	VOC	BOD	TSS					Comments
2402 INCO83006	Influent	8-30-06 1125 to 8-31-06 1047	C	1	—							✓						
2403 PECO83006	Primary Eff	8-29-06 1715 8-30-06 1645	C	1	—							✓						
2404 DECO83006	Domestic	8-30-06 0930 8-31-06 0950	C	1	—							✓						
2405 SECO83106	Secondary Eff	8-30-06 1335 8-31-06 1320	C	1	—							✓						
2406 SP083106	Spot	8-31-06 1310	G	1	—							✓						
	Septage																	

Custody		Date:	Time:
Sampled by:	Aaron Costa, Eric Swope		
Relinquished by:		8-31-06	1354
Received by:	David Lacy	8-31-06	1354
Relinquished by:			
Received by:			

Receipt Checklist	
Received within hold time?	(Y) / N
Received enough volume for analysis?	(Y) / N
Received within acceptable temperature range?	(Y) / N
Received with appropriate preservative?	(Y) / N
Received in acceptable condition for analysis?	(Y) / N

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Analytical Labs

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Analytical Report Form

Client: City of Keene WWTP
Contact: Eric Swope
Address: 350 Marlboro Street
Phone: (603) 357-9836 ext. 6504
Fax: (603) 357-9854

Project Description: WWTP Local Limits
Sampling Site: listed below
Sample Type: Wastewater Composites
Sampled By: A. Costa, E. Swope
Report Date: September 5, 2006

Sample ID #	Sample Location	Composite / Grab	Date and Time Collected	Date and Time Analysis Completed	Analyst	Analyte	Method #	Detection Limit	Result	Unit of Measure
22374	Septage, Sep082806	C	8/28/06 1315	9/03/06 1330	OC	BOD_5	SM 5210 B	200	**2,120**	mg / L
22375	Influent, INC082806	C	8/29/06 1125	9/03/06 1330	OC	BOD_5	SM 5210 B	50	**335**	mg / L
22376	Domestic, HEC082806	C	8/29/06 0905	9/03/06 1330	OC	BOD_5	SM 5210 B	50	**388**	mg / L

EAI Analytical Labs maintains accreditation with the State of New Hampshire Environmental Laboratory Accreditation Program (NHELAP), adhering to all standards put forth by the National Environmental Laboratory Accreditation Conference (NELAC).

NH Laboratory Certification Number: 1007
US EPA ID Code: NH01013

Reviewed by:

Chain of Custody 1 of 1

Client Information

Client: City of Keene
Contact: Aaron Costa
Address: 350 Marlboro St
City / State / Zip: Keene, NH 03431
Telephone: 357-9836 X 6502
Fax: 357-9857

EAI Analytical Labs
640 Marlboro Street / Route 101 Keene NH 03431
(603) 352-2777 / (800) FEC-4246 / Fax: (603) 352-2899

Project Information

System/Client Name: City of Keene
System/Client Location: Keene WWTP / Domestic
EPA ID or Permit #:
Project Description: Local Limits
Chlorinated: Y / N Water Source: Drinking / Surface / Waste
Sampler Name: AC, ES Phone #: 357-9836 x6502

Sample ID	Sample Location	Date/Time Collected	Composite or Grab (C/G)	Containers	Preservative	Bacteria	IOC	Nitrate	Nitrite	SOC	VOC	BOD	TSS					Comments
22374	Sep082506	Septage	6-25-06 1315	C	1	—							✓					
22375	INF082506	Influent	6-26-06 @ 1105 6-27-06 @ 1105	C	1	—							✓					
	RECD 1K																	
22376	REC082506	Domestic	6-27-06 0905 6-28-06 0905	C	1	—							✓					

Custody	Date:	Time:
Sampled by: Aaron Costa, Eric Swope		
Relinquished by:	6-28-06	1240
Received by:	6-28-06	1240
Relinquished by:		
Received by:		

Receipt Checklist	
Received within hold time?	Y / N
Received enough volume for analysis?	Y / N
Received within acceptable temperature range?	Y / N
Received with appropriate preservative?	Y / N
Received in acceptable condition for analysis?	Y / N

EAI
Analytical Labs

640 Marlboro Street / Route 101, Keene NH 03431
Phone (603) 357-2577 / Toll Free: (800) 760-4246 / Fax (603) 352-3899

Analytical Report Form

Client:	City of Keene WWTP	Project Description:	WWTP Local Limits
Contact:	Eric Swope	Sampling Site:	listed below
Address:	350 Marlboro Street	Sample Type:	Wastewater
Phone:	(603) 357-9838 ext. 6504	Sampled By:	A. Costa, E. Swope
Fax:	(603) 357-9854	Report Date:	September 5, 2006

Sample ID #	Sample Location	Composite / Grab	Date and Time Collected	Date and Time Analysis Completed	Analyst	Analyte	Method #	Detection Limit	Result	Unit of Measure
22389	Septage, SEP083006	G	8/30/06 1305	9/04/06 1540	DC	BOD_5	SM 5210 B	200	3,170	mg / L
22390	Influent, INC082906	C	8/30/06 1116	9/04/06 1540	DC	BOD_5	SM 5210 B	50	198	mg / L
22391	Primary Effluent, PEC082906	C	8/29/06 1700	9/04/06 1540	DC	BOD_5	SM 5210 B	50	88	mg / L
22392	Septage, SEP082906	G	8/29/06 1350	9/04/06 1540	DC	BOD_5	SM 5210 B	200	2,580	mg / L
22393	Sanitary Sewer - Monadnock Mkt. MMC082906	C	8/30/06 0950	9/04/06 1540	DC	BOD_5	SM 5210 B	50	118	mg / L
22394	2 Effluent, SEC083006	C	8/30/06 1325	9/04/06 1540	DC	BOD_5	SM 5210 B	50	<50	mg / L

EAI Analytical Labs maintains accreditation with the State of New Hampshire Environmental Laboratory Accreditation Program (NHELAP), adhering to all standards put forth by the National Environmental Laboratory Accreditation Conference (NELAC).

NH Laboratory Certification Number: 1007
US EPA ID Code: NH01013

Reviewed by:

ACCREDITED IN ACCORDANCE WITH nelac

13: 58

Chain of Custody 1 / 1

Client Information	
Client:	Keene City Lab
Contact:	Eric Swope
Address:	350 Marlboro St.
City / State / Zip:	Keene, NH 03431
Telephone:	357-9836 x 6504
Fax:	357-9854

EAI Analytical Labs
840 Marlboro Street / Route 101 Keene NH 03431
(603) 357-2577 / (800) 780-4345 / Fax: (603) 352-3665

Project Information	
System/Client Name:	City of Keene
System/Client Location:	WWTP
EPA ID or Permit #:	
Project Description:	Local Limits sampling
Chlorinated: Y / (N);	Water Source: Drinking / Surface / (Waste)
Sampler Name:	Aaron Costa Phone #: 357-9836 x6502

	Sample ID	Sample Location	Date/Time Collected	Composite or Grab (C/G)	Containers	Preservative	Bacteria	IOC	Nitrate	Nitrite	SOC	VOC	BOD	TSS					Comments
2389	SEP 082906	WWTP - Septage	8-30-06 / 1305	G	1								✓						
2390	INC 082906	WWTP - Influent	8-29-06, 11:25 8-30-06, 11:18	C	1								✓						
2391	PEC 082906	WWTP Primary Effluent	8-28-06 1725 8-29-06 17:0	C	1								✓						
2392	SEP 082906	WWTP - Septage	8-29-06 13:30	G	1								✓						
2393	MMC 082906	Sanitary Sewer - Monadnock Mkt.	8-29-06 10:40 8-30-06 0950	C	1								✓						
2394	SEC083006	2° Effluent	8-28-06 1335 8-30-06 1325	C	1								✓						

Custody		Date:	Time:
Sampled by:	Aaron Costa, Eric Swope		
Relinquished by:		8-30-06	1357
Received by:	Melinda Dutton	8.30.06	13:57
Relinquished by:			
Received by:			

Receipt Checklist	
Received within hold time?	(Y) N
Received enough volume for analysis?	(Y) N
Received within acceptable temperature range?	(Y) N
Received with appropriate preservative?	(Y) N
Received in acceptable condition for analysis?	(Y) N

ENVIRONMENTAL RESOURCE ASSOCIATES, WP-104 Definitions & Study Discussion

ERA Laboratory Code: B353S-01 EPA ID: NH01013

Report Issued: 11/11/03
Study Dates: 09/08/03 - 10/23/03

WP Study Definitions:

The Reported Value is the value that the laboratory reported to ERA.

The ERA Assigned Values are established per the USEPA's guidelines contained in the National Standards for Water Proficiency Testing Studies Criteria Document, December 1998, and the National Environmental Laboratory Accreditation Conference (NELAC) program criteria as applicable. A parameter not added to the standard is given an Assigned Value of "0" per the guidelines contained in the USEPA's Criteria Document and NELAC standards.

The Acceptance Limits and Warning Limits are established per the USEPA's guidelines contained in the National Standards for Water Proficiency Testing Studies Criteria Document, December 1998, the NELAC PT [illegible] criteria, ERA's SOP for the Development of Performance Acceptance [illegible] as applicable. For a further discussion of how your results were evaluated, please see the cover letter that accompanied the enclosed report.

The Performance Evaluation:

Acceptable	= Reported Value falls within the Acceptance Limits.
Not Acceptable	= Reported Value falls outside of the Acceptance Limits.
Check for Error	= Reported Value falls within the Acceptance Limits and outside of the Warning Limits.
No Evaluation	= Reported Value cannot be evaluated.

The Method Description is the method the laboratory reported to ERA.

WP Study Discussion:

ERA's WatR™ Pollution Proficiency Testing Study, WP-104, has been reviewed by ERA Senior Management and certified compliant with the requirements of the USEPA's National Standards for Water Proficiency Testing Studies Criteria Document (December 1998), the NELAC Standards Chapter 2 and Associated Appendices, applicable state PT programs, and those contained in the National Institute of Standards and Technology NVLAP Handbooks 150 and 150-19. ERA is a NIST NVLAP accredited PT Provider (Lab Code 200366O).

This report contains data that are not covered by the NVLAP accreditation.

ERA's WatR™ Pollution Study, WP-104, standards were examined for any anomalies. A full review of all homogeneity, stability, and accuracy verification data was completed. All analytical verification data for all analytes in the WP-104 standards met the acceptance criteria contained in the USEPA's National Criteria Document for Water Proficiency Testing Studies, December 1998, and the National Voluntary Laboratory Accreditation Program Handbook 150-19 for Chemical Calibration for Providers of Proficiency Testing.

The data submitted by participating laboratories was also examined for study anomalies. There was one anomaly found during the review of the study data.

If you have any questions regarding ERA's WatR™ Pollution Proficiency Testing Study, WP-104, please contact Shawn Kassner, Proficiency Testing Manager, or Curtis Wood, Quality Assurance Director, at 1-800-372-0122.

NVLAP

ENVIRONMENTAL RESOURCE ASSOCIATES

WP-137 Final Complete Report

Daniel Crosby
Lab Director
EAI Analytical Labs
540 Marlboro St.
Route 101
Keene, NH 03431
603-357-2577

EPA ID: NH01013
ERA Laboratory Code: B3535-01
Report Issued: 08/17/06
Study Dates: 06/12/06 - 07/27/06

Anal. No.	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Warning Limits	Performance Evaluation	Method Description
Demand					40% - 150%	60% - 131%		
0038	BOD †	mg/L	20.0	28.2	13.9 - 42.4	18.7 - 37.6	Acceptable	SM 5210 B
0102	CBOD †	mg/L	18.0	24.3	10.9 - 37.8	15.4 - 33.3	Acceptable	SM 5210 B
0036	COD †	mg/L	37.0	45.3	29.8 - 57.3	34.4 - 52.8	Acceptable	HACH 8000
0037	TOC †	mg/L		17.9	14.8 - 21.0	15.9 - 19.9		

BOD %R = 71%

All analytes are included in ERA's A2LA accreditation. Lab Code: 1539-01
† Indicates analytes included in ERA's NIST/NVLAP accreditation. Lab Code 200356-0

NVLAP

ENVIRONMENTAL RESOURCE ASSOCIATES,

WP-125 Final Complete Report

Daniel Crosby
Lab Director
EAI Analytical Labs
640 Marlboro St.
Route 101
Keene, NH 03431
603-357-2577

EPA ID: NH01013
ERA Laboratory Code: B3535-01
Report Issued: 08/10/05
Study Dates: 06/06/05 - 07/21/05

Anal. No.	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Warning Limits	Performance Evaluation	Method Description
Demand					51% - 150%	67% - 133%		
0036	BOD ‡	mg/L	102	94.2	47.6 - 141	63.2 - 125	Acceptable	SM 5210 B
0102	CBOD †	mg/L	90	81.1	36.4 - 126	51.3 - 111	Acceptable	SM 5210 B
0035	COD ‡	mg/L		152	116 - 174	128 - 164		
0037	TOC †	mg/L		60.1	50.2 - 69.2	53.4 - 66.0		

BOD % R = 108%

All analytes are included in ERA's A2LA accreditation. Lab Code 1535-01
† Indicates analytes included in ERA's NIST/NVLAP accreditation. Lab Code 200386-0

NVLAP

ENVIRONMENTAL RESOURCE ASSOCIATES®
The Industry Standard™

October 11, 2006

Daniel Crosby
EAI Analytical Labs
840 Marlboro St., Route 101
Keene, NH 03431

Fax: 603-352-3899

Dear Daniel,

On October 5, 2006, EAI Analytical Labs located in Keene, New Hampshire, participated in ERA's QuiK™ Response Performance Evaluation Program. The following result was reported to ERA by EAI Analytical Labs for the PE standard, Project Number 100506F. The Certified Value and the QuiK™ Response Acceptance Limits were not available to EAI Analytical Labs.

If you have any questions, please contact either myself, or Shawn Kassner, Proficiency Testing Program Manager, at 1-800-372-0122.

Sincerely,

Christian Milek
QuiK™ Response Coordinator

Cc: Project File Number 100506F

ENVIRONMENTAL RESOURCE ASSOCIATES
The Industry Standard™

QuiK™ Response Final Report
Project Number: 100506F

EAI Analytical Labs
840 Marlboro St.
Route 101
Keene, New Hampshire 03431

ERA Laboratory Code: B3535-01
EPA Lab ID: NH01013

Results reported by: Daniel Crosby
Title: Lab Director
Phone # 603-352-3888
Fax # 603-352-3899

Study Open Date: 10/5/2006
Study Close Date: 10/11/2006
Report Issue Date: 10/11/2006

WatR™ Pollution Demand (cat# 516QR)

Analyte No.	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description
0038	BOD	mg/L	135	120	60.8 - 179	Acceptable	SM 5210 B

112% R

Environmental
Laboratories Corporation

111 Herrick Street, Merrimack, NH 03054
TEL: (603) 424-2022 • FAX: (603) 429-0485
www.amrolabs.com

November 24, 2006

ANALYTICAL TEST RESULTS

Eric Swope
Keene WWTP
350 Marlboro Street
Keene, NH 03431
TEL: (603) 357-9836
FAX: (603) 357-9854

Subject: Local Limits

Workorder No.: 0609009

Dear Eric Swope:

AMRO Environmental Laboratories Corp. received 40 samples on 9/5/2006 for the analyses presented in the following report.

AMRO is accredited in accordance with NELAC and certifies that these test results meet all the requirements of NELAC, where applicable, unless otherwise noted in the case narrative.

The enclosed Sample Receipt Checklist details the condition of your sample(s) upon receipt. Please be advised that any unused sample volume and sample extracts will be stored for a period of 60 days from sample receipt date (90 days for samples from New York). After this time, AMRO will properly dispose of the remaining sample(s). If you require further analysis, or need the samples held for a longer period, please contact us immediately.

This report consists of a total of 46 pages. This letter is an integral part of your data report. All results in this project relate only to the sample(s) as received by the laboratory and documented in the Chain-of-Custody. This report shall not be reproduced except in full, without the written approval of the laboratory. If you have any questions regarding this project in the future, please refer to the Workorder Number above.

Sincerely,

Maria N. Bordas
President

State Certifications: NH (NELAC) 169, MA M-NH002, CT PH-0758, NY 11758 (NELAC), ME NH012 and 1001, NJ NH125, RI 00105, U.S. Army Corps of Engineers, NAVFAC, Naval Facilities Engineering Service Center (NFESC)

Hard copy of our State Certifications available upon request.

AMRO Environmental Laboratories Corp.

Date: 24-Nov-06

CLIENT: Keene WWTP
Project: Local Limits
Lab Order: 0609008
Date Received: 9.5.06

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Collection Date	Collection Time
0609008-01A	Comp of 4 ING Grabs	8/28/06	12:00 AM
0609008-01B	ING A 082806	8/28/06	10:25 AM
0609008-01C	ING B 082806	8/28/06	1:50 PM
0609008-01D	ING C 082806	8/28/06	3:55 PM
0609008-01E	ING D 082806	8/29/06	8:55 AM
0609008-02A	Comp of 4 PEG Grabs	8/28/06	12:00 AM
0609008-02B	PEG A 082806	8/28/06	5:25 PM
0609008-02C	PEG B 082906	8/29/06	9:40 AM
0609008-02D	PEG C 082906	8/29/06	11:20 AM
0609008-02E	PEG D 082906	8/29/06	1:30 PM
0609008-03A	Comp of 4 SEG Grabs	8/31/06	12:00 AM
0609008-03B	SEG A 083106	8/31/06	1:20 PM
0609008-03C	SEG B 083106	8/31/06	3:26 PM
0609008-03D	SEG C 090106	9/1/06	9:15 AM
0609008-03E	SEG D 090106	9/1/06	11:20 AM
0609008-04A	Comp of 4 ING Grabs	8/29/06	12:00 AM
0609008-04B	ING A 082906	8/29/06	11:35 AM
0609008-04C	ING B 082906	8/29/06	1:35 PM
0609008-04D	ING C 082906	8/29/06	3:45 PM
0609008-04E	ING D 083006	8/30/06	8:30 AM
0609008-05A	Comp of 4 SEG Grabs	8/29/06	12:00 AM
0609008-05B	SEG A 082906	8/29.06	1:45 PM
0609008-05C	SEG B 082906	8/29.06	3:50 PM
0609008-05D	SEG C 083006	8/30.06	8:40 AM
0609008-05E	SEG D 083006	8.30/06	11:37 AM
0609008-06A	Comp of 4 PEG Grabs	8/29/06	12:00 AM
0609008-06B	PEG A 082906	8/29/06	5:25 PM
0609008-06C	PEG B 083006	8/30/06	8:35 AM
0609008-06D	PEG C 083006	8/30/06	11:32 AM
0609008-06E	PEG D 083006	8/30/06	2:22 PM
0609008-07A	Comp of 4 ING Grabs	8/30/06	12:00 AM
0609008-07B	ING A 083006	8/30/06	11:32 AM
0609008-07C	ING B 083006	8/30/06	2:20 PM
0609008-07D	ING C 083006	8/30/06	4:05 PM
0609008-07E	ING D 083106	8/31/06	8:50 AM

CLIENT: Keene WWTP
Project: Local Limits
Lab Order: 0609008
Date Received: 9/5/06

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Collection Date	Collection Time
0609008-08A	Comp of 4 SEG Grabs	8/30/06	12:00 AM
0609008-08B	SEG A 083006	8/30/06	1:30 PM
0609008-08C	SEG B 083006	8/30/06	4:10 PM
0609008-08D	SEG C 083106	8/31/06	8:40 AM
0609008-08E	SEG D 083106	8/31/06	10:51 AM
0609008-09A	Comp of 4 PEG Grabs	8/30/06	12:00 AM
0609008-09B	PEG A 083006	8/30/06	5:20 PM
0609008-09C	PEG B 083106	8/31/06	8:45 AM
0609008-09D	PEG C 083106	8/31/06	10:55 AM
0609008-09E	PEG D 083106	8/31/06	12:58 PM
0609008-10A	MMG 082806	8/28/06	9:50 AM
0609008-11A	HEG 082806	8/28/06	9:10 AM
0609008-12A	HEG 082906	8/29/06	9:55 AM
0609008-13A	MMG 082906	8/29/06	10:35 AM
0609008-14A	HEG 083006	8/30/06	9:30 AM
0609008-15A	MMG 083006	8/30/06	10:00 AM
0609008-16A	MMG 083106	8/31/06	10:15 AM
0609008-17A	HEG 083106	8/31/06	9:35 AM
0609008-18A	MMG 090506	9/5/06	8:15 AM
0609008-19A	HEG 090506	9/5/06	7:50 AM
0609008-20A	SEP 082806	8/28/06	1:15 PM
0609008-20B	SEP 082806	8/28/06	1:15 PM
0609008-20C	SEP 082806	8/28/06	1:15 PM
0609008-21A	SEP 082906	8/29/06	1:50 PM
0609008-21B	SEP 082906	8/29/06	1:50 PM
0609008-21C	SEP 082906	8/29/06	1:50 PM
0609008-22A	SEP 083006	8/30/06	1:05 PM
0609008-22B	SEP 083006	8/30/06	1:05 PM
0609008-22C	SEP 083006	8/30/06	1:05 PM
0609008-23A	SEP 083106	8/31/06	1:10 PM
0609008-23B	SEP 083106	8/31/06	1:10 PM
0609008-23C	SEP 083106	8/31/06	1:10 PM
0609008-24A	CAK 082806	8/28/06	6:00 AM
0609008-25A	CAK 083006	8/30/06	7:05 AM
0609008-26A	CAK 090106	9/1/06	6:00 AM
0609008-27A	HEC 082806	8/28/06	9:05 AM
0609008-27B	HEC 082806	8/28/06	9:05 AM

CLIENT: Keene WWTP
Project: Local Limits
Lab Order: 0609008
Date Received: 9/5/06

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Collection Date	Collection Time
0609008-28A	MMC 082906	8/29/06	10:40 AM
0609008-28B	MMC 082906	8/29/06	10:40 AM
0609008-29A	PEC 082906	8/28/06	5:25 PM
0609008-29B	PEC 082906	8/28/06	5:25 PM
0609008-30A	PEC 083006	8/29/06	5:15 PM
0609008-30B	PEC 083006	8/29/06	5:15 PM
0609008-31A	PEC 083106	8/30/06	5:15 PM
0609008-31B	PEC 083106	8/30/06	5:15 PM
0609008-32A	SEC 083006	8/29/06	1:35 PM
0609008-32B	SEC 083006	8/29/06	1:35 PM
0609008-33A	SEC 083106	8/30/06	1:35 PM
0609008-33B	SEC 083106	8/30/06	1:35 PM
0609008-34A	SEC 090106	8/31/06	1:25 PM
0609008-34B	SEC 090106	8/31/06	1:25 PM
0609008-35A	HEC 083006	8/30/06	9:30 AM
0609008-35B	HEC 083006	8/30/06	9:30 AM
0609008-36A	MMC 083106	8/31/06	10:20 AM
0609008-36B	MMC 083106	8/31/06	10:20 AM
0609008-37A	HEC 083106	8/31/06	9:45 AM
0609008-37B	HEC 083106	8/31/06	9:45 AM
0609008-38A	INC 082806	8/28/06	11:25 AM
0609008-38B	INC 082806	8/28/06	11:25 AM
0609008-39A	INC 082906	8/29/06	11:25 AM
0609008-39B	INC 082906	8/29/06	11:25 AM
0609008-40A	INC 083006	8/30/06	11:25 AM
0609008-40B	INC 083006	8/30/06	11:25 AM

AMRO Environmental Laboratories Corp.

