AECOM Environment

Prepared for:
Superfund Standby Program
NYSDEC
Albany, NY

Prepared by:
AECOM
Chestnut Ridge, NY
60277021
May 2017

Periodic Review Report
Review Period: January 1, 2016 through January 1, 2017
Dzus Fasteners Site, Site #1-52-033

Final

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Engineering Certification

I, Michael L. Spera, certify that I am currently a NYS registered professional engineer and that this Periodic Review Report was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10) and that all activities were performed in full accordance with the DEC-approved scope of work and any DER-approved modifications.

Respectfully submitted,

AECOM Technical Services Northeast, Inc.

Michael L. Spera — Date

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Executive Summary

AECOM Technical Services Northeast, Inc., (AECOM) has prepared this Periodic Review Report (PRR) for the Dzus Fasteners Site (the Site) in West Islip, Suffolk County, NY (Figure 1). The period of review for this report is January 1, 2016 through January 1, 2017.

The Dzus Fastener facility was used to manufacturer fasteners and springs from 1932 to 2015 when manufacturing ceased at the facility. The sale of the property is currently pending. Discharge of oils, heavy metals and salts via on-site leaching pools led to the contamination of soil, groundwater, and nearby surface waters and sediment in Willetts Creek and Lake Capri. An initial site inspection took place in August 1983. Contamination was discovered later in August 1983 and a preliminary site assessment was completed in September 1984. A Phase I investigation was completed and a Phase II investigation was submitted by Dzus in August 1990. The primary contaminant of concern at the Site, and in Willetts Creek and Lake Capri, is cadmium. Dzus completed an Interim Remedial Measure (IRM) in 1991. During the IRM, a leach field on the eastern side of the site was removed. A remedial investigation / feasibility study (RI/FS) was initiated on the site in 1992. The site was then broken up into the two Operable Units (OU1: the stabilized portion of the Dzus facility [eastern parking lot]; and OU2: the offsite localities including Willetts Creek and Lake Capri). A Record of Decision (ROD) for OU1 was issued for the site in March 1995, and a ROD for OU2 was issued for the site in October 1997. In response to the ROD for OU1, the remedy for contaminated groundwater in the vicinity of the Dzus facility consisted of source removal, in-situ stabilization/solidification of cadmium contaminated soils, and ongoing natural attenuation. Soils in the eastern parking lot were mixed with Portland cement which was augured into the soils to stabilize the metals prior to capping. An asphalt cover at the eastern parking lot at the Dzus manufacturing facility was constructed to eliminate the potential for direct human contact with the underlying stabilized soils at the site, and to eliminate or reduce the mobility of soil contaminants that would cause further groundwater degradation. In response to the ROD for OU2, Lake Capri and a portion of Willetts Creek were dredged in 1999 and riprap was used to cover portions identified as having deeper zones of contamination in order to prevent future erosion.

In accordance with the remedial design, the fish population of Lake Capri was eradicated using Rotenone, a NYSDEC approved fish eradicant, in July 1999. In 2000 after completion of the remedial activities, the lake was restocked with silversides; bluegill, *Lepomis macrochirus*; and largemouth bass, *Microptera salmoides*.

During the periodic monitoring of Willetts Creek and Lake Capri sediment, anomalously high cadmium concentrations were noted in a few sediment samples. Additional sediment sampling was conducted in Lake Capri and Willetts Creek in April 2013. Another round of sampling was conducted in Willetts Creek in November 2013 to evaluate the horizontal and vertical extent of cadmium contamination in Willetts Creek. Further confirmation samples were collected in Willetts Creek in October 2014. A

public meeting was held at the West Islip High School on March 23, 2016 to present the results of the Willetts Creek sediment sampling to the local residents.

NYSDEC established OU-3 (wetland areas of Willetts Creek) to address this contamination. Additional sampling was conducted to delineate this contamination in the Fall of 2016. This round sampling was conducted by others and was not available at the time of this report.

The periodic review (PR) process is used for determining if a remedy continues to be properly managed, as set forth in the ROD and continues to be protective of human health and the environment. The results of PR have led to the determination that the site is in general compliance with the applicable requirements as presented in the RODs for OU1 and OU2.

Conclusions

Site Maintenance: Groundwater monitoring well MW-1 could not be located and was replaced in August 2015. The asphalt cover located at the Dzus Fasteners Facility currently has vegetation growing through cracks in the pavement.

- Groundwater: The only metal of concern found consistently in off-site wells above the Class GA criteria is cadmium. The majority of the exceedances are concentrated along the eastern side of the Site. Concentrations of iron, manganese, and sodium have exceeded the criterion in numerous wells but these compounds are typically found in groundwater on Long Island and are most likely representative of background conditions and not site related. One round of groundwater samples was collected during this review period.
- Surface Water: Cadmium is the only metal of concern for surface water. Cadmium concentrations have only exceeded the criterion in Willetts Creek sample SW-5 and a single exceedance in SW-6. Six other secondary metals have been detected at concentrations above their Class A Surface Water criteria including antimony, iron, manganese, selenium, sodium and thallium. Concentrations of antimony, selenium and thallium have been very sporadic and do not appear to be site related. Concentrations of iron, manganese and sodium have exceeded the criteria in a majority of the samples collected to date but these are naturally occurring metals typical for Long Island and are not considered to be site related. One round of surface water samples was collected during this review period.
- Sediments: The sediment sample data indicate that the surficial sediments in Lake Capri and Willetts Creek remain contaminated with cadmium and lead concentrations above the applicable NYSDEC Technical Guidance for Screening Sediment Criteria. Several other metals, including antimony, arsenic, chromium, copper, iron, manganese, mercury, nickel, and zinc, have been detected sporadically at concentrations exceeding the screening criteria during the nine sampling events.
- Fish Tissue: No fish tissue samples were collected during this review period. There have been four fish tissue sampling events conducted since 2006. During each of these events, the number of fish samples collected was well below the target of 80 samples of at least 100

grams and as a consequence, most samples consisted of numerous small fish. Fish size and numbers were inadequate for the assessment of cadmium contamination of fish tissues.

Recommendations

- Perform a focused feasibility study to address the elevated concentrations of cadmium in sediment in portions of Willetts Creek and throughout Lake Capri.
- Continue sampling on a five-quarter basis in order to better evaluate temporal trend for cadmium and other metals found in exceedance of the NYSDEC groundwater, surface water and sediment criteria.
- Continue fish sampling as detailed in the SMP. The frequency of sampling will be determined by the NYSDEC.
- Locate the damaged/destroyed monitoring wells and properly abandon them.
- Perform periodic inspections of the asphalt cover at the Dzus Fasteners facility in accordance with the SMP.
- Repair the cracks in the asphalt cap after the RCRA closure activities are completed.
- Perform a periodic review of the Site in 2018.

1.0 Introduction

The review period for this PRR is January 1, 2016 through January 1, 2017.

1.1 Site History and Remedial Program

The Dzus Fastener Manufacturing Facility is located at 425 Union Boulevard in West Islip, Suffolk County, New York (Figure 1). The Dzus Fastener facility, a manufacturer of fastener and springs since 1932, was responsible for the release of oils, heavy metals, and salts via on-site leaching pools used for the disposal of hazardous waste and former discharge into Upper Willetts Creek, located immediately east of the facility. These operations led to soil and groundwater contamination at the Dzus facility and downstream groundwater, sediment, and surface water contamination of nearby Willetts Creek and Lake Capri, an eight-acre man-made lake.

An IRM conducted in 1991 resulted in removal of a leach pool at the eastern side of the Site. The project was divided into two operable units. Operable Unit 1 (OU1) consists of the 1-acre parking lot on the eastern side of the property. A Record of Decision (ROD) for OU1 was issued for the Site by New York State Department of Environmental Conservation (NYSDEC) in March 1995. The selected remedy consisted of the following:

- In-situ stabilization/solidification for soils containing cadmium at concentrations greater than 10 parts per million (ppm). Three areas on the western portion of the facility were excavated and mixed with the soils to be treated on the eastern portion of the Site;
- Design and installation of a final topsoil/asphalt cover at the eastern portion of the Site, which would protect the treatment cells from erosion; and,
- Implementation of institutional controls, such as deed restrictions at the Site.

The second operable unit, Operable Unit 2 (OU2) consisted of offsite contamination, including sediment and water contamination of Willetts Creek and Lake Capri. A ROD for OU2 was issued for the Site by NYSDEC in October 1997. The selected remedy consisted of the following:

- Dredging, dewatering and off-site disposal of contaminated sediments from Lake Capri;
- Excavation and off-site disposal of approximately 100 cubic yards of sediment from Willetts Creek, corresponding to levels of cadmium exceeding 9 ppm; and,
- A long-term monitoring program to evaluate the effectiveness of the on-site remedy and to verify that existing groundwater plume does not impact public health or environment.

A Site Management Plan (SMP, AECOM, May 2014) was prepared for the project. As part of the OM&M, a long-term monitoring plan (LTMP) was developed for OU1 and OU2 with regard to monitoring of groundwater, surface water, sediment, and the asphalt cover (engineering control) in the

manufacturing facility's eastern parking lot. The SMP outlines the most recent sample collection procedures.

Anomalously high concentrations of cadmium were noted in Willetts Creek and Lake Capri sediment samples collected during long-term monitoring sampling events. Additional sampling was conducted in 2013 and 2014 to characterize these anomalies. The sample results found isolated areas of elevated cadmium concentrations in sediment samples in Willetts Creek adjacent to the Beach Street Middle School athletic fields and the wetland areas behind the strip mall on Union Boulevard. A public meeting was held on March 23, 2016 to present the results of these investigations to the public. OU3 was established to include sediment contamination in these wetland areas of Willetts Creek.

Additional sampling was conducted in the second half of 2016. Field investigations were completed in two phases: Phase 1A and 1B. A total of 197 soil samples for cadmium and chromium were collected from 39 residential properties along Willetts Creek and the Beach Street Middle School athletic fields. At the West Islip High School, eight soil samples from five locations were collected from the grassy area that may have received flood waters from Willetts Creek. Four samples were also collected from east and west of the Burling Lane and Edmore Lane foot bridges across Willetts Creek.

Geoprobe soil borings were advanced along Union Boulevard in front of the commercial properties south of the Dzus property. Nine soil borings were advanced through fill material to the native soils to determine if the native soils had been impacted.

All culverts in Willetts Creek between Union Boulevard and Lake Capri were video inspected. Sediment samples were collected immediately downstream of the outfalls. Additional sediment samples were collected in Willetts Creek to fill in data gaps related to the 2013-2014 sediment sampling activities. Two sediment samples were also collected from the tidal portions of Willetts Creek south of Montauk Highway.

Three surface soil samples were collected north of the Dzus property along the LIRR tracks adjacent to Orinoco Drive to evaluate the potential for contaminated soils to have been placed north of the Site.

A Remedial Investigation Report is being prepared for the above mentioned sampling conducted in 2016. NYSDEC is preparing a Proposed Remedial Action Plan (PRAP) for OU3.

Two IRMs were completed by NYSDEC. A demarcation fence was installed at the Beach Street Middle School and the area behind the ACE Hardware Store in June 2016. The second IRM consisted of debris and sediment removal upstream of the footbridges at Burling Lane and Edmore Lane and was completed in January 2017.

RCRA closure activities are being conducted at the DFCI Solutions property during the first quarter in 2017.

The primary contaminant of concern at the Site is cadmium. Concentrations have been found in exceedance of published standards in soil and groundwater at the Dzus facility and in the surface water and sediments of nearby Willetts Creek and Lake Capri.

1.2 Remedy Evaluation and Recommendations Summary

In summary, this Periodic Review Report (PRR) is intended to evaluate the ongoing management of the selected remedial program for OU1 and OU2, as designed. Based on information reviewed as part of this PRR, implementation of investigation and maintenance activities is required in order to ensure that the remedy is performing properly and effectively, and is protective of public health and the environment.

In order to return to compliance with the requirements presented in the ROD and OM&M program, a summary of recommended investigation and maintenance activities is provided below. Details with regard to these recommendations are also provided in Section 5.0 of this Report.

- Continue sampling on a five-quarter basis in order to better evaluate temporal trends for cadmium and other metals found in exceedance of the NYSDEC groundwater, surface water, and sediment criteria.
- Re-evaluate the current fish sampling protocol. Currently, Lake Capri does not provide fish of sufficient number or of sufficient size to meet the SMP requirements for fish tissue sampling. Other options for obtaining accurate cadmium levels in edible sized fish should be considered (e.g., towed gill nets or a more robust trapping program). Also evaluate whether the restocking program was successful in reestablishing a large healthy fishy population in Lake Capri. The current NYSDOH fish consumption advisory applies to American eel and carp with a generic advisory for all other fish. Several rounds of fish collection have failed to capture any carp. NYSDOH should consider revising the fish advisory to include other species.
- Establish the inspection protocol of the asphalt cover at the Dzus Fasteners facility after the RCRA closure activities are completed. The evaluation can be completed and reported along with the sampling program on a five-quarter basis.
- Incorporate the inspection of the demarcation fence into the general Site inspection.
- Evaluate the effectiveness of the sediment removal IRM behind the Willetts Creek footbridges into the general Site inspection.
- Evaluate the implemented remedies' effectiveness towards moving the Site to closure.
- Finalize the 2016 RI Report.
- Finalize the PRAP for OU3.
- Perform a periodic review of the Site in 2018.

Total annual costs for completion of all the required monitoring is approximately $48,300, based on costs incurred in calendar year 2016 (does not include the cost of fish tissue sampling, last event was September 2012).

2.0 Site Overview

AECOM has prepared this PRR for the Dzus Fastener Site, located in the Town of West Islip, Suffolk County, New York. This PRR covers the period of January 1, 2016 through January 1, 2017. This work was performed for the New York State Department of Environmental Conservation (NYSDEC) under Work Assignment D007626-17.1 of AECOM's Superfund Standby Contract with NYSDEC. The NYSDEC has assigned the Site the ID No. 1-52-033 on the NYSDEC's registry of inactive hazardous waste sites. On February 24, 2016, the NYSDEC re-classified the Dzus Fastener Site from Class 4 to Class 2 based on the sediment contamination found in Willetts Creek during the 2013 through 2016 field investigations. A Class 2 site is a site where the disposal of hazardous waste has been confirmed and the presence of such hazardous waste or its components or breakdown products represents a significant threat to public health or the environment.

2.1 Objectives of the Periodic Review

The periodic review process is used for determining if a remedy continues to be properly managed as set forth in the guidance documents for the Site, and is protective of human health and the environment. The objectives of the periodic review for sites in the State Superfund Program are as follows:

- Determine if the remedy remains in place, is performing properly and effectively, and is protective of public health and the environment;
- Evaluate compliance with the decision document(s) and the SMP;
- Evaluate the condition of the remedy;
- Verify, if appropriate, that the intent of Institutional Controls (IC) continues to be met, and that Engineering Controls (EC) remain in place, are effective and protective of public health and the environment;
- Evaluate the implemented remedies' effectiveness towards moving the Site to closure;
- Memorialize what occurred during the review period; and,
- Evaluate costs.

2.2 Remedial History

The Dzus Fasteners facility was used to manufacture fasteners and springs from 1932 through 2015 when the site was closed. Discharge of oils, heavy metals and salts via on-site leaching pools led to the contamination of soil, groundwater, and nearby surface waters and sediment. The principal containment of concern is cadmium.

The initial site inspection took place in August 1983. The contamination was discovered later in August 1983 and the preliminary site assessment was completed in September 1984. A Phase I investigation was completed and a Phase II investigation was submitted by Dzus in August 1990.

Dzus then completed an IRM in October 1990. A remedial investigation / feasibility study (RI/FS) was initiated on the site in 1992. The site was then broken up into the two Operable Units: OU1, the Dzus facility; and OU2, the offsite localities including Willetts Creek and Lake Capri. A ROD for OU1 was issued for the site in March 1995. The remedial goals as specified in the OU1 ROD are as follows (NYSDEC, 1995):

- Eliminate the potential for direct human contact with the contaminated soils at the site;
- Eliminate or reduce the mobility of contaminants in on-site soils that would cause further groundwater contamination; and,
- Eliminate the hazardous wastes on-site or treat them to render them as non-hazardous.