24-Nov-05

Lab Order: 0609003
Client: Keene WWTP
Project: Local Limits

DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Analytical Test Name / Preparatory Test Name	Prep Date	Analysis Date / Batch ID	TCLP Date
0609003-01A	Comp of 4 INF Grabs	8/28/06	Waste Water	EPA 335.2 Cyanide, Total		9/8/06 R34099	
0609003-02A	Comp of 4 PEF Grabs			EPA 335.2 Cyanide, Total		9/8/06 R34099	
0609003-03A	Comp of 4 SEC Grabs	8/31/06		EPA 335.2 Cyanide, Total		9/12/06 R34052	
0609003-04A	Comp of 4 INF Grabs	8/29/06		EPA 335.2 Cyanide, Total		9/11/06 R34108	
0609003-05A	Comp of 4 SEC Grabs			EPA 335.2 Cyanide, Total		9/11/06 R34108	
0609003-06A	Comp of 4 PEC Grabs			EPA 335.2 Cyanide, Total		9/11/06 R34108	
0609003-07A	Comp of 4 INF Grabs	8/30/06		EPA 335.2 Cyanide, Total		9/11/06 R34108	
0609003-08A	Comp of 4 SEC Grabs			EPA 335.2 Cyanide, Total		9/12/06 R34052	
0609003-09A	Comp of 4 PEC Grabs			EPA 335.2 Cyanide, Total		9/11/06 R34108	
0609003-10A	MMG-082806	8/28/06 9:00:00 AM		EPA 335.2 Cyanide, Total		9/8/06 R34099	
0609003-11A	HEG-082806	8/28/06 10:30:00 AM		EPA 335.2 Cyanide, Total		9/8/06 R34099	
0609003-12A	HEG-082906	8/29/06 9:55:00 AM		EPA 335.2 Cyanide, Total		9/11/06 R34108	

AMRO Environmental Laboratories Corp.

24-Nov-06

Lab Order: R609008
Client: Keene WWTP
Project: Local Limits

DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Analytical Test Name / Preparatory Test Name	Prep Date	Analysis Date / Batch ID	ECLP Date
[illegible]	MMG052906	8/29/06 10:35:00 AM	Waste Water	EPA 335.2 Cyanide, Total		9/11/06	
						R34128	
[illegible]	BEG052706	8/30/06 9:20:00 AM		EPA 335.2 Cyanide, Total		9/11/06	
						R34128	
[illegible]	MMG [illegible]	8/31/06 10:00 AM		EPA 335.2 Cyanide, Total		9/11/06	
						R34158	
[illegible]	MMG [illegible]	8/31/06 12:05 AM		EPA 335.2 Cyanide, Total		9/12/06	
						R34059	
[illegible]	BEG [illegible]	8/31/06 9:35:00 AM		EPA 335.2 Cyanide, Total		9/12/06	
						R34250	
[illegible]	MMG [illegible]	9/5/06 8:15:00 AM		EPA 335.2 Cyanide, Total		9/12/06	
						R34250	
[illegible]	BEG [illegible]	9/5/06 7:50:00 AM		EPA 335.2 Cyanide, Total		9/12/06	
						R34269	
[illegible]	SLP [illegible]	8/29/06 1:15:00 PM	Aqueous	EPA 335.2 Cyanide, Total		9/8/06	
						R34299	
[illegible]				EPA 335.2 Amenable Cyanide		9/21/06	
						R34418	
[illegible]				EPA 200.7 ICP METALS, TOTAL		9/15/06	
				200 Series Prep ICP/GFAA	9/12/06	16958	
				EPA 200.7 ICP METALS, TOTAL		9/18/06	
					9/12/06	16958	
				EPA 200.8 ARSENIC, Total		9/19/06	
					9/12/06	16965	

AMRO Environmental Laboratories Corp.

24-Nov-06

Lab Order: 0609008
Client: Keene WWTP
Project: Local Limits

DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Analytical Test Name / Preparatory Test Name	Prep Date	Analysis Date / Batch ID	TCLP Date
[illegible]	SFP 092806	8-28-06 1:15:00 PM	Aqueous	EPA 245.1 MERCURY, Total		9/22/06	
				MERCURY PREP EPA 245.1/7470	9/21/06	15113	
				EPA 270.2 SELENIUM, Total		9/13/06	
				200 Series Prep ICP/GFAA	9/12/06	15065	
[illegible]	SFP 092806	8/28/06 1:15:00 PM		EPA 335.2 Cyanide, Total		9/11/06	
						R24125	
[illegible]				EPA 350.2 Ammonia as Nitrogen		9/15/06	
						R24095	
[illegible]				EPA 200.7 ICP METALS, TOTAL		9/13/06	
				200 Series Prep ICP/GFAA	9/12/06	15066	
				EPA 200.7 ICP METALS, TOTAL		9/13/06	
					9/12/06	15066	
				EPA 200.8 ARSENIC, Total		9/19/06	
					9/12/06	15065	
				EPA 245.1 MERCURY, Total		9/22/06	
				MERCURY PREP EPA 245.1/7470	9/21/06	15113	
				EPA 270.2 SELENIUM, Total		9/13/06	
				200 Series Prep ICP/GFAA	9/12/06	15065	
[illegible]	SFP 092806	8/28/06 1:15:00 PM		EPA 335.2 Cyanide, Total		9/12/06	
						R24050	
[illegible]				EPA 350.2 Ammonia as Nitrogen		9/15/06	
						R24095	
[illegible]				EPA 200.7 ICP METALS, TOTAL		9/13/06	
				200 Series Prep ICP/GFAA	9/12/06	15065	

AMRO Environmental Laboratories Corp.

24-Nov-06

Lab Order: 0609008
Client: Keene W WTP
Project: Local Limits

DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Analytical Test Name / Preparatory Test Name	Prep Date	Analysis Date / Batch ID	TCLP Date
[illegible]	SLP 093006	8/30/06 1:05:00 PM	Aqueous	EPA 200.7 ICP METALS, TOTAL		9/13/06	
				200 Series Prep: ICP GFAA	9/12/06	15068	
				EPA 200.2 ARSENIC, Total		9/19/06	
					9/12/06	15068	
				EPA 245.1 MERCURY, Total		9/21/06	
				MERCURY PREP: EPA 245.1 TOTAL	9/21/06	15113	
				EPA 200.2 SELENIUM, Total		9/19/06	
				200 Series Prep: ICP GFAA	9/12/06	15068	
[illegible]	SLP 093006	8/31/06 1:10:00 PM		EPA 335.2 Cyanide, Total		9/13/06	
						R34950	
[illegible]				EPA 350.2 Ammonia as Nitrogen		9/15/06	
						R34955	
[illegible]				EPA 200.7 ICP METALS, TOTAL		9/13/06	
				200 Series Prep: ICP GFAA	9/12/06	15068	
				EPA 200.7 ICP METALS, TOTAL		9/13/06	
					9/12/06	15068	
				EPA 200.2 ARSENIC, Total		9/19/06	
					9/12/06	15068	
				EPA 245.1 MERCURY, Total		9/21/06	
				MERCURY PREP: EPA 245.1 TOTAL	9/21/06	15113	
				EPA 200.2 SELENIUM, Total		9/19/06	
				200 Series Prep: ICP GFAA	9/12/06	15068	
[illegible]	CAS 093006	8/28/06 5:00:00 AM	Sludge	EPA 350.2 Ammonia as Nitrogen (Modified for Soil)		9/21/06	
						R34949	

AMRO Environmental Laboratories Corp.

24-Nov-06

Lab Order: 0609008
Client: Keene WWTP
Project: Local Limits

DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Analytical Test Name / Preparatory Test Name	Prep Date	Analysis Date / Batch ID	TT LP Date
0609008-01A	OAK 12506	8/28/2006 6:05:00 AM	Sludge	EPA 6010B ICP METALS, SOIL		9/15/06	
				EPA 3051 SOPREP TOTAL METALS Micro	9/14/06	16078	
				EPA 7060 ARSENIC, Soil 3051 7060		9/18/06	
					9/14/06	16078	
				EPA 7471 MERCURY, Soil		9/13/06	
				EPA 747[illegible] HG Soil Prep	9/12/06	16058	
				EPA 9010 Cyanide, Total or Soil		9/18/06	
						R34658	
				Percent Moisture		9/12/06	
						R34657	
				SELENIUM, Soil EPA 3051 7740		9/18/06	
				EPA 3051 SOPREP TOTAL METALS Micro	9/14/06	16078	
0609008-02A	OAK 08[illegible]	8/30/2006 7:15:00 AM		EPA 350.2 Ammonia as Nitrogen (Manual) Soil		9/21/06	
						R34749	
				EPA 6010B ICP METALS, SOIL		9/15/06	
				EPA 3051 SOPREP TOTAL METALS Micro	9/14/06	16078	
				EPA 7060 ARSENIC, Soil 3051 7060		9/18/06	
					9/14/06	16078	
				EPA 7471 MERCURY, Soil		9/13/06	
				EPA 7471 HG Soil Prep	9/12/06	16058	
				EPA 9010 Cyanide, Total or Soil		9/18/06	
						R34658	
				Percent Moisture		9/12/06	
						R34657	

AMRO Environmental Laboratories Corp.

24-Nov-06

Lab Order: 0609068
Client: Keene WWTP
Project: Local Limits

DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Analytical Test Name / Preparatory Test Name	Prep Date	Analysis Date / Batch ID	TCLP Date
[illegible]	[illegible]	[illegible]	Sludge	SELENIUM, Soil EPA 6010/7740		9/18/06	
				EPA 3050 SOPREP TOTAL METALS Micro	9/14/06	16078	
[illegible]	[illegible]	[illegible]		EPA 350.2 Ammonia as Nitrogen (Modified for Soil)		9/21/06	
						R34339	
				EPA 6010B ICP METALS, 3051 6010		9/15/06	
				EPA 3051 SOPREP TOTAL METALS Micro	9/14/06	16078	
				EPA 7060 ARSENIC Soil 3051 7060		9/18/06	
					9/14/06	16078	
				EPA 7471 MERCURY Soil		9/13/06	
				EPA 7471 HG Soil Prep	9/13/06	16058	
				EPA 9014 Cyanide, Total in Soil		9/18/06	
						R34398	
				Percent Moisture		9/13/06	
						R34247	
				SELENIUM, Soil EPA 3051 7740		9/18/06	
				EPA 3051 SOPREP TOTAL METALS Micro	9/14/06	16078	
[illegible]	[illegible]	[illegible]	Waste Water	EPA 350.2 Ammonia as Nitrogen		9/15/06	
						R34295	
[illegible]				EPA 200.7 ICP METALS, TOTAL		9/12/06	
				200 Series Prep ICP or AA	9/12/06	16068	
				EPA 245.2 AUTO MANUAL Total		9/13/06	
					9/12/06	16068	
				EPA 206.2 ARSENIC, Total		9/18/06	
					9/12/06	16068	

AMRO Environmental Laboratories Corp.

24-Nov-06

Lab Order: 0609608
Client: Keene WWTP
Project: Local Limits

DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Analytical Test Name / Preparatory Test Name	Prep Date	Analysis Date / Batch ID	TCLP Date
[illegible]	[illegible]	[illegible]	Waste Water	EPA 200.2 LEAD, Total		9/25/06	
				200 Series Prep: ICP/CVAA	9/12/06	15968	
				EPA 245.1 MERCURY, Total		9/22/06	
				MERCURY PREP: EPA 245.1 [illegible]	9/21/06	16113	
				EPA 270.2 SELENIUM, Total		9/13/06	
				200 Series Prep: ICP/CVAA	9/12/06	15968	
[illegible]	[illegible]	[illegible]		EPA 350.2 Ammonia as Nitrogen		9/25/06	
						R34955	
[illegible]				EPA 200.7 ICP METALS, TOTAL		9/13/06	
				200 Series Prep: ICP/CVAA	9/12/06	15968	
				EPA 204.2 ANTIMONY, Total		9/13/06	
					9/12/06	15968	
				EPA 206.2 ARSENIC, Total		9/19/06	
					9/12/06	15968	
				EPA 239.2 LEAD, Total		9/25/06	
					9/12/06	15968	
				EPA 245.1 MERCURY, Total		9/22/06	
				MERCURY PREP: EPA 245.1 [illegible]	9/21/06	16113	
				EPA 270.2 SELENIUM, Total		9/13/06	
				200 Series Prep: ICP/CVAA	9/12/06	15968	
[illegible]	[illegible]	[illegible]		EPA 350.2 Ammonia as Nitrogen		9/21/06	
						R34145	
[illegible]				EPA 200.7 ICP METALS, TOTAL		9/13/06	
				200 Series Prep: ICP/CVAA	9/12/06	15968	

AMRO Environmental Laboratories Corp.

24-Nov-06

Lab Order: 0609008
Client: Keene WWTP
Project: Local Limits

DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Analytical Test Name / Preparatory Test Name	Prep Date	Analysis Date / Batch ID	TCLP Date
[illegible]	[illegible]	[illegible]	Waste Water	EPA 200.2 ANTIMONY, Total		9/13/06	
				200 Series Prep: ICP GFAA	9/12/06	16568	
				EPA 200.2 ARSENIC, Total		9/19/06	
					9/12/06	16568	
				EPA 200.2 LEAD, Total		9/25/06	
					9/12/06	16568	
				EPA 245.1 MERCURY, Total		9/22/06	
				MERCURY PREP: EPA 245.1/7470	9/21/06	16115	
				EPA 200.2 SELENIUM, Total		9/15/06	
				200 Series Prep: ICP GFAA	9/12/06	16568	
[illegible]	[illegible]	[illegible]		EPA 350.2 Ammonia as Nitrogen		9/21/06	
						R34143	
[illegible]				EPA 200.7 TCLP METALS, TOTAL		9/13/06	
				200 Series Prep: ICP GFAA	9/12/06	16568	
				EPA 200.7 ANTIMONY, Total		9/15/06	
					9/12/06	16568	
				EPA 200.2 ARSENIC, Total		9/19/06	
					9/12/06	16568	
				EPA 200.2 LEAD, Total		9/25/06	
					9/12/06	16568	
				EPA 245.1 MERCURY, Total		9/22/06	
				MERCURY PREP: EPA 245.1/7470	9/21/06	16115	
				EPA 200.2 SELENIUM, Total		9/15/06	
				200 Series Prep: ICP GFAA	9/12/06	16568	

AMRO Environmental Laboratories Corp.

24-Nov-06

Lab Order: 0609008
Client: Keene WWTP
Project: Local Limits

DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Analytical Test Name / Preparatory Test Name	Prep Date	Analysis Date / Batch ID	TCLP Date
0609008-01A	PLC 083006	8/30/2006 5:15:00 PM	Waste Water	EPA 350.2 Ammonia as Nitrogen		9/21/06	
						R34148	
0609008-01B				EPA 200.7 ICP METALS, TOTAL		9/13/06	
				200 Series Prep: ICP/GFAA	9/12/06	16668	
				EPA 204.2 ANTIMONY, Total		9/15/06	
					9/12/06	16668	
				EPA 206.2 ARSENIC, Total		9/19/06	
					9/12/06	16668	
				EPA 239.2 LEAD, Total		9/25/06	
					9/12/06	16668	
				EPA 245.1 MERCURY, Total		9/22/06	
				MERCURY PREP: EPA 245.1/7470	9/21/06	16113	
				EPA 270.2 SELENIUM, Total		9/15/06	
				200 Series Prep: ICP/GFAA	9/12/06	16668	
0609008-02A	SEC 083006	8/29/2006 1:30:00 PM		EPA 350.2 Ammonia as Nitrogen		9/21/06	
						R34148	
0609008-02B				EPA 200.7 ICP METALS, TOTAL		9/13/06	
				200 Series Prep: ICP/GFAA	9/12/06	16668	
				EPA 200.7 ICP METALS, TOTAL		9/13/06	
					9/12/06	16668	
				EPA 204.2 ANTIMONY, Total		9/15/06	
					9/12/06	16668	
				EPA 206.2 ARSENIC, Total		9/19/06	
					9/12/06	16668	

AMRO Environmental Laboratories Corp.

24-Nov-06

Lab Order: 0609068
Client: Keene WWTP
Project: Local Limits

DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Analytical Test Name / Preparatory Test Name	Prep Date	Analysis Date / Batch ID	TCLP Date
[illegible]	SEC [illegible]	8/29/06 1:35:00 PM	Waste Water	EPA 200.2 LEAD, Total		9/25/06	
				200 Series Prep ICP/GFAA	9/12/06	15065	
				EPA 245.1 MERCURY, Total		9/22/06	
				MERCURY PREP EPA 245.1/7470	9/21/06	16113	
				EPA 200.2 SELENIUM, Total		9/13/06	
				200 Series Prep ICP/GFAA	9/12/06	15065	
[illegible]	SEC [illegible]	8/29/06 1:35:00 PM		EPA 350.2 Ammonia as Nitrogen		9/21/06	
						R34148	
[illegible]				EPA 200.7 ICP METALS, TOTAL		9/13/06	
				200 Series Prep ICP/GFAA	9/12/06	16068	
				EPA 200.2 ANTIMONY, Total		9/13/06	
					9/12/06	16068	
				EPA 200.2 ARSENIC, Total		9/19/06	
					9/12/06	16068	
				EPA 200.2 LEAD, Total		9/25/06	
					9/12/06	16068	
				EPA 245.1 MERCURY, Total		9/22/06	
				MERCURY PREP EPA 245.1/7470	9/21/06	16113	
				EPA 200.2 SELENIUM, Total		9/13/06	
				200 Series Prep ICP/GFAA	9/12/06	16068	
[illegible]	SEC [illegible]	8/29/06 1:35:00 PM		EPA 350.2 Ammonia as Nitrogen		9/25/06	
						R34193	
[illegible]				EPA 200.7 ICP METALS, TOTAL		9/13/06	
				200 Series Prep ICP/GFAA	9/12/06	16068	

AMRO Environmental Laboratories Corp.

24-Nov-06

Lab Order: 0609008
Client: Keene WWTP
Project: Local Limits

DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Analytical Test Name / Preparatory Test Name	Prep Date	Analysis Date / Batch ID	TCLP Date
[illegible]	SEC 090106	8/31/06 1:25:00 PM	Waste Water	EPA 204.2 ANTIMONY, Total		9/13/06	
				200 Series Prep ICP/GFAA	9/12/06	16068	
				EPA 206.2 ARSENIC, Total		9/19/06	
					9/12/06	16068	
				EPA 239.2 LEAD, Total		9/25/06	
					9/12/06	16068	
				EPA 245.1 MERCURY, Total		9/22/06	
				MERCURY PREP EPA 245.1/7040	9/21/06	16113	
				EPA 270.2 SELENIUM, Total		9/13/06	
				200 Series Prep ICP/GFAA	9/12/06	16068	
[illegible]	HCC 093006	9/30/06 9:30:00 AM		EPA 350.2 Ammonia as Nitrogen		9/26/06	
						R54190	
[illegible]				EPA 200.7 ICP METALS, TOTAL		9/13/06	
				200 Series Prep ICP/GFAA	9/12/06	16068	
				EPA 204.2 ANTIMONY, Total		9/13/06	
					9/12/06	16068	
				EPA 206.2 ARSENIC, Total		9/19/06	
					9/12/06	16068	
				EPA 239.2 LEAD, Total		9/25/06	
					9/12/06	16068	
				EPA 245.1 MERCURY, Total		9/22/06	
				MERCURY PREP EPA 245.1/7040	9/21/06	16113	
				EPA 270.2 SELENIUM, Total		9/13/06	
				200 Series Prep ICP/GFAA	9/12/06	16068	

AMRO Environmental Laboratories Corp.

24-Oct-06

Lab Order: 0609008
Client: Keene WWTP
Project: Local Limits

DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Analytical Test Name / Preparatory Test Name	Prep Date	Analysis Date / Batch ID	TCLP Date
[illegible]	MW-083106	8/31/06 10:25:00 AM	Waste Water	EPA 350.2 Ammonia as Nitrogen		9/26/06	
						R34190	
[illegible]				EPA 200.7 ICP METALS, TOTAL		9/13/06	
				200 Series Prep: ICP/GFAA	9/12/06	16568	
				EPA 204.2 ANTIMONY, Total		9/13/06	
					9/12/06	16568	
				EPA 206.2 ARSENIC, Total		9/19/06	
					9/12/06	16568	
				EPA 239.2 LEAD, Total		9/25/06	
					9/12/06	16568	
				EPA 245.1 MERCURY, Total		9/22/06	
				MERCURY PREP, EPA 245.1/7470	9/21/06	16513	
				EPA 270.2 SELENIUM, Total		9/13/06	
				200 Series Prep: ICP/GFAA	9/12/06	16568	
[illegible]	MW-083106	8/31/06 9:45:00 AM		EPA 350.2 Ammonia as Nitrogen		9/26/06	
						R34192	
[illegible]				EPA 200.7 ICP METALS, TOTAL		9/13/06	
				200 Series Prep: ICP/GFAA	9/12/06	16568	
				EPA 204.2 ANTIMONY, Total		9/13/06	
					9/12/06	16568	
				EPA 206.2 ARSENIC, Total		9/19/06	
					9/12/06	16568	
				EPA 239.2 LEAD, Total		9/25/06	
					9/12/06	16568	

AMRO Environmental Laboratories Corp.

24-Nov-06

Lab Order: 0609008
Client: Keene WWTP
Project: Local Limits

DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Analytical Test Name / Preparatory Test Name	Prep Date	Analysis Date / Batch ID	BCL P Date
[illegible]	[illegible]	[illegible]	Waste Water	EPA 245.1 MERCURY, Total		9/22/06	
				MERCURY PREP EPA 245.1 7042	9/21/06	15113	
				EPA 270.2 SELENIUM, Total		9/13/06	
				200 Series Prep ICP/GFAA	9/12/06	15068	
[illegible]	[illegible]	8/28/06 11:25:00 AM		EPA 350.2 Ammonia as N-Hach		9/21/06	
						R34148	
[illegible]				EPA 200.7/6020 METALS, TOTAL		9/13/06	
				200 Series Prep ICP/GFAA	9/12/06	15068	
				EPA 204.2 ANTIMONY, Total		9/13/06	
					9/12/06	15068	
				EPA 206.2 ARSENIC, Total		9/19/06	
					9/12/06	15068	
				EPA 239.2 LEAD, Total		9/25/06	
					9/12/06	15068	
				EPA 245.1 MERCURY, Total		9/22/06	
				MERCURY PREP EPA 245.1 7042	9/21/06	15113	
				EPA 270.2 SELENIUM, Total		9/13/06	
				200 Series Prep ICP/GFAA	9/12/06	15068	
[illegible]	[illegible]	8/29/06 11:25:00 AM		EPA 350.2 Ammonia as N-Hach		9/21/06	
						R34148	
[illegible]				EPA 200.7/6020 METALS, TOTAL		9/13/06	
				200 Series Prep ICP/GFAA	9/12/06	15068	
				EPA 204.2 ANTIMONY, Total		9/13/06	
					9/12/06	15068	

AMRO Environmental Laboratories Corp.