The remedy for contaminated groundwater in the vicinity of the Dzus facility consisted of source removal and ongoing natural attenuation. The remedy for contaminated soils at the Site (OU1), included solidification of on-site soils containing greater than 10 ppm cadmium which was completed in 1996. An asphalt cover at the eastern parking lot at the Dzus manufacturing facility was constructed to eliminate the potential for direct human contact with the underlying contaminated soils at the site, and to eliminate or reduce the mobility of soil contaminants that would cause further groundwater degradation.

A ROD for OU2 was issued for the site in October 1997. The remedial goals are as follows:

- Manage contaminated groundwater to prevent human exposure and to minimize impacts to the environment;
- Reduce cadmium concentrations in sediments to levels that are protective of human health and the environment; and,
- Eliminate the potential for direct human or animal contact with contaminated sediments.

In response to the ROD for OU2, all of Lake Capri and a portion of Willetts Creek were dredged in 1999 and riprap was used to cover portions identified as having deeper zones of contamination in order to prevent future erosion.

Lake Capri and Willetts Creek

Blue Water Environmental, Inc. (BWE) of Farmingdale, Long Island, New York, was the contractor who performed the dredging of Lake Capri, including the 0.25 acre lagoon in the northwest corner of the lake. The Notice to Proceed was given on June 6, 1999 and all work was completed by December 31, 1999 (Earth Tech, 2000a). The east shoreline, north shoreline and the lagoon were mechanically excavated as well as regions around a small island in the northern part of the lake. Approximately 17,095 cubic yards (cy) of sediment were removed from the Lake based on a comparison of pre- and post-excavation hydrographic surveys (Earth Tech, 2000a). The upper portion of Willetts Creek was mechanically excavated by BWE. The sampling results are provided in Appendix B and Figure 1A.

Per the remediation design, in July 1999 the fish population of Lake Capri was eradicated. 5,800 pounds of fish carcasses were removed via netting and collected in a vacuum truck for transport and disposal. In 2000 after completion of the remedial activities, the lake was restocked with silversides, bluegill (*Lepomis macrochirus*) and largemouth bass (*Microptera salmoides)*.

Operable Unit 3

OU3 was established in 2016 to address cadmium contamination found in Willetts Creek sediments. Two IRMs were completed as part of the OU3 investigation. A demarcation fence was installed along Willetts Creek adjacent to the Beach Street Middle School athletic fields and behind the ACE Hardware Store on Union Boulevard; the work was completed in June 2016. Sediment and debris were removed immediately upstream of the two footbridges at Burling Lane and Edmore Lane to allow the free flow of storm water under the footbridges and was completed in January 2017.

3.0 Evaluate Remedy Performance, Effectiveness, and Protectiveness

A SMP (AECOM, May 2014) was developed for the Site. The SMP outlines the following activities:

- Monitoring well inspection: Inspect the 15 monitoring wells designated for groundwater sampling and complete the NYSDEC Monitoring Well Field Inspection Log for each. Obsolete and damaged wells need to be properly abandoned.
- Groundwater monitoring: 15 wells are designated for periodic groundwater sampling and analysis of target analyte list (TAL) metals (Figure 2).
- Surface water monitoring: surface water sampling at six locations, two from Willetts Creek and four from Lake Capri (Figure 2) and analyzed for TAL metals.
- Sediment monitoring: sediment sampling at six designated locations co-located with the surface water samples (Figure 2) and analyzed for TAL metals.
- Fish tissue sampling: collect fish tissue samples at the north and south ends of Lake Capri (Figure 2a).
- Perform an inspection of the asphalt cap at the Dzus facility as part of the periodic Site inspection.

3.1 Operation and Maintenance Plan Compliance Report

The current operation and maintenance (O&M) program at the Site consists of groundwater monitoring well inspection and repair, and inspection of the asphalt cap.

3.1.1 O&M Plan Compliance

The following summarizes operation and maintenance activities undertaken at the Site from January 2016 through January 2017:

Activity	Required Frequency (X)			Compliance Dates
	Annually	Five-Quarter	As needed	
Groundwater Monitoring Well Inspection and Maintenance		X		May 2016
Asphalt Cap Inspection		X		May 2016

3.1.2 Evaluation of O&M Activities

Logs of monitoring well inspections have been submitted to NYSDEC as part of periodic groundwater sampling reports. Monitoring well MW-1 was destroyed sometime after the August 2007 sampling event and was not sampled between 2008 and 2015. The well was replaced in August 2015 and was sampled as part of the May 2016 event. Regular inspection of the asphalt cover and rip rap is needed to ensure proper protection of human health and wildlife; these tasks are now a part of the SMP.

3.2 Monitoring Plan Compliance Report

The Final SMP (AECOM, May 2014) is referenced as the Site guidance document. This PRR assesses whether the site has been managed as set forth in this document. Analysis performed during each sampling event included TAL metal analysis for groundwater, sediment, surface water, and cadmium analysis for fish tissue sampling. The groundwater, surface water and sediment sampling event conducted in May 2016 occurred during this review period. No fish tissue samples were collected during this review period.

The current monitoring program is as follows:

- Water levels measurements are collected from all Site monitoring wells on a five quarter basis;
- Groundwater sampling is conducted from 15 monitoring wells on a five-quarter basis and analyzed for TAL metals. During the 2016 sampling event, both filtered and unfiltered metals samples were collected; however, this is not part of the long-term monitoring program. The 15 monitoring wells are MW-1, MW-2, MW-3, MW-9, MW-9B, MW-13A, MW-13B, MW-15A, MW-15B, MW-17, MW-18, MW-22A, MW-22B, MW-23A, and MW-23B. Field measurements of temperature, pH, conductivity, oxygen reduction potential (ORP), dissolved oxygen (DO) and turbidity are recorded during each sampling event;
- Sediment and surface water sampling is conducted on a five-quarter basis and analyzed for TAL metals;
- Fish samples are currently collected on an as-needed basis determined by NYSDEC and are analyzed for cadmium. Fish tissue sampling was suspended during this review period as the Lake has experienced a blue-green algae bloom that resulted in significant fish die-off; and,
- Preparation of sampling reports that summarize analytical results of each sampling round.

During this review period, AECOM conducted one five-quarter sampling event in May 2016 at the Dzus Fastener facility, Willetts Creek, and Lake Capri. A summary of well construction data is presented in Table 1. Groundwater samples were analyzed for TAL metals. Prior to sampling, a synoptic round of water level measurements was collected from the 15 selected monitoring wells. The locations of the wells are shown on Figure 2**.** Sediment and surface water samples were collected at six co-located locations and analyzed for TAL metals. These sampling locations are also shown on Figure 2.

The ninth round of groundwater sampling occurred on May 11, 12 and 13, 2016. The ninth round of surface water and sediment sampling occurred on May 20, 2016. Fifteen monitoring wells were sampled during this round. As during previous sampling rounds, groundwater samples were filtered

in the field using 0.45 micron filters and both total and dissolved samples were analyzed for TAL metals. Surface water and co-located sediment samples were collected on May 20, 2016 at the same six locations as during previous years and were also analyzed for TAL metals. All sampling was conducted in accordance with the SMP. A peristaltic pump with dedicated poly tubing was used to purge each well prior to sampling. The flow rate was set to between 200 to 500 milliliters per minute (mL/min). Field measurements of pH, temperature, specific conductivity, turbidity, DO, and ORP were collected at five-minute intervals until all parameters were stabilized.

3.2.1 Confirm Compliance with Monitoring Plan

The following summarizes monitoring activities at the Site conducted to-date in accordance with the SMP. AECOM conducted sampling events at the Dzus Fastener facility, Willetts Creek, and Lake Capri in June 2006, August 2007, November 2008, March 2010, May 2011, August 2012, November 2013, March 2015, and May 2016:

Activity	Required Frequency (X)	Compliance Dates
	Five Quarter	
Groundwater Monitoring	X	May 2016
Water Level Monitoring	X	May 2016
Surface Water Sampling	X	May 2016
Sediment Sampling	X	May 2016
Fish Tissue Sampling[1]	X	None

1 Fish tissue sampling was not conducted in 2008 at the request of NYSDEC due to the small number of fish collected in 2006 and 2007; sampling was suspended during this review period due to a blue green algae bloom in Lake Capri.

Groundwater Level Measurement

Groundwater level measurements from 2006 through 2016 are presented in Table 2. Comparison of the groundwater elevations in the monitoring wells shows that the general groundwater flow direction is towards the south-southwest. A groundwater contour map is presented in Figure 3 and was constructed using data from the May 2016 sampling event. A groundwater hydrograph is shown in Figure 3A. As shown on this figure, the elevations in each well tend to rise and fall in sync.

3.2.2 Confirm that Performance Standards are Being Met

The sections below discuss the results of the groundwater, surface water, and sediment sampling conducted in accordance with the SMP and provides a summary of the results.

3.2.2.1 Groundwater

Fifteen monitoring wells are included in the long-term monitoring plan: MW-1, MW-2, MW-3, MW-9, MW-9B, MW-13A, MW-13B, MW-15A, MW-15B, MW-17, MW-18, MW-22A, MW-22B, MW-23A, and MW-23B and are shown on Figure 2. Laboratory analytical results for the TAL metal analyses have been provided in the groundwater monitoring reports for the sampling events that occurred in 2006, 2007, 2008, 2010, 2011, 2012, 2013, 2015 and 2016. The summary of groundwater results for these sampling events is presented in Table 3. A summary of detected groundwater results is presented in Figure 4.

One monitoring well, MW-17, is located upgradient of the Site along Orinoco Drive, immediately west of Willetts Creek. Five wells (MW-1, MW-2, MW-3, MW-9A and MW-9B) are located on Site and are considered source area monitoring wells. Five wells (MW-13A, MW-13B, MW-15A, MW-15B and MW-18) are located downgradient of the Site. Four wells (MW-22A, MW-22B, MW-23A and MW-23B) are located along Willetts Creek.

Ten metals have been detected at concentrations above their Class GA criteria at least once during the nine rounds of groundwater sampling at the Site. These metals include cadmium and chromium (contaminants of concern [COCs] listed in the OU1 ROD), and antimony, arsenic, iron, lead, manganese, selenium, sodium, and thallium. Out of these metals, only cadmium, iron, manganese, and sodium were detected at concentrations above Class GA criteria in May 2016.

Upgradient Monitoring Well

Monitoring well MW-17 was first included in the long-term monitoring program in Round 8 (March 2015). Cadmium and chromium were not detected in any of the unfiltered or filtered samples from Round 8 or Round 9 (May 2016). Concentrations of iron and manganese exceeded the criteria in unfiltered samples in both rounds but were not detected in filtered samples.

Source Area Monitoring Wells

Ten TAL metals (antimony, arsenic, cadmium, chromium, iron, lead, manganese, selenium, sodium and thallium) have been detected in the five wells included in the source area monitoring wells (MW-1, MW-2, MW-3, MW-9 and MW-9B).

Historically, concentrations of antimony, arsenic, lead, selenium and thallium have been sporadically detected above their respective criteria in source area monitoring wells during the nine sampling rounds. Each exceedance was in an unfiltered sample and the filtered samples were all not detected. None of these six metals were detected during the Round 9 sampling event.

Concentrations of iron, manganese and sodium were detected above their respective criteria during the Round 9 sampling event in both unfiltered and filtered samples.

Cadmium was detected in both the unfiltered and filtered samples from MW-3 at concentrations of 11.0 micrograms per liter (µg/L) and 9.4 µg/L (Figures 5 and 6). Chromium was not detected in any of the source area monitoring wells during Round 9.

Downgradient Monitoring Wells

Eight TAL metals (antimony, cadmium, iron, lead, manganese, selenium, sodium and thallium) have been detected in the five downgradient monitoring wells (MW-13A, MW-13B, MW-15A, MW-15B and MW-18).

Historically, concentrations of antimony, lead, selenium and thallium have been sporadically detected above their respective criteria in downgradient monitoring wells during the nine sampling rounds. None of these four metals were detected during the Round 9 sampling event.

Concentrations of iron, manganese and sodium were detected above their respective criteria during the Round 9 sampling event in both unfiltered and filtered samples.

Cadmium was detected in both the unfiltered and filtered samples at MW-13A, MW-13B, and MW-15A. Cadmium in unfiltered samples exceeded the criterion at all three locations with concentrations ranging from 6.9 µg/L to 11µg/L. Cadmium in filtered samples exceeded the criterion in two of three samples with concentrations ranging from 4.8 µg/L to 8.5 µg/L (Figures 5 and 6). Chromium was not detected in any of the downgradient monitoring wells during Round 9.

Willetts Creek Monitoring Wells

Nine TAL metals (antimony, cadmium, chromium, iron, lead, manganese, selenium, sodium and thallium) have been detected in the four Willetts Creek monitoring wells (MW-22A, MW-22B, MW-23A, and MW-23B).

Historically, concentrations of antimony, chromium, lead, selenium and thallium have been sporadically detected above their respective criteria in Willetts Creek monitoring wells during the nine sampling rounds. None of these five metals were detected during the Round 9 sampling event.

Concentrations of iron, manganese and sodium were detected above their respective criteria during the Round 9 sampling event in both unfiltered and filtered samples. Historically, concentrations of these three metals have exceeded their criteria in a majority of samples collected.

Cadmium concentrations exceeded the criterion in monitoring wells MW-23A (unfiltered sample only, 8.9 µg/L) and both the unfiltered and filtered samples from MW-23B (42 µg/L and 37 µg/L). Historically, cadmium concentrations exceeded the criterion in most of the samples from these two wells (Figure 6). Unfiltered cadmium concentrations at MW-23A during the first five sampling rounds were significantly higher than in rounds 6 through 9. This is most likely a result of the purging method. Rounds 1 through 5 were purged using the volumetric method and sampled with bailers; starting with

Round 6, wells were purged and sampled using low-flow techniques. Purging at higher flow rates can increase the turbidity, affecting the metals values in the unfiltered samples.

3.2.2.2 Surface Water Samples

Six surface water samples were collected from Lake Capri and Willetts Creek at the locations shown on Figure 2. A summary of the detections is presented in Table 4. The results were compared to the NYSDEC Class A surface water criteria. A summary of the exceedances is presented on Figure 7.

The OU2 ROD lists cadmium as the only metal COC for surface water in Lake Capri and Willetts Creek. Seven other metals, including antimony, iron, lead, manganese, selenium, sodium and thallium have been detected at concentrations above the surface water criteria. Of these, only five (cadmium, iron, lead, manganese, and sodium) were detected at concentrations above the Class A criteria in May 2016.

Cadmium was not detected above the criterion in any of the four lake samples collected during the May 2016 event. Historically, cadmium has been detected in the majority of the lake samples but none have exceeded the criterion. Cadmium was detected in one of the two creek samples (SW-5) collected during the May 2016 sampling event at a concentration that exceeded the criterion. Historically, cadmium concentrations at location SW-5 have exceeded the criterion in seven of nine samples collected at this location.

Antimony was not detected in any of the six surface water samples collected in May 2016. Historically, antimony concentrations and exceedances have been sporadically detected in the creek and lake waters. Antimony does not appear to be a contaminant of concern at the Site.

Iron was detected above the criterion in one of four lake samples and both creek samples during the May 2016 sampling event. Historically, iron concentrations have exceeded the criterion in a majority of samples collected from the lake and creek. Iron is a naturally occurring metal in Long Island surface water and is not considered to be Site related.

Lead was detected below the criterion in one of four lake samples. Lead was detected in both creek samples and exceeded the criterion at SW-5. Historically, lead has only been detected in 15 of 54 samples collected at the Site during nine rounds of sampling and this was the first exceedance.

Manganese was detected above the criterion in two of four lake samples and both creek samples during the May 2016 sampling event. Historically, manganese concentrations have exceeded the criterion in a majority of the samples collected at the Site. Manganese is a naturally occurring metal in Long Island surface water and is not considered to be Site related.

Sodium was detected above the criterion in all six surface water samples collected during the May 2016 sampling event. Historically, sodium concentrations have exceeded the criterion in a majority of samples collected at the Site. Sodium is a naturally occurring metal in Long Island surface water and is not considered to be Site related.

Selenium was not detected in any of the six surface water samples collected in May 2016. Historically, selenium has only been detected twice in surface water samples at the Site and only one of these, SW-6, exceeded the criterion. Selenium does not appear to be a contaminant of concern at the Site.