24-Nov-06

Lab Order: 0609008
Client: Keene WWTP
Project: Local Limits

DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Analytical Test Name / Preparatory Test Name	Prep Date	Analysis Date / Batch ID	TCLP Date
[illegible]	[illegible]	[illegible]	Waste Water	EPA 200.7 ARSENIC Total		9/19/06	
				200 Series Prep ICP/GFAA	9/12/06	16668	
				EPA 200.7 LEAD Total		9/25/06	
					9/12/06	16665	
				EPA 245.1 MERCURY Total		9/22/06	
				MERCURY PREP EPA 245.1 7470	9/21/06	16613	
				EPA 270.2 SELENIUM Total		9/13/06	
				200 Series Prep ICP/GFAA	9/12/06	16668	
[illegible]	[illegible]	[illegible]		EPA 350.2 Ammonia as Nitrogen		9/26/06	
						R24192	
[illegible]				EPA 200.7 ICP METALS, TOTAL		9/15/06	
				200 Series Prep ICP/GFAA	9/12/06	16665	
				EPA 200.7 ANTIMONY Total		9/13/06	
					9/12/06	16668	
				EPA 200.7 ARSENIC Total		9/19/06	
					9/12/06	16668	
				EPA 200.7 LEAD Total		9/25/06	
					9/12/06	16665	
				EPA 245.1 MERCURY Total		9/22/06	
				MERCURY PREP EPA 245.1 7470	9/21/06	16613	
				EPA 270.2 SELENIUM Total		9/13/06	
				200 Series Prep ICP/GFAA	9/12/06	16668	

AMRO Environmental Laboratories Corporation
211 Hetrick Street
Merrimack, NH 03054

CHAIN-OF-CUSTODY RECORD

Office: (603) 424-2022
Fax: (603) 429-8496
web: www.amrolabs.com

Project No:	Project Name:	Project State:	Project Manager:	Samplers (Signature):	AMRO Project No:
P.O.#:	Results Needed by:		REQUESTED ANALYSES		Remarks
QUOTE #:	Seal Intact? Yes No N/A				
Sample ID:	Date/Time Sampled	Matrix / # of Cont. & Size / Comp. / Grab			

Preservative: (1) HCL (2) MeOH (3) HNO_3 (4) H_2SO_4 (5) NaOH (6) Other

Send Results To:	PRIORITY TURNAROUND TIME AUTHORIZATION Before submitting samples for expedited TAT you must have a coded AUTHORIZATION NUMBER AUTHORIZATION No: BY	METALS: RCRA 8 PP 13 PP 14 CAM 14 MCP Method: 6010 200.7 Other Metals Dissolved Metals Field Filtered? YES NO
PHONE #: FAX #: Email:		MCP Presumptive Certainty Required? YES NO MCP Methods Needed: YES NO

Relinquished By	Date/Time	Received By	Required Reporting Limits
			AMRO report package level needed: S-1 GW-1 S-2 GW-2 S-3 GW-3
			EDD required: Other:

Please print clearly, legibly and completely. Samples can not be logged in and the turnaround time clock will not start until any ambiguities are resolved.

Samples arriving after 12:00 noon will be marked and billed as received on the following day.

AMRO policy requires notification prior to arriving at the laboratory in cases where the samples were collected from highly contaminated sites.

KNOWN SITE CONTAMINATION

White: Lab Copy Yellow: Accompanies Report Pink: Client Copy SHEET 1 OF 3

AMRO Environmental Laboratories Corporation
111 Hedrick Street
Merrimack, NH 03054

CHAIN-OF-CUSTODY RECORD

Office: (603) 424-2022
Fax: (603) 429-8496
web: www.amrolabs.com

Project No.:	Project Name:	Project State:	Project Manager:	Samplers (Signature):	AMRO Project No
P.O.#	Results Needed by		REQUESTED ANALYSES		Remarks
QUOTE #:	Seal Intact? Yes No N/A				
Sample I.D.:	Date/Time Sampled	Matrix / Total # of Cont. & Size / Comp. / Grab			

Preservative: (1) HCl (2) MeOH (3) HNO3 (4) H2SO4 (5) NaOH (6) Other

Send Results To

PRIORITY TURNAROUND TIME AUTHORIZATION
Before submitting samples for expedited TAT, you must have a coded AUTHORIZATION NUMBER
AUTHORIZATION No.: BY

METALS 8 RCRA 13 PP 23 TAL 13 MCP
Method 6010 200.7 Other Metals
Dissolved Metals Field Filtered? YES NO

PHONE #: FAX #:
E-mail:

RCP Presumptive Certainty Required? YES NO
MCP Methods Needed YES NO
Required Reporting Limits S-1 GW-1 S-2 GW-2 S-3 GW-3 Other:
AMRO report package level needed:
EDD required:

Relinquished By	Date/Time	Received By

Please print clearly, legibly and completely. Samples can not be logged in and the turnaround time clock will not start until any ambiguities are resolved.

Samples arriving after 12:00 noon will be marked and billed as received on the following day.

AMRO policy requires notification in writing to the laboratory in cases where the samples were collected from highly contaminated sites.

KNOWN SITE CONTAMINATION

White: Lab Copy Yellow: Accompanies Report Pink: Client Copy SHEET OF

AMRO Environmental Laboratories Corporation
111 Herrick Street
Merrimack, NH 03054

CHAIN-OF-CUSTODY RECORD

Office: (603) 424-2022
Fax: (603) 429-8496
web: www.amrolabs.com

Project No.:	Project Name:	Project State:	Project Manager:	Samplers (Signature)	AMRO Project No.:
PO #:	Results Needed by:				
QUOTE #:	Seal Intact? Yes No N/A				

Sample ID.:	Date/Time Sampled	Matrix	Total # of Cont. & Size	Comp. / Grab	REQUESTED ANALYSES	Remarks

Preservative: (1) HCl (2) MeOH (3) HNO3 (4) H2SO4 (5) NaOH (6) Other

Send Results To:

PRIORITY TURNAROUND TIME AUTHORIZATION
Advance scheduling samples for expedited TAT may incur
Advanced AUTHORIZATION Needed
AUTHORIZATION No: BY:

METALS: RCRA 10 PP 13 TAL CT MCP
Method: 6010 200.7 Other Metals

Dissolved Metals Field Filtered? YES NO

PHONE: FAX:
Email:

MCP Presumptive Certainty Required? YES NO

MCP Methods Needed YES NO

AMRO report package level needed.

EDD required:

Required Reporting Limits
S-1 GW-1
S-2 GW-2
S-3 GW-3
Other

Relinquished By:	Date/Time:	Received By:
1.		
2.		

Please print clearly, legibly and completely. Samples can not be logged in and the turnaround time clock will not start until any ambiguities are resolved.

Samples arriving after 12:00 hours will be tracked and billed as received on the following day.

AMRO policy requires notification in writing of the laboratory in cases where the samples were collected from high contaminated sites.

KNOWN SITE CONTAMINATION:

White: Lab Copy Yellow: Accompanies Report Pink: Client Copy SHEET 2 OF 2

AMRO Environmental Laboratories Corporation
111 Herrick Street
Merrimack, NH 03054

CHAIN-OF-CUSTODY RECORD

Office: (603) 424-2022
Fax: (603) 429-8496
web: www.amrolabs.com

Project No	Project Name:	Project State:	Project Manager:	Samplers (Signature)	AMRO Project No.:

P.O.#	Results Needed by	Matrix	Total # of Cont. & Size	Comp.	Grab	REQUESTED ANALYSES	Remarks
QUOTE #:	Seal Intact? Yes No N/A						
Sample ID..	Date/Time Sampled						

*Preservative: C-HCl, M-MeOH, Y-HNO3, S-H2SO4, Na-NaOH, O-Other

Send Results To	PRIORITY TURNAROUND TIME AUTHORIZATION	METALS: 8 RCRA 13 PP 23 TAL 14 MCP
	Return subcontracted samples for expected TAT when you have a coded AUTHORIZATION NUMBER	Method: 6010 7000 Other Metals:
	AUTHORIZATION No. BY	Dissolved Metals Field Filtered? YES NO

PHONE #	FAX #	MCP Presumptive Certainty Required? YES NO	MCP Methods Needed YES NO	Required Reporting Limits S-1 GW-1 S-2 GW-2 S-3 GW-3
E-mail:			AMRO report package level needed	Other
			EDD required	

Relinquished By:	Date/Time	Received By:

Please print clearly, legibly and completely. Samples can not be logged in and the turnaround time clock will not start until any ambiguities are resolved.

Samples arriving after 12:00 noon will be checked and billed as received on the following day.

AMRO policy requires notification in writing to the laboratory in cases where the samples were collected from highly contaminated sites.

KNOWN SITE CONTAMINATION

White: Lab Copy Yellow: Accompanies Report Pink: Client Copy

SHEET 1 OF 2

AMRO-COC-rev 10-30-01

AMRO Environmental Laboratories Corporation
111 Merrick Street
Merrimack, NH 03054

CHAIN-OF-CUSTODY RECORD

Office: (603) 424-2022
Fax: (603) 429-8496
web: www.amrolabs.com

Project No.:	Project Name	Project State:	Project Manager:	Samplers (Signature):	AMRO Project No.:
P.O.#	Results Needed by:				
QUOTE #:	Seal Intact? Yes No N/A				

Sample ID:	Date/Time Sampled	Matrix	Total # of Cont. & Size	Comp.	Grab	REQUESTED ANALYSES	Remarks

Preservative: (1) HCl (2) MeOH (3) HNO3 (4) H2SO4 (5) NaOH (6) Other

Send Results To:	PRIORITY TURNAROUND TIME AUTHORIZATION	METALS: 8 RCRA 13 PP 4 TAL 14 MCP
	Before subcontracting samples for expedited TAT, you must have received AUTHORIZATION NUMBER	Method: 6010 200.7 Other Metals:
	AUTHORIZATION No: By:	Dissolved Metals Field Filtered? YES NO

PHONE #	FAX #:	MCP Presumptive Certainty Required? YES NO	MCP Methods Needed YES NO	Required Reporting Limits
E-mail:				S-1 GW-1 S-2 GW-2 S-3 GW-3

Relinquished By:	Date/Time:	Received By:	AMRO report package / level needed	Other
			EDD required	

Please print clearly, legibly and completely. Samples can not be logged in and the turnaround time clock will not start until any ambiguities are resolved.

Samples arriving after 12:00 noon will be tracked and billed as received on the following day.

AMRO policy requires notification prior to the laboratory in cases where the samples were collected from highly contaminated sites.

KNOWN SITE CONTAMINATION:

White: Lab Copy Yellow: Accompanies Report Pink: Client Copy SHEET OF

AMRO Environmental Laboratories Corporation
111 Herrick Street
Merrimack, NH 03054

CHAIN-OF-CUSTODY RECORD

Office: (603) 424-2022
Fax: (603) 429-8496
web: www.amrolabs.com

Project No.:	Project Name:	Project State:	Project Manager:	Samplers (Signature):	AMRO Project No.:
P.O.#:	Results Needed by				
QUOTE #:	Sealed Cooler? Yes No N/A				

Sample ID.:	Date/Time Sampled	Matrix	Total # of Cont. & Size	Comp.	Grab	REQUESTED ANALYSES	Remarks

Preservative: Cl-HCl, MeOH, N-HNO3, S-H2SO4, Na-NaOH, O-Other

Send Results To	PRIORITY TURNAROUND TIME AUTHORIZATION	METALS: 8 RCRA ___ 13 PP ___ 23 TAL ___ 14 NCP ___
	Before submitting samples for expedited TAT you must have a coded AUTHORIZATION NUMBER	Method: 6010 ___ 200.7 ___ Other Metals
	AUTHORIZATION No. BY:	Dissolved Metals Field Filtered? YES ___ NO ___
PHONE #: FAX #: E-mail:	MCP Presumptive Certainty Required? YES ☐ NO ☐	MCP Methods Needed: YES ☐ NO ☐

Relinquished By	Date/Time	Received By	AMERO report package level needed	Requires Reporting Limits: S-1 ☐ GW-1 ☐ S-2 ☐ GW-2 ☐ S-3 ☐ GW-3 ☐ Other:
			EDD required	

Please print clearly, legibly and completely. Samples can not be logged in and the turnaround time clock will not start until any ambiguities are resolved.

Samples arriving after 12:00 noon will be logged and billed as received on the following day.

AMRO policy requires notification in writing as the laboratory is to be informed when the samples were collected from highly contaminated sites.

KNOWN SITE CONTAMINATION

White Tab Copy - Returned w/ Report | Yellow - Accompanies Report | Pink - Client Copy

AMRO Environmental Laboratories Corporation
111 Herrick Street
Merrimack, NH 03054

CHAIN-OF-CUSTODY RECORD

Office: (603) 424-2022
Fax: (603) 429-8496
web: www.amroLabs.com

Project No.:	Project Name:	Project State:	Project Manager:	Sampler's (Signature):	AMRO Project No.:
P.O.#	Results Needed by:				
QUOTE #	Seal Intact? Yes No N/A				

Sample ID.:	Date/Time Sampled	Matrix	Total # of Cont. & Size	Comp.	Grab	REQUESTED ANALYSES	Remarks

Preservative: C- ICE, V-VOA, N-HNO3, S-H2SO4, Na-Na2S2O3, O- Other

N/A

Send Results To

PHONE #

FAX #

E-mail

PRIORITY TURNAROUND TIME AUTHORIZATION

Before submitting samples for expedited TAT you must have a coded AUTHORIZATION NUMBER

AUTHORIZATION No.: BY

METALS RCRA 13 PP 23 TAL 14 MCP

Method 6010 200.7 Other Metals

Dissolved Metals Field Filtered? YES NO

MCP Presumptive Certainty Required? YES NO

MCP Methods Needed: YES NO

Required Reporting Limits: S-1 GW-1 S-2 GW-2 S-3 GW-3 Other

Relinquished By	Date/Time	Received By

AMRO report package level needed:

EDD required:

Please print clearly, legibly and completely. Samples can not be logged in and the turnaround time clock will not start until any ambiguities are resolved.

Samples arriving after 17:00 hours will be logged and billed as received on the following day.

AMRO policy requires notification in writing to the laboratory in cases where the samples were collected from highly contaminated sites.

KNOWN SITE CONTAMINATION

White: LSR Copy Yellow: Accompanies Report Pink: Client Copy

SHEET 1 OF 1

AMRO Environmental Laboratories Corporation

SAMPLE RECEIPT CHECKLIST

[illegible] Industrial Drive
Merrimack, NH 03054
(603) 424-2022

Client: CITY OF KEENE
Project Name: LOCAL LIMITS
Ship via (circle one): FedEx UPS AMRO Courier
Hand Del., Other Courier, Other

AMRO ID: 0609008
Date Rec: 9/5/06
Date Due: 9/22/06

Items to be Checked Upon Receipt	Yes	No	NA	Comments
1 Were Samples received in individual plastic bags?		✓		
2 Custody Seals present?		✓		
3 Custody Seals Intact?		✓		
4 Air Bill included in folder if received?			✓	
5 Is COC included with samples?	✓			
6 Is COC signed and dated by client?	✓			
7 Laboratory receipt temperature: TEMP = 4°C. Samples rec'd with ice ✓, ice packs __, neither __				
8 Were samples received the same day they were sampled?		✓		
Is client temperature 4°C ± 2°C?	✓			
If no obtain authorization from the client for the analyses. Client authorization from: Date: Obtained by:				
9 Is the COC filled out correctly and completely?	✓			
10 Does the info on the COC match the samples?	✓			
11 Were samples rec within holding time?	✓			
12 Were all samples properly labeled?	✓			
13 Were all samples properly preserved?	✓			
14 Were proper sample containers used?	✓			
15 Were all samples received intact? (none broken or leaking)	✓			
16 Were VOA vials rec with no air bubbles?			NA	
17 Were the sample volumes sufficient for requested analysis?	✓			
18 Were all samples received?	✓			
19 VPH and VOA Soils only				
Sampling Method VPH (circle one): M=Methanol, E=EnCore (au-tight container)				
Sampling Method VOA (circle one): M=Methanol, SB=Sodium Bisulfate, E=EnCore, B= Bulk				
If M or SB:			NA	
Does preservative cover the soil?				
If NO then client must be faxed.				
Does preservation level come close to the fill line on the vial?				
If NO then client must be faxed.				
Were vials provided by AMRO?				
If NO then weights MUST be obtained from client				
Was dry weight aliquot provided?				
If NO then fax client and inform the VOA lab ASAP.				
20 Subcontracted Samples			N/A	
What samples sent:				
Where sent:				
Date:				
Analysis:				
TAT:				
21 Information entered into				
Internal Tracking Log?	✓			
Dry Weight Log?	✓		NA	
Client Log?				
Composite Log?	✓			
Filtration Log?				

Received By: CC Date: 9/1/06 Logged in By: C.C. Date: 9/6/06
Reviewed By: C.C. Date: 9/6/06 Checked By: [illegible] Date: 9/6/06

NA= Not Applicable

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Merrimack, NH 03054

CHAIN-OF-CUSTODY RECORD

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Project No..	Project Name:	Project State:	Project Manager	Samplers (Signature):	AMRO Project No.
PO #	Results Needed by		REQUESTED ANALYSES		Remarks
QUOTE #:	Seal Intact? Yes No N/A				
Sample ID..	Date/Time Sampled	Matrix / Total # of Cont. & Size / Comp. / Grab			
CAR0202-04	[illegible]		X		
CAR0204-04	[illegible]		X		
CAR0211-04	[illegible]		X		
SEP0202-04	[illegible]		X	X	
SEP0204-04	[illegible]		X	X	
SEP0208-04	[illegible]		X	X	
SEP0211-04	[illegible]		X	X	

Preservative: Cl-HCl, MeOH, N-HNO3, S-H2SO4, Na-NaOH, O-Other — Temp: [illegible] — H2S: N — N

Send Results To:

PRIORITY TURNAROUND TIME AUTHORIZATION
Before submitting samples for a reduced TAT, you must have a coded AUTHORIZATION NUMBER
AUTHORIZATION No: BY:

METALS: 8 RCRA 13 PP 23 TAL 14 MCP
Method: 6010 200.7 Other Metals:
Dissolved Metals Field Filtered? YES NO

PHONE #: FAX #:
E-mail:

MCP Presumptive Certainty Required? YES NO

MCP Methods Needed: YES NO

Required Reporting Limits: S-1 GW-1 S-2 GW-2 S-3 GW-3 Other:

AMRO report package level needed:

EDD required:

Relinquished By:	Date/Time	Received By:
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]

Please print clearly, legibly and completely. Samples can not be logged in and the turnaround time clock will not start until any ambiguities are resolved.

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AMRO policy requires notification to arrive to the laboratory in cases where the samples were collected from highly contaminated sites.

KNOWN SITE CONTAMINATION

White: Lab Copy — Yellow: Accompanies Report — Pink: Client Copy — SHEET 1 OF 1

AMRO Environmental
Laboratories Corporation

111 Herrick Street
Merrimack, NH 03054
(603) 424-2022

Please Circle if samples are Drinking Water or Sludge/Waste

Sludge : 0609008-24A-26A

AMRO ID# 0609008

Sample ID	Analysis	Volume Sample	Preserv. Used	Initial pH*	Acceptable? Y or N	Lot# Preserv Added by AMRO	Solution ID # of Preserv	Volume Preservative Added	Final adjusted pH	Final adjusted pH (after 16 hours)
0609008-01A ÷ 09A (Comp/4)	Cyanide	1x250	NaOH	>12	Yes					
0609008-10A ÷ 19A (Grab)	cyanide	1x250	NaOH	>12	Yes					
0609008-20A ÷ 23A	cyanide	1x250	NaOH	>12	Yes					
0609008-20B ÷ 23B	Ammonia	1x500	H_2SO_4	<2	Yes					
0609008-27A ÷ 40A	Ammonia	1x500	H_2SO_4	<2	Yes					
0609008-20C ÷ 23C	Metals	1x500	HNO_3	<2	Yes					
0609008-27B ÷ 40B	Metals	1x500	HNO_3	<2	Yes					

* If the laboratory preserves the drinking water sample (s) for EPA Method 200 series, sample(s) should be held at least hours prior to analysis

1 Checked By: [signature] Date: 9/5/06 pH adjusted By: _____ Date: _____

2 Checked By: _____ Date: _____ pH adjusted (16hrs) By _____ Date: _____

AMRO Environmental Laboratories Corp. Date: 24-Nov-06

CLIENT: Keene WWTP
Project: Local Limits
Lab Order: 0609008

CASE NARRATIVE

Samples were analyzed using the methods outlined in Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition and EPA Water & Wastewater Methods for ICP (200.7), Mercury (245.1), Arsenic (206.2), Lead (239.2), Antimony (204.2), and Selenium (270.2)

All Method Blanks (MBLK/MB) were within the AMRO control limits.

All Laboratory Control Samples (LCS) were within the AMRO control limits except for Antimony by furnace for LCS-16068. However, this appeared to be an anomoly since both the MS and the MSD were well withing the LCS control limits (85-115%) at 104% and 107% respectively. There was no impact on the data.

The following samples were taken as sample duplicates: SEP 082806, HEC 083106, CAK 082806, MMC 082906, PEC 082906, SEC 083106, INC 082806 and all duplicate recoveries were within the AMRO control limits of <20% for samples with sample and duplicate concentrations greater than five times the reporting limit.

The following samples were spiked (MS and MSD): HEC 083106, CAK 082806, MMC 082906, PEC 082906, and INC 082806. All spike recoveries for ICP, Mercury, and Selenium & Antimony by graphite furnace (HGA) were in control. Both sets of MS/MSD results for Arsenic by HGA were low indicating a strong matrix effect which was confirmed by low post digestion spike (PDS) recoveries. The MSD for Lead in sample MMC 082906 was not spiked. The MS and LCS/LCSD were all in control. The HGA MS results for both sets of spiked samples were in control and both MSD recoveries were low. Most of the Lead PDS recoveries were also low prior to dilution.

All furnace samples were analyzed and then post digested spiked by the intelligent auto-sampler. If the recovery was outside the control limit of 85-115%, the sample was diluted and reanalyzed and the dilution spiked and analyzed. Whereever possible, the lowest dilution was reported. If the sample and dilution were both below the reporting limit (RL) and both recoveries were <85%, the sample was reported as <RL. If the PDS recoveries were high and the sample was <RL, the sample was reported as <RL. If the sample contained analyte at a concentration greater than the reporting limit, the "in-control" PDS recovery for the straight sample or diluted sample was reported.

DATA COMMENT PAGE

Organic Data Qualifiers

ND	Indicates compound was analyzed for, but not detected at or above the reporting limit.
J	Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than the method detection limit.
H	Method prescribed holding time exceeded.
E	This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
B	This flag is used when the analyte is found in the associated blank as well as in the sample.
R	RPD outside accepted recovery limits
RL	Reporting limit; defined as the lowest concentration the laboratory can accurately quantitate.
S	Spike Recovery outside accepted recovery limits.
#	See Case Narrative

Micro Data Qualifiers

TNTC	Too numerous to count

Inorganic Data Qualifiers

ND or U	Indicates element was analyzed for, but not detected at or above the reporting limit
J	Indicates a value greater than or equal to the method detection limit, but less than the quantitation limit.
H	Indicates analytical holding time exceedance
B	Indicates that the analyte is found in the associated blank, as well as in the sample
MSA	Indicates value determined by the Method of Standard Addition
E	This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
R	RPD outside accepted recovery limits
RL	Reporting limit; defined as the lowest concentration the laboratory can accurately quantitate.
S	Spike Recovery outside accepted recovery limits.
W	Post-digestion spike for Furnace AA analysis is out of control limits (85-115), while sample absorbance is less than 50% of spike absorbance.
*	Duplicate analysis not within control limits
+	Indicates the correlation coefficient for the Method of Standard Addition is less than 0.995
#	See Case Narrative

Report Comments

1. Soil, sediment and sludge sample results are reported on a "dry weight" basis.
2. Reporting limits are adjusted for sample size used, dilutions and moisture content, if applicable

AMRO Environmental Laboratories Corp.