Thallium was not detected in any of the surface water samples collected during the May 2016 sampling event. Historically, thallium has been detected sporadically in samples collected at the Site. Only four samples collected during the nine rounds of sampling have exceeded the thallium criterion, all of which were in lake samples. Thallium does not appear to be a contaminant of concern at the Site.

In summary, cadmium and lead were detected above their respective criteria in SW-5 in 2016. Iron and manganese exceeded the criteria in one lake sample and both creek samples; and sodium exceeded the criterion in all six samples.

3.2.2.3 Sediment Samples

Six co-located sediment samples were collected at the same locations as the surface water samples as shown on Figure 2. The data for all TAL metals presented in Table 5 were compared to the NYSDEC Technical Guidance for Sediment Criteria lowest effects values. A summary of the exceedances is presented on Figure 8. The OU2 ROD lists cadmium and lead as COCs for sediments at the Site.

Lake Capri Sediment Samples

Four samples were collected from Lake Capri in May 2016, two from the northern end of the Lake and two from the southern end of the Lake, as shown on Figures 2 and 8.

Cadmium concentrations have exceeded the lowest effects level in all 36 lake sediment samples collected between 2006 and 2016 with concentrations ranging from 1.5 milligrams per kilogram (mg/kg) to 150 mg/kg (Figure 9). Of these, 34 samples also exceeded the highest effects level of 9 mg/kg.

Lead has been detected in all 36 sediment samples collected from Lake Capri at concentrations ranging from 9.2 mg/kg to 600 mg/kg. Thirty-two of these samples exceeded the lowest effects level of 31 mg/kg and of these, 22 equaled or exceeded the highest effects level of 110 mg/kg (Figure 10).

Antimony has only exceeded the lowest effects level in two samples from the lake during the nine rounds of sampling. Antimony does not appear to be a contaminant of concern in Lake Capri.

Arsenic has been detected in 32 of 36 lake sediment samples, 14 of which exceeded the lowest effects level. Of these, 12 were from the two samples at the northern end of the Lake (Figure 8). None of the samples have exceeded the highest effects level of 33 mg/kg. Arsenic does not appear to be a contaminant of concern in lake sediment.

Chromium has been detected in 31 of 36 lake sediment samples at concentrations ranging from 1.5 mg/kg to 57.4 mg/kg, 15 of which have exceeded the lowest effects level of 26 mg/kg. None of the samples have exceeded the highest effects level of 110 mg/kg. Chromium does not appear to be a contaminant of concern in lake sediment.

Copper has been detected in all 36 lake sediment samples at concentrations ranging from 2.7 mg/kg to 160 mg/kg. Thirty-two samples exceeded the lowest effects level of 16 mg/kg, and of these, 11 exceeded the highest effects level of 110 mg/kg (Figure 11). Copper was not found during on-site investigations and its presence is not considered site-related. The source of copper may be from residential pesticides use.

Iron has been detected in all 36 sediment samples collected during the nine rounds of lake sampling. However, only ten samples have exceeded the 20,000 mg/kg criterion. Nine of the ten exceedances were from the northern end of the lake. Iron is a naturally occurring metal in Long Island soils and is not considered to be Site related.

Manganese has been detected in all 36 lake sediment samples at concentrations ranging from 89.8 mg/kg to 22,600 mg/kg. Twenty-seven samples have exceeded the lowest effects level of 460 mg/kg and 21 of these also equaled or exceeded the highest effects level of 1,100 mg/kg. Manganese is a naturally occurring metal in Long Island soils and is not considered to be Site related.

Mercury has been detected in 26 of 36 lake sediment samples at concentrations ranging from 0.0071 mg/kg to 0.52 mg/kg. Of these, 14 exceeded the lowest effect level of 0.15 mg/kg. Eleven of these exceedances were noted in northern lake samples. None of the samples exceeded the highest effects level of 1.3 mg//kg. Mercury was not found during on-site investigations and is not considered to be Site related.

Nickel has been detected in 27 of 36 Lake Capri sediment samples at concentrations ranging from 3 mg/kg to 38.0 mg/kg. Twelve samples exceeded the lowest effects level of 16 mg/kg. Ten of these exceedances were noted in the two northern samples. None of the samples exceeded the highest effects level of 50 mg/kg. Nickel was not found during on-site investigations and is not considered to be Site related.

Silver has only been detected in three Lake Capri sediment samples at concentrations ranging from 0.33 mg/kg to 2.7 mg/kg. Two samples exceeded the lowest effects level of 1 mg/kg and one exceeded the highest effects level of 2.2 mg/kg. Silver was not found during on-site investigations and is not considered to be a contaminant of concern in lake sediments.

Zinc was detected in all 36 Lake Capri sediment samples at concentrations ranging from 10 mg/kg to 770 mg/kg (Figure 12). Of these, 25 samples exceeded the lowest effect level of 120 mg/kg and 15 exceeded the highest effects level of 270 mg/kg. Twelve of the highest effects level exceedances were noted in the two samples form the northern end of the lake. Zinc is a naturally occurring metal in Long Island sediments and is not considered to be Site related.

Willetts Creek Sediment Samples

Sample SED-5 was collected near the Burling Lane footbridge and SED-6 was collected behind the Ace Hardware store on Union Boulevard. The sample locations are shown on Figure 2. As noted above, the OU2 ROD listed cadmium and lead as contaminants of concern for creek sediments.

During the nine rounds of sediment sampling in Willetts Creek, 11 TAL metals have been detected at concentrations that exceed the lowest effects level including antimony, arsenic, cadmium, chromium, copper, iron, lead, manganese, mercury, nickel and zinc.

Cadmium was detected in 15 of 18 creek sediment samples with concentrations ranging from 0.23 mg/kg to 140 mg/kg (Figure 9). Ten samples exceeded the lowest effects level of 0.6 mg/kg and six also exceed the highest effects level of 9 mg/kg.

Lead has been detected in all 18 creek sediment samples at concentrations ranging from 4.9 mg/kg to 350 mg/kg. Ten of these samples exceeded the lowest effects level of 31 mg/kg and of these, four also exceeded the highest effects level of 110 mg/kg (Figure 10).

Antimony has only exceeded the lowest effects criterion in one sample from the creek. Antimony is not a contaminant of concern in creek sediments.

Arsenic has been detected in 17 of 18 creek sediment samples at concentrations ranging from 0.56 mg/kg to 18.0 mg/kg. Six of these exceeded the lowest effects criterion of 6 mg/kg. None exceeded the highest effects level (Table 5). Arsenic is not a contaminant of concern in creek sediment.

Chromium has been detected in 15 of 18 creek sediment samples at concentrations ranging from 2.4 mg/kg to 64 mg/kg. Six samples exceeded the lowest effects level of 26 mg/kg. None of the samples exceeded the highest effects level of 110 mg/kg. Chromium is not a contaminant of concern for creek sediments.

Copper has been detected in all 18 creek sediment samples at concentrations ranging from 4.7 mg/kg to 210 mg/kg. Ten samples exceeded the lowest effects level of 16 mg/kg, and of these, three also equaled or exceeded the highest effects level of 110 mg/kg (Figure 11). As noted above in the discussion of lake sediments, copper was not found during on-site investigations and is not considered to be Site related.

Iron has been detected in all 18 creek sediment samples. Eight samples exceeded the 20,000 mg/kg criterion. Iron is a naturally occurring metal in Long Island soils and is not considered to be Site related.

Manganese has been detected in all 18 creek sediment samples at concentrations ranging from 162 mg/kg to 3,750 mg/kg. Eight samples have exceeded the lowest effects level of 460 mg/kg and four of these also exceeded the highest effects level of 1,100 mg/kg. Manganese is a naturally occurring metal in Long Island soils and is not considered to be Site related.

Mercury has been detected in 12 of 18 creek sediment samples at concentrations ranging from 0.0055 mg/kg to 1.2 mg/kg. Of these, six equaled or exceeded the lowest effect level of 0.15 mg/kg. None exceeded the highest effects level of 1.3 mg/kg. Mercury is not considered to be a contaminant of concern in creek sediment.

Nickel has been detected in 14 of 18 creek sediment samples at concentrations ranging from 1 mg/kg to 32.0 mg/kg. Four samples exceeded the lowest effects level of 16 mg/kg. None exceeded the highest effects level of 50 mg/kg. Nickel is not considered to be a contaminant of concern in creek sediment.

Zinc was detected in all 18 creek sediment samples at concentrations ranging from 24.2 mg/kg to 700 mg/kg (Figure 12). Seven samples exceeded the lowest effect level of 120 mg/kg and six of these also exceeded the highest effects level of 270 mg/kg. Zinc is a naturally occurring metal in Long Island soil and is not considered to be Site related.

Fish Tissue Analytical

Fish tissue sampling did not occur during this review period. Results of previous fish tissue sampling can be found in the reports listed in Section 6 – References.

3.3 IC/EC Certification Plan Report

Engineering controls at the Site currently consist of environmental monitoring to determine effectiveness of the remedy. A Declaration of Covenants and Restrictions was filed with the Suffolk County Clerk's Office by the Dzus Fasteners Company on June 9, 2004. The document included the following restrictions for the Site:

- The treatment cell area (stabilized contaminated soil area) located within the eastern section of the Site must not be disturbed unless authorized by the NYSDEC;
- The document encompasses the entire Site (not limited to the treatment cell area) and shall be binding upon all future owners of the Site;
- On-site groundwater usage is prohibited, unless approval is granted by the appropriate State agency; and,
- NYSDEC has the right to access the Site for the purpose of collecting groundwater samples as part of the monitoring phase of the remedy.

Comparison of DER-10, Unified Information System and Actual Site Conditions

DER-10	Unified Information System	Actual Site Conditions
Source Removal	IRM completed in 1991, removed approximately 1,960 cubic yards of contaminated	Contaminated soil removed from area of former industrial leach field on the eastern portion of the Site

	soils	
Source Control when removal is not feasible	OU1, soils in the eastern parking area of the Site (approximately 1 acre) were treated through in-situ stabilization/solidification, completed in December 1996	OU1 in-situ stabilization/solidification of eastern corner of the Site (includes former oil/water separator)
Containment / Isolation	Not mentioned	Soil and asphalt cap over the treatment cell in the eastern corner of the Site (includes the former oil/water separator, former dry wells, laterals from former dry well #4, and drain line to Willetts Creek)
Source removal	OU2 dredging and offsite disposal of sediment from Lake Capri and portions of Willetts Creek	OU2 dredging and offsite disposal of sediment from Lake Capri and portions of Willetts Creek
Containment / Isolation	Not mentioned	Riprap was placed in portions of Lake Capri and Willetts Creek to cover areas where cadmium concentrations exceeded the cleanup goal of 9 mg/kg (1999 remediation of Lake Capri and Willetts Creek).
Long-Term Monitoring	Long-term monitoring of groundwater	Long-term monitoring of groundwater
Long-Term Monitoring	Long-term monitoring of sediment and surface water in Lake Capri and Willetts Creek	Long-term monitoring of sediment and surface water in Lake Capri and Willetts Creek
Long-Term Monitoring	Long-term monitoring of fish tissue in lake Capri	Long-term monitoring of fish tissue in Lake Capri

3.3.1 IC/EC Requirements and Compliance

Determination of compliance with the IC/EC at the Site is made based on the following criteria:

- The EC(s) applied at the site are in place and unchanged from the previous certification;
- Nothing has occurred that would impair the ability of such controls to protect the public health and the environment, or constitute a violation or failure to comply with any element of the SMP for such controls; and
- Access to the Site will continue to be provided to the NYSDEC to evaluate the remedy, including access to evaluate the continued maintenance of such controls (*future access cannot be guaranteed, but access for maintenance and inspections has not been an issue to date, and is not anticipated to become one*).

Currently, certification that the site ECs are in compliance with the requirements stated above, cannot be completed because of the following deficiencies:

- The asphalt cap on the eastern side of the Dzus Fastener facility currently is damaged and needs to be repaired. Vegetation is growing through cracks in the pavement. Once the RCRA closure activities have been completed, the cover should be inspected to determine if closure activities have damaged the asphalt.

Detailed descriptions of the deficiencies identified at the Site and the severity presented is included in Section 5.0, including a proposed schedule to utilize in bringing the Site into compliance with the EC Certification requirements.

3.3.2 IC/EC Certification Forms

See Appendix A.

4.0 Evaluate Costs

4.1 Summary of Costs

A total annual cost for the required monitoring is approximately $48,300, based on costs incurred in calendar year 2016. The table also shows the cost associated with the completion of one round of groundwater monitoring (14 monitoring wells), surface water sampling (six locations), sediment sampling (six locations) and a report, including AECOM field labor, travel, other direct costs, and laboratory fees. The costs associated with the well rehabilitation (Task 2.05) and the public meeting (Task 2.06) are not recurring events.

Task 2.01: Five Quarter Sampling	**Period Cost**	**Comments**
AECOM Labor & Travel	$13,800	One groundwater sampling event
Lab Fees (Hampton-Clarke Veritech)	$4,400	May 2016 event
Total for Task 2.01	**$18,200**	
Task 2.02: Fish Sampling	**$0**	No activity during this review period
Task 2.03: Reports	**$13,900**	One report, May 2016 event
Task 2.04: SMP	**$0**	No activity during this review period
Task 2.05: Well Rehab		
AECOM Labor	$200	Field work in August 2015
Subcontractors (Aztech)	$0	
Total for Task 2.05	**$200**	
Task 2.06: Creek-Lake Surveys		
AECOM labor	$6,800	Public Meeting in March 2016
Lab Fees (Hampton -Clarke Veritech)	$0	
Total for Task 2.06	**$6,800**	
Task 2.07: PRR	**$9,200**	
Total for the Review Period	**$48,300**	

The following suggestions are made for potential cost savings:

AECOM can perform a statistical analysis of the metals results for each monitoring well to determine if the well can be removed from future sampling events.

AECOM can evaluate the potential use of alternative sampling methodologies to collect the metals samples.

5.0 Conclusions and Recommendations

5.1 Conclusions

5.1.1 Operations and Maintenance

The asphalt cover located at the Dzus Fasteners Facility currently has vegetation growing through cracks in the pavement. This deficiency is categorized as low to moderate and in its current state (see Appendix C) may result in increased contaminant mobility. The LTMP laid out guidelines for monitoring the asphalt cover but there are no written records of cap maintenance. The SMP does include asphalt cap inspection to be performed on a five-quarter basis. Once the RCRA closure at the Site has been completed, the cover should be inspected to determine if closure activities have disturbed the asphalt cover.

The current maintenance status of the riprap in Willetts Creek and Lake Capri is unknown. The LTMP laid out guidelines for monitoring the riprap but no written records of its condition and maintenance exists. Field sampling in the creek in 2013 and 2014 did not locate any signs of rip rap. The current SMP does include riprap monitoring and maintenance. This problem is categorized as moderate and results in a lack of knowledge in regards to site contamination.

5.1.2 Monitoring

A summary of cadmium results in each media sampled (groundwater, surface water and sediment) during the long-term monitoring is shown on Table 6.

Groundwater

Cadmium concentrations have exceeded the Class GA groundwater criterion of 5 µg/L in the majority of unfiltered samples collected during the nine sampling events. The majority of the exceedances are concentrated along the eastern side of the Site in wells MW-3, MW-9, MW-13A, MW-15A, MW-23A, and MW-23B. The majority of the samples (both unfiltered and filtered) collected from these six wells during the nine sampling events have exceeded the criterion as shown on Figures 5 and 6. Most of these wells are showing a downward trend in concentration.

Chromium has been detected in less than half of the samples collected at the Site during the nine sampling rounds but has only exceeded the 50 µg/L criterion in two wells, MW-9 (four of nine samples) and MW-23B (three of nine samples).

The only metal of concern found consistently in off-site wells above the Class GA criteria is cadmium. Dissolved concentrations in off-site wells in 2016 ranged from 4.8 µg/L at MW-15A (200 ft south of the Site) to not detected in shallow well MW-23A and 37.0 µg/L in deep well MW-23B (approximately 1,200 ft south of the Site). An isoconcentration map of the dissolved cadmium groundwater values from the May 2016 sampling event is shown on Figure 13.