Date: *11-Oct-06*

CLIENT: Keene WWTP
Project: Local Limits
Lab Order: 0609008

Lab ID:	0609008-01				Collection Date:	8/28/2006
					Collection Time:	
Client Sample ID:	Comp of 4 ING Grabs				Matrix:	WASTE WATER
Analyses	**Result**	**RL**	**Qual**	**Units**	**DF**	**Date Analyzed**
CYANIDE, TOTAL		**E335.2**				**Analyst: GM**
Cyanide	0.0030	0.010	J	mg/L	1	9/8/2006

Lab ID:	0609008-02				Collection Date:	8/28/2006
					Collection Time:	
Client Sample ID:	Comp of 4 PEG Grabs				Matrix:	WASTE WATER
Analyses	**Result**	**RL**	**Qual**	**Units**	**DF**	**Date Analyzed**
CYANIDE, TOTAL		**E335.2**				**Analyst: GM**
Cyanide	0.0030	0.010	J	mg/L	1	9/8/2006

Lab ID:	0609008-03				Collection Date:	8/31/2006
					Collection Time:	
Client Sample ID:	Comp of 4 SEG Grabs				Matrix:	WASTE WATER
Analyses	**Result**	**RL**	**Qual**	**Units**	**DF**	**Date Analyzed**
CYANIDE, TOTAL		**E335.2**				**Analyst: GM**
Cyanide	0.0030	0.010	J	mg/L	1	9/12/2006

Lab ID:	0609008-04				Collection Date:	8/29/2006
					Collection Time:	
Client Sample ID:	Comp of 4 ING Grabs				Matrix:	WASTE WATER
Analyses	**Result**	**RL**	**Qual**	**Units**	**DF**	**Date Analyzed**
CYANIDE, TOTAL		**E335.2**				**Analyst: GM**
Cyanide	ND	0.010		mg/L	1	9/11/2006

AMRO Environmental Laboratories Corp.

Date: 11-Oct-06

CLIENT: Keene WWTP
Project: Local Limits
Lab Order: 0609008

Lab ID:	0609008-05				**Collection Date:**	8/29/2006	
					Collection Time:		
Client Sample ID:	Comp of 4 SEG Grabs				**Matrix:**	WASTE WATER	
Analyses		**Result**	**RL**	**Qual**	**Units**	**DF**	**Date Analyzed**
CYANIDE, TOTAL			**E335.2**				**Analyst GM**
Cyanide		ND	0.010		mg/L	1	9/1/2006
Lab ID:	0609008-06				**Collection Date:**	8/29/2006	
					Collection Time:		
Client Sample ID:	Comp of 4 PEG Grabs				**Matrix:**	WASTE WATER	
Analyses		**Result**	**RL**	**Qual**	**Units**	**DF**	**Date Analyzed**
CYANIDE, TOTAL			**E335.2**				**Analyst GM**
Cyanide		ND	0.010		mg/L	1	9/1/2006
Lab ID:	0609008-07				**Collection Date:**	8/30/2006	
					Collection Time:		
Client Sample ID:	Comp of 4 ENG Grabs				**Matrix:**	WASTE WATER	
Analyses		**Result**	**RL**	**Qual**	**Units**	**DF**	**Date Analyzed**
CYANIDE, TOTAL			**E335.2**				**Analyst GM**
Cyanide		ND	0.010		mg/L	1	9/1/2006
Lab ID:	0609008-08				**Collection Date:**	8/30/2006	
					Collection Time:		
Client Sample ID:	Comp of 4 SEG Grabs				**Matrix:**	WASTE WATER	
Analyses		**Result**	**RL**	**Qual**	**Units**	**DF**	**Date Analyzed**
CYANIDE, TOTAL			**E335.2**				**Analyst GM**
Cyanide		0.0050	0.010	J	mg/L	1	9/12/2006

AMRO Environmental Laboratories Corp.

Date: 11-Oct-06

CLIENT: Keene WWTP
Project: Local Limits

Lab Order: 0609008

Lab ID:	0609008-09				Collection Date:	8/30/2006
					Collection Time:	
Client Sample ID:	Comp of 4 PEG Grabs				Matrix:	WASTE WATER
Analyses	**Result**	**RL**	**Qual**	**Units**	**DF**	**Date Analyzed**
CYANIDE, TOTAL		**E335.2**				**Analyst: GM**
Cyanide	ND	0.010		mg/L	1	9/11/2006

Lab ID:	0609008-10				Collection Date:	8/28/2006 9:50:00 AM
					Collection Time:	
Client Sample ID:	MMG 082806				Matrix:	WASTE WATER
Analyses	**Result**	**RL**	**Qual**	**Units**	**DF**	**Date Analyzed**
CYANIDE, TOTAL		**E335.2**				**Analyst: GM**
Cyanide	0.0030	0.010	J	mg/L	1	9/8/2006

Lab ID:	0609008-11				Collection Date:	8/28/2006 9:10:00 AM
					Collection Time:	
Client Sample ID:	BEG 082806				Matrix:	WASTE WATER
Analyses	**Result**	**RL**	**Qual**	**Units**	**DF**	**Date Analyzed**
CYANIDE, TOTAL		**E335.2**				**Analyst: GM**
Cyanide	0.0030	0.010	J	mg/L	1	9/8/2006

Lab ID:	0609008-12				Collection Date:	8/29/2006 9:55:00 AM
					Collection Time:	
Client Sample ID:	BEG 082906				Matrix:	WASTE WATER
Analyses	**Result**	**RL**	**Qual**	**Units**	**DF**	**Date Analyzed**
CYANIDE, TOTAL		**E335.2**				**Analyst: GM**
Cyanide	ND	0.010		mg/L	1	9/11/2006

AMRO Environmental Laboratories Corp.

Date: 11-Oct-06

CLIENT: Keene WWTP
Project: Local Limits

Lab Order: 0609008

Lab ID:	0609008-13				**Collection Date:**	8/29/2006 10:35:00 AM	
					Collection Time:		
Client Sample ID:	MMG 082906				**Matrix:**	WASTE WATER	
Analyses		**Result**	**RL**	**Qual**	**Units**	**DF**	**Date Analyzed**
CYANIDE, TOTAL			**E335.2**				**Analyst: GM**
Cyanide		ND	0.010		mg/L	1	9/11/2006

Lab ID:	0609008-14				**Collection Date:**	8/30/2006 9:30:00 AM	
					Collection Time:		
Client Sample ID:	MMG 083006				**Matrix:**	WASTE WATER	
Analyses		**Result**	**RL**	**Qual**	**Units**	**DF**	**Date Analyzed**
CYANIDE, TOTAL			**E335.2**				**Analyst: GM**
Cyanide		ND	0.010		mg/L	1	9/11/2006

Lab ID:	0609008-15				**Collection Date:**	8/30/2006 10:00:00 AM	
					Collection Time:		
Client Sample ID:	MMG 083006				**Matrix:**	WASTE WATER	
Analyses		**Result**	**RL**	**Qual**	**Units**	**DF**	**Date Analyzed**
CYANIDE, TOTAL			**E335.2**				**Analyst: GM**
Cyanide		ND	0.010		mg/L	1	9/11/2006

Lab ID:	0609008-16				**Collection Date:**	8/31/2006 10:15:00 AM	
					Collection Time:		
Client Sample ID:	MMG 083106				**Matrix:**	WASTE WATER	
Analyses		**Result**	**RL**	**Qual**	**Units**	**DF**	**Date Analyzed**
CYANIDE, TOTAL			**E335.2**				**Analyst: GM**
Cyanide		0.0020	0.010	J	mg/L	1	9/12/2006

AMRO Environmental Laboratories Corp.

Date: 11-Oct-06

CLIENT: Keene WWTP
Project: Local Limits

Lab Order: 0609008

Lab ID:	0609008-17				**Collection Date:**	8/31/2006 9:35:00 AM	
					Collection Time:		
Client Sample ID:	BEG 083106				**Matrix:**	WASTE WATER	
Analyses		**Result**	**RL**	**Qual**	**Units**	**DF**	**Date Analyzed**
CYANIDE, TOTAL			**E335.2**				**Analyst GM**
Cyanide		0.0030	0.010	J	mg/L	1	9/12/2006

Lab ID:	0609008-18				**Collection Date:**	9/5/2006 8:15:00 AM	
					Collection Time:		
Client Sample ID:	MMG 090506				**Matrix:**	WASTE WATER	
Analyses		**Result**	**RL**	**Qual**	**Units**	**DF**	**Date Analyzed**
CYANIDE, TOTAL			**E335.2**				**Analyst GM**
Cyanide		0.0030	0.010	J	mg/L	1	9/12/2006

Lab ID:	0609008-19				**Collection Date:**	9/5/2006 7:50:00 AM	
					Collection Time:		
Client Sample ID:	HEG 090506				**Matrix:**	WASTE WATER	
Analyses		**Result**	**RL**	**Qual**	**Units**	**DF**	**Date Analyzed**
CYANIDE, TOTAL			**E335.2**				**Analyst GM**
Cyanide		0.0030	0.010	J	mg/L	1	9/12/2006

AMRO Environmental Laboratories Corp.

Date: 11 Oct 06

CLIENT: Keene WWTP
Project: Local Limits

Lab Order: 0609008

Lab ID: 0609008-20
Collection Date: 8/28/2006 4:15:00 PM
Collection Time:
Client Sample ID: SEP 082806
Matrix: AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP- TOTAL METALS BY 200.7		**E200.7**				Analyst: **APL**
Antimony	42	20		µg/L	1	9/13/2006 12:34:25 PM
Arsenic	320	50		µg/L	1	9/13/2006 12:34:25 PM
Beryllium	2.8	4.0	J	µg/L	1	9/13/2006 12:34:25 PM
Cadmium	29	5.0		µg/L	1	9/13/2006 12:34:25 PM
Chromium	240	10		µg/L	1	9/13/2006 12:34:25 PM
Copper	12,000	25		µg/L	1	9/13/2006 12:34:25 PM
Lead	2,200	12		µg/L	1	9/13/2006 12:34:25 PM
Molybdenum	310	25		µg/L	1	9/13/2006 12:34:25 PM
Nickel	290	40		µg/L	1	9/13/2006 12:34:25 PM
Silver	170	7.0		µg/L	1	9/13/2006 12:34:25 PM
Zinc	18,000	20		µg/L	1	9/13/2006 12:34:25 PM
CYANIDE, TOTAL		**E335.2**				Analyst: **GM**
Cyanide	0.020	0.010		mg/L	1	9/8/2006
AMMONIA AS NITROGEN		**E350.2**				Analyst: **GM**
Nitrogen, Ammonia (As N)	13	1.0		mg/L	1	9/21/2006
MERCURY, TOTAL		**E245.1**				Analyst: **AL**
Mercury	23	1.0		µg/L	1	9/22/2006 1:48:35 PM
SELENIUM, TOTAL		**E270.2**				Analyst: **RK**
Selenium	23	10		µg/L	2	9/13/2006 8:05:20 PM

AMRO Environmental Laboratories Corp.

Date: 11-Oct-06

CLIENT: Keene WWTP
Project: Local Limits

Lab Order: 0609008

Lab ID: 0609008-21

Collection Date: 8/29/2006 1:50:00 PM

Collection Time:

Client Sample ID: SEP 082906

Matrix: AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP- TOTAL METALS BY 200.7		**E200.7**				Analyst **APL**
Antimony	36	20		µg/L	1	9/13/2006 1:00:45 PM
Arsenic	220	50		µg/L	1	9/13/2006 1:00:45 PM
Beryllium	16	4.0	J	µg/L	1	9/13/2006 1:00:45 PM
Cadmium	14	5.0		µg/L	1	9/13/2006 1:00:45 PM
Chromium	110	10		µg/L	1	9/13/2006 1:00:45 PM
Copper	4,900	25		µg/L	1	9/13/2006 1:00:45 PM
Lead	270	12		µg/L	1	9/13/2006 1:00:45 PM
Molybdenum	76	25		µg/L	1	9/13/2006 1:00:45 PM
Nickel	100	40		µg/L	1	9/13/2006 1:00:45 PM
Silver	36	7.0		µg/L	1	9/13/2006 1:00:45 PM
Zinc	8,100	20		µg/L	1	9/13/2006 1:00:45 PM
CYANIDE, TOTAL		**E335.2**				Analyst **GM**
Cyanide	0.011	0.010		mg/L	1	9/11/2006
AMMONIA AS NITROGEN		**E350.2**				Analyst **GM**
Nitrogen, Ammonia (As N)	240	1.0		mg/L	1	9/15/2006
MERCURY, TOTAL		**E245.1**				Analyst **AL**
Mercury	8.4	1.0		µg/L	1	9/22/2006 1:52:30 PM
SELENIUM, TOTAL		**E270.2**				Analyst **RK**
Selenium	14	10		µg/L	2	9/13/2006 8:33:21 PM

AMRO Environmental Laboratories Corp.

Date: 11-Oct-06

CLIENT: Keene WWTP
Project: Local Limits

Lab Order: 0609008

Lab ID: 0609008-22

Collection Date: 8/30/2006 1:05:00 PM

Collection Time:

Client Sample ID: SEP 083006

Matrix: AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP- TOTAL METALS BY 200.7		**E200.7**				Analyst: **APL**
Antimony	69	20		µg/L	1	9/13/2006 1:12:13 PM
Arsenic	220	50		µg/L	1	9/13/2006 1:12:13 PM
Beryllium	7.9	4.0		µg/L	1	9/13/2006 1:12:13 PM
Cadmium	34	5.0		µg/L	1	9/13/2006 1:12:13 PM
Chromium	810	10		µg/L	1	9/13/2006 1:12:13 PM
Copper	42,000	25		µg/L	1	9/13/2006 1:12:13 PM
Lead	1,400	12		µg/L	1	9/13/2006 1:12:13 PM
Molybdenum	230	25		µg/L	1	9/13/2006 1:12:13 PM
Nickel	1,500	40		µg/L	1	9/13/2006 1:12:13 PM
Silver	75	7.0		µg/L	1	9/13/2006 1:12:13 PM
Zinc	17,000	20		µg/L	1	9/13/2006 1:12:13 PM
CYANIDE, TOTAL		**E335.2**				Analyst: **GM**
Cyanide	0.012	0.010		mg/L	1	9/12/2006
AMMONIA AS NITROGEN		**E350.2**				Analyst: **GM**
Nitrogen, Ammonia (As N)	94	1.0		mg/L	1	9/15/2006
MERCURY, TOTAL		**E245.1**				Analyst: **AL**
Mercury	23	1.0		µg/L	1	9/22/2006 11:16:35 AM
SELENIUM, TOTAL		**E270.2**				Analyst: **RK**
Selenium	12	10		µg/L	2	9/13/2006 8:44:17 PM

AMRO Environmental Laboratories Corp.

Date: *11-Oct-06*

CLIENT: Keene WWTP
Project: Local Limits

Lab Order: 0609008

Lab ID: 0609008-23
Collection Date: 8/31/2006 1:10:00 PM
Collection Time:

Client Sample ID: SEP 083106
Matrix: AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP- TOTAL METALS BY 200.7		**E200.7**				**Analyst APL**
Antimony	30	20		µg/L	1	9/13/2006 1:34:30 PM
Arsenic	160	50		µg/L	1	9/13/2006 1:34:30 PM
Beryllium	2.0	4.0	J	µg/L	1	9/13/2006 1:34:30 PM
Cadmium	19	5.0		µg/L	1	9/13/2006 1:34:30 PM
Chromium	160	10		µg/L	1	9/13/2006 1:34:30 PM
Copper	7,300	25		µg/L	1	9/13/2006 1:34:30 PM
Lead	410	12		µg/L	1	9/13/2006 1:34:30 PM
Molybdenum	75	25		µg/L	1	9/13/2006 1:34:30 PM
Nickel	170	40		µg/L	1	9/13/2006 1:34:30 PM
Silver	27	7.0		µg/L	1	9/13/2006 1:34:30 PM
Zinc	11,000	20		µg/L	1	9/13/2006 1:34:30 PM
CYANIDE, TOTAL		**E335.2**				**Analyst GM**
Cyanide	0.0080	0.010	J	mg/L	1	9/12/2006
AMMONIA AS NITROGEN		**E350.2**				**Analyst GM**
Nitrogen, Ammonia (As N)	120	1.0		mg/L	1	9/15/2006
MERCURY, TOTAL		**E245.1**				**Analyst AL**
Mercury	7.4	1.0		µg/L	1	9/22/2006 11:20:30 AM
SELENIUM, TOTAL		**E270.2**				**Analyst RK**
Selenium	17	10		µg/L	2	9/13/2006 8:11:09 PM

AMRO Environmental Laboratories Corp.

Date: 11 Oct 06

CLIENT: Keene WWTP
Project: Local Limits

Lab Order: 0609008

Lab ID: 0609008-24
Collection Date: 8/28/2006 6:00:00 AM
Collection Time:

Client Sample ID: OAK 082806
Matrix: SLUDGE

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP METALS TOTAL SW-846 - 3051/6010		**SW6010B**				Analyst: **AL**
Antimony	ND	25.4		mg/Kg-dry	1	9/15/2006 3:33:52 PM
Arsenic	13.4	31.7	J	mg/Kg-dry	1	9/15/2006 3:33:52 PM
Beryllium	0.370	1.59	J	mg/Kg-dry	1	9/15/2006 3:33:52 PM
Cadmium	0.935	3.17	J	mg/Kg-dry	1	9/15/2006 3:33:52 PM
Chromium	20.9	6.34		mg/Kg-dry	1	9/15/2006 3:33:52 PM
Copper	489	15.9		mg/Kg-dry	1	9/15/2006 3:33:52 PM
Lead	40.6	15.9		mg/Kg-dry	1	9/15/2006 3:33:52 PM
Molybdenum	15.9	15.9		mg/Kg-dry	1	9/15/2006 3:33:52 PM
Nickel	13.4	25.4	J	mg/Kg-dry	1	9/15/2006 3:33:52 PM
Selenium	8.75	76.1	J	mg/Kg-dry	1	9/15/2006 3:33:52 PM
Silver	13.4	6.88		mg/Kg-dry	1	9/15/2006 3:33:52 PM
Zinc	565	38.0		mg/Kg-dry	1	9/15/2006 3:33:52 PM
AMMONIA AS NITROGEN (MODIFIED FOR SOIL)		**E350.2**				Analyst: **GM**
Nitrogen, Ammonia (As N)	8,300	570		mg/Kg-dry	1	9/21/2006
MERCURY, 7471A		**SW7471A**				Analyst: **AL**
Mercury	0.948	0.244		mg/Kg-dry	1	9/13/2006 1:33:55 PM
PERCENT MOISTURE		**D2216**				Analyst: **CB**
Percent Moisture	81.0	0		wt%	1	9/12/2006
CYANIDE, SW9014		**SW9010B**				Analyst: **GM**
Cyanide	ND	2.0		mg/Kg-dry	1	9/8/2006

AMRO Environmental Laboratories Corp.

Date: 11-Oct-06

CLIENT: Keene WWTP
Project: Local Limits

Lab Order: 0609008

Lab ID: 0609008-25

Collection Date: 8/30/2006 7:05:00 AM
Collection Time:

Client Sample ID: CAK 083006

Matrix: SLUDGE

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP METALS TOTAL SW-846 - 3051/6010		**SW6010B**				Analyst: **AL**
Antimony	9.65	25.9	J	mg/Kg-dry	1	9/15/2006 4:01:18 PM
Arsenic	20.6	32.3	J	mg/Kg-dry	1	9/15/2006 4:01:18 PM
Beryllium	1.21	1.62	J	mg/Kg-dry	1	9/15/2006 4:01:18 PM
Cadmium	1.76	3.23	J	mg/Kg-dry	1	9/15/2006 4:01:18 PM
Chromium	25.3	6.47		mg/Kg-dry	1	9/15/2006 4:01:18 PM
Copper	504	16.2		mg/Kg-dry	1	9/15/2006 4:01:18 PM
Lead	49.5	16.2		mg/Kg-dry	1	9/15/2006 4:01:18 PM
Molybdenum	15.0	16.2	J	mg/Kg-dry	1	9/15/2006 4:01:18 PM
Nickel	18.4	25.9	J	mg/Kg-dry	1	9/15/2006 4:01:18 PM
Selenium	21.5	77.6	J	mg/Kg-dry	1	9/15/2006 4:01:18 PM
Silver	12.3	9.05		mg/Kg-dry	1	9/15/2006 4:01:18 PM
Zinc	587	38.8		mg/Kg-dry	1	9/15/2006 4:01:18 PM
AMMONIA AS NITROGEN (MODIFIED FOR SOIL)		**E350.2**				Analyst: **GM**
Nitrogen, Ammonia (As N)	9,400	470		mg/Kg-dry	1	9/21/2006
MERCURY, 7471A		**SW7471A**				Analyst: **AL**
Mercury	0.687	0.251		mg/Kg-dry	1	9/13/2006 1:51:46 PM
PERCENT MOISTURE		**D2216**				Analyst: **CB**
Percent Moisture	81.5	0		wt%	1	9/12/2006
CYANIDE, SW9014		**SW9010B**				Analyst: **GM**
Cyanide	ND	1.5		mg/Kg-dry	1	9/8/2006

AMRO Environmental Laboratories Corp.

Date: 27-Oct-06

CLIENT: Keene WWTP
Project: Local Limits

Lab Order: 0609008

Lab ID: 0609008-26
Collection Date: 9/1/2006 6:00:00 AM
Collection Time:
Client Sample ID: CAK 090106
Matrix: SLUDGE

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP METALS TOTAL SW-846 - 3051/6010		**SW6010B**				**Analyst: AL**
Antimony	ND	27.5		mg/Kg-dry	1	9/15/2006 4:06:37 PM
Arsenic	17.1	34.4	J	mg/Kg-dry	1	9/15/2006 4:06:37 PM
Beryllium	0.356	1.72	J	mg/Kg-dry	1	9/15/2006 4:06:37 PM
Cadmium	0.851	3.44	J	mg/Kg-dry	1	9/15/2006 4:06:37 PM
Chromium	19.5	6.88		mg/Kg-dry	1	9/15/2006 4:06:37 PM
Copper	525	17.2		mg/Kg-dry	1	9/15/2006 4:06:37 PM
Lead	42.2	17.2		mg/Kg-dry	1	9/15/2006 4:06:37 PM
Molybdenum	13.2	17.2	J	mg/Kg-dry	1	9/15/2006 4:06:37 PM
Nickel	10.7	27.5	J	mg/Kg-dry	1	9/15/2006 4:06:37 PM
Selenium	17.8	82.6	J	mg/Kg-dry	1	9/15/2006 4:06:37 PM
Silver	12.6	3.63		mg/Kg-dry	1	9/15/2006 4:06:37 PM
Zinc	568	41.2		mg/Kg-dry	1	9/15/2006 4:06:37 PM
AMMONIA AS NITROGEN (MODIFIED FOR SOIL)		**E350.2**				**Analyst: GM**
Nitrogen, Ammonia (As N)	6,900	490		mg/Kg-dry	1	9/21/2006
MERCURY, 7471A		**SW7471A**				**Analyst: AL**
Mercury	0.748	0.275		mg/Kg-dry	1	9/13/2006 1:55:24 PM
PERCENT MOISTURE		**D2216**				**Analyst: CB**
Percent Moisture	82.1	0		wt%	1	9/12/2006
CYANIDE, SW9014		**SW9010B**				**Analyst: GM**
Cyanide	ND	1.6		mg/Kg-dry	1	9/8/2006

AMRO Environmental Laboratories Corp.