Surface Water

Cadmium has been detected in almost every surface water sample collected from Lake Capri during the nine sampling events; however, none have exceeded the 5 µg/L criterion. Cadmium was detected in all nine rounds in Willetts Creek sample SW-5 and slightly exceeded the criterion in seven samples. There was one anomalously high cadmium exceedance in Willetts Creek sample SW-6 during Round 3 (75.4 µg/L) while the other seven samples were either below the criterion or not detected.

Sediments

The sediment sample data indicate that the surficial sediments in Lake Capri and Willetts Creek remain contaminated with metals concentrations above the applicable NYSDEC Technical Guidance for Screening Contaminated Sediments. Cadmium has been detected above the lowest effects level in 50 of 59 samples collected during the nine rounds of sampling and above the highest effects level in 41 of 53 samples as shown on Figure 9. The lake sediment sampling conducted in April 2013 indicates that lake sediment cadmium concentrations are above the cleanup criterion.

Sediment sampling in Willetts Creek conducted in 2013 and 2014 indicate that the marshy area behind the strip mall along Union Boulevard contains several isolated areas with elevated concentrations of cadmium contamination. The locations of these exceedances are outside of the areas excavated in 1999. These sediments may be acting as a source of continued impacts seen in Lake Capri sediments.

Lead has been detected above the lowest effects criterion in 42 of 54 samples collected as shown on Figure 10. Of these, 26 were above the highest effects level. The highest concentrations appear to be along the northern end of the lake (SED-1 and SED-2).

Fish Tissue

Fish samples were not collected during this review period.

5.2 Recommendations

In order to return to compliance with the requirements presented in the RODs and SMP, a summary of the recommended investigation and maintenance activities is provided below:

- Perform a focused feasibility study to address the elevated concentrations of cadmium in sediment in portions of Willetts Creek and throughout Lake Capri.
- Continue sampling on a five-quarter basis in order to better evaluate temporal trend for cadmium and other metals found in exceedance of the NYSDEC groundwater, surface water and sediment criteria.
- Continue fish sampling as detailed in the SMP. The frequency of sampling will be determined by the NYSDEC.
- Locate the damaged/destroyed monitoring wells and properly abandon them.
- Perform periodic inspections of the asphalt cover at the Dzus Fasteners facility in accordance with the SMP.

- Repair the cracks in the asphalt cap after the RCRA closure activities are completed.
- Perform a periodic review of the Site in 2018.

6.0 References

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Tables

TABLE 1
DZUS FASTENERS SITE (1-52-033)
WELL CONSTRUCTION DATA

Well Number	Latitude	Longitude	Ground Elevation	Top of Riser Elevation	Top of Casing Elevation	Total Depth of Well
MW-1	40° 42.49	73° 18.10	22.44	22.03	22.44	15.3
MW-2	40° 42.45	73° 18.10	22.16	21.42	22.16	14.3
MW-3	40° 42.49	73° 18.02	20.23	19.71	20.23	15.0
MW-9	40° 42.50	73° 18.02	19.14	18.83	19.14	11.5
MW-9B	40° 42.49	73° 18.01	19.08	18.75	19.08	44.5
MW-13A	40° 42.44	73° 17.100	16.34	16.02	16.34	10.7
MW-13B	40° 42.43	73° 17.99	16.14	15.82	16.14	44.3
MW-15A	40° 42.49	73° 17.97	19.45	19.09	19.45	28.8
MW-15B	40° 42.50	73° 17.96	19.35	19.06	19.35	84.7
MW-17						16.0
MW-18			14.69	14.31	14.66	13.5
MW-22A	40° 42.491	73° 17.941	20.49	20.09	20.49	14.4
MW-22B	40° 42.491	73° 17.941	20.35	19.95	20.35	44.5
MW-23A	40° 42.402	73° 17.991	17.57	17.34	17.57	14.3
MW-23B	40° 42.403	73° 17.987	17.54	17.29	17.54	44.5

Notes:
All elevations and depths are in feet
Vertical datum: on-site benchmark from previous survey.
Latitude / Longitude taken from a previous report
Survey performed by YEC, Inc., on April 18, 2007

TABLE 2
DZUS FASTENERS SITE (1-52-033)
GROUNDWATER ELEVATIONS

Well #	Reference Elevation	Date	Depth To Water	Water Table Elevation	Comments
MW-1	22.03	6/8/06	8.00	14.03	
		8/22/07	8.62	13.41	
		11/11/08	NC		could not be located, damaged during snow
		3/10/10	NC		removal not collected
		5/25/11	NC		
		8/22/12	NC		
		11/5/13	NC		
		3/18/15	NC		
		5/12/16	8.86	13.17	Well was replaced in August 2015
MW-2	21.42	6/8/06	8.15	13.27	
		8/22/07	8.50	12.92	
		11/11/08	8.30	13.12	
		3/10/10	7.43	13.99	
		5/25/11	7.77	13.65	
		8/22/12	8.33	13.09	
		11/5/13	9.66	11.76	
		3/18/15	7.43	13.99	
		5/12/16	8.51	12.91	
MW-3	19.71	6/8/06	5.77	13.94	
		8/22/07	6.30	13.41	
		11/11/08	6.25	13.46	
		3/10/10	5.36	14.35	
		5/25/11	5.62	14.09	
		8/22/12	6.23	13.48	
		11/5/13	7.53	12.18	
		3/18/15	5.34	14.37	
		5/12/16	6.31	13.40	
MW-9 (shallow)	18.83	6/8/06	4.59	14.24	
		8/22/07	5.15	13.68	
		11/11/08	5.01	13.82	
		3/10/10	4.19	14.64	
		5/25/11	4.45	14.38	
		8/22/12	5.05	13.78	
		11/5/13	6.50	12.33	
		3/18/15	4.20	14.63	
		5/12/16	5.24	13.59	

TABLE 2
DZUS FASTENERS SITE (1-52-033)
GROUNDWATER ELEVATIONS

Well #	Reference Elevation	Date	Depth To Water	Water Table Elevation	Comments
MW-9B (deep)	18.75	6/8/06	4.50	14.25	
		8/22/07	5.05	13.70	
		11/11/08	4.93	13.82	
		3/10/10	4.11	14.64	
		5/25/11	4.36	14.39	
		8/22/12	5.00	13.75	
		11/5/13	5.52	13.23	
		3/18/15	4.09	14.66	
		5/12/16	5.20	13.55	
MW-13A (shallow)	16.02	6/8/06	2.59	13.43	
		8/22/07	3.02	13.00	
		11/11/08	2.90	13.12	
		3/10/10	2.27	13.75	
		5/25/11	2.51	13.51	
		8/22/12	2.93	13.09	
		11/5/13	4.41	11.61	
		3/17/15	2.22	13.80	
		5/12/16	3.02	13.00	
MW-13B (deep)	15.82	6/8/06	2.39	13.43	
		8/22/07	2.85	12.97	
		11/11/08	2.69	13.13	
		3/10/10	2.08	13.74	
		5/25/11	2.32	13.50	
		8/22/12	2.77	13.05	
		11/5/13	4.35	11.47	
		3/17/15	2.15	13.67	
		5/12/16	2.95	12.87	
MW-15A (shallow)	19.09	6/7/06	5.48	13.61	
		8/22/07	5.80	13.29	
		11/11/08	5.64	13.45	
		3/10/10	4.95	14.14	
		5/25/11	5.15	13.94	
		8/22/12	5.69	13.40	
		11/5/13	5.34	13.75	
		3/17/15	4.86	14.23	
		5/12/16	5.77	13.32	

TABLE 2
DZUS FASTENERS SITE (1-52-033)
GROUNDWATER ELEVATIONS

Well #	Reference Elevation	Date	Depth To Water	Water Table Elevation	Comments
MW-15B (deep)	19.06	6/7/06	5.35	13.71	
		8/22/07	5.70	13.36	
		11/11/08	5.58	13.48	
		3/10/10	NC		unable to access, ACE Hardware
		5/25/11	5.10	13.96	
		8/22/12	5.65	13.41	
		11/5/13	5.21	13.85	
		3/17/15	4.60	14.46	
		5/12/16	5.72	13.34	
MW-17		5/25/11			Could not be located
		11/5/13			Could not be located
		3/17/15	6.14		
		5/12/16	7.68		
MW-18	14.31	6/8/06	7.93	6.38	
		8/23/07	5.05	9.26	
		11/11/08	4.98	9.33	
		3/10/10	4.52	9.79	
		5/25/11	4.70	9.61	
		8/22/12	4.92	9.39	
		11/5/13	5.41	8.90	
		3/17/15	4.35	9.96	
		5/12/16	4.95	9.36	
MW-22A (shallow)	20.09	6/7/06	6.00	14.09	
		8/22/07	6.44	13.65	
		11/11/08	6.38	13.71	
		3/10/10	5.78	14.31	
		5/25/11	5.92	14.17	
		8/22/12	6.45	13.64	
		11/5/13	7.70	12.39	
		3/17/15	5.72	14.37	
		5/12/16	6.52	13.57	
MW-22B (deep)	19.95	6/7/06	5.82	14.13	
		8/22/07	6.30	13.65	
		11/11/08	6.20	13.75	
		3/10/10	5.61	14.34	
		5/25/11	5.74	14.21	
		8/22/12	6.28	13.67	
		11/5/13	5.65	14.30	
		3/17/15	5.00	14.95	
		5/12/16	6.54	13.41	

TABLE 2
DZUS FASTENERS SITE (1-52-033)
GROUNDWATER ELEVATIONS

Well #	Reference Elevation	Date	Depth To Water	Water Table Elevation	Comments
MW-23A (shallow)	17.34	6/7/06	4.59	12.75	
		8/22/07	4.80	12.54	
		11/11/08	4.62	12.72	
		3/10/10	4.16	13.18	
		5/25/11	4.38	12.96	
		8/22/12	5.30	12.04	
		11/5/13	5.72	11.62	
		3/17/15	4.21	13.13	
		5/12/16	4.80	12.54	
MW-23B (deep)	17.29	6/7/06	4.51	12.78	
		8/22/07	5.05	12.24	
		11/11/08	4.59	12.70	
		3/10/10	4.06	13.23	
		5/25/11	4.31	12.98	
		8/22/12	4.62	12.67	
		11/5/13	6.51	10.78	
		3/17/15	4.10	13.19	
		5/12/16	4.71	12.58	

Notes:
All measurements in feet from top of casing
Veritcal data - surveyed by YEC in 2007
NC - Not collected

TABLE 3
DZUS FASTENERS SITE (1-52-033)
JUNE 2006 THROUGH MAY 2016 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location	NYSDEC	MW-17	MW-17	MW-17	MW-17
Sample ID	Class GA	DMW-17	DMW-17F	DMW-17	DMW-17
Laboratory ID	Ground	AC83807-021	AC83807-022	AC91318-005	AC91318-006
Sample Date	Water	3/17/15	3/17/15	5/11/16	5/11/16
Filtered/Unfiltered	Criteria	Unfiltered	Filtered	Unfiltered	Filtered
		conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	ND	ND	990	ND
Antimony	3	ND	ND	ND	ND
Arsenic	25	ND	ND	2.1	ND
Barium	1,000	ND	ND	ND	ND
Beryllium	3	ND	ND	ND	ND
Cadmium	5	ND	ND	ND	ND
Calcium	NC	37,000	41,000	31,000	31,000
Chromium	50	ND	ND	ND	ND
Cobalt	NC	ND	ND	ND	ND
Copper	200	ND	ND	ND	ND
Iron	300	***880***	ND	***1,900***	ND
Lead	25	6.5	ND	7.2	ND
Magnesium	35,000	11,000	12,000	9,800	9,700
Manganese	300	**520**	ND	***490***	52.0
Mercury	0.7	ND	ND	ND	ND
Nickel	100	ND	ND	ND	ND
Potassium	NC	ND	ND	ND	ND
Selenium	10	ND	ND	ND	ND
Silver	50	ND	ND	ND	ND
Sodium	20,000	7,100	8,400	12,000	11,000
Thallium	0.5	ND	ND	ND	ND
Vanadium	NC	ND	ND	ND	ND
Zinc	2,000	ND	ND	ND	ND

Notes:
All values in µg/L
NC - No Criteria
NA - Not analyzed
ND - Not Detected

BOLD/Italics - exceeds criterion
B - Estimated value (greater than MDL but less than RL)
N - Matrix spike recovery falls outside of the control limit
E - Estimated due to matrix interference
* - Replicate RPDs were not within QC limits

Upgradient Wells
Source Area Wells
Downgradient Wells
Willetts Creek Wells
Groundwater Contaminants of Concern

TABLE 3
DZUS FASTENERS SITE (1-52-033)
JUNE 2006 THROUGH MAY 2016 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location	NYSDEC	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1
Sample ID	Class GA	MW-1	DMW-1	DMW-1	DMW-1	DMW-1	DMW-1	DMW-1	DMW-1	DMW-1	DMW-1
Laboratory ID	Ground	E0773-05A	F1193-01A	destroyed	destroyed	destroyed	destroyed	destroyed	destroyed	AC91318-020	AC91318-021
Sample Date	Water	6/8/06	8/22/07	11/11/08	3/10/10	5/25/11	8/22/12	11/5/13	3/18/15	5/12/16	5/12/16
Filtered/Unfiltered	Criteria	Unfiltered	Unfiltered							Unfiltered	Filtered
		conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	4,180	3,160	NA	NA	NA	NA	NA	NA	210	ND
Antimony	3	ND	ND	NA	NA	NA	NA	NA	NA	ND	ND
Arsenic	25	4.3 B	3.8 B	NA	NA	NA	NA	NA	NA	ND	ND
Barium	1,000	80.2 B	73.3 B	NA	NA	NA	NA	NA	NA	ND	ND
Beryllium	3	0.42 B	0.25 B	NA	NA	NA	NA	NA	NA	ND	ND
Cadmium	5	***23.9***	***5.1***	NA	NA	NA	NA	NA	NA	ND	ND
Calcium	NC	8,790	7,150	NA	NA	NA	NA	NA	NA	12,000	12,000
Chromium	50	8.0 B	5.0 B	NA	NA	NA	NA	NA	NA	ND	ND
Cobalt	NC	5.1 B	6.9 BE	NA	NA	NA	NA	NA	NA	ND	ND
Copper	200	18.3 B	16.0 B	NA	NA	NA	NA	NA	NA	ND	ND
Iron	300	***13,200***	***12,600***	NA	NA	NA	NA	NA	NA	***340***	ND
Lead	25	3.9 B	9.8 B	NA	NA	NA	NA	NA	NA	ND	ND
Magnesium	35,000	3,010	2,420	NA	NA	NA	NA	NA	NA	ND	ND
Manganese	300	210	158	NA	NA	NA	NA	NA	NA	ND	ND
Mercury	0.7	ND	ND	NA	NA	NA	NA	NA	NA	ND	ND
Nickel	100	8.7 B	8.7 B	NA	NA	NA	NA	NA	NA	ND	ND
Potassium	NC	1,760	1,680	NA	NA	NA	NA	NA	NA	ND	ND
Selenium	10	ND	5.4 B	NA	NA	NA	NA	NA	NA	ND	ND
Silver	50	ND	ND	NA	NA	NA	NA	NA	NA	ND	ND
Sodium	20,000	***22,500***	***23,100***	NA	NA	NA	NA	NA	NA	***29,000***	***30,000***
Thallium	0.5	***1.9 B***	***5.5 B***	NA	NA	NA	NA	NA	NA	ND	ND
Vanadium	NC	7.8 B	8.2 B	NA	NA	NA	NA	NA	NA	ND	ND
Zinc	2,000	244	196	NA	NA	NA	NA	NA	NA	ND	ND

Notes:
All values in µg/L
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Upgradient Wells
Source Area Wells
Downgradient Wells
Willetts Creek Wells
Groundwater Contaminants of Concern