Date: 11-Oct-06

CLIENT: Keene WWTP
Project: Local Limits

Lab Order: 0609028

Lab ID: 0609028-27

Collection Date: 8/28/2006 9:05:00 AM
Collection Time:

Client Sample ID: IDEC 082806

Matrix: WASTE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP- TOTAL METALS BY 200.7		**E200.7**				Analyst **APL**
Beryllium	ND	4.0		µg/L	1	9/13/2006 1:46:53 PM
Cadmium	ND	5.0		µg/L	1	9/13/2006 1:46:53 PM
Chromium	8.2	10	J	µg/L	1	9/13/2006 1:46:53 PM
Copper	210	25		µg/L	1	9/13/2006 1:46:53 PM
Lead	7.9	12	J	µg/L	1	9/13/2006 1:46:53 PM
Molybdenum	4.2	25	J	µg/L	1	9/13/2006 1:46:53 PM
Nickel	5.7	40	J	µg/L	1	9/13/2006 1:46:53 PM
Silver	ND	7.0		µg/L	1	9/13/2006 1:46:53 PM
Zinc	170	20		µg/L	1	9/13/2006 1:46:53 PM
ARSENIC, TOTAL		**E206.2**				Analyst **RK**
Arsenic	ND	5.0		µg/L	1	9/19/2006
AMMONIA AS NITROGEN		**E350.2**				Analyst **GM**
Nitrogen, Ammonia (As N)	33	1.0		mg/L	1	9/15/2006
MERCURY, TOTAL		**E245.1**				Analyst **AL**
Mercury	0.21	0.20		µg/L	1	9/22/2006 1:56:31 PM
ANTIMONY, TOTAL		**E204.2**				Analyst **RK**
Antimony	ND	6.0		µg/L	1	9/13/2006
SELENIUM, TOTAL		**E270.2**				Analyst **RK**
Selenium	ND	5.0		µg/L	1	9/13/2006

AMRO Environmental Laboratories Corp.

Date: 11-Oct-06

CLIENT: Keene WWTP
Project: Local Limits

Lab Order: 0609008

Lab ID: 0609008-28
Collection Date: 8/29/2006 10:40:00 AM
Collection Time:
Client Sample ID: MMC 082906
Matrix: WASTE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP- TOTAL METALS BY 200.7		**E200.7**				Analyst **APL**
Beryllium	ND	4.0		µg/L	1	9/13/2006 1:52:21 PM
Cadmium	ND	5.0		µg/L	1	9/13/2006 1:52:21 PM
Chromium	4.6	10	J	µg/L	1	9/13/2006 1:52:21 PM
Copper	120	25		µg/L	1	9/13/2006 1:52:21 PM
Molybdenum	4.1	25	J	µg/L	1	9/13/2006 1:52:21 PM
Nickel	3.7	40	J	µg/L	1	9/13/2006 1:52:21 PM
Silver	ND	7.0		µg/L	1	9/13/2006 1:52:21 PM
Zinc	140	20		µg/L	1	9/13/2006 1:52:21 PM
ARSENIC, TOTAL		**E206.2**				Analyst **RK**
Arsenic	ND	5.0		µg/L	1	9/19/2006
AMMONIA AS NITROGEN		**E350.2**				Analyst **GM**
Nitrogen, Ammonia (As N)	14	1.0		mg/L	1	9/15/2006
MERCURY, TOTAL		**E245.1**				Analyst: **AL**
Mercury	0.39	0.20		µg/L	1	9/22/2006 11:56:01 AM
LEAD, TOTAL		**E239.2**				Analyst: **REB**
Lead	4.6	5.0	J	µg/L	1	9/25/2006 1:27:50 PM
ANTIMONY, TOTAL		**E204.2**				Analyst: **RK**
Antimony	ND	6.0		µg/L	1	9/13/2006
SELENIUM, TOTAL		**E270.2**				Analyst: **RK**
Selenium	ND	5.0		µg/L	1	9/13/2006

AMRO Environmental Laboratories Corp.

Date: 11-Oct-06

CLIENT: Keene WWTP
Project: Local Limits

Lab Order: 0609008

Lab ID: 0609008-29

Collection Date: 8/28/2006 5:25:00 PM
Collection Time:

Client Sample ID: PEC 082906

Matrix: WASTE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP- TOTAL METALS BY 200.7		**E200.7**				Analyst: **APL**
Beryllium	0.49	4.0	J	µg/L	1	9/13/2006 2:18:16 PM
Cadmium	ND	5.0		µg/L	1	9/13/2006 2:18:16 PM
Chromium	2.4	10	J	µg/L	1	9/13/2006 2:18:16 PM
Copper	23	25		µg/L	1	9/13/2006 2:18:16 PM
Lead	5.1	12	J	µg/L	1	9/13/2006 2:18:16 PM
Molybdenum	20	25	J	µg/L	1	9/13/2006 2:18:16 PM
Nickel	5.5	40	J	µg/L	1	9/13/2006 2:18:16 PM
Silver	ND	7.0		µg/L	1	9/13/2006 2:18:16 PM
Zinc	100	20		µg/L	1	9/13/2006 2:18:16 PM
ARSENIC, TOTAL		**E206.2**				Analyst: **RK**
Arsenic	ND	5.0		µg/L	1	9/19/2006
AMMONIA AS NITROGEN		**E350.2**				Analyst: **GM**
Nitrogen, Ammonia (As N)	20	1.0		mg/L	1	9/21/2006
MERCURY, TOTAL		**E245.1**				Analyst: **AL**
Mercury	0.15	0.20	J	µg/L	1	9/22/2006 11:28:21 AM
ANTIMONY, TOTAL		**E204.2**				Analyst: **RK**
Antimony	ND	6.0		µg/L	1	9/13/2006
SELENIUM, TOTAL		**E270.2**				Analyst: **RK**
Selenium	ND	5.0		µg/L	1	9/13/2006

AMRO Environmental Laboratories Corp.

Date: *11-Oct-06*

CLIENT: Keene WWTP
Project: Local Limits

Lab Order: 0609008

Lab ID: 0609008-30
Collection Date: 8-29-2006 5:15:00 PM
Collection Time:

Client Sample ID: PEC 082906
Matrix: WASTE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP- TOTAL METALS BY 200.7		**E200.7**				Analyst: **APL**
Beryllium	0.31	4.0	J	µg/L	1	9/13/2006 2:33:07 PM
Cadmium	ND	5.0		µg/L	1	9/13/2006 2:33:07 PM
Chromium	1.6	10	J	µg/L	1	9/13/2006 2:33:07 PM
Copper	66	25		µg/L	1	9/13/2006 2:33:07 PM
Lead	4.2	12	J	µg/L	1	9/13/2006 2:33:07 PM
Molybdenum	19	25	J	µg/L	1	9/13/2006 2:33:07 PM
Nickel	4.6	40	J	µg/L	1	9/13/2006 2:33:07 PM
Silver	ND	7.0		µg/L	1	9/13/2006 2:33:07 PM
Zinc	89	20		µg/L	1	9/13/2006 2:33:07 PM
ARSENIC, TOTAL		**E206.2**				Analyst: **RK**
Arsenic	ND	5.0		µg/L	1	9/19/2006
AMMONIA AS NITROGEN		**E350.2**				Analyst: **GM**
Nitrogen, Ammonia (As N)	21	1.0		mg/L	1	9/21/2006
MERCURY, TOTAL		**E245.1**				Analyst: **AL**
Mercury	0.12	0.20	J	µg/L	1	9/22/2006 11:59:59 AM
ANTIMONY, TOTAL		**E204.2**				Analyst: **RK**
Antimony	ND	6.0		µg/L	1	9/13/2006
SELENIUM, TOTAL		**E270.2**				Analyst: **RK**
Selenium	ND	5.0		µg/L	1	9/13/2006

AMRO Environmental Laboratories Corp.

Date: 17-Oct-06

CLIENT: Keene WWTP
Project: Local Limits

Lab Order: 0609008

Lab ID: 0609008-31
Collection Date: 9/30/2006 5:15:00 PM
Collection Time:
Client Sample ID: PEC 093006
Matrix: WASTE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP- TOTAL METALS BY 200.7		**E200.7**				Analyst: **APL**
Beryllium	0.18	4.0	J	µg/L	1	9/13/2006 2:38:32 PM
Cadmium	ND	5.0		µg/L	1	9/13/2006 2:38:32 PM
Chromium	1.2	10	J	µg/L	1	9/13/2006 2:38:32 PM
Copper	78	25		µg/L	1	9/13/2006 2:38:32 PM
Lead	ND	12		µg/L	1	9/13/2006 2:38:32 PM
Molybdenum	13	25	J	µg/L	1	9/13/2006 2:38:32 PM
Nickel	4.3	40	J	µg/L	1	9/13/2006 2:38:32 PM
Silver	ND	7.0		µg/L	1	9/13/2006 2:38:32 PM
Zinc	87	20		µg/L	1	9/13/2006 2:38:32 PM
ARSENIC, TOTAL		**E206.2**				Analyst: **RK**
Arsenic	ND	5.0		µg/L	1	9/19/2006
AMMONIA AS NITROGEN		**E350.2**				Analyst: **GM**
Nitrogen, Ammonia (As N)	20	1.0		mg/L	1	9/21/2006
MERCURY, TOTAL		**E245.1**				Analyst: **AL**
Mercury	0.091	0.20	J	µg/L	1	9/22/2006 12:03:59 PM
ANTIMONY, TOTAL		**E204.2**				Analyst: **RK**
Antimony	ND	6.0		µg/L	1	9/13/2006
SELENIUM, TOTAL		**E270.2**				Analyst: **RK**
Selenium	ND	5.0		µg/L	1	9/13/2006

AMRO Environmental Laboratories Corp.

Date: *11-Oct-06*

CLIENT: Keene WWTP
Project: Local Limits

Lab Order: 0609008

Lab ID: 0609008-32
Collection Date: 8/29/2006 1:35:00 PM
Collection Time:

Client Sample ID: SEC 083006
Matrix: WASTE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP- TOTAL METALS BY 200.7		**E200.7**				Analyst: **APL**
Beryllium	0.11	4.0	J	µg/L	1	9/13/2006 2:43:57 PM
Cadmium	ND	5.0		µg/L	1	9/13/2006 2:43:57 PM
Chromium	ND	10		µg/L	1	9/13/2006 2:43:57 PM
Copper	14	25	J	µg/L	1	9/13/2006 2:43:57 PM
Lead	ND	12		µg/L	1	9/13/2006 2:43:57 PM
Molybdenum	12	25	J	µg/L	1	9/13/2006 2:43:57 PM
Nickel	2.5	40	J	µg/L	1	9/13/2006 2:43:57 PM
Silver	ND	7.0		µg/L	1	9/13/2006 2:43:57 PM
Zinc	65	20		µg/L	1	9/13/2006 2:43:57 PM
ARSENIC, TOTAL		**E206.2**				Analyst: **RK**
Arsenic	ND	5.0		µg/L	1	9/11/2006
AMMONIA AS NITROGEN		**E350.2**				Analyst: **GM**
Nitrogen, Ammonia (As N)	0.56	1.0	J	mg/L	1	9/21/2006
MERCURY, TOTAL		**E245.1**				Analyst: **AL**
Mercury	0.0e0	0.20	J	µg/L	1	9/27/2006 2:00:31 PM
ANTIMONY, TOTAL		**E204.2**				Analyst: **RK**
Antimony	ND	6.0		µg/L	1	9/13/2006
SELENIUM, TOTAL		**E270.2**				Analyst: **RK**
Selenium	ND	5.0		µg/L	1	9/13/2006

AMRO Environmental Laboratories Corp.

Date: 11-Oct-06

CLIENT: Keene WWTP
Project: Local Limits

Lab Order: 0609008

Lab ID: 0609008-13
Collection Date: 8/30/2006 1:35:00 PM
Collection Time:

Client Sample ID: SEC 083106
Matrix: WASTE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP- TOTAL METALS BY 200.7		**E200.7**				Analyst: **APL**
Beryllium	0.11	4.0	J	µg/L	1	9/13/2006 2:49:22 PM
Cadmium	ND	5.0		µg/L	1	9/13/2006 2:49:22 PM
Chromium	ND	10		µg/L	1	9/13/2006 2:49:22 PM
Copper	12	25	J	µg/L	1	9/13/2006 2:49:22 PM
Molybdenum	12	25	J	µg/L	1	9/13/2006 2:49:22 PM
Nickel	2.5	40	J	µg/L	1	9/13/2006 2:49:22 PM
Silver	ND	7.0		µg/L	1	9/13/2006 2:49:22 PM
Zinc	54	20		µg/L	1	9/13/2006 2:49:22 PM
ARSENIC, TOTAL		**E206.2**				Analyst: **RK**
Arsenic	ND	5.0		µg/L	1	9/19/2006
AMMONIA AS NITROGEN		**E350.2**				Analyst: **GM**
Nitrogen, Ammonia (As N)	0.56	1.0	J	mg/L	1	9/21/2006
MERCURY, TOTAL		**E245.1**				Analyst: **AL**
Mercury	0.10	0.20	J	µg/L	1	9/22/2006 12:11:57 PM
LEAD, TOTAL		**E239.2**				Analyst: **REB**
Lead	0.82	5.0	J	µg/L	1	9/25/2006 2:48:24 PM
ANTIMONY, TOTAL		**E204.2**				Analyst: **RK**
Antimony	ND	6.0		µg/L	1	9/13/2006
SELENIUM, TOTAL		**E270.2**				Analyst: **RK**
Selenium	ND	5.0		µg/L	1	9/13/2006

AMRO Environmental Laboratories Corp.

Date: *11-Oct-06*

CLIENT: Keene WWTP
Project: Local Limits

Lab Order: 0609008

Lab ID: 0609008-34
Collection Date: 8/31/2006 1:25:00 PM
Collection Time:

Client Sample ID: SEC 090106
Matrix: WASTE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP- TOTAL METALS BY 200.7		**E200.7**				Analyst: **APL**
Beryllium	ND	4.0		µg/L	1	9/13/2006 3:00:17 PM
Cadmium	ND	5.0		µg/L	1	9/13/2006 3:00:17 PM
Chromium	ND	10		µg/L	1	9/13/2006 3:00:17 PM
Copper	14	25	J	µg/L	1	9/13/2006 3:00:17 PM
Molybdenum	17	25	J	µg/L	1	9/13/2006 3:00:17 PM
Nickel	18	40	J	µg/L	1	9/13/2006 3:00:17 PM
Silver	ND	7.0		µg/L	1	9/13/2006 3:00:17 PM
Zinc	57	70		µg/L	1	9/13/2006 3:00:17 PM
ARSENIC, TOTAL		**E206.2**				Analyst: **RK**
Arsenic	ND	5.0		µg/L	1	9/19/2006
AMMONIA AS NITROGEN		**E350.2**				Analyst: **GM**
Nitrogen, Ammonia (As N)	0.28	1.0	J	mg/L	1	9/26/2006
MERCURY, TOTAL		**E245.1**				Analyst: **AL**
Mercury	0.11	0.20	J	µg/L	1	9/22/2006 12:19:58 PM
LEAD, TOTAL		**E239.2**				Analyst: **REB**
Lead	1.2	5.0	J	µg/L	1	9/25/2006 3:00:49 PM
ANTIMONY, TOTAL		**E204.2**				Analyst: **RK**
Antimony	ND	6.0		µg/L	1	9/13/2006
SELENIUM, TOTAL		**E270.2**				Analyst: **RK**
Selenium	ND	5.0		µg/L	1	9/13/2006

AMRO Environmental Laboratories Corp.

Date: 11-Oct-06

CLIENT: Keene WWTP
Project: Local Limits

Lab Order: 0609008

Lab ID: 0609008-35

Collection Date: 8/30/2006 9:30:00 AM
Collection Time:

Client Sample ID: HEC 083006

Matrix: WASTE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP- TOTAL METALS BY 200.7		**E200.7**				Analyst: **APL**
Beryllium	ND	4.0		µg/L	1	9/13/2006 3:05:44 PM
Cadmium	ND	5.0		µg/L	1	9/13/2006 3:05:44 PM
Chromium	11	10	J	µg/L	1	9/13/2006 3:05:44 PM
Copper	150	25		µg/L	1	9/13/2006 3:05:44 PM
Lead	7.6	12	J	µg/L	1	9/13/2006 3:05:44 PM
Molybdenum	3.1	25	J	µg/L	1	9/13/2006 3:05:44 PM
Nickel	30	40	J	µg/L	1	9/13/2006 3:05:44 PM
Silver	ND	7.0		µg/L	1	9/13/2006 3:05:44 PM
Zinc	92	20		µg/L	1	9/13/2006 3:05:44 PM
ARSENIC, TOTAL		**E206.2**				Analyst: **RK**
Arsenic	ND	3.0		µg/L	1	9/19/2006
AMMONIA AS NITROGEN		**E350.2**				Analyst: **GM**
Nitrogen, Ammonia (As N)	24	1.0		mg/L	1	9/20/2006
MERCURY, TOTAL		**E245.1**				Analyst: **AL**
Mercury	0.290	0.20	J	µg/L	1	9/22/2006 12:44:20 PM
ANTIMONY, TOTAL		**E204.2**				Analyst: **RK**
Antimony	ND	6.0		µg/L	1	9/13/2006
SELENIUM, TOTAL		**E270.2**				Analyst: **RK**
Selenium	ND	5.0		µg/L	1	9/13/2006

AMRO Environmental Laboratories Corp.

Date: 11-Oct-06

CLIENT: Keene WWTP
Project: Local Limits

Lab Order: 0609008

Lab ID: 0609008-36

Collection Date: 8/31/2006 10:20:00 AM
Collection Time:

Client Sample ID: MMC 083106

Matrix: WASTE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP- TOTAL METALS BY 200.7		**E200.7**				Analyst: **APL**
Beryllium	ND	4.0		µg/L	1	9/13/2006 3:11:11 PM
Cadmium	ND	5.0		µg/L	1	9/13/2006 3:11:11 PM
Chromium	1.6	10	J	µg/L	1	9/13/2006 3:11:11 PM
Copper	60	25		µg/L	1	9/13/2006 3:11:11 PM
Molybdenum	4.2	25	J	µg/L	1	9/13/2006 3:11:11 PM
Nickel	2.6	40	J	µg/L	1	9/13/2006 3:11:11 PM
Silver	ND	7.0		µg/L	1	9/13/2006 3:11:11 PM
Zinc	82	20		µg/L	1	9/13/2006 3:11:11 PM
ARSENIC, TOTAL		**E206.2**				Analyst: **RK**
Arsenic	ND	5.0		µg/L	1	9/19/2006
AMMONIA AS NITROGEN		**E350.2**				Analyst: **GM**
Nitrogen, Ammonia (As N)	11	1.0		mg/L	1	9/26/2006
MERCURY, TOTAL		**E245.1**				Analyst: **AL**
Mercury	0.058	0.20	J	µg/L	1	9/22/2006 12:48:17 PM
LEAD, TOTAL		**E239.2**				Analyst: **REB**
Lead	1.9	5.0	J	µg/L	1	9/25/2006 3:33:56 PM
ANTIMONY, TOTAL		**E204.2**				Analyst: **RK**
Antimony	ND	6.0		µg/L	1	9/13/2006
SELENIUM, TOTAL		**E270.2**				Analyst: **RK**
Selenium	ND	5.0		µg/L	1	9/13/2006

AMRO Environmental Laboratories Corp.

Date: *11-Oct-06*

CLIENT: Keene WWTP
Project: Local Limits

Lab Order: 0609008

Lab ID: 0609008-37

Collection Date: 8/31/2006 9:45:00 AM
Collection Time:

Client Sample ID: KEC 083106

Matrix: WASTE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP- TOTAL METALS BY 200.7		**E200.7**				Analyst **APL**
Beryllium	ND	4.0		µg/L	1	9/13/2006 3:16:38 PM
Cadmium	ND	5.0		µg/L	1	9/13/2006 3:16:38 PM
Chromium	11	10	J	µg/L	1	9/13/2006 3:16:38 PM
Copper	150	25		µg/L	1	9/13/2006 3:16:38 PM
Lead	9.2	12	J	µg/L	1	9/13/2006 3:16:38 PM
Molybdenum	30	25	J	µg/L	1	9/13/2006 3:16:38 PM
Nickel	70	40	J	µg/L	1	9/13/2006 3:16:38 PM
Silver	ND	7.0		µg/L	1	9/13/2006 3:16:38 PM
Zinc	110	20		µg/L	1	9/13/2006 3:16:38 PM
ARSENIC, TOTAL		**E206.2**				Analyst **RK**
Arsenic	ND	5.0		µg/L	1	9/19/2006
AMMONIA AS NITROGEN		**E350.2**				Analyst: **GM**
Nitrogen, Ammonia (As N)	16	1.0		mg/L	1	9/26/2006
MERCURY, TOTAL		**E245.1**				Analyst **AL**
Mercury	0.395	0.20	J	µg/L	1	9/22/2006 12:52:11 PM
ANTIMONY, TOTAL		**E204.2**				Analyst: **RK**
Antimony	ND	6.0		µg/L	1	9/13/2006
SELENIUM, TOTAL		**E270.2**				Analyst **RK**
Selenium	ND	5.0		µg/L	1	9/13/2006

AMRO Environmental Laboratories Corp.

Date: 11-Oct-06

CLIENT: Keene WWTP
Project: Local Limits

Lab Order: 0609008

Lab ID: 0609008-38

Collection Date: 8/28/2006 11:25:00 AM
Collection Time:

Client Sample ID: INC 082806

Matrix: WASTE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP- TOTAL METALS BY 200.7		**E200.7**				Analyst: **APL**
Beryllium	1.5	4.0	J	µg/L	1	9/13/2006 3:52:15 PM
Cadmium	0.56	5.0	J	µg/L	1	9/13/2006 3:52:15 PM
Chromium	10	10		µg/L	1	9/13/2006 3:52:15 PM
Copper	160	25		µg/L	1	9/13/2006 3:52:15 PM
Lead	16	12		µg/L	1	9/13/2006 3:52:15 PM
Molybdenum	24	25	J	µg/L	1	9/13/2006 3:52:15 PM
Nickel	13	40	J	µg/L	1	9/13/2006 3:52:15 PM
Silver	2.4	7.0	J	µg/L	1	9/13/2006 3:52:15 PM
Zinc	220	20		µg/L	1	9/13/2006 3:52:15 PM
ARSENIC, TOTAL		**E206.2**				Analyst: **RK**
Arsenic	ND	5.0		µg/L	1	9/19/2006
AMMONIA AS NITROGEN		**E350.2**				Analyst: **GM**
Nitrogen, Ammonia (As N)	16	1.0		mg/L	1	9/21/2006
MERCURY, TOTAL		**E245.1**				Analyst: **AL**
Mercury	1.7	0.20		µg/L	1	9/22/2006 12:56:05 PM
ANTIMONY, TOTAL		**E204.2**				Analyst: **RK**
Antimony	ND	6.0		µg/L	1	9/13/2006
SELENIUM, TOTAL		**E270.2**				Analyst: **RK**
Selenium	ND	5.0		µg/L	1	9/12/2006

AMRO Environmental Laboratories Corp.

Date: *11-Oct-06*

CLIENT: Keene WWTP
Project: Local Limits

Lab Order: 0609008

Lab ID: 0609008-39

Collection Date: 8/29/2006 11:25:00 AM
Collection Time:

Client Sample ID: INC 082906

Matrix: WASTE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP- TOTAL METALS BY 200.7		**E200.7**				Analyst: **APL**
Beryllium	0.21	4.0	J	µg/L	1	9/13/2006 3:57:38 PM
Cadmium	ND	5.0		µg/L	1	9/13/2006 3:57:38 PM
Chromium	2.4	10	J	µg/L	1	9/13/2006 3:57:38 PM
Copper	120	25		µg/L	1	9/13/2006 3:57:38 PM
Lead	29	12		µg/L	1	9/13/2006 3:57:38 PM
Molybdenum	17	25	J	µg/L	1	9/13/2006 3:57:38 PM
Nickel	4.7	40	J	µg/L	1	9/13/2006 3:57:38 PM
Silver	ND	7.0		µg/L	1	9/13/2006 3:57:38 PM
Zinc	170	20		µg/L	1	9/13/2006 3:57:38 PM
ARSENIC, TOTAL		**E206.2**				Analyst: **RK**
Arsenic	ND	5.0		µg/L	1	9/19/2006
AMMONIA AS NITROGEN		**E350.2**				Analyst: **GM**
Nitrogen, Ammonia (As N)	36	1.0		mg/L	1	9/21/2006
MERCURY, TOTAL		**E245.1**				Analyst: **AL**
Mercury	0.27	0.20		µg/L	1	9/22/2006 1:15:53 PM
ANTIMONY, TOTAL		**E204.2**				Analyst: **RK**
Antimony	ND	5.0		µg/L	1	9/13/2006
SELENIUM, TOTAL		**E270.2**				Analyst: **RK**
Selenium	ND	5.0		µg/L	1	9/13/2006

AMRO Environmental Laboratories Corp.

Date: 11-Oct-06

CLIENT: Keene WWTP
Project: Local Limits

Lab Order: 0609008

Lab ID: 0609008-40
Collection Date: 8/30/2006 11:25:00 AM
Collection Time:

Client Sample ID: INC 083006
Matrix: WASTE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP- TOTAL METALS BY 200.7		**E200.7**				Analyst **APL**
Beryllium	0.25	4.0	J	µg/L	1	9/13/2006 4:03:01 PM
Cadmium	ND	5.0		µg/L	1	9/13/2006 4:03:01 PM
Chromium	2.3	10	J	µg/L	1	9/13/2006 4:03:01 PM
Copper	130	25		µg/L	1	9/13/2006 4:03:01 PM
Lead	5.5	12	J	µg/L	1	9/13/2006 4:03:01 PM
Molybdenum	14	25	J	µg/L	1	9/13/2006 4:03:01 PM
Nickel	5.7	40	J	µg/L	1	9/13/2006 4:03:01 PM
Silver	ND	7.0		µg/L	1	9/13/2006 4:03:01 PM
Zinc	150	20		µg/L	1	9/13/2006 4:03:01 PM
ARSENIC, TOTAL		**E206.2**				Analyst **RK**
Arsenic	ND	5.0		µg/L	1	9/19/2006
AMMONIA AS NITROGEN		**E350.2**				Analyst **GM**
Nitrogen, Ammonia (As N)	20	1.0		mg/L	1	9/26/2006
MERCURY, TOTAL		**E245.1**				Analyst **AL**
Mercury	0.18	0.20	J	µg/L	1	9/22/2006 1:19:51 PM
ANTIMONY, TOTAL		**E204.2**				Analyst **RK**
Antimony	ND	6.0		µg/L	1	9/13/2006
SELENIUM, TOTAL		**E270.2**				Analyst **RK**
Selenium	ND	5.0		µg/L	1	9/13/2006

AMRO Environmental Laboratories Corp.

Date: 07-Dec-06

CLIENT: Keene WWTP
Work Order: 0609008
Project: Local Limits

QC SUMMARY REPORT
Method Blank

Sample ID: MB-16068 Batch ID: 16068 Test Code: E200.7 Units: µg/L Analysis Date: 9/13/06 12:25:13 PM Prep Date: 9/12/06
Client ID: Run ID: ICP-OPTIMA_060913A SeqNo: 559060

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	Low Limit	High Limit	Original Sample or MS Result	%RPD	RPD Limit	Qua
Antimony	ND	20	µg/L									
Beryllium	0.1681	4.0	µg/L									J
Cadmium	ND	5.0	µg/L									
Chromium	ND	10	µg/L									
Copper	ND	25	µg/L									
Lead	ND	12	µg/L									
Molybdenum	2.365	25	µg/L									J
Nickel	ND	40	µg/L									
Silver	ND	7.0	µg/L									
Zinc	4.362	20	µg/L									J

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; NA - Not applicable where J values or ND results occur
RL - Reporting Limit, defined as the lowest concentration the laboratory can accurately quantitate

AMRO Environmental Laboratories Corp.

Date: 07-Dec-06

CLIENT: Keene WWTP
Work Order: 0609008
Project: Local Limits

QC SUMMARY REPORT

Method Blank

Sample ID MB-16078 Batch ID 16078 Test Code SW6010B Units mg/Kg Analysis Date 9/15/06 3:01:33 PM Prep Date 9/14/06
Client ID Run ID ICP-OPTIMA_060915A SeqNo 559480

Analyte	QC Sample Result	RL	Units	QC Spike Original Sample Amount	Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Antimony	ND	4.0	mg/Kg									
Beryllium	0.005739	0.25	mg/Kg									-
Cadmium	ND	0.50	mg/Kg									
Chromium	0.1056	1.0	mg/Kg									-
Copper	ND	2.5	mg/Kg									
Lead	ND	2.5	mg/Kg									
Molybdenum	0.2826	2.5	mg/Kg									-
Nickel	ND	4.0	mg/Kg									
Silver	0.09193	1.4	mg/Kg									-
Zinc	ND	6.0	mg/Kg									

Sample ID MB-16068 Batch ID 16068 Test Code E206.2 Units µg/L Analysis Date 9/19/06 Prep Date 9/12/06
Client ID Run ID GFAA-6000_060918D SeqNo. 560744

Analyte	QC Sample Result	RL	Units	QC Spike Original Sample Amount	Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Arsenic	ND	5.0	µg/L									

Sample ID MB-16076 Batch ID 16076 Test Code SW7060A Units mg/Kg Analysis Date 9/18/06 Prep Date 9/14/06
Client ID Run ID GFAA-6000_060918A SeqNo 560611

Analyte	QC Sample Result	RL	Units	QC Spike Original Sample Amount	Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Arsenic	ND	1.0	mg/Kg									

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
RL - Reporting Limit, defined as the lowest concentration the laboratory can accurately quantitate
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where I values or ND results occur

AMRO Environmental Laboratories Corp.

Date: 07-Dec-06

CLIENT: Keene WWTP
Work Order: 0609003
Project: Local Limits

QC SUMMARY REPORT

Method Blank

Sample ID	MB-R34050	Batch ID	R34050	Test Code	E315.2	Units	mg/L	Analysis Date	9/12/06	Prep Date	
Client ID				Run ID	ING-WET_060912A			SeqNo	558724		

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qual
Cyanide	0.002	0.010	mg/L									J

Sample ID	MB-R34099	Batch ID	R34099	Test Code	E335.2	Units	mg/L	Analysis Date	9/9/06	Prep Date	
Client ID				Run ID	ING-WET_060908E			SeqNo	559593		

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qual
Cyanide	ND	0.010	mg/L									

Sample ID	MB-R34108	Batch ID	R34108	Test Code	E335.2	Units	mg/L	Analysis Date	9/11/06	Prep Date	
Client ID				Run ID	ING-WET_060911B			SeqNo	559726		

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qual
Cyanide	ND	0.010	mg/L									

Sample ID	MB-R34095	Batch ID	R34095	Test Code	E350.2	Units	mg/L	Analysis Date	9/15/06	Prep Date	
Client ID				Run ID	ING-WET_060915E			SeqNo	559564		

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	ND	1.0	mg/L									

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
RL - Reporting Limit, defined as the lowest concentration the laboratory can accurately quantitate
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

AMRO Environmental Laboratories Corp.

Date: 01-Dec-06

CLIENT: Keene WWTP
Work Order: 0609008
Project: Local Limits

QC SUMMARY REPORT
Method Blank

Sample ID MB-R34148	Batch ID R34148	Test Code E350.2	Units mg/L	Analysis Date 9/21/06	Prep Date
Client ID		Run ID INIG-WET_060921A		SeqNo 560576	

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Nitrogen, Ammonia (As N)	ND	1.0	mg/L									

Sample ID MB-R34190	Batch ID R34190	Test Code E350.2	Units mg/L	Analysis Date 9/26/06	Prep Date
Client ID		Run ID INIG-WET_060926A		SeqNo 561598	

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Nitrogen, Ammonia (As N)	ND	1.0	mg/L									

Sample ID MB-R34149	Batch ID R34149	Test Code E350.2	Units mg/Kg	Analysis Date 9/21/06	Prep Date
Client ID		Run ID INIG-WET_060921B		SeqNo 560590	

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Nitrogen, Ammonia (As N)	ND	1.0	mg/Kg									

Sample ID mb-16113	Batch ID 16113	Test Code E245.1	Units µg/L	Analysis Date 9/22/06 10:44:37 AM	Prep Date 9/21/06
Client ID		Run ID HG-FIMS_060922A		SeqNo 560987	

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Mercury	ND	0.20	µg/L									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
RL - Reporting Limit, defined as the lowest concentration the laboratory can accurately quantitate
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

AMRO Environmental Laboratories Corp.

Date: 07-Dec-06

CLIENT: Keene WWTP
Work Order: 0609008
Project: Local Limits

QC SUMMARY REPORT

Method Blank

Sample ID	mb-16058	Batch ID	16058	Test Code	SW7471A	Units	mg/Kg	Analysis Date	9/13/06 5:23:17 PM	Prep Date	9/12/06
Client ID		Run ID	HG-FIMS_060913A					SeqNo	556965		

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Mercury	ND	0.050	mg/Kg									

Sample ID	MB-16066	Batch ID	16066	Test Code	E239.2	Units	µg/L	Analysis Date	9/25/06 1:05:17 PM	Prep Date	9/12/06
Client ID		Run ID	GFAA-6000_060925B					SeqNo	561758		

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Lead	0.64	5.0	µg/L	0	0	0	0	0	0			J

Sample ID	MB-16066	Batch ID	16066	Test Code	E204.2	Units	µg/L	Analysis Date	9/13/06	Prep Date	9/12/06
Client ID		Run ID	GFAA-6000_060913A					SeqNo	559815		

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Antimony	ND	6.0	µg/L									

Sample ID	MB-16058	Batch ID	16058	Test Code	E270.2	Units	µg/L	Analysis Date	9/13/06	Prep Date	9/12/06
Client ID		Run ID	GFAA-6000_060913B					SeqNo	559857		

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Selenium	ND	5.0	µg/L									

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; NA - Not applicable where J values or ND results occur
RL - Reporting Limit, defined as the lowest concentration the laboratory can accurately quantitate

AMRO Environmental Laboratories Corp.

Date: 01-Dec-06

CLIENT: Keene WWTP
Work Order: 0602008
Project: Local Limits

QC SUMMARY REPORT

Method Blank

Sample ID: MB-16078	Batch ID: 16078	Test Code: SW7740	Units: mg/Kg	Analysis Date: 9/18/06	Prep Date: 9/14/06
Client ID:		Run ID: GFAA-6000_060918B		SeqNo: 560650	

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Selenium	ND	1.0	mg/Kg									

Sample ID: MB-R34058	Batch ID: R34058	Test Code: SW9010B	Units: mg/Kg	Analysis Date: 9/9/06	Prep Date:
Client ID:		Run ID: UNG-WET_060908D		SeqNo: 549585	

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Cyanide	ND	1.0	mg/Kg									

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; NA - Not applicable where J values or ND results occur
RL - Reporting Limit, defined as the lowest concentration the laboratory can accurately quantitate

AMRO Environmental Laboratories Corp.

Date: 07-Dec-06

CLIENT: Keene WWTP
Work Order: 0609308
Project: Local Limits

QC SUMMARY REPORT

Laboratory Control Spike

Sample ID: LCS-16068 Batch ID: 16068 Test Code: E200.7 Units: µg/L Analysis Date: 9/13/06 12:28:49 PM Prep Date: 9/12/06

Client ID: Run ID: ICP-OPTIMA_060913A SeqNo: 559061

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Antimony	1979	20	µg/L	1996	0	99.2	85	115	0			
Beryllium	808	4.0	µg/L	797	0	101	85	115	0			
Cadmium	795.7	5.0	µg/L	800	0	99.5	85	115	0			
Chromium	3969	10	µg/L	3976	0	101	85	115	0			
Copper	1973	25	µg/L	2004	0	98.4	85	115	0			
Lead	2010	12	µg/L	1988	0	101	85	115	0			
Molybdenum	2019	25	µg/L	2006	0	101	85	115	0			
Nickel	4057	40	µg/L	3984	0	102	85	115	0			
Silver	393.1	7.0	µg/L	400	0	98.3	85	115	0			
Zinc	3917	20	µg/L	3984	0	98.3	85	115	0			

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

J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; NA - Not applicable where J values or ND results occur

RL - Reporting Limit, defined as the lowest concentration the laboratory can accurately quantitate

AMRO Environmental Laboratories Corp.

Date: 01-Dec-06

CLIENT: Keene WWTP
Work Order: 0609008
Project: Local Limits

QC SUMMARY REPORT
Laboratory Control Spike

Sample ID LCS-16078 Batch ID 16078 Test Code SW6010B Units mg/Kg Analysis Date 9/15/06 3:13:09 PM Prep Date 9/14/06

Client ID Run ID ICP-OPTIMA_060915A SeqNo 559481

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Antimony	195	4.0	mg/Kg	200	0	97.5	80	120	0			
Beryllium	80.1	0.25	mg/Kg	79.7	0	100	80	120	0			
Cadmium	80.41	0.50	mg/Kg	80	0	101	80	120	0			
Chromium	418.1	1.0	mg/Kg	400	0	105	80	120	0			
Copper	197.7	2.5	mg/Kg	200	0	98.9	80	120	0			
Lead	204.1	2.5	mg/Kg	199.8	0	102	80	120	0			
Molybdenum	217.2	2.5	mg/Kg	200.6	0	108	80	120	0			
Nickel	412	4.0	mg/Kg	398.4	0	103	80	120	0			
Silver	38.82	1.4	mg/Kg	40	0	97	80	120	0			
Zinc	394.4	6.0	mg/Kg	398.4	0	99	80	120	0			

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; NA - Not applicable when J values or ND results occur
RL - Reporting Limit, defined as the lowest concentration the laboratory can accurately quantitate

AMRO Environmental Laboratories Corp.

Date: 07-Dec-06

CLIENT: Keene WWTP
Work Order: 0609008
Project: Local Limits

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

Sample ID LCSD-16078 Batch ID 16078 Test Code SW6010B Units mg/Kg Analysis Date 9/15/06 3:58:47 PM Prep Date 9/14/06
Client ID Run ID ICP-OPTIMA_060915A SeqNo 559487

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Antimony	195	4.0	mg/Kg	200	0	97.5	80	120	195	0.0115	20	
Beryllium	80.24	0.25	mg/Kg	79.7	0	101	80	120	80.1	0.175	20	
Cadmium	77.75	0.50	mg/Kg	80	0	97.2	80	120	80.41	3.36	20	
Chromium	422	1.0	mg/Kg	400	0	105	80	120	415.1	0.451	20	
Copper	192.5	2.5	mg/Kg	200	0	96.2	80	120	197.7	2.69	20	
Lead	197.2	2.5	mg/Kg	199.5	0	98.7	80	120	204.1	3.45	20	
Molybdenum	208.1	2.5	mg/Kg	200.5	0	104	80	120	212.2	0.41	20	
Nickel	396.2	4.0	mg/Kg	398.4	0	99.5	80	120	410	3.39	20	
Silver	37.52	1.4	mg/Kg	40	0	93.6	80	120	38.82	3.39	20	
Zinc	381.5	6.0	mg/Kg	398.4	0	95.8	80	120	394.4	3.32	20	

Sample ID LCS-16068 Batch ID 16068 Test Code E206.2 Units µg/L Analysis Date 9/19/06 Prep Date 9/12/06
Client ID Run ID GFAA-6000_060919D SeqNo 562743

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Arsenic	24.27	5.0	µg/L	25	0	97.1	85	115	0			

Sample ID LCSD-16078 Batch ID 16078 Test Code SW7060A Units mg/Kg Analysis Date 9/18/06 Prep Date 9/14/06
Client ID Run ID GFAA-6000_060918A SeqNo 560810

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Arsenic	2.598	1.0	mg/Kg	2.5	0	104	50	120	0			

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
RL - Reporting Limit, defined as the lowest concentration the laboratory can accurately quantitate
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
N/A - Not applicable where J values or ND results occur

AMRO Environmental Laboratories Corp.

Date: 07-Dec-06

CLIENT: Keene WWTP
Work Order: 0609008
Project: Local Limits

QC SUMMARY REPORT

Laboratory Control Spike

Sample ID	LCS-R34050	Batch ID	R34050	Test Code	E335.2	Units	mg/L	Analysis Date	9/12/06	Prep Date	
Client ID				Run ID	ING-WET_060912A			SeqNo	558725		

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Cyanide	0.196	0.010	mg/L	0.2	0	98	90	110	0			

Sample ID	LCS-R34099	Batch ID	R34099	Test Code	E335.2	Units	mg/L	Analysis Date	9/8/06	Prep Date	
Client ID				Run ID	ING-WET_060908E			SeqNo	559594		

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Cyanide	0.202	0.010	mg/L	0.2	0	101	90	110	0			

Sample ID	LCS-R34108	Batch ID	R34108	Test Code	E335.2	Units	mg/L	Analysis Date	9/11/06	Prep Date	
Client ID				Run ID	ING-WET_060911B			SeqNo	559727		

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Cyanide	0.192	0.010	mg/L	0.2	0	96	90	110	0			

Sample ID	LCS-R34095	Batch ID	R34095	Test Code	E350.2	Units	mg/L	Analysis Date	9/15/06	Prep Date	
Client ID				Run ID	ING-WET_060915E			SeqNo	559585		

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Nitrogen, Ammonia (As N)	9.52	1.0	mg/L	10	0	95.2	80	120	0			

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
RL - Reporting Limit, defined as the lowest concentration the laboratory can accurately quantitate
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

AMRO Environmental Laboratories Corp.

Date: 07-Oct-06

CLIENT: Keene WWTP
Work Order: 0609008
Project: Local Limits

QC SUMMARY REPORT

Laboratory Control Spike

Sample ID LCS-R34148	Batch ID R34148	Test Code E354.2	Units mg/L	Analysis Date 9/21/06	Prep Date
Client ID		Run ID ING-WET_060921A		SeqNo 560577	

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Nitrogen, Ammonia (As N)	9.1	1.0	mg/L	10	0	91	80	120	0			

Sample ID LCS-R34190	Batch ID R34190	Test Code E350.2	Units mg/L	Analysis Date 9/26/06	Prep Date
Client ID		Run ID ING-WET_060926A		SeqNo 561599	

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Nitrogen, Ammonia (As N)	9.38	1.0	mg/L	10	0	93.8	80	120	0			

Sample ID lcs-16113	Batch ID 16113	Test Code E245.1	Units µg/L	Analysis Date 9/22/06 10:56:35 AM	Prep Date 9/21/06
Client ID		Run ID HG-FIMS_060922A		SeqNo 560990	

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Mercury	4.174	0.20	µg/L	4	0	104	85	115	0			

Sample ID lcsd-16113	Batch ID 16113	Test Code E245.1	Units µg/L	Analysis Date 9/22/06 11:00:36 AM	Prep Date 9/21/06
Client ID		Run ID HG-FIMS_060922A		SeqNo 560991	

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Mercury	3.95	0.20	µg/L	4	0	98.8	85	115	4.174	5.5	20	

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limit
RL - Reporting Limit, defined as the lowest concentration the laboratory can accurately quantitate
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

AMRO Environmental Laboratories Corp.

Date: 07-Dec-06

CLIENT: Keene WWTP
Work Order: 0609008
Project: Local Limits

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

Sample ID	lcsd-16058	Batch ID	16058	Test Code	SW7471A	Units	mg/Kg	Analysis Date	9/13/06 1:30:20 PM	Prep Date	9/12/06
Client ID				Run ID	HG-FIMS_060913A			SeqNo	558966		

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qual
Mercury	0.7716	0.049	mg/Kg	0.8163	0	94.5	50	120	0.8256	6.75	20	

Sample ID	lcs-16058	Batch ID	16058	Test Code	SW7471A	Units	mg/Kg	Analysis Date	9/13/06 1:37:29 PM	Prep Date	9/12/06
Client ID				Run ID	HG-FIMS_060913A			SeqNo	558968		

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qual
Mercury	0.8256	0.049	mg/Kg	0.8165	0	101	80	120	0			

Sample ID	LCS-16068	Batch ID	16068	Test Code	E239.2	Units	µg/L	Analysis Date	9/25/06 1:09:16 PM	Prep Date	9/12/06
Client ID				Run ID	GFAA-6000_060925B			SeqNo	561799		

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qual
Lead	28.5	5.0	µg/L	25	0	114	85	115	0			

Sample ID	LCS-16068	Batch ID	16068	Test Code	E204.2	Units	µg/L	Analysis Date	9/13/06	Prep Date	9/12/06
Client ID				Run ID	GFAA-6000_060913A			SeqNo	559814		

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qual
Antimony	29.5	6.0	µg/L	25	0	117	85	115	0			S

Qualifiers:
- ND - Not Detected at the Reporting Limit
- J - Analyte detected below quantitation limits
- RL - Reporting Limit, defined as the lowest concentration the laboratory can accurately quantitate
- S - Spike Recovery outside accepted recovery limits
- R - RPD outside accepted recovery limits
- B - Analyte detected in the associated Method Blank
- NA - Not applicable, where J values or ND results occur

AMRO Environmental Laboratories Corp.

Date: 07-Dec-06

CLIENT: Keene WWTP
Work Order: 0609008
Project: Local Limits

QC SUMMARY REPORT
Laboratory Control Spike

Sample ID LCS-16066	**Batch ID** 16066	**Test Code** E270.2	**Units** µg/L			**Analysis Date** 9/13/06			**Prep Date** 9/12/06		
Client ID		**Run ID** GFAA-6000_060913B				**SeqNo** 559866					
	QC Sample		QC Spike	Original Sample				Original Sample			
Analyte	Result	RL	Units	Amount	Result	%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	Qua
Selenium	23.48	5.0	µg/L	25	0	93.9	85	115	0			
Sample ID LCS-16078	**Batch ID** 16078	**Test Code** SW7740	**Units** mg/Kg			**Analysis Date** 9/18/06			**Prep Date** 9/14/06		
Client ID		**Run ID** GFAA-6000_060918B				**SeqNo** 560655					
	QC Sample		QC Spike	Original Sample				Original Sample			
Analyte	Result	RL	Units	Amount	Result	%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	Qua
Selenium	2.573	1.0	mg/Kg	2.5	0	103	80	120	0			
Sample ID LCS-R34098	**Batch ID** R34098	**Test Code** SW9010B	**Units** mg/Kg			**Analysis Date** 9/5/06			**Prep Date**		
Client ID		**Run ID** ING-WET_060905D				**SeqNo** 559588					
	QC Sample		QC Spike	Original Sample				Original Sample			
Analyte	Result	RL	Units	Amount	Result	%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	Qua
Cyanide	77.5	1.0	mg/Kg	51.8	0	150	0	256	0			

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
RL - Reporting Limit, defined as the lowest concentration the laboratory can accurately quantitate
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

AMRO Environmental Laboratories Corp.