TABLE 3
DZUS FASTENERS SITE (1-52-033)
JUNE 2006 THROUGH MAY 2016 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location	NYSDEC	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2
Sample ID	Class GA	MW-2	DMW-2	DMW-2	DMW-2	DMW-2	DMW-2	DMW-2	DMW-2F
Laboratory ID	Ground	E0773-10A	F1193-04A	G2114-01	J0429-10A	K0942-01	K0942-02	L1807-19	L1808-15
Sample Date	Water	6/7/06	8/22/07	11/11/08	3/10/10	5/25/11	5/25/11	8/22/12	8/22/12
Filtered/Unfiltered	Criteria	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Filtered	Unfiltered	Filtered
		conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	7,090	1,580	242	3,880 E	1,500	ND	328	ND
Antimony	3	ND	***7.3*** B	ND	***9.4 B***	ND	ND	ND	ND
Arsenic	25	3.9 B	6.3 B	ND	7.7 B	12.4 B	5.0 B	ND	ND
Barium	1,000	96.5 B	212	38.7 B	47.9 B	51.1 B	34.2 B	20.4 B	18.4 B
Beryllium	3	0.4 B	0.71 B	0.27 B	0.51 B	0.33 B	ND	ND	ND
Cadmium	5	4.2 B	***8.6***	2.7 B	***10.4***	ND	ND	ND	ND
Calcium	NC	15,500	28,200	14,500	11,100	38,700	34,500	12,500 E	12,300
Chromium	50	8.8 B	3.1 B	ND	6.8 B	2.2 B	ND	0.73 B	ND
Cobalt	NC	18.3 B	27 BE	13.8 B	9.3 B	11.4 B	7.6 B	1.2 B	1.0 B
Copper	200	19.3 B	8.3 B	12.6 B	34.9	7.9 B	ND	ND	ND
Iron	300	***14,900***	***25,200***	***23,300***	***12,000*** N	***88,900***	***17,600***	***1,590 E***	***1,060***
Lead	25	14.7	4.2 B	5.2 B	6.9 B	7.5 B	ND	ND	ND
Magnesium	35,000	3,740	4,690	2,700	2,810	3,690	3,510	1,850	1,790
Manganese	300	***518***	***989***	***2,150***	***768***	***882***	***655***	124	115
Mercury	0.7	ND	ND	ND	0.084 B	ND	ND	ND	ND
Nickel	100	13.3 B	9.0 B	4.7 B	13.5 B	6.5 B	2.8 B	1.7 B	1.3 B
Potassium	NC	2,140	2,780	1,880	1,450	2,470	2,410	1,440	1,430
Selenium	10	1.4 B	ND	ND	ND	ND	ND	ND	ND
Silver	50	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	20,000	***21,500***	***66,200***	18,600	18,200	***25,200***	***24,100***	***24,400 E***	***23,500***
Thallium	0.5	***2.3 B***	***6.3 B***	ND	ND	ND	ND	ND	ND
Vanadium	NC	11.9 B	4.0 B	ND	16.2 B	2.5 B	ND	ND	ND
Zinc	2,000	138	82.8	64.3	109	111	30.5 B	18.4 B	5.2 B

Notes:
All values in µg/L
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NA - Not analyzed
ND - Not Detected

BOLD/Italics - exceeds criterion
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Upgradient Wells
Source Area Wells
Downgradient Wells
Willetts Creek Wells
Groundwater Contaminants of Concern

TABLE 3
DZUS FASTENERS SITE (1-52-033)
JUNE 2006 THROUGH MAY 2016 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location	NYSDEC	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2
Sample ID	Class GA	DMW-2	DMW-2F	DMW-2	DMW-2F	DMW-2	DMW-2
Laboratory ID	Ground	AC75646-005	AC75646-006	AC83807-027	AC83807-028	AC91318-009	AC91318-010
Sample Date	Water	11/6/13	11/6/13	3/18/15	3/18/15	5/12/16	5/12/16
Filtered/Unfiltered	Criteria	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered
		conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	300	ND	7,200	ND	ND	ND
Antimony	3	ND	ND	ND	ND	ND	ND
Arsenic	25	3	ND	21.0	ND	ND	2.0
Barium	1,000	ND	ND	65.0	ND	ND	ND
Beryllium	3	ND	ND	ND	ND	ND	ND
Cadmium	5	ND	ND	***15.0***	ND	ND	ND
Calcium	NC	15,000	14,000	21,000	20,000	18,000	23,000
Chromium	50	ND	ND	ND	ND	ND	ND
Cobalt	NC	2.6	ND	13.0	3.6	5.0	5.8
Copper	200	ND	ND	ND	ND	ND	ND
Iron	300	***9,200***	***3,300***	***98,000***	***4,200***	***6,100***	***7,400***
Lead	25	ND	ND	***29.0***	ND	ND	ND
Magnesium	35,000	ND	ND	ND	ND	ND	ND
Manganese	300	170	150	***410***	240	200	240
Mercury	0.7	ND	ND	ND	ND	ND	ND
Nickel	100	ND	ND	ND	ND	ND	ND
Potassium	NC	ND	ND	ND	ND	ND	ND
Selenium	10	ND	ND	ND	ND	ND	ND
Silver	50	ND	ND	ND	ND	ND	ND
Sodium	20,000	***25,000***	***22,000***	***19,000***	***20,000***	***35,000***	***38,000***
Thallium	0.5	ND	ND	ND	ND	ND	ND
Vanadium	NC	ND	ND	ND	ND	ND	ND
Zinc	2,000	ND	ND	210	ND	ND	ND

Notes:
All values in µg/L
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ND - Not Detected

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Upgradient Wells
Source Area Wells
Downgradient Wells
Willetts Creek Wells
Groundwater Contaminants of Concern

TABLE 3
DZUS FASTENERS SITE (1-52-033)
JUNE 2006 THROUGH MAY 2016 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location	NYSDEC	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3
Sample ID	Class GA	MW-3	DMW-3	DMW-3	DMW-3	DMW-3	DMW-3	DMW-3	DMW-3F
Laboratory ID	Ground	E0773-07A	F1193-07A	G2114-04	J0429-11A	K0942-03	K0942-04	L1807-20	L1808-17
Sample Date	Water	6/8/06	8/22/07	11/11/08	3/10/10	5/25/11	5/25/11	8/22/12	8/22/12
Filtered/Unfiltered	Criteria	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Filtered	Unfiltered	Filtered
		conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	5,650	620	314	2,890 E	8,520	ND	ND	ND
Antimony	3	ND	ND	ND	***7.2 B***	ND	ND	***10.7*** B	ND
Arsenic	25	2.9 B	ND	ND	3.2 B	7.1 B	6.3 B	ND	ND
Barium	1,000	90.9 B	37.2 B	28.3 B	35.3 B	59.7 B	20.3 B	29.0 B	28.0 B
Beryllium	3	0.26 B	ND	ND	0.25 B	0.7 B	ND	ND	ND
Cadmium	5	***77.4***	***74.4***	***70.8***	***98.4***	***73.5***	***13.1***	***16.3***	***15.1***
Calcium	NC	17,800	17,200	11,800	10,600	11,000	9,750	11,100 E	10,700
Chromium	50	9.2 B	1.6 B	ND	6.4 B	11.4 B	ND	ND	0.90 B
Cobalt	NC	4.4 B	1.6 BE	ND	2.2 B	4.7 B	ND	ND	ND
Copper	200	16.1 B	5.4 B	ND	6.8 B	9.7 B	ND	ND	ND
Iron	300	***4,430***	***649***	253	***3,680 N***	***7,430***	ND	50.5 B	ND
Lead	25	ND	3.8 B	2.7 B	3.9 B	7.5 B	ND	ND	ND
Magnesium	35,000	4,160	3,820	2,650	2,670	2,890	1,970	2,220	2,180
Manganese	300	***423***	***301***	262	***553***	***980***	ND	ND	ND
Mercury	0.7	ND	ND	ND	0.067 B	0.057 B	ND	ND	ND
Nickel	100	6.8 B	2.1 B	1.6 B	7.4 B	5.0 B	ND	0.92 B	ND
Potassium	NC	2,630	2,050	1,420	1,500	2,170	1,790	2,420	2,400
Selenium	10	ND	8.4 B	ND	***10.6 B***	ND	ND	ND	ND
Silver	50	ND	3.5 B	ND	ND	ND	ND	ND	ND
Sodium	20,000	***27,700***	***31,000***	***25,000***	***20,700***	***20,400***	19,400	***23,400 E***	***23,000***
Thallium	0.5	***2.5 B***	ND	ND	ND	ND	ND	ND	ND
Vanadium	NC	8.1 B	1.1 B	ND	4 B	9.6 B	ND	ND	ND
Zinc	2,000	87.0	29.4 B	26.2 B	29.0 B	34.0 B	18.9 B	ND	7.1 B

Notes:
All values in µg/L
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NA - Not analyzed
ND - Not Detected

BOLD/Italics - exceeds criterion
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Upgradient Wells
Source Area Wells
Downgradient Wells
Willetts Creek Wells
Groundwater Contaminants of Concern

TABLE 3
DZUS FASTENERS SITE (1-52-033)
JUNE 2006 THROUGH MAY 2016 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location	NYSDEC	MW-3	MW-3	MW-3	MW-3	MW-3
Sample ID	Class GA	DMW-3	DMW-3F	DMW-3	DMW-3	DMW-3F
Laboratory ID	Ground	AC75646-011	AC75646-012	AC83807-031	AC91318-022	AC91318-023
Sample Date	Water	11/6/13	11/6/13	3/18/15	5/12/16	5/12/16
Filtered/Unfiltered	Criteria	Unfiltered	Filtered	Unfiltered	Unfiltered	Filtered
		conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	330	ND	490	220	ND
Antimony	3	ND	ND	ND	ND	ND
Arsenic	25	ND	ND	ND	ND	ND
Barium	1,000	ND	ND	ND	ND	ND
Beryllium	3	ND	ND	ND	ND	ND
Cadmium	5	***12.0***	***13.0***	***20.0***	***11.0***	***9.4***
Calcium	NC	9,000	9,700	9,300	9,200	9,000
Chromium	50	ND	ND	ND	ND	ND
Cobalt	NC	ND	ND	ND	ND	ND
Copper	200	ND	ND	ND	ND	ND
Iron	300	ND	ND	***510***	***980***	ND
Lead	25	ND	ND	ND	ND	ND
Magnesium	35,000	ND	ND	ND	ND	ND
Manganese	300	ND	ND	64	40.0	ND
Mercury	0.7	ND	ND	ND	ND	ND
Nickel	100	ND	ND	ND	ND	ND
Potassium	NC	ND	ND	ND	ND	ND
Selenium	10	ND	ND	ND	ND	ND
Silver	50	ND	ND	ND	ND	ND
Sodium	20,000	***43,000***	***45,000***	18,000	***20,000***	***20,000***
Thallium	0.5	ND	ND	ND	ND	ND
Vanadium	NC	ND	ND	ND	ND	ND
Zinc	2,000	ND	ND	ND	ND	ND

Notes:
All values in µg/L
NC - No Criteria
NA - Not analyzed
ND - Not Detected

BOLD/Italics - exceeds criterion
B - Estimated value (greater than MDL but less than RL)
N - Matrix spike recovery falls outside of the control limit
E - Estimated due to matrix interference
* - Replicate RPDs were not within QC limits

Upgradient Wells
Source Area Wells
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Groundwater Contaminants of Concern

TABLE 3
DZUS FASTENERS SITE (1-52-033)
JUNE 2006 THROUGH MAY 2016 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location	NYSDEC	MW-9	MW-9	MW-9	MW-9	MW-9	MW-9	MW-9	MW-9
Sample ID	Class GA	MW-9	DMW-9	DMW-9	DMW-9	DMW-9	DMW-9	DMW-9	DMW-9F
Laboratory ID	Ground	E0773-09A	F1193-06A	G2114-02	J0429-12A	K0942-05	K0942-06	L1807-21	L1808-19
Sample Date	Water	6/8/06	8/22/07	11/11/08	3/10/10	5/25/11	5/25/11	8/22/12	8/22/12
Filtered/Unfiltered	Criteria	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Filtered	Unfiltered	Filtered
		conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	16,800	3,520	611	2,300 E	2,850	ND	163 B	ND
Antimony	3	ND	ND	ND	ND	ND	ND	***9.5 B***	ND
Arsenic	25	***32.6***	16.2 B	ND	11.4 B	11.5 B	4.9 B	ND	ND
Barium	1,000	102 B	44.7 B	30.2 B	39.2 B	71.0 B	49.2 B	17.8 B	17.0 B
Beryllium	3	0.63 B	ND	0.21 B	0.29 B	0.42 B	ND	ND	ND
Cadmium	5	***32.8***	***22.4***	***15.5***	***17.5***	***18.7***	***9.5***	4.9 B	4.4 B
Calcium	NC	16,000	15,100	10,800	21,900	29,000	25,600	13,900 E	13,700
Chromium	50	***125***	***62.2***	35.3	***62.7***	***85.5***	2.9 B	8.3 B	4.0 B
Cobalt	NC	5.2 B	4.9 BE	1.5 B	2.0 B	2.5 B	ND	ND	ND
Copper	200	62.3	41.4	17.3 B	32.5	41.1	ND	ND	ND
Iron	300	***21,600***	***12,400***	***3,670***	***11,300 N***	***11,600***	***1,760***	***556 E***	ND
Lead	25	11.6	10.6	5.9 B	8.1 B	9.9 B	ND	ND	ND
Magnesium	35,000	3,170	1,550	2,690	4,210	4,110	3,900	3,300	3,220
Manganese	300	151	117	62.6	124	149	15.3 B	ND	ND
Mercury	0.7	ND	ND	ND	0.088 B	ND	ND	ND	ND
Nickel	100	18.3 B	7.3 B	3.3 B	8.0 B	6.5 B	2.4 B	1.4 B	2.3 B
Potassium	NC	3,270	4,830	1,720	3,950	6,310	5,210	1,420	1,390
Selenium	10	2.7 B	ND	ND	ND	ND	ND	ND	ND
Silver	50	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	20,000	***25,500***	***52,100***	16,100	***29,100***	***72,800***	***68,700***	***26,300 E***	***25,900***
Thallium	0.5	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	NC	33.1 B	13.4 B	5.5 B	10.4 B	12.8 B	ND	ND	ND
Zinc	2,000	170	73.1	55.9	82.8	90.9	36.6 B	12.9 B	11.8 B

Notes:
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TABLE 3
DZUS FASTENERS SITE (1-52-033)
JUNE 2006 THROUGH MAY 2016 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location	NYSDEC	MW-9	MW-9	MW-9	MW-9	MW-9	MW-9
Sample ID	Class GA	DMW-9	DMW-9F	DMW-9	DMW-9F	DMW-9	DMW-9
Laboratory ID	Ground	AC75646-031	AC75646-032	AC83807-029	AC83807-030	AC91318-012	AC91318-013
Sample Date	Water	11/7/13	11/7/13	3/18/15	3/18/15	5/12/16	5/12/16
Filtered/Unfiltered	Criteria	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered
		conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	ND	ND	ND	ND	430	ND
Antimony	3	ND	ND	ND	ND	ND	ND
Arsenic	25	ND	ND	ND	ND	ND	ND
Barium	1,000	ND	ND	ND	ND	ND	ND
Beryllium	3	ND	ND	ND	ND	ND	ND
Cadmium	5	3.4	3.0	ND	ND	3.0	ND
Calcium	NC	12,000	12,000	13,000	14,000	15,000	14,000
Chromium	50	ND	ND	ND	ND	ND	ND
Cobalt	NC	ND	ND	ND	ND	ND	ND
Copper	200	ND	ND	ND	ND	ND	ND
Iron	300	ND	ND	***550***	ND	***1,200***	ND
Lead	25	ND	ND	ND	ND	ND	ND
Magnesium	35,000	ND	ND	ND	ND	ND	ND
Manganese	300	ND	ND	ND	ND	ND	ND
Mercury	0.7	ND	ND	ND	ND	ND	ND
Nickel	100	ND	ND	ND	ND	ND	ND
Potassium	NC	ND	ND	ND	ND	ND	ND
Selenium	10	ND	ND	ND	ND	ND	ND
Silver	50	ND	ND	ND	ND	ND	ND
Sodium	20,000	11,000	11,000	18,000	***21,000***	***39,000***	***40,000***
Thallium	0.5	ND	ND	ND	ND	ND	ND
Vanadium	NC	ND	ND	ND	ND	ND	ND
Zinc	2,000	ND	ND	ND	ND	ND	ND

Notes:
All values in µg/L
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TABLE 3
DZUS FASTENERS SITE (1-52-033)
JUNE 2006 THROUGH MAY 2016 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location	NYSDEC	MW-9B	MW-9B	MW-9B	MW-9B	MW-9B	MW-9B	MW-9B	MW-9B
Sample ID	Class GA	MW-9B	DMW-9B	DMW-9B	DMW-9B	DMW-9B	DMW-9B	DMW-9B	DMW-9BF
Laboratory ID	Ground	E0773-08A	F1193-05A	G2114-03	J0429-14A	K0942-07	K0942-08	L1807-22	L1808-18
Sample Date	Water	6/8/06	8/22/07	11/11/08	3/10/10	5/25/11	5/25/11	8/22/12	8/22/12
Filtered/Unfiltered	Criteria	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Filtered	Unfiltered	Filtered
		conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	213	177 B	ND	49.5 BE	99.1 B	ND	ND	ND
Antimony	3	1.8 B	***4.6 B***	ND	ND	ND	ND	ND	ND
Arsenic	25	ND	ND	ND	ND	ND	6.2 B	ND	ND
Barium	1,000	45.5 B	25.5 B	27.1 B	17.1 B	14.4 B	12.8 B	22.2 B	21.1 B
Beryllium	3	ND	ND	ND	0.051 B	ND	ND	ND	ND
Cadmium	5	2.9 B	1.2 B	0.23 B	3.6 B	ND	ND	ND	ND
Calcium	NC	10,800	11,900	8,180	6,950	8,580	8,480	9,300 E	8,330
Chromium	50	2.2 B	3.4 B	ND	2.4 B	1.4 B	ND	0.82 B	ND
Cobalt	NC	2.6 B	1.5 BE	ND	ND	ND	ND	ND	ND
Copper	200	28.8 B	14.8 B	ND	ND	ND	ND	ND	ND
Iron	300	***561***	***429***	134 B	286 N	528	31.8 B	39.5 B	ND
Lead	25	ND	6.0 B	ND	ND	ND	ND	ND	ND
Magnesium	35,000	1,640	1,630	1,330	1,380	1,490	1,430	1,680	1,480
Manganese	300	211	***306***	171	69.5	92.4	ND	ND	ND
Mercury	0.7	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	100	8.6 B	2.9 B	ND	1.9 B	1.8 B	0.88 B	ND	ND
Potassium	NC	2,140	2,050	1,940	1,950	1,910	1,670	1,800	1,790
Selenium	10	ND	ND	ND	***12.7 B***	ND	ND	ND	ND
Silver	50	ND	2.2 B	ND	ND	ND	ND	ND	ND
Sodium	20,000	8,070	10,100	11,800	7,660	6,730	6,650	***21,400 E***	19,700
Thallium	0.5	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	NC	ND	0.83 B	ND	ND	ND	ND	ND	ND
Zinc	2,000	83.7	36.0 B	35.3 B	23.3 B	27.1 B	25.4 B	ND	ND

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TABLE 3
DZUS FASTENERS SITE (1-52-033)
JUNE 2006 THROUGH MAY 2016 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location	NYSDEC	MW-9B	MW-9B	MW-9B	MW-9B	MW-9B	MW-9B
Sample ID	Class GA	DMW-9B	DMW-9BF	DMW-9B	DMW-9BF	DMW-9B	DMW-9B
Laboratory ID	Ground	AC75646-013	AC75646-014	AC83807-023	AC83807-024	AC91318-014	AC91318-017
Sample Date	Water	11/6/13	11/6/13	3/18/15	3/18/15	5/12/16	5/12/16
Filtered/Unfiltered	Criteria	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered
		conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	ND	ND	ND	ND	ND	ND
Antimony	3	ND	ND	ND	ND	ND	ND
Arsenic	25	ND	ND	ND	ND	ND	ND
Barium	1,000	ND	ND	ND	ND	ND	ND
Beryllium	3	ND	ND	ND	ND	ND	ND
Cadmium	5	ND	ND	ND	ND	ND	ND
Calcium	NC	11,000	10,000	6,400	6,700	14,000	14,000
Chromium	50	ND	ND	ND	ND	ND	ND
Cobalt	NC	ND	ND	ND	ND	ND	ND
Copper	200	ND	ND	ND	ND	ND	ND
Iron	300	ND	ND	ND	ND	ND	ND
Lead	25	ND	ND	ND	ND	ND	ND
Magnesium	35,000	ND	ND	ND	ND	ND	ND
Manganese	300	ND	ND	44	ND	ND	ND
Mercury	0.7	ND	ND	ND	ND	ND	ND
Nickel	100	ND	ND	ND	ND	ND	ND
Potassium	NC	ND	ND	ND	ND	ND	ND
Selenium	10	ND	ND	ND	ND	ND	ND
Silver	50	ND	ND	ND	ND	ND	ND
Sodium	20,000	10,000	9,000	13,000	14,000	14,000	15,000
Thallium	0.5	ND	ND	ND	ND	ND	ND
Vanadium	NC	ND	ND	ND	ND	ND	ND
Zinc	2,000	ND	ND	ND	ND	ND	ND

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TABLE 3
DZUS FASTENERS SITE (1-52-033)
JUNE 2006 THROUGH MAY 2016 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location	NYSDEC	MW-13A	MW-13A	MW-13A	MW-13A	MW-13A	MW-13A	MW-13A	MW-13A
Sample ID	Class GA	MW-13A	DMW-13A	DMW-13A	DMW-13A	DMW-13A	DMW-13A	DMW-13A	DMW-13AF
Laboratory ID	Ground	E0773-13A	F1193-14A	F1193-14A	J0429-15A	K0942-17	K0942-18	L1807-15	L1808-25
Sample Date	Water	6/8/06	8/22/07	11/12/08	3/10/10	5/25/11	5/25/11	8/22/12	8/22/12
Filtered/Unfiltered	Criteria	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Filtered	Unfiltered	Filtered
		conc. Q	conc.	conc.	conc.	conc.	conc.	conc.	conc.
Aluminum	NC	15,000	2,560	258	529 E	2,100	ND	204	ND
Antimony	3	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	25	5.7 B	ND	ND	ND	13.1 B	ND	ND	ND
Barium	1,000	176 B	94.0 B	185 B	605	886	20.5 B	77.9 B	31.4 B
Beryllium	3	0.53 B	ND	ND	0.073 B	ND	ND	ND	ND
Cadmium	5	***174***	***94.1***	***67.7***	***267***	***373***	***10.3***	***93.5***	***64.4***
Calcium	NC	37,900	23,300	19,900	43,700	27,500	24,900	7,850	7,800
Chromium	50	12.9 B	2.7 B	ND	3.9 B	22.1	ND	2.8 B	1.9 B
Cobalt	NC	55.8	45.4 BE	35.4 B	144	268	1.1 B	33.7 B	15.1 B
Copper	200	34.3	ND	ND	17.9 B	20.8 B	ND	6.7 B	ND
Iron	300	***12,700***	***3,490***	***300***	***749 N***	***2,310***	ND	***3,690***	***1,580***
Lead	25	5.7 B	2.5 B	ND	5.3 B	ND	ND	ND	ND
Magnesium	35,000	5,580	3,640	2,630	4,570	3,820	3,340	936	960
Manganese	300	***9,560***	***8,040***	***16,400***	***33,900***	***61,600***	***1,720***	***6,190***	***3,430***
Mercury	0.7	ND	ND	ND	0.063 B	ND	ND	ND	ND
Nickel	100	9.4 B	2.1 B	ND	2.6 B	3.3 B	ND	1.1 B	2.7 B
Potassium	NC	7,430	6,390	3,680	7,510	6,700 E	5,990 E	2,250 E	2,140
Selenium	10	ND	ND	ND	ND	ND	ND	ND	ND
Silver	50	ND	3.5 B	ND	ND	12.1 B	ND	ND	ND
Sodium	20,000	***94,500***	***77,500***	***21,700***	***247,000***	***38,400***	***37,500***	***47,000***	***46,900***
Thallium	0.5	***44***	ND	***11.7*** B	***88.2***	ND	ND	***9.2*** B	ND
Vanadium	NC	17.6 B	3.7 B	ND	2.7 B	6.4 B	ND	ND	ND
Zinc	2,000	53.3	16.8 B	20.8 B	27.4 B	36.1 B	18.0 B	9.5 B	ND

Notes:
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Upgradient Wells
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Groundwater Contaminants of Concern

TABLE 3
DZUS FASTENERS SITE (1-52-033)
JUNE 2006 THROUGH MAY 2016 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location	NYSDEC	MW-13A	MW-13A	MW-13A	MW-13A	MW-13A	MW-13A
Sample ID	Class GA	DMW-13A	DMW-13AF	DMW-13A	DMW-13AF	DMW-13A	DMW-13A
Laboratory ID	Ground	AC75646-021	AC75646-022	AC83807-011	AC83807-012	AC91350-001	AC91350-002
Sample Date	Water	11/7/13	11/7/13	3/17/15	3/17/15	5/12/16	5/12/16
Filtered/Unfiltered	Criteria	Unfiltered conc.	Filtered conc.	Unfiltered conc.	Filtered conc.	Unfiltered conc.	Filtered conc.
Aluminum	NC	ND	ND	420	ND	ND	ND
Antimony	3	ND	ND	ND	ND	ND	ND
Arsenic	25	ND	ND	ND	ND	ND	ND
Barium	1,000	ND	ND	ND	ND	57.0	55.0
Beryllium	3	ND	ND	ND	ND	ND	ND
Cadmium	5	***120***	***120***	***9.6***	***9.0***	***10.0***	***8.5***
Calcium	NC	14,000	13,000	20,000	21,000	37,000	36,000
Chromium	50	ND	ND	ND	ND	ND	ND
Cobalt	NC	16.0	17.0	17.0	18.0	5.9	5.4
Copper	200	ND	ND	ND	ND	ND	ND
Iron	300	***7,300***	***6,400***	***8,600***	***6,200***	***3,200***	***1,700***
Lead	25	ND	ND	ND	24.0	ND	ND
Magnesium	35,000	ND	ND	ND	ND	ND	ND
Manganese	300	***1,700***	***1,700***	***1,100***	***1,200***	***360***	***350***
Mercury	0.7	ND	ND	ND	ND	ND	ND
Nickel	100	ND	ND	ND	ND	ND	ND
Potassium	NC	ND	ND	ND	ND	6,700	6,400
Selenium	10	ND	ND	ND	ND	ND	ND
Silver	50	ND	ND	ND	ND	ND	ND
Sodium	20,000	***31,000***	***31,000***	***43,000***	***47,000***	***39,000***	***37,000***
Thallium	0.5	ND	ND	***ND***	ND	ND	ND
Vanadium	NC	ND	ND	ND	ND	ND	ND
Zinc	2,000	ND	ND	ND	ND	ND	ND

Notes:
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ND - Not Detected

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Groundwater Contaminants of Concern

TABLE 3
DZUS FASTENERS SITE (1-52-033)
JUNE 2006 THROUGH MAY 2016 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location	NYSDEC	MW-13B	MW-13B	MW-13B	MW-13B	MW-13B	MW-13B	MW-13B	MW-13B
Sample ID	Class GA	MW-13B	DMW-13B	DMW-13B	DMW-13B	DMW-13B	DMW-13B	DMW-13B	DMW-13BF
Laboratory ID	Ground	E0773-14A	F1193-13A	G2114-13	J0429-16A	K0942-19	K0942-20	L1807-27	L1808-23
Sample Date	Water	6/8/06	8/22/07	11/12/08	3/10/10	5/25/11	5/25/11	8/22/12	8/22/12
Filtered/Unfiltered	Criteria	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Filtered	Unfiltered	Filtered
		conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	330	133 B	ND	114 BE	106 B	ND	ND	ND
Antimony	3	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	25	ND	ND	ND	ND	ND	ND	ND	ND
Barium	1,000	54.3 B	29.0 B	33.4 B	21.5 B	14.4 B	12.6 B	23.1 B	22.4 B
Beryllium	3	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	5	***15***	***9.8***	2.3 B	4.2 B	2.2 B	ND	1.5 B	1.1 B
Calcium	NC	10,700	9,840	11,700	8,880	10,900	10,900	11,300 E	10,600
Chromium	50	27.8	27.2	22.3	17.8 B	11.7 B	10.7 B	21.2	21.4
Cobalt	NC	3.9 B	1.9 BE	ND	ND	ND	ND	ND	ND
Copper	200	19.3 B	13.8 B	ND	ND	6.5 B	ND	ND	ND
Iron	300	***614***	***404***	106 B	286 N	***469***	ND	ND	ND
Lead	25	ND	7.7 B	3.1 B	ND	ND	ND	ND	ND
Magnesium	35,000	1,710	1,600	1,910	1,350	1,560	1,530	1,630	1,550
Manganese	300	***621***	***426***	153	243	148	ND	54.3	19.7 B
Mercury	0.7	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	100	9.8 B	4.2 B	ND	1.3 B	1.5 B	ND	ND	ND
Potassium	NC	2,410	1,820	2,100	1,570	1,910 E	1,680 E	1,340	1,360
Selenium	10	ND	6.2 B	ND	ND	ND	ND	ND	ND
Silver	50	ND	2.3 B	ND	ND	ND	ND	ND	ND
Sodium	20,000	7,880	6,710	9,280	8,060	6,720	6,880	9,260 E	8,950
Thallium	0.5	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	NC	1.3 B	0.96 B	ND	0.54 B	ND	ND	ND	ND
Zinc	2,000	45.9 B	33.2 B	24.3 B	24.3 B	32.7 B	32.5 B	ND	ND

Notes:
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TABLE 3
DZUS FASTENERS SITE (1-52-033)
JUNE 2006 THROUGH MAY 2016 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location	NYSDEC	MW-13B	MW-13B	MW-13B	MW-13B	MW-13B	MW-13B
Sample ID	Class GA	DMW-13B	DMW-13BF	DMW-13B	DMW-13BF	DMW-13B	DMW-13B
Laboratory ID	Ground	AC75646-023	AC75646-024	AC83807-013	AC83807-014	AC91350-004	AC91350-003
Sample Date	Water	11/7/13	11/7/13	3/17/15	3/17/15	5/12/16	5/12/16
Filtered/Unfiltered	Criteria	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered
		conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	1,800	ND	1,000	ND	ND	ND
Antimony	3	2.9	ND	ND	ND	ND	ND
Arsenic	25	ND	ND	ND	ND	ND	ND
Barium	1,000	ND	ND	ND	ND	98.0	94.0
Beryllium	3	ND	ND	ND	ND	ND	ND
Cadmium	5	***10.0***	2.3	4.0	ND	***6.9***	***6.6***
Calcium	NC	29,000	12,000	12,000	13,000	30,000	29,000
Chromium	50	ND	ND	ND	ND	ND	ND
Cobalt	NC	3.1	ND	3.0	ND	ND	ND
Copper	200	57.0	ND	ND	ND	ND	ND
Iron	300	***4,900***	ND	2100	ND	ND	ND
Lead	25	13.0	ND	6.3	ND	ND	ND
Magnesium	35,000	9,000	ND	ND	ND	ND	ND
Manganese	300	240	57.0	780	ND	ND	ND
Mercury	0.7	ND	ND	ND	ND	ND	ND
Nickel	100	ND	ND	ND	ND	ND	ND
Potassium	NC	9,400	ND	ND	ND	ND	ND
Selenium	10	ND	ND	ND	ND	ND	ND
Silver	50	ND	ND	ND	ND	ND	ND
Sodium	20,000	***22,000***	13,000	12,000	13,000	***43,000***	***41,000***
Thallium	0.5	ND	ND	ND	ND	ND	ND
Vanadium	NC	ND	ND	ND	ND	ND	ND
Zinc	2,000	350	ND	ND	ND	ND	ND

Notes:
All values in µg/L
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TABLE 3
DZUS FASTENERS SITE (1-52-033)
JUNE 2006 THROUGH MAY 2016 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location	NYSDEC	MW-15A	MW-15A	MW-15A	MW-15A	MW-15A	MW-15A	MW-15A	MW-15A
Sample ID	Class GA	MW-15A	DMW-15A	DMW-15A	DMW-15A	DMW-15A	DMW-15A	DMW-15A	DMW-15AF
Laboratory ID	Ground	E0773-03A	F1193-15A	G2114-08	J0429-17A	K0942-21	K0942-22	L1807-25	L1808-21
Sample Date	Water	6/7/06	8/22/07	11/12/08	3/9/10	5/25/11	5/25/11	8/22/12	8/22/12
Filtered/Unfiltered	Criteria	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Filtered	Unfiltered	Filtered
		conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	773	ND	ND	335 E	ND	ND	ND	ND
Antimony	3	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	25	ND	ND	ND	ND	ND	ND	ND	ND
Barium	1,000	53.7 B	15.5 B	20.1 B	30.8 B	23.1 B	16.4 B	15.9 B	15.0 B
Beryllium	3	ND	ND	ND	0.074 B	ND	ND	ND	ND
Cadmium	5	***28.8***	***29.1***	***33.9***	***62.3***	***63.0***	***12.2***	***16.8***	***9.7***
Calcium	NC	18,900	13,700	12,100	14,800	16,300	16,600	13,500 E	13,400
Chromium	50	3.0 B	0.45 B	ND	4.6 B	1.3 B	ND	ND	1.2 B
Cobalt	NC	3.2 B	1.3 BE	ND	0.9 B	ND	ND	ND	ND
Copper	200	38.0	4.8 B	ND	8.4 B	9.8 B	ND	ND	ND
Iron	300	***2,320***	158 B	ND	***1,000 N***	164 B	ND	ND	ND
Lead	25	9.9 B	1.7 B	ND	5.2 B	ND	ND	ND	ND
Magnesium	35,000	3,170	2,240	1,890	2,780	2,410	2,380	2,460	2,440
Manganese	300	***370***	***929***	***895***	***2,850***	***1,510***	55.7	238	41.1 B
Mercury	0.7	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	100	7.1 B	0.85 B	ND	3.6 B	1.7 B	ND	ND	1.1 B
Potassium	NC	2,090	1,960	1,610	2,140	2,290 E	2,290 E	2,110	2,230
Selenium	10	ND	ND	ND	ND	ND	ND	ND	ND
Silver	50	ND	3.4 B	ND	ND	ND	ND	ND	ND
Sodium	20,000	18,000	13,300	9,040	17,100	19,500	19,800	***20,400 E***	***20,400***
Thallium	0.5	***1.9 B***	ND	ND	***7.3 B***	ND	ND	ND	ND
Vanadium	NC	2.6 B	ND	ND	0.69 B	ND	ND	ND	ND
Zinc	2,000	155	18.8 B	24.3 B	33.5 B	31.7 B	25.9 B	ND	ND

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DZUS FASTENERS SITE (1-52-033)
JUNE 2006 THROUGH MAY 2016 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location	NYSDEC	MW-15A	MW-15A	MW-15A	MW-15A	MW-15A	MW-15A
Sample ID	Class GA	DMW-15A	DMW-15AF	DMW-15A	DMW-15AF	DMW-15A	DMW-15A
Laboratory ID	Ground	AC75646-009	AC75646-010	AC83807-001	AC83807-002	AC91318-001	AC91318-002
Sample Date	Water	11/6/13	11/6/13	3/17/15	3/17/15	5/11/16	5/11/16
Filtered/Unfiltered	Criteria	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered
		conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	810	ND	820	ND	290	ND
Antimony	3	ND	ND	ND	ND	ND	ND
Arsenic	25	ND	ND	ND	ND	ND	ND
Barium	1,000	ND	ND	ND	ND	ND	ND
Beryllium	3	ND	ND	ND	ND	ND	ND
Cadmium	5	***73.0***	***8.9***	***17.0***	***8.0***	***11.0***	4.8
Calcium	NC	14,000	14,000	12,000	14,000	13,000	12,000
Chromium	50	ND	ND	ND	ND	ND	ND
Cobalt	NC	ND	ND	ND	ND	ND	ND
Copper	200	ND	ND	ND	ND	ND	ND
Iron	300	***1,200***	ND	***1,100***	ND	***360***	ND
Lead	25	7.9	ND	6.3	ND	3.2	ND
Magnesium	35,000	ND	ND	ND	ND	ND	ND
Manganese	300	***2,100***	59.0	150	ND	140	ND
Mercury	0.7	ND	ND	ND	ND	ND	ND
Nickel	100	ND	ND	ND	ND	ND	ND
Potassium	NC	ND	ND	ND	ND	ND	ND
Selenium	10	ND	ND	ND	ND	ND	ND
Silver	50	ND	ND	ND	ND	ND	ND
Sodium	20,000	***21,000***	***21,000***	***20,000***	***23,000***	***25,000***	***25,000***
Thallium	0.5	ND	ND	ND	ND	ND	ND
Vanadium	NC	ND	ND	ND	ND	ND	ND
Zinc	2,000	ND	ND	ND	ND	ND	ND

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TABLE 3
DZUS FASTENERS SITE (1-52-033)
JUNE 2006 THROUGH MAY 2016 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location	NYSDEC	MW-15B	MW-15B	MW-15B	MW-15B	MW-15B	MW-15B	MW-15B	MW-15B
Sample ID	Class GA	MW-15B	DMW-15B	DMW-15B	DMW-15B	DMW-15B	DMW-15B	DMW-15B	DMW-15BF
Laboratory ID	Ground	E0773-04A	F1193-10A	G2114-07	Inaccessible	K0942-23	K0942-24	L1807-24	L1808-20
Sample Date	Water	6/7/06	8/22/07	11/12/08	3/10/10	5/25/11	5/25/11	8/22/12	8/22/12
Filtered/Unfiltered	Criteria	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Filtered	Unfiltered	Filtered
		conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	224	58.6 B	ND	NA	ND	ND	ND	ND
Antimony	3	ND	ND	ND	NA	ND	ND	ND	ND
Arsenic	25	1.7 B	ND	ND	NA	5.5 B	4.8 B	ND	4.3 B
Barium	1,000	83.6 B	40.6 B	45.0 B	NA	34.6 B	34.4 B	32.4 B	29.4 B
Beryllium	3	ND	ND	0.19 B	NA	ND	ND	ND	ND
Cadmium	5	3.6 B	0.54 B	0.29 B	NA	ND	ND	ND	ND
Calcium	NC	16,400	13,700	13,700	NA	12,000	11,900	12,200 E	11,500
Chromium	50	2.1 B	0.56 B	ND	NA	ND	ND	ND	ND
Cobalt	NC	5.5 B	2.7 BE	1.9 B	NA	1.4 B	1.2 B	1.5 B	1.4 B
Copper	200	20.4 B	2.5 B	ND	NA	ND	ND	ND	18.1 B
Iron	300	***4,780***	***1,320***	***875***	NA	***1,410***	***1,130***	***1,510 E***	48.4 B
Lead	25	3.3 B	ND	3.6 B	NA	ND	ND	ND	ND
Magnesium	35,000	5,930	5,290	5,240	NA	4,860	4,920	4,700	4,490
Manganese	300	239	228	267	NA	182	182	189	174
Mercury	0.7	ND	ND	ND	NA	ND	ND	ND	ND
Nickel	100	11.5 B	1.4 B	2.2 B	NA	1.9 B	2.0 B	1.5 B	2.7 B
Potassium	NC	2,450	1,500	1,980	NA	1,890 E	1,860 E	1,470	1,510
Selenium	10	ND	ND	ND	NA	ND	ND	ND	ND
Silver	50	ND	2.5 B	1.0 B	NA	ND	ND	ND	ND
Sodium	20,000	***46,600***	***45,200***	***43,900***	NA	***40,600***	***40,600***	***40,800 E***	***39,100***
Thallium	0.5	***3.0 B***	ND	ND	NA	ND	ND	ND	ND
Vanadium	NC	0.72 B	ND	ND	NA	ND	ND	ND	ND
Zinc	2,000	129	16.8 B	38.9 B	NA	37.3 B	33.7 B	12.1 B	23.7 B

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TABLE 3
DZUS FASTENERS SITE (1-52-033)
JUNE 2006 THROUGH MAY 2016 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location	NYSDEC	MW-15B	MW-15B	MW-15B	MW-15B	MW-15B	MW-15B
Sample ID	Class GA	DMW-15B	DMW-15BF	DMW-15B	DMW-15BF	DMW-15B	DMW-15B
Laboratory ID	Ground	AC75646-001	AC75646-002	AC83807-003	AC83807-004	AC91318-003	AC91318-004
Sample Date	Water	11/6/13	11/6/13	3/17/15	3/17/15	5/11/16	5/11/16
Filtered/Unfiltered	Criteria	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered
		conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	ND	ND	ND	ND	ND	ND
Antimony	3	ND	ND	ND	ND	ND	ND
Arsenic	25	ND	ND	ND	ND	ND	ND
Barium	1,000	ND	ND	ND	ND	ND	ND
Beryllium	3	ND	ND	ND	ND	ND	ND
Cadmium	5	ND	ND	ND	ND	ND	ND
Calcium	NC	12,000	12,000	9,900	11,000	7,200	8,000
Chromium	50	ND	ND	ND	ND	ND	ND
Cobalt	NC	ND	ND	ND	ND	3.8	4.1
Copper	200	ND	ND	ND	ND	ND	ND
Iron	300	***3,300***	ND	***1,500***	ND	***720***	***710***
Lead	25	ND	ND	11	ND	ND	ND
Magnesium	35,000	ND	ND	ND	ND	ND	ND
Manganese	300	170	140	94	ND	ND	ND
Mercury	0.7	ND	ND	ND	ND	ND	ND
Nickel	100	ND	ND	ND	ND	ND	ND
Potassium	NC	ND	ND	ND	ND	ND	ND
Selenium	10	ND	ND	ND	ND	ND	ND
Silver	50	ND	ND	ND	ND	ND	ND
Sodium	20,000	***40,000***	***40,000***	***32,000***	***36,000***	***20,000***	19,000
Thallium	0.5	ND	ND	ND	ND	ND	ND
Vanadium	NC	ND	ND	ND	ND	ND	ND
Zinc	2,000	ND	ND	ND	ND	61	ND

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TABLE 3
DZUS FASTENERS SITE (1-52-033)
JUNE 2006 THROUGH MAY 2016 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location	NYSDEC	MW-18	MW-18	MW-18	MW-18	MW-18	MW-18	MW-18	MW-18
Sample ID	Class GA	MW-18	DMW-18	DMW-18	DMW-18	DMW-18	DMW-18	DMW-18	DMW-18F
Laboratory ID	Ground	E0773-06A	F1193-16A	G2114-06	J0429-18A	K0942-25	K0942-26	L1807-18	L1808-28
Sample Date	Water	6/8/06	8/23/07	11/11/08	3/9/10	5/25/11	5/25/11	8/23/12	8/23/12
Filtered/Unfiltered	Criteria	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Filtered	Unfiltered	Filtered
		conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	1,430	829	88.1 B	2,270	3,280	ND	ND	ND
Antimony	3	ND	ND	***5.1*** B	***12.2*** B	ND	ND	ND	ND
Arsenic	25	ND	ND U	ND	5.9 B	7.0 B	ND	ND	ND
Barium	1,000	168 B	71.3 B	166 B	283	109 B	13.4 B	19.7 B	17.0 B
Beryllium	3	ND	ND	ND	0.31 B	0.29 B	ND	ND	ND
Cadmium	5	3.0 B	1.2 B	***9.8***	***18.1***	1.3 B	ND	ND	ND
Calcium	NC	13,900	9,790	12,600	27,000	19,000	18,400	14,000	14,300
Chromium	50	2.2 B	0.63 B	ND	5 B	3.9 B	ND	0.75 B	ND
Cobalt	NC	7.3 B	5.5 BE	2.0 B	11.6 B	9.2 B	ND	ND	ND
Copper	200	17.7 B	3.5 B	11.1 B	112	12.2 B	ND	ND	ND
Iron	300	***1,150***	***1,320***	114 B	***4,620***	***2,890***	ND	35.3 B	ND
Lead	25	ND	1.9 B	ND	19.0	ND	ND	ND	ND
Magnesium	35,000	2,340	1,550	2,440	4,130	3,300	3,070	2,360	2,410
Manganese	300	***6,270***	***4,490***	***2,870***	***10,100*** *	***3,450***	ND	113	23.4 B
Mercury	0.7	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	100	17.5 B	13.0 B	29.3 B	48.0 BE	15.7 B	ND	ND	ND
Potassium	NC	1,520	1,180	1,540	4,120 E	2,050 E	1,860 E	2,310 E	2,410
Selenium	10	ND	ND	ND	***16.4 B***	ND	ND	ND	ND
Silver	50	ND	1.5 B	ND	ND	ND	ND	ND	ND
Sodium	20,000	7,870	6,020	12,100	10,600	16,800	17,300	17,900	18,700
Thallium	0.5	***26.5***	ND	ND	***64.5***	ND	ND	ND	ND
Vanadium	NC	2.6 B	1.4 B	ND	5.0 B	3.9 B	ND	ND	ND
Zinc	2,000	235	89.0	265	366	192	22.2 B	ND	ND

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TABLE 3
DZUS FASTENERS SITE (1-52-033)
JUNE 2006 THROUGH MAY 2016 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location	NYSDEC	MW-18	MW-18	MW-18	MW-18	MW-18	MW-18
Sample ID	Class GA	DMW-18	DMW-18F	DMW-18	DMW-18F	DMW-18	DMW-18
Laboratory ID	Ground	AC75646-015	AC75646-016	AC83807-019	AC83807-020	AC91318-007	AC91318-008
Sample Date	Water	11/6/13	11/6/13	3/17/15	3/17/15	5/11/16	5/11/16
Filtered/Unfiltered	Criteria	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered
		conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	ND	ND	440	ND	ND	ND
Antimony	3	ND	ND	ND	ND	ND	ND
Arsenic	25	ND	ND	ND	ND	ND	ND
Barium	1,000	ND	ND	ND	ND	ND	ND
Beryllium	3	ND	ND	ND	ND	ND	ND
Cadmium	5	ND	ND	ND	ND	ND	ND
Calcium	NC	22,000	21,000	18,000	19,000	37,000	37,000
Chromium	50	ND	ND	ND	ND	ND	ND
Cobalt	NC	ND	ND	ND	ND	ND	ND
Copper	200	ND	ND	ND	ND	ND	ND
Iron	300	ND	ND	***520***	ND	ND	ND
Lead	25	ND	ND	ND	ND	ND	ND
Magnesium	35,000	ND	ND	ND	ND	ND	ND
Manganese	300	***450***	ND	***720***	ND	160	ND
Mercury	0.7	ND	ND	ND	ND	ND	ND
Nickel	100	ND	ND	ND	ND	ND	ND
Potassium	NC	ND	ND	ND	ND	ND	ND
Selenium	10	ND	ND	ND	ND	ND	ND
Silver	50	ND	ND	ND	ND	ND	ND
Sodium	20,000	***26,000***	***25,000***	***37,000***	***39,000***	***60,000***	***61,000***
Thallium	0.5	ND	ND	ND	ND	ND	ND
Vanadium	NC	ND	ND	ND	ND	ND	ND
Zinc	2,000	ND	ND	ND	ND	ND	ND

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TABLE 3
DZUS FASTENERS SITE (1-52-033)
JUNE 2006 THROUGH MAY 2016 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location	NYSDEC	MW-22A	MW-22A	MW-22A	MW-22A	MW-22A	MW-22A	MW-22A	MW-22A
Sample ID	Class GA	MW-22A	DMW-22A	DMW-22A	DMW-22A	DMW-22A	DMW-22A	DMW-22A	DMW-22AF
Laboratory ID	Ground	E0773-11A	F1193-09A	G2114-09	J0429-19A	K0942-11	K0942-12	L1807-17	L1808-27
Sample Date	Water	6/7/06	8/22/07	11/12/08	3/9/10	5/25/11	5/25/11	8/23/12	8/23/12
Filtered/Unfiltered	Criteria	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Filtered	Unfiltered	Filtered
		conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	4,320	2,870	2,620	1,060	159 B	ND	ND	ND
Antimony	3	1.7 B	***5.2 B***	ND	***13.0 B***	ND	ND	ND	ND
Arsenic	25	16.0 B	3.8 B	7.2 B	15.4 B	7.5 B	4.5 B	ND	ND
Barium	1,000	167 B	76.9 B	69.6 B	109 B	106 B	111 B	36.1 B	37.8 B
Beryllium	3	0.15 B	ND	0.21 B	0.19 B	ND	ND	ND	ND
Cadmium	5	***38.9***	***22.1***	***13.5***	***13.7***	***6.8***	ND	ND	ND
Calcium	NC	52,100	37,500	55,700	104,000	114,000	96,400	27,600	28,200
Chromium	50	18.0 B	12.8 B	13.0 B	8.8 B	2.8 B	0.76 B	2.2 B	1.7 B
Cobalt	NC	2.2 B	5.2 BE	ND	1.4 B	ND	ND	ND	ND
Copper	200	32.3	24.0 B	19.3 B	21.5 B	7.9 B	ND	ND	ND
Iron	300	***70,400***	***22,400***	***22,000***	***61,100***	***16,700***	***2,260***	***2,700***	***2,690***
Lead	25	8.6 B	13.1	11.3	12.4	ND	ND	ND	ND
Magnesium	35,000	8,300	5,580	7,860	13,800	15,600	13,100	4,060	4,210
Manganese	300	***1,280***	***1,190***	***1,030***	***912*** *	***683***	***780***	***437***	***443***
Mercury	0.7	ND	ND	ND	0.094 B	ND	ND	ND	ND
Nickel	100	6.0 B	3.7 B	2.6 B	4.7 BE	2.4 B	1.4 B	ND	ND
Potassium	NC	4,560	3,530	3,980	3,430 E	4,520 E	5,120 E	2,980 E	3,040
Selenium	10	8.7 B	ND	ND	***24.3 B***	ND	ND	ND	ND
Silver	50	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	20,000	***95,200***	***69,400***	***39,900***	***57,800***	***100,000***	***134,000***	***59,700***	***61,000***
Thallium	0.5	ND	***2.8 B***	ND	ND	ND	ND	ND	ND
Vanadium	NC	17.4 B	9.2 B	7.0 B	6.3 B	3.1 B	ND	ND	ND
Zinc	2,000	1,650	1,170	714	1,360	1,000	546	16.9 B	16.1 B

Notes:
All values in µg/L
NC - No Criteria
NA - Not analyzed
ND - Not Detected

BOLD/Italics - exceeds criterion
B - Estimated value (greater than MDL but less than RL)
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E - Estimated due to matrix interference
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Upgradient Wells
Source Area Wells
Downgradient Wells
Willetts Creek Wells
Groundwater Contaminants of Concern

TABLE 3
DZUS FASTENERS SITE (1-52-033)
JUNE 2006 THROUGH MAY 2016 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location	NYSDEC	MW-22A	MW-22A	MW-22A	MW-22A	MW-22A	MW-22A
Sample ID	Class GA	DMW-22A	DMW-22AF	DMW-22A	DMW-22AF	DMW-22A	DMW-22A
Laboratory ID	Ground	AC75646-019	AC75646-020	AC83807-009	AC83807-010	AC91350-009	AC91350-010
Sample Date	Water	11/7/13	11/7/13	3/17/15	3/17/15	5/13/16	5/13/16
Filtered/Unfiltered	Criteria	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered
		conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	ND	ND	ND	ND	ND	ND
Antimony	3	ND	ND	ND	ND	ND	ND
Arsenic	25	ND	ND	ND	ND	ND	ND
Barium	1,000	ND	ND	ND	ND	ND	ND
Beryllium	3	ND	ND	ND	ND	ND	ND
Cadmium	5	ND	ND	ND	ND	ND	ND
Calcium	NC	33,000	30,000	45,000	51,000	54,000	49,000
Chromium	50	ND	ND	ND	ND	ND	ND
Cobalt	NC	ND	ND	ND	ND	ND	ND
Copper	200	ND	ND	ND	ND	ND	ND
Iron	300	***2,800***	***2,100***	***2,100***	***640***	***2,900***	***2,500***
Lead	25	ND	ND	ND	ND	ND	ND
Magnesium	35,000	ND	ND	7,200	8,200	8,900	8,100
Manganese	300	***440***	***380***	220	260	***450***	***420***
Mercury	0.7	ND	ND	ND	ND	ND	ND
Nickel	100	ND	ND	ND	ND	ND	ND
Potassium	NC	ND	ND	ND	ND	ND	ND
Selenium	10	ND	ND	ND	ND	ND	ND
Silver	50	ND	ND	ND	ND	ND	ND
Sodium	20,000	***43,000***	***41,000***	***28,000***	***34,000***	***41,000***	***39,000***
Thallium	0.5	ND	ND	ND	ND	ND	ND
Vanadium	NC	ND	ND	ND	ND	ND	ND
Zinc	2,000	ND	ND	280	290	310	270

Notes:
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Upgradient Wells
Source Area Wells
Downgradient Wells
Willetts Creek Wells
Groundwater Contaminants of Concern

TABLE 3
DZUS FASTENERS SITE (1-52-033)
JUNE 2006 THROUGH MAY 2016 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location	NYSDEC	MW-22B	MW-22B	MW-22B	MW-22B	MW-22B	MW-22B	MW-22B	MW-22B
Sample ID	Class GA	MW-22B	DMW-22B	DMW-22B	DMW-22B	DMW-22B	DMW-22B	DMW-22B	DMW-22BF
Laboratory ID	Ground	E0773-12A	F1193-08A	G2114-11	J0429-20A	k0942-13	k0942-13	L1807-16	L1808-26
Sample Date	Water	6/7/06	8/22/07	11/12/08	3/9/10	5/25/11	5/25/11	8/23/12	8/23/12
Filtered/Unfiltered	Criteria	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Filtered	Unfiltered	Filtered
		conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	763 B	151 B	ND	56.3 B	ND	ND	ND	ND
Antimony	3	ND	***4.7 B***	ND	***8.7 B***	ND	ND	ND	ND
Arsenic	25	ND	ND	ND	ND	ND	ND	ND	ND
Barium	1,000	76.6 B	48.2 B	41.3 B	57.6 B	43.3 B	35.6 B	39.6 B	40.5 B
Beryllium	3	ND	ND	ND	0.039 B	ND	ND	ND	ND
Cadmium	5	***29.0*** B	4.4 B	1.2 B	1.7 B	ND	ND	ND	ND
Calcium	NC	12,800	20,400	27,200	21,400	19,500	19,700	22,400	22,500
Chromium	50	7.9 B	1.5 B	ND	1.6 B	0.66 B	ND	ND	ND
Cobalt	NC	17.4 B	3.9 BE	1.5 B	1.0 B	ND	ND	ND	ND
Copper	200	118 B	4.0 B	ND	ND	ND	ND	ND	ND
Iron	300	***4,600***	***1,120***	***518***	***358***	164 B	ND	110 B	ND
Lead	25	8.6 B	3 B	2.4 B	3.3 B	ND	ND	ND	ND
Magnesium	35,000	2,660 B	3,130	5,090	3,510	3,230	3,300	3,860	3,950
Manganese	300	***2,310***	***2,440***	***775***	***940*** *	***589***	***342***	***748***	***726***
Mercury	0.7	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	100	28.0 B	2.7 B	6.5 B	2.0 BE	0.85 B	ND	ND	ND
Potassium	NC	3,000 B	2,500	1,910	4,220 E	4,740 E	4,260 E	4,470 E	4,270
Selenium	10	ND	ND	ND	***19.0 B***	ND	ND	ND	ND
Silver	50	ND	4.2 B	ND	ND	ND	ND	ND	ND
Sodium	20,000	8,170 B	17,100	11,300	14,400	12,700	13,600	19,200	19,000
Thallium	0.5	***20.1*** B	***3.5 B***	ND	ND	ND	ND	ND	ND
Vanadium	NC	ND	0.49 B	ND	ND	ND	ND	ND	ND
Zinc	2,000	194 B	39.4 B	29.8 B	34.6 B	20.1 B	17.6 B	5.7 B	ND

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Upgradient Wells
Source Area Wells
Downgradient Wells
Willetts Creek Wells
Groundwater Contaminants of Concern

TABLE 3
DZUS FASTENERS SITE (1-52-033)
JUNE 2006 THROUGH MAY 2016 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location	NYSDEC	MW-22B		MW-22B		MW-22B		MW-22B		MW-22B	
Sample ID	Class GA	DMW-22B		DMW-22BF		DMW-22B		DMW-22BF		DMW-22B		DMW-22B	
Laboratory ID	Ground	AC75646-029		AC75646-030		AC83807-007		AC83807-008		AC91350-011		AC91350-012	
Sample Date	Water	11/7/13		11/7/13		3/17/15		3/17/15		5/13/16		5/13/16	
Filtered/Unfiltered	Criteria	Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered		Filtered	
		conc.	Q	conc.	Q	conc.	Q	conc.	Q	conc.	Q	conc.	Q
Aluminum	NC	ND		ND		ND		ND		ND		300	
Antimony	3	ND		ND		ND		ND		ND		ND	
Arsenic	25	ND		ND		ND		ND		ND		ND	
Barium	1,000	ND		ND		ND		ND		ND		ND	
Beryllium	3	ND		ND		ND		ND		ND		ND	
Cadmium	5	ND		ND		ND		ND		ND		ND	
Calcium	NC	26,000		27,000		27,000		31,000		30,000		31,000	
Chromium	50	ND		ND		ND		ND		ND		ND	
Cobalt	NC	ND		ND		ND		ND		ND		ND	
Copper	200	ND		ND		ND		ND		ND		ND	
Iron	300	ND		ND		ND		ND		ND		ND	
Lead	25	ND		ND		ND		ND		ND		ND	
Magnesium	35,000	ND		ND		5,100		5,900		5,900		6,200	
Manganese	300	***610***		***600***		***550***		***590***		***500***		***500***	
Mercury	0.7	ND		ND		ND		ND		ND		ND	
Nickel	100	ND		ND		ND		ND		ND		ND	
Potassium	NC	ND		ND		ND		ND		ND		ND	
Selenium	10	ND		ND		ND		ND		ND		ND	
Silver	50	ND		ND		ND		ND		ND		ND	
Sodium	20,000	13,000		13,000		15,000		17,000		16,000		17,000	
Thallium	0.5	ND		ND		ND		ND		ND		ND	
Vanadium	NC	ND		ND		ND		ND		ND		ND	
Zinc	2,000	ND		ND		ND		ND		ND		ND	

Notes:
All values in µg/L
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NA - Not analyzed
ND - Not Detected

BOLD/Italics - exceeds criterion
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Upgradient Wells
Source Area Wells
Downgradient Wells
Willetts Creek Wells
Groundwater Contaminants of Concern

TABLE 3
DZUS FASTENERS SITE (1-52-033)
JUNE 2006 THROUGH MAY 2016 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location	NYSDEC	MW-23A	MW-23A	MW-23A	MW-23A	MW-23A	MW-23A	MW-23A	MW-23A
Sample ID	Class GA	MW-23A	DMW-23A	DMW-23A	DMW-23A	DMW-23A	DMW-23A	DMW-23A	DMW-23AF
Laboratory ID	Ground	E0773-01A	F1193-12A	G2114-14	J0429-21A	K0942-15	K0942-16	L1807-28	L1808-24
Sample Date	Water	6/7/06	8/22/07	11/12/08	3'10/10	5/25/11	5/25/11	8/22/12	8/22/12
Filtered/Unfiltered	Criteria	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Filtered	Unfiltered	Filtered
		conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	941	2,440	3,200	3,790	5,060	ND	161 B	ND
Antimony	3	1.8 B	***5.8 B***	ND	***9.5 B***	ND	ND	ND	ND
Arsenic	25	2.0 B	4.1 B	5.8 B	7.9 B	7.4 B	ND	ND	ND
Barium	1,000	87.5 B	51.2 B	40.1 B	47.8 B	47.4 B	34.6 B	28.0 B	27.3 B
Beryllium	3	ND	ND	0.29 B	0.23 B	ND	ND	ND	ND
Cadmium	5	***110***	***702***	***1,080***	***704***	***924***	***9.5***	***31.7***	3.3 B
Calcium	NC	34,200	40,900	31,000	38,600	29,300	27,800	26,700 E	26,400
Chromium	50	3.6 B	4.9 B	3.6 B	6.4 B	6.4 B	0.97 B	1.2 B	4.0 B
Cobalt	NC	3.2 B	6.1 BE	ND	0.76 B	ND	ND	ND	ND
Copper	200	33.2	35.9	47.6	137	190	ND	6.7 B	ND
Iron	300	***10,300***	***29,700***	***13,100***	***11,500***	***15,200***	***2,030***	***1,860 E***	***602***
Lead	25	ND	6.6 B	9.5 B	11.2	5.6 B	ND	ND	ND
Magnesium	35,000	6,660	6,280	9,020	8,010	5,160	5,100	4,950	4,750
Manganese	300	***1,100***	***612***	***1,390***	***1,410*** *	***1,600***	***1,480***	***1,110***	***1,170***
Mercury	0.7	0.065 B	ND	ND	0.12 B	0.035 B	ND	ND	ND
Nickel	100	9.3 B	7.1 B	2.2 B	6.3 BE	3.7 B	1.2 B	ND	2.0 B
Potassium	NC	7,070	5,200	6,780	6,930 E	6,270 E	6,420 E	5,770	5,790
Selenium	10	1.3 B	6.1 B	ND	***13.5 B***	ND	ND	ND	ND
Silver	50	0.92 B	ND	ND	ND	ND	ND	ND	ND
Sodium	20,000	***60,200***	***32,400***	***37,800***	***64,600***	***67,900***	***70,800***	***74,100 E***	***73,400***
Thallium	0.5	***9.3*** B	ND	ND	***11.3 B***	ND	ND	ND	ND
Vanadium	NC	5.5 B	12.6 B	20.5 B	11.4 B	16.4 B	ND	1.1 B	ND
Zinc	2,000	181	26.9 B	42.7 B	48.3 B	70.5	15.6 B	ND	5.9 B

Notes:
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Upgradient Wells
Source Area Wells
Downgradient Wells
Willetts Creek Wells
Groundwater Contaminants of Concern

TABLE 3
DZUS FASTENERS SITE (1-52-033)
JUNE 2006 THROUGH MAY 2016 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location	NYSDEC	MW-23A	MW-23A	MW-23A	MW-23A	MW-23A	MW-23A
Sample ID	Class GA	DMW-23A	DMW-23AF	DMW-23A	DMW-23AF	DMW-23A	DMW-23A
Laboratory ID	Ground	AC75646-027	AC75646-028	AC83807-015	AC83807-016	AC91350-005	AC91350-006
Sample Date	Water	11/7/13	11/7/13	3/17/15	3/17/15	5/13/16	5/13/16
Filtered/Unfiltered	Criteria	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered
		conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	ND	ND	ND	ND	ND	ND
Antimony	3	ND	ND	ND	ND	ND	ND
Arsenic	25	ND	ND	ND	ND	ND	ND
Barium	1,000	ND	ND	ND	ND	57.0	54.0
Beryllium	3	ND	ND	ND	ND	ND	ND
Cadmium	5	***24.0***	***13.0***	***10.0***	ND	***8.9***	ND
Calcium	NC	20,000	20,000	41,000	40,000	69,000	66,000
Chromium	50	ND	ND	ND	ND	ND	ND
Cobalt	NC	ND	ND	ND	ND	ND	ND
Copper	200	ND	ND	ND	ND	ND	ND
Iron	300	***900***	***650***	***8,000***	***6,400***	***11,000***	***10,000***
Lead	25	ND	ND	ND	ND	ND	ND
Magnesium	35,000	ND	ND	8,600	8,400	15,000	14,000
Manganese	300	***980***	***1,000***	***780***	***820***	***930***	***920***
Mercury	0.7	ND	ND	ND	ND	ND	ND
Nickel	100	ND	ND	ND	ND	ND	ND
Potassium	NC	ND	ND	6,400	6,800	8,900	8,000
Selenium	10	ND	ND	ND	ND	ND	ND
Silver	50	ND	ND	ND	ND	ND	ND
Sodium	20,000	***27,000***	***29,000***	***91,000***	***95,000***	***130,000***	***130,000***
Thallium	0.5	ND	ND	ND	ND	ND	ND
Vanadium	NC	ND	ND	ND	ND	ND	ND
Zinc	2,000	ND	ND	ND	ND	ND	ND

Notes:
All values in µg/L
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BOLD/Italics - exceeds criterion
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Upgradient Wells
Source Area Wells
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Willetts Creek Wells
Groundwater Contaminants of Concern

TABLE 3
DZUS FASTENERS SITE (1-52-033)
JUNE 2006 THROUGH MAY 2016 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location	NYSDEC	MW-23B	MW-23B	MW-23B	MW-23B	MW-23B	MW-23B	