Date: 01-Dec-06

CLIENT: Keene WWTP
Work Order: 0609008
Project: Local Limits

QC SUMMARY REPORT

Sample Duplicate

Sample ID 0609008-20CD Batch ID 16068 Test Code E200.7 Units µg/L Analysis Date 9/13/06 12:47:31 PM Prep Date 9/12/06

Client ID SEP 082806 Run ID ICP-OPTIMA_060913A SeqNo 559064

Analyte	QC Sample Result	RL	Units	QC Source Original Sample Amount	Result	%REC	Low Limit	High Limit	Original Sample or MS Result	%RPD	RPD Limit	Qual
Antimony	39.54	20	µg/L	0	0	0	0	0	42.1	5.25	20	
Beryllium	2.574	4.0	µg/L	0	0	0	0	0	2.8	8.4	20	J
Cadmium	28.54	5.0	µg/L	0	0	0	0	0	29.33	2.73	20	
Chromium	240.3	10	µg/L	0	0	0	0	0	238.8	0.637	20	
Copper	12530	25	µg/L	0	0	0	0	0	12500	0.293	20	
Lead	2157	12	µg/L	0	0	0	0	0	2191	1.59	20	
Molybdenum	309.2	25	µg/L	0	0	0	0	0	311	0.59*	20	
Nickel	300.1	40	µg/L	0	0	0	0	0	292.3	2.6*	20	
Silver	169	7.0	µg/L	0	0	0	0	0	170.6	0.695	20	
Zinc	18430	20	µg/L	0	0	0	0	0	18270	0.73	20	

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
RL - Reporting Limit defined as the lowest concentration the laboratory can accurately quantitate
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

AMRO Environmental Laboratories Corp.

Date: 07-Dec-06

CLIENT: Keene WWTP
Work Order: 0609008
Project: Local Limits

QC SUMMARY REPORT

Sample Duplicate

Sample ID: 0609008-28BD Batch ID: 16066 Test Code: E200.7 Units: µg/L Analysis Date: 9/13/06 2:01:36 PM Prep Date: 9/12/06

Client ID: MWC082906 Run ID: ICP-OPTIMA_060913A SeqNo: 559077

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qual
Antimony	ND	20	µg/L	0	0	0	0	0	0	0	20	
Beryllium	ND	4.0	µg/L	0	0	0	0	0	0	0	20	
Cadmium	ND	5.0	µg/L	0	0	0	0	0	0	0	20	
Chromium	3.271	10	µg/L	0	0	0	0	0	4.596	33.7	20	JR
Copper	115.2	25	µg/L	0	0	0	0	0	117.4	1.93	20	
Lead	6.027	12	µg/L	0	0	0	0	0	7.065	15.9	20	J
Molybdenum	4.359	25	µg/L	0	0	0	0	0	6.1	4.97	20	J
Nickel	3.3	40	µg/L	0	0	0	0	0	3.663	10.4	20	J
Silver	ND	7.0	µg/L	0	0	0	0	0	0	0	20	
Zinc	137.1	20	µg/L	0	0	0	0	0	139.6	1.08	20	

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; RL - Reporting Limit, defined as the lowest concentration the laboratory can accurately quantitate; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank; NA - Not applicable where J values or ND results occur

AMRO Environmental Laboratories Corp.

Date: 01-Dec-06

CLIENT: Keene WWTP
Work Order: 0609008
Project: Local Limits

QC SUMMARY REPORT

Sample Duplicate

Sample ID 0609008-13BD Batch ID 16068 Test Code E200.7 Units µg/L Analysis Date 9/13/06 2:54:48 PM Prep Date 9/12/06

Client ID SEC 083106 Run ID ICP-OPTIMA_060913A SeqNo 559087

Analyte	QC Sample Result	RL	Units	QC Spike Origina Sample Amount	Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Antimony	ND	20	µg/L	0	0	0	0	0	0	0	20	
Beryllium	ND	4.0	µg/L	0	0	0	0	0	0.1063	0	20	
Cadmium	ND	5.0	µg/L	0	0	0	0	0	0	0	20	
Chromium	ND	10	µg/L	0	0	0	0	0	0	0	20	
Copper	12.92	25	µg/L	0	0	0	0	0	12.35	4.51	20	
Lead	ND	12	µg/L	0	0	0	0	0	0	0	20	
Molybdenum	11.24	25	µg/L	0	0	0	0	0	11.71	4.1	20	J
Nickel	2.370	40	µg/L	0	0	0	0	0	2.454	3.08	20	J
Silver	ND	7.0	µg/L	0	0	0	0	0	0	0	20	
Zinc	60.30	20	µg/L	0	0	0	0	0	54.41	9.82	20	

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
RL - Reporting Limit, defined as the lowest concentration the laboratory can accurately quantitate

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank
NA - Not applicable where I values or ND results occur

CLIENT: Keene WWTP
Work Order: 0609003
Project: Local Limits

QC SUMMARY REPORT

Sample Duplicate

Sample ID 0609008-37BD Batch ID 16068 Test Code E200.7 Units µg/L Analysis Date 9/13/06 3:05:11 PM Prep Date 9/12/06
Client ID: HEC 083106 Run ID ICP-OPTIMA_060913A SeqNo 559095

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Antimony	ND	20	µg/L	0	0	0	0	0	0	0	20	
Beryllium	0.1584	4.0	µg/L	0	0	0	0	0	0	200	20	JR
Cadmium	ND	5.0	µg/L	0	0	0	0	0	0	0	20	
Chromium	1.45	10	µg/L	0	0	0	0	0	3.143	25.7	20	JR
Copper	151.7	25	µg/L	0	0	0	0	0	146.4	3.57	20	
Lead	9.502	12	µg/L	0	0	0	0	0	9.159	3.67	20	J
Molybdenum	6.347	25	µg/L	0	0	0	0	0	2.951	73	20	JR
Nickel	7.475	40	µg/L	0	0	0	0	0	6.951	7.27	20	J
Silver	ND	7.0	µg/L	0	0	0	0	0	0	0	20	
Zinc	130.5	20	µg/L	0	0	0	0	0	114.3	12.7	20	

Sample ID 0609008-24AG Batch ID 16078 Test Code SW6010B Units mg/Kg-dry Analysis Date 9/15/06 3:44:27 PM Prep Date 9/14/06
Client ID CAK 082506 Run ID ICP-OPTIMA_060915A SeqNo 559485

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Antimony	ND	26	mg/Kg-dry	0	0	0	0	0	0	0	20	
Beryllium	0.3123	1.5	mg/Kg-dry	0	0	0	0	0	0.3701	16.9	20	J
Cadmium	1.055	3.2	mg/Kg-dry	0	0	0	0	0	0.9393	12.6	20	J
Chromium	21.67	6.5	mg/Kg-dry	0	0	0	0	0	20.85	3.63	20	
Lead	39.6	16	mg/Kg-dry	0	0	0	0	0	40.81	3.02	20	
Molybdenum	13.51	15	mg/Kg-dry	0	0	0	0	0	15.9	15.5	20	J
Nickel	12.44	26	mg/Kg-dry	0	0	0	0	0	13.45	7.51	20	J
Silver	13	9.1	mg/Kg-dry	0	0	0	0	0	13.37	2.76	20	
Zinc	568	33	mg/Kg-dry	0	0	0	0	0	565.3	3.93	20	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; NA - Not applicable where duplicates or ND results exist
RL - Reporting Limit, defined as the lowest concentration that the laboratory can accurately quantitate

AMRO Environmental Laboratories Corp.

Date: 01-Dec-06

CLIENT: Keene WWTP
Work Order: 0609008
Project: Local Limits

QC SUMMARY REPORT

Sample Duplicate

Sample ID 0609054-01AD	Batch ID 16078	Test Code SW6010B	Units mg/Kg-dry			Analysis Date 9/15/06 4:37:25 PM			Prep Date 9/14/06		
Client ID		Run ID ICP-OPTIMA_060915A				SeqNo 559493					
Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Antimony	ND	28	mg/Kg-dry	0	0	0	0	0	0	0	20	
Beryllium	0.3672	1.7	mg/Kg-dry	0	0	0	0	0	0.2451	39.9	20	JR
Cadmium	0.6187	3.4	mg/Kg-dry	0	0	0	0	0	0.7734	4.92	20	J
Chromium	19.04	5.9	mg/Kg-dry	0	0	0	0	0	17.57	8.06	20	
Copper	514.1	17	mg/Kg-dry	0	0	0	0	0	485.9	5.64	20	
Lead	43.35	17	mg/Kg-dry	0	0	0	0	0	37.65	14.1	20	
Molybdenum	14.97	17	mg/Kg-dry	0	0	0	0	0	11.17	29.1	20	JR
Nickel	11.17	28	mg/Kg-dry	0	0	0	0	0	10.46	6.56	20	J
Silver	11.51	9.7	mg/Kg-dry	0	0	0	0	0	10.65	8.6	20	
Zinc	598	41	mg/Kg-dry	0	0	0	0	0	527.7	12.5	20	

Sample ID 0609008-28BD	Batch ID 16068	Test Code E206.2	Units µg/L			Analysis Date 9/19/06			Prep Date 9/12/06		
Client ID MMC 082906		Run ID GFAA-6000_060918D				SeqNo 560703					
Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Arsenic	ND	5.0	µg/L	0	0	0	0	0	0	0	20	

Sample ID 0609008-29CD	Batch ID 16068	Test Code E206.2	Units µg/L			Analysis Date 9/19/06			Prep Date 9/12/06		
Client ID SEP 082806		Run ID GFAA-6000_060918D				SeqNo 560746					
Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Arsenic	52.61	50	µg/L	0	0	0	0	0	50.37	13.7	20	

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
RL - Reporting Limit defined as the lowest concentration the laboratory can accurately quantitate
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

AMRO Environmental Laboratories Corp.

Date: 07-Dec-06

CLIENT: Keene WWTP
Work Order: 0609008
Project: Local Limits

QC SUMMARY REPORT

Sample Duplicate

Sample ID	0609008-24AD	Batch ID	16078	Test Code	SW7060A	Units	mg/Kg-dry			Analysis Date	9/18/06		Prep Date	9/14/06
Client ID	CAK 082806			Run ID	GFAA-600C_060918A					SeqNo	360614			

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	Low Limit	High Limit	Original Sample or MS Result	%RPD	RPD Limit	Qua
Arsenic	ND	13	mg/Kg-dry	0	0	0	0	0	0	0	20	

Sample ID	0609008-11AD	Batch ID	R34589	Test Code	E335.2	Units	mg/L			Analysis Date	9/8/06		Prep Date	
Client ID	HEG 082806			Run ID	ING-WET_060908E					SeqNo	559600			

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	Low Limit	High Limit	Original Sample or MS Result	%RPD	RPD Limit	Qua
Cyanide	0.009	0.010	mg/L	0	0	0	0	0	0.009	0	20	J

Sample ID	0609008-17AD	Batch ID	R34050	Test Code	E335.2	Units	mg/L			Analysis Date	9/12/06		Prep Date	
Client ID	HEG 083106			Run ID	ING-WET_060912A					SeqNo	559724			

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	Low Limit	High Limit	Original Sample or MS Result	%RPD	RPD Limit	Qua
Cyanide	0.002	0.010	mg/L	0	0	0	0	0	0.000	40	20	JR

Sample ID	0609008-23AD	Batch ID	R34050	Test Code	E335.2	Units	mg/L			Analysis Date	9/12/06		Prep Date	
Client ID	SEP 083106			Run ID	ING-WET_060912A					SeqNo	559725			

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	Low Limit	High Limit	Original Sample or MS Result	%RPD	RPD Limit	Qua
Cyanide	0.009	0.010	mg/L	0	0	0	0	0	0.008	11.8	20	J

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
JL - Reporting Limit defined as the lowest concentration the laboratory can accurately quantitate
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

AMRO Environmental Laboratories Corp.

Date: 07-Dec-06

CLIENT: Keene WWTP
Work Order: 0609008
Project: Local Limits

QC SUMMARY REPORT

Sample Duplicate

Sample ID	0609008-13AD	Batch ID	R34108	Test Code	E335.2	Units	mg/L	Analysis Date	9/11/06	Prep Date	
Client ID	MMG 082906			Run ID	ING-WET_060911B			SeqNo	559738		

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Cyanide	ND	0.010	mg/L	0	0	0	0	0	0	0	20	

Sample ID	0609008-15AD	Batch ID	R34108	Test Code	E335.2	Units	mg/L	Analysis Date	9/11/06	Prep Date	
Client ID	MMG 083006			Run ID	ING-WET_060911B			SeqNo	559741		

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Cyanide	ND	0.010	mg/L	0	0	0	0	0	0	0	20	

Sample ID	0609008-28AD	Batch ID	R34095	Test Code	E350.2	Units	mg/L	Analysis Date	9/15/06	Prep Date	
Client ID	MMG 082906			Run ID	ING-WET_060915E			SeqNo	559570		

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Nitrogen, Ammonia (As N)	14.28	1.0	mg/L	0	0	0	0	0	13.72	4	20	

Sample ID	0609008-33AD	Batch ID	R34148	Test Code	E350.2	Units	mg/L	Analysis Date	9/21/06	Prep Date	
Client ID	SEC 083106			Run ID	ING-WET_060921A			SeqNo	560586		

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Nitrogen, Ammonia (As N)	0.42	1.0	mg/L	0	0	0	0	0	0			J

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limit
RL - Reporting Limit, defined as the lowest concentration the laboratory can accurately quantitate
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

AMRO Environmental Laboratories Corp.

Date: 07-Oct-06

CLIENT: Keene WWTP
Work Order: 0609008
Project: Local Limits

QC SUMMARY REPORT

Sample Duplicate

Sample ID 0609008-20BO	Batch ID R34148	Test Code E350.2	Units mg/L	Analysis Date 9/21/06	Prep Date
Client ID KEP 082806		Run ID ING-WET_060921A		SeqNo 560589	

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Nitrogen, Ammonia (As N)	14	1.0	mg/L	0	0	0	0	0	12.6	10.5	20	

Sample ID 0609094-09BO	Batch ID R34150	Test Code E350.2	Units mg/L	Analysis Date 9/26/06	Prep Date
Client ID		Run ID ING-WET_060926A		SeqNo 561610	

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Nitrogen, Ammonia (As N)	91	1.0	mg/L	0	0	0	0	0	102.2	11.6	20	

Sample ID 0609008-13AD	Batch ID R34150	Test Code E350.2	Units mg/L	Analysis Date 9/26/06	Prep Date
Client ID HEC 083106		Run ID ING-WET_060926A		SeqNo 561611	

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Nitrogen, Ammonia (As N)	19.6	1.0	mg/L	0	0	0	0	0	18.2	7.41	20	

Sample ID 0609094-03AD	Batch ID R34149	Test Code E350.2	Units mg/kg-dry	Analysis Date 9/21/06	Prep Date
Client ID		Run ID ING-WET_060921B		SeqNo 560599	

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Nitrogen, Ammonia (As N)	8602	510	mg/kg-dry	0	0	0	0	0	0			

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; NA - Not applicable when J values or ND results occur
RL - Reporting Limit, defined as the lowest concentration the laboratory can accurately quantitate

AMRO Environmental Laboratories Corp.

Date: 01-Dec-06

CLIENT: Keene WWTP
Work Order: 0609008
Project: Local Limits

QC SUMMARY REPORT

Sample Duplicate

Sample ID	0609008-24AD	Batch ID	R34149	Test Code	E350.2	Units	mg/Kg-dry	Analysis Date	9/21/06		Prep Date		
Client ID	CAK 082606			Run ID	HG-WET_060921B			SeqNo	560600				

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Nitrogen, Ammonia (As N)	8445	450	mg/Kg-dry	0	0	0	0	0	8275	2.03	20	

Sample ID	0609008-28bd	Batch ID	16113	Test Code	E245.1	Units	µg/L	Analysis Date	9/22/06 11:08:37 AM		Prep Date	9/21/06	
Client ID	SEP 082806			Run ID	HG-FIMS_060922A			SeqNo	560952				

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Mercury	2.132	0.20	µg/L	0	0	0	0	0	2.277	6.57	20	

Sample ID	0609008-29bd	Batch ID	16113	Test Code	E245.1	Units	µg/L	Analysis Date	9/22/06 11:44:10 AM		Prep Date	9/21/06	
Client ID	PEC 082506			Run ID	HG-FIMS_060922A			SeqNo	560999				

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Mercury	0.132	0.20	µg/L	0	0	0	0	0	0.1452	36	20	JR

Sample ID	0609008-33bd	Batch ID	16113	Test Code	E245.1	Units	µg/L	Analysis Date	9/22/06 12:15:57 PM		Prep Date	9/21/06	
Client ID	SEC 083106			Run ID	HG-FIMS_060922A			SeqNo	561006				

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Mercury	0.07155	0.20	µg/L	0	0	0	0	0	0.1005	33.2	20	JR

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
RL - Reporting Limit, defined as the lowest concentration the laboratory can accurately quantitate
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

AMRO Environmental Laboratories Corp.

Date: 01-Dec-06

CLIENT: Keene WWTP
Work Order: 0609008
Project: Local Limits

QC SUMMARY REPORT

Sample Duplicate

Sample ID	0609008-38BD	Batch ID	16113	Test Code	E245.1	Units	µg/L	Analysis Date	9/22/06 2:04:31 PM	Prep Date	9/21/06	
Client ID	MWC 082806	Run ID		HG-FIMS_060922A				SeqNo	561031			

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Mercury	1.741	0.20	µg/L	0	0	0	0	0	0.0758	0	20	

Sample ID	0609008-24AD	Batch ID	16058	Test Code	SW7471A	Units	mg/Kg-dry	Analysis Date	9/13/06 1:41:03 PM	Prep Date	9/12/06	
Client ID	CAK 082806	Run ID		HG-F-MS_060913A				SeqNo	558965			

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Mercury	1.101	0.25	mg/Kg-dry	0	0	0	0	0	0.948	14.9	20	

Sample ID	0609008-26BD	Batch ID	16068	Test Code	E239.2	Units	µg/L	Analysis Date	9/25/06 1:31:24 PM	Prep Date	9/12/06	
Client ID	MWC 082906	Run ID		GFAA-6000_060925B				SeqNo	561803			

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Lead	4.715	5.0	µg/L	0	0	0	0	0	4.563	3.25	20	J

Sample ID	0609008-17BD	Batch ID	16068	Test Code	E239.2	Units	µg/L	Analysis Date	9/25/06 3:58:42 PM	Prep Date	9/12/06	
Client ID	HEC 083106	Run ID		GFAA-6000_060925B				SeqNo	561827			

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Lead	8.534	5.0	µg/L	0	0	0	0	0	11.7	31.3	20	R

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; NA - Not applicable where J values or ND results occur
RL - Reporting Limit, defined as the lowest concentration the laboratory can accurately quantitate

AMRO Environmental Laboratories Corp.

Date: 07-Dec-06

CLIENT: Keene WWTP
Work Order: 0609008
Project: Local Limits

QC SUMMARY REPORT

Sample Duplicate

Sample ID	0609008-25BD	Batch ID	16068	Test Code	E270.2	Units	µg/L	Analysis Date	9/13/06	Prep Date	9/12/06
Client ID	MWC 082906			Run ID	GFAA-6000_060913B			SeqNo	559828		

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Selenium	ND	5.0	µg/L	0	0	0	0	0	0			

Sample ID	0609008-20CD	Batch ID	16068	Test Code	E270.2	Units	µg/L	Analysis Date	9/13/06 8:17:00 PM	Prep Date	9/12/06
Client ID	SEP 082806			Run ID	GFAA-6000_060913C			SeqNo	562989		

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Selenium	23.79	10	µg/L	0	0	0	0	0	25.46	1.41	20	

Sample ID	0609008-24AD	Batch ID	16078	Test Code	SW7740	Units	mg/Kg-dry	Analysis Date	9/18/06	Prep Date	9/14/06
Client ID	CAK 082806			Run ID	GFAA-6000_060918B			SeqNo	560635		

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Selenium	ND	5.5	mg/Kg-dry	0	0	0	0	0	3.049	0	20	

Sample ID	0609008-26AD	Batch ID	R34098	Test Code	SW9013B	Units	mg/Kg-dry	Analysis Date	9/8/06	Prep Date	
Client ID	CAK 090106			Run ID	ING-WET_060908D			SeqNo	559590		

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Cyanide	ND	1.5	mg/Kg-dry	0	0	0	0	0	0			

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
RL - Reporting Limit, defined as the lowest concentration the laboratory can accurately quantitate
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

AMRO Environmental Laboratories Corp.

Date: 01-Dec-06

CLIENT: Keene WWTP
Work Order: 0609008
Project: Local Limits

QC SUMMARY REPORT
Sample Matrix Spike

Sample ID: 0609008-28BMS **Batch ID:** 16068 **Test Code:** E200.7 **Units:** µg/L **Analysis Date:** 9/13/06 2:07:00 PM **Prep Date:** 9/12/06
Client ID: NMC 082906 **Run ID:** ICP-OPTIMA_060913A **SeqNo:** 590078

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qual
Antimony	1548	20	µg/L	1666	0	92.6	70	130	0			
Beryllium	745.7	4.0	µg/L	797	0	93.6	70	130	0			
Cadmium	747.4	5.0	µg/L	800	0	93.4	70	130	0			
Chromium	3717	10	µg/L	3975	45.95	93.4	70	130	0			
Copper	2105	25	µg/L	2004	117.4	99.2	70	130	0			
Lead	1852	12	µg/L	1998	7.065	92.6	70	130	0			
Molybdenum	1943	25	µg/L	2085	41	96.7	70	130	0			
Nickel	3826	40	µg/L	3584	3.663	95	70	130	0			
Silver	372.1	7.0	µg/L	400	0	93	70	130	0			
Zinc	3563	20	µg/L	3584	136.6	93.5	70	130	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
RL - Reporting Limit, defined as the lowest concentration the laboratory can accurately quantitate
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

AMRO Environmental Laboratories Corp.

Date: 01-Dec-06

CLIENT: Keene WWTP
Work Order: 0509068
Project: Local Limits

QC SUMMARY REPORT
Sample Matrix Spike Duplicate

Sample ID 0509068-23BMSD **Batch ID** 16068 **Test Code** E200.7 **Units** µg/L **Analysis Date** 9/13/06 2:32:37 PM **Prep Date** 9/12/06
Client ID MMC 082506 **Run ID** ICP-OPTIMA_060913A **SeqNo** 559079

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Antimony	1951	20	µg/L	1996	0	97.7	70	130	1848	5.42	20	
Beryllium	795.6	4.0	µg/L	797	0	99.9	70	130	745.7	6.51	20	
Cadmium	749.1	5.0	µg/L	800	0	93.6	70	130	747.4	0.237	20	
Chromium	3905	10	µg/L	3976	4.536	98.1	70	130	3717	4.92	20	
Copper	2109	25	µg/L	2004	117.4	99.4	70	130	2105	0.191	20	
Lead	1585	12	µg/L	1993	7.065	94	70	130	1852	0.164	20	
Molybdenum	1941	25	µg/L	2005	4.1	96.5	70	130	1943	0.132	20	
Nickel	3844	40	µg/L	3984	3.663	96.4	70	130	3826	0.456	20	
Silver	273.9	7.0	µg/L	400	0	93.3	70	130	272.1	0.316	20	
Zinc	3660	20	µg/L	3984	135.6	93.4	70	130	3663	0.0547	20	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; NA - Not applicable where J values or ND results occur
RL - Reporting Limit, defined as the lowest concentration the laboratory can accurately quantitate

AMRO Environmental Laboratories Corp.

Date: 01-Dec-06

CLIENT: Keene WWTP
Work Order: 0609008
Project: Local Limits

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0609008-3TBMS Batch ID: 16068 Test Code: E200.7 Units: µg/L Analysis Date: 9/13/06 1:40:46 PM Prep Date: 9/12/06

Client ID: HEC 083106 Run ID: ICP-OPTIMA_060913A SeqNo: 559096

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Antimony	1977	20	µg/L	1996	0	99	70	130	0			
Beryllium	803.2	40	µg/L	797	0	101	70	130	0			
Cadmium	784.6	50	µg/L	800	0	98.1	70	130	0			
Chromium	3972	10	µg/L	3976	1.143	99.9	70	130	0			
Copper	2259	25	µg/L	2004	146.4	105	70	130	0			
Lead	1988	12	µg/L	1996	9.159	99	70	130	0			
Molybdenum	1940	25	µg/L	2005	2.951	96.6	70	130	0			
Nickel	4038	40	µg/L	3984	6.951	101	70	130	0			
Silver	391.3	70	µg/L	400	0	97.8	70	130	0			
Zinc	3968	20	µg/L	3984	114.3	97.5	70	130	0			

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

J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; NA - Not applicable where J values or ND results occur

RL - Reporting Limit, defined as the lowest concentration the laboratory can accurately quantify

AMRO Environmental Laboratories Corp.

Date: 01-Dec-06

CLIENT: Keene WWTP
Work Order: 0609008
Project: Local Limits

QC SUMMARY REPORT
Sample Matrix Spike DupEcate

Sample ID 0609008-37BMSD Batch ID 16058 Test Code E200.7 Units µg/L Analysis Date 9/13/06 3:46:36 PM Prep Date 9/12/06
Client C HEC 083106 Run ID ICP-OPTIMA_060913A SeqNo 559097

Analyte	QC Sample Result	RL	Units	QC Spike Original Sample Amount	Result	%REC	Low Limit	High Limit	Original Sample or MS Result	%RPD	RPD Limit	Qua
Antimony	2090	20	µg/L	1995	0	105	70	130	1977	5.57	20	
Beryllium	851.5	4.0	µg/L	797	0	107	70	130	803.2	5.87	20	
Cadmium	803	5.0	µg/L	800	0	100	70	130	784.6	2.31	20	
Chromium	4191	10	µg/L	3976	1145	105	70	130	3972	5.42	20	
Copper	2296	25	µg/L	2004	1464	109	70	130	2259	3.34	20	
Lead	2032	12	µg/L	1998	5.159	101	70	130	1988	2.21	20	
Molybdenum	2079	25	µg/L	2005	2.951	103	70	130	1945	6.91	20	
Nickel	4129	40	µg/L	3584	6.951	103	70	130	4030	2.41	20	
Silver	400.6	7.0	µg/L	400	0	100	70	130	391.3	2.34	20	
Zinc	4109	20	µg/L	3984	114.3	100	70	130	3998	2.74	20	

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
RL - Reporting Limit, defined as the lowest concentration the laboratory can accurately quantitate
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

AMRO Environmental Laboratories Corp.

Date: 01-Dec-06

CLIENT: Keene WWTP
Work Order: 0609008
Project: Local Limits

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0609008-24AMS Batch ID: 18078 Test Code: SW6010B Units: mg/Kg-dry Analysis Date: 9/15/06 3:49:48 PM Prep Date: 9/14/06

Client ID: CAK 082606 Run ID: ICP-OPTIMA_060915A SeqNo: 559488

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qual
Antimony	1134	25	mg/Kg-dry	1250	0	90.5	75	125	0			
Beryllium	473.5	1.6	mg/Kg-dry	499.4	0.3701	94.1	75	125	0			
Cadmium	468.2	3.1	mg/Kg-dry	501.3	0.9293	93.2	75	125	0			
Chromium	2491	6.2	mg/Kg-dry	2506	20.89	98.6	75	125	0			
Copper	1738	16	mg/Kg-dry	1253	468.8	99.7	75	125	0			
Lead	1224	16	mg/Kg-dry	1252	49.81	94.5	75	125	0			
Molybdenum	1326	16	mg/Kg-dry	1257	15.9	103	75	125	0			
Nickel	2417	25	mg/Kg-dry	2496	13.45	96.3	75	125	0			
Silver	237.6	8.2	mg/Kg-dry	250.6	13.07	89.5	75	125	0			
Zinc	3143	38	mg/Kg-dry	2496	665.3	101	75	125	0			

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

J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; NA - Not applicable where % values or ND results occur

RL - Reporting Limit, defined as the lowest concentration the laboratory can accurately quantitate

AMRO Environmental Laboratories Corp.

Date: 01-Dec-06

CLIENT: Keene WWTP
Work Order: 0609008
Project: Local Limits

QC SUMMARY REPORT

Sample Matrix Spike Duplicate

Sample ID 0609008-24AMSD Batch ID 16078 Test Code SW6010B Units mg/Kg-dry Analysis Date 9/15/06 3:35:33 PM Prep Date 9/14/06
Client ID CAK 082606 Run ID ICP-OPTIMA_060915A SeqNo 559487

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Antimony	1212	28	mg/Kg-dry	1290	0	94	75	125	1134	6.64	20	
Beryllium	501	1.6	mg/Kg-dry	514.1	0.9701	97.4	75	125	470.5	6.28	20	
Cadmium	517.4	3.2	mg/Kg-dry	515	0.9393	100	75	125	468.2	9.98	20	
Chromium	2617	6.4	mg/Kg-dry	2583	20.89	101	75	125	2491	4.94	20	
Copper	1818	16	mg/Kg-dry	1292	458.6	103	75	125	1738	4.48	20	
Lead	1343	16	mg/Kg-dry	1289	40.87	101	75	125	1224	9.01	20	
Molybdenum	1294	16	mg/Kg-dry	1294	15.9	97	75	125	1305	8.54	20	
Nickel	2651	25	mg/Kg-dry	2570	13.45	104	75	125	2417	10.8	20	
Silver	259.3	9.0	mg/Kg-dry	258	13.37	95.0	75	125	237.6	5.74	20	
Zinc	3543	39	mg/Kg-dry	2570	565.3	130	75	125	3543	0.00543	20	

Sample ID 0609008-08BMS Batch ID 16068 Test Code E206.2 Units µg/L Analysis Date 9/15/06 Prep Date 9/12/06
Client ID MMC 082906 Run ID GFAA-6000_060915D SeqNo 560705

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Arsenic	13.62	5.0	µg/L	25	0	54.5	70	130	0			S

Sample ID 0609008-08BMSD Batch ID 16068 Test Code E206.2 Units µg/L Analysis Date 9/15/06 Prep Date 9/12/06
Client ID MMC 082906 Run ID GFAA-6000_060915D SeqNo 560706

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Arsenic	15.29	5.0	µg/L	25	0	61.2	70	130	13.62	11.6	20	S

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
RL - Reporting Limit, defined as the lowest concentration the laboratory can accurately quantitate
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

AMRO Environmental Laboratories Corp.

Date: 01-Dec-06

CLIENT: Keene WWTP
Work Order: 0609008
Project: Local Limits

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID	0609008-37BMS	Batch ID: 16066	Test Code:	E206.2	Units: µg/L		Analysis Date:	9/19/06		Prep Date:	9/12/06	
Client ID	HEC 083106		Run ID:	GFAA-6000_060918D			SeqNo:	560729				

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Arsenic	14.56	5.0	µg/L	25	0	58.3	70	130	0			S

Sample ID	0609008-37BMSD	Batch ID: 16066	Test Code:	E206.2	Units: µg/L		Analysis Date:	9/19/06		Prep Date:	9/12/06	
Client ID	HEC 083106		Run ID:	GFAA-6000_060918D			SeqNo:	560730				

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Arsenic	14.51	5.0	µg/L	25	0	58.1	70	130	14.56	0.345	20	S

Sample ID	0609008-17AMS	Batch ID: R34055	Test Code:	E335.2	Units: mg/L		Analysis Date:	9/12/06		Prep Date:		
Client ID	HEC 083106		Run ID:	ING-WET_060912A			SeqNo:	558729				

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Cyanide	0.191	0.010	mg/L	0.2	0.003	94	80	120	0			

Sample ID	0609008-17AMSD	Batch ID: R34055	Test Code:	E335.2	Units: mg/L		Analysis Date:	9/12/06		Prep Date:		
Client ID	HEC 083106		Run ID:	ING-WET_060912A			SeqNo:	558730				

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Cyanide	0.187	0.010	mg/L	0.2	0.003	92	80	120	0.191	2.12	20	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; NA - Not applicable where J values or ND results occur
RL - Reporting Limit, defined as the lowest concentration that laboratory can accurately quantitate

AMRO Environmental Laboratories Corp.

Date: 01-Dec-06

CLIENT: Keene WWTP
Work Order: 0609008
Project: Local Limits

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID	0609008-11AMS	Batch ID	R34099	Test Code	E335.2	Units	mg/L	Analysis Date	9/8/06		Prep Date		
Client ID	KEG 082506			Run ID	ING-WET_060908E			SeqNo	559601				

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Cyanide	0.184	0.010	mg/L	0.2	0.003	90.5	80	120	0			

Sample ID	0609008-11AMSD	Batch ID	R34099	Test Code	E335.2	Units	mg/L	Analysis Date	9/8/06		Prep Date		
Client ID	KEG 082506			Run ID	ING-WET_060908E			SeqNo	559602				

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Cyanide	0.186	0.010	mg/L	0.2	0.003	91.5	80	120	0.184	1.08	20	

Sample ID	0609306-13AMS	Batch ID	R34108	Test Code	E335.2	Units	mg/L	Analysis Date	9/11/06		Prep Date		
Client ID	MMG 082506			Run ID	ING-WET_060911B			SeqNo	559739				

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Cyanide	0.187	0.010	mg/L	0.2	0	93.5	80	120	0			

Sample ID	0609306-13AMSD	Batch ID	R34108	Test Code	E335.2	Units	mg/L	Analysis Date	9/11/06		Prep Date		
Client ID	MMG 082506			Run ID	ING-WET_060911B			SeqNo	559740				

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Cyanide	0.194	0.010	mg/L	0.2	0	97	80	120	0.187	3.67	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
RL - Reporting Limit, defined as the lowest concentration the laboratory can accurately quantitate
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable, where J values or ND results occur

AMRO Environmental Laboratories Corp.

Date: 01-Dec-06

CLIENT: Keene WWTP
Work Order: 0609008
Project: Local Limits

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID 0609008-28AMS	Batch ID R34095	Test Code E350.2	Units mg/L			Analysis Date 9/15/06			Prep Date				
Client ID MMC 082906		Run ID IHG-WET_060915E				SeqNo 559571							
	QC Sample		QC Spike	Original Sample				Original Sample					
Analyte	Result	RL	Units	Amount	Result	%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	Qua	
Nitrogen, Ammonia (As N)	33.6	1.0	mg/L	20	13.72	99.4	80	120	0				
Sample ID 0609008-28AMSD	Batch ID R34095	Test Code E350.2	Units mg/L			Analysis Date 9/15/06			Prep Date				
Client ID MMC 082906		Run ID IHG-WET_060915E				SeqNo 559572							
	QC Sample		QC Spike	Original Sample				Original Sample					
Analyte	Result	RL	Units	Amount	Result	%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	Qua	
Nitrogen, Ammonia (As N)	33.04	1.0	mg/L	20	13.72	99.6	80	120	33.6	1.65	20		
Sample ID 0609008-33AMS	Batch ID R34148	Test Code E350.2	Units mg/L			Analysis Date 9/21/06			Prep Date				
Client ID SEC 083106		Run ID IHG-WET_060921A				SeqNo 560587							
	QC Sample		QC Spike	Original Sample				Original Sample					
Analyte	Result	RL	Units	Amount	Result	%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	Qua	
Nitrogen, Ammonia (As N)	9.38	1.0	mg/L	10	0.56	88.2	80	120	0				
Sample ID 0609008-33AMSD	Batch ID R34148	Test Code E350.2	Units mg/L			Analysis Date 9/21/06			Prep Date				
Client ID SEC 083106		Run ID IHG-WET_060921A				SeqNo 560588							
	QC Sample		QC Spike	Original Sample				Original Sample					
Analyte	Result	RL	Units	Amount	Result	%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	Qua	
Nitrogen, Ammonia (As N)	9.68	1.0	mg/L	10	0.56	91	80	120	9.38	2.94	20		

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
RL - Reporting Limit, defined as the lowest concentration that laboratory can accurately quantitate
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable because J values or ND results occur

AMRO Environmental Laboratories Corp.

Date: 07-Dec-06

CLIENT: Keene WWTP
Work Order: 0609008
Project: Local Limits

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID	0609008-37AMS	Batch ID	R34190	Test Code	E350.2	Units	mg/L	Analysis Date	9/26/06	Prep Date	
Client ID	HEC 083106			Run ID	LNG-WET_060926A			SeqNo	561612		

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Nitrogen, Ammonia (As N)	28	1.0	mg/L	10	15.2	98	80	120	0			

Sample ID	0609008-37AMSD	Batch ID	R34190	Test Code	E350.2	Units	mg/L	Analysis Date	9/26/06	Prep Date	
Client ID	HEC 083106			Run ID	LNG-WET_060926A			SeqNo	561613		

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Nitrogen, Ammonia (As N)	28.7	1.0	mg/L	10	18.2	105	80	120	28	2.47	20	

Sample ID	0609008-24AMS	Batch ID	R34149	Test Code	E350.2	Units	mg/Kg-dry	Analysis Date	9/21/06	Prep Date	
Client ID	CAK 082806			Run ID	LNG-WET_060921B			SeqNo	560601		

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Nitrogen, Ammonia (As N)	13360	520	mg/Kg-dry	5160	8275	98.6	0	0	0			S

Sample ID	0609008-24AMSD	Batch ID	R34149	Test Code	E350.2	Units	mg/Kg-dry	Analysis Date	9/28/06	Prep Date	
Client ID	CAK 082806			Run ID	LNG-WET_060921B			SeqNo	560602		

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Nitrogen, Ammonia (As N)	13140	520	mg/Kg-dry	5165	8275	93.5	0	0	13360	1.69	0	S

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
RL - Reporting Limit, defined as the lowest concentration the laboratory can accurately quantitate
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

06

AMRO Environmental Laboratories Corp.

Date: 30-Dec-06

CLIENT: Keene WWTP
Work Order: 0609008
Project: Local Limits

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0609008-29bms	Batch ID: 16113	Test Code: E245.1	Units: µg/L			Analysis Date: 9/22/06 11:48:08 AM			Prep Date: 9/21/06		
Client ID: PEC 062906		Run ID: HG-FIMS_060922A				SeqNo: 561000					
Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Mercury	4.304	0.20	µg/L	4	0.1432	104	70	130	0			

Sample ID: 0609008-29bmsd	Batch ID: 16113	Test Code: E245.1	Units: µg/L			Analysis Date: 9/22/06 11:52:03 AM			Prep Date: 9/21/06		
Client ID: PEC 062906		Run ID: HG-FIMS_060922A				SeqNo: 561001					
Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Mercury	4.524	0.20	µg/L	4	0.1432	109	70	130	4.304	4.95	20	

Sample ID: 0609008-38bms	Batch ID: 16113	Test Code: E245.1	Units: µg/L			Analysis Date: 9/22/06 1:07:55 PM			Prep Date: 9/21/06		
Client ID: INC 062906		Run ID: HG-FIMS_060922A				SeqNo: 561017					
Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Mercury	5.55	0.20	µg/L	4	1.656	96.9	70	130	0			

Sample ID: 0609008-38bmsd	Batch ID: 16113	Test Code: E245.1	Units: µg/L			Analysis Date: 9/22/06 1:11:56 PM			Prep Date: 9/21/06		
Client ID: INC 062906		Run ID: HG-FIMS_060922A				SeqNo: 561018					
Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Mercury	5.754	0.20	µg/L	4	1.656	112	70	130	5.65	2.54	20	

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
RL - Reporting Limit, defined as the lowest concentration the laboratory can accurately quantitate
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

AMRO Environmental Laboratories Corp.

Date: 07-Dec-06

CLIENT: Keene WWTP
Work Order: 0609008
Project: Local Limits

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID	0609008-24ams	Batch ID	15058	Test Code	SW7471A	Units	mg/Kg-dry	Analysis Date	9/13/06 1:44:38 PM	Prep Date	9/12/06		
Client ID	CAK 082906			Run ID	HG-FIMS_060913A			SeqNo	558970				

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Mercury	4.753	0.25	mg/Kg-dry	4.592	0.346	90.4	75	125	0			

Sample ID	0609008-24amsd	Batch ID	15058	Test Code	SW7471A	Units	mg/Kg-dry	Analysis Date	9/13/06 1:46:12 PM	Prep Date	9/12/06		
Client ID	CAK 082906			Run ID	HG-FIMS_060913A			SeqNo	558971				

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Mercury	5.117	0.25	mg/Kg-dry	4.25	0.346	98.1	75	125	4.765	7.06	20	

Sample ID	0609008-25BMS	Batch ID	15068	Test Code	E239.2	Units	µg/L	Analysis Date	9/25/06 1:35:27 PM	Prep Date	9/12/06		
Client ID	MMC 082906			Run ID	GFAA-6000_060925B			SeqNo	561804				

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Lead	22.48	5.0	µg/L	25	4.552	71.7	70	130	0			

Sample ID	0609008-25BMSD	Batch ID	15068	Test Code	E239.2	Units	µg/L	Analysis Date	9/25/06 1:39:03 PM	Prep Date	9/12/06		
Client ID	MMC 082906			Run ID	GFAA-6000_060925B			SeqNo	561805				

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Lead	17.79	5.0	µg/L	25	4.563	53.1	70	130	22.48	17.8	20	JSR

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; NA - Not applicable where J values or ND results occur
RL - Reporting Limit defined as the lowest concentration the laboratory can accurately quantitate

AMRO Environmental Laboratories Corp.

Date: 07-Dec-06

CLIENT: Keene WWTP
Work Order: 0609008
Project: Local Limits

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID	0609008-37BMS	Batch ID	16068	Test Code	E239.2	Units	µg/L	Analysis Date	9/25/06 4:11:54 PM	Prep Date	9/12/06
Client ID	HEC 083106			Run ID	GFAA-6000_060925B			SeqNo	561830		

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Lead	30.96	5.0	µg/L	25	11.7	77	70	130	0			

Sample ID	0609008-37BMSD	Batch ID	16068	Test Code	E239.2	Units	µg/L	Analysis Date	9/25/06 4:16:06 PM	Prep Date	9/12/06
Client ID	HEC 083106			Run ID	GFAA-6000_060925B			SeqNo	561831		

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Lead	28.93	5.0	µg/L	25	11.7	68.9	70	130	30.96	5.79	20	S

Sample ID	0609008-28BMS	Batch ID	16068	Test Code	E204.2	Units	µg/L	Analysis Date	9/13/06	Prep Date	9/12/06
Client ID	MMC 082906			Run ID	GFAA-6000_060913A			SeqNo	559778		

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Antimony	25	6.0	µg/L	25	0	104	70	130	0			*

Sample ID	0609008-28BMSD	Batch ID	16068	Test Code	E204.2	Units	µg/L	Analysis Date	9/13/06	Prep Date	9/12/06
Client ID	MMC 082906			Run ID	GFAA-6000_060913A			SeqNo	559779		

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Antimony	26.63	6.0	µg/L	25	0	107	70	130	25	2.41	20	*

Qualifiers: ND - Not Detected at the Reporting Limit
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

AMRO Environmental Laboratories Corp.

Date: 07-Dec-06

CLIENT: Keene WWTP
Work Order: 0609008
Project: Local Limits

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID	0609008-37BMS	Batch ID	16068	Test Code:	E204.2	Units	µg/L	Analysis Date	9/13/06	Prep Date	9/12/06
Client ID	HEC 083106			Run ID:	GFAA-6000_060913A			SeqNo	559800		

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Antimony	27.4	6.0	µg/L	25	0	110	70	130	0			*

Sample ID	0609008-37BMSD	Batch ID	16068	Test Code	E204.2	Units	µg/L	Analysis Date	9/13/06	Prep Date	9/12/06
Client ID	HEC 083106			Run ID	GFAA-6000_060913A			SeqNo	559801		

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Antimony	27.14	6.0	µg/L	25	0	109	70	130	27.41	0.995	20	*

Sample ID	0609008-26BMS	Batch ID	16068	Test Code	E270.2	Units	µg/L	Analysis Date	9/13/06	Prep Date	9/12/06
Client ID	MMC 082906			Run ID	GFAA-6000_060913B			SeqNo	559830		

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Selenium	22.17	5.0	µg/L	25	0	88.7	70	130	0			

Sample ID	0609008-26BMSD	Batch ID	16068	Test Code	E270.2	Units	µg/L	Analysis Date	9/13/06	Prep Date	9/12/06
Client ID	MMC 082906			Run ID	GFAA-6000_060913B			SeqNo	559831		

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Selenium	22.72	5.0	µg/L	25	0	91.2	70	130	22.17	2.46	20	

Qualifiers: ND - Not Detected at the Reporting Limit
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RL - Reporting Limit, defined as the lowest concentration the laboratory can accurately quantitate
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

AMRO Environmental Laboratories Corp.

Date: 07-Dec-06

CLIENT: Keene WWTP
Work Order: 0609008
Project: Local Limits

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID	0609008-07BMS	Batch ID	18068	Test Code	E270.2	Units	µg/L	Analysis Date	9/13/06		Prep Date	9/12/06	
Client ID	HEC 083106			Run ID	GFAA-6000_060913B			SeqNo	559852				
Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Selenium	25.18	5.0	µg/L	25	0	101	70	130	0			

Sample ID	0609008-07BMSD	Batch ID	18068	Test Code	E270.2	Units	µg/L	Analysis Date	9/13/06		Prep Date	9/12/06	
Client ID	HEC 083106			Run ID	GFAA-6000_060913B			SeqNo	559853				
Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Selenium	24.21	5.0	µg/L	25	0	96.8	70	130	25.18	3.95	20	

Sample ID	0609008-24AMS	Batch ID	18078	Test Code	SW7740	Units	mg/Kg-dry	Analysis Date	9/18/06		Prep Date	9/14/06	
Client ID	CAK 083106			Run ID	GFAA-6000_060918B			SeqNo	560837				
Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Selenium	14.2	6.3	mg/Kg-dry	15.56	3.249	71.2	75	125	0			S

Sample ID	0609008-24AMSD	Batch ID	18078	Test Code	SW7740	Units	mg/Kg-dry	Analysis Date	9/18/06		Prep Date	9/14/06	
Client ID	CAK 083106			Run ID	GFAA-6000_060918B			SeqNo	560838				
Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Selenium	14.42	6.4	mg/Kg-dry	16.12	3.249	70.5	75	125	14.2	1.56	20	S

Qualifiers: U - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; NA - Not applicable where J values or ND results occur
RL - Reporting Limit, defined as the lowest concentration the laboratory can accurately quantitate

AMRO Environmental Laboratories Corp.

Date: 01-Dec-06

CLIENT: Keene WWTP
Work Order: 0609008
Project: Local Limits

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID	0609008-25AMS	Batch ID	R34098	Test Code	SW9010B	Units	mg/Kg-dry	Analysis Date	9/5/06		Prep Date		
Client ID	CAK 090106			Run ID	ING-WET_060908C			SeqNo	559591				

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Cyanide	30.64	1.5	mg/Kg-dry	30.03	0	102	50	120	0			

Sample ID	0609008-25AMSD	Batch ID	R34098	Test Code	SW9010B	Units	mg/Kg-dry	Analysis Date	9/6/06		Prep Date		
Client ID	CAK 090106			Run ID	ING-WET_060908D			SeqNo	559592				

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Cyanide	32.59	1.6	mg/Kg-dry	32.78	0	99.4	80	120	30.64	6.15	20	

Qualifiers: ND - Not Detected at the Reporting Limit
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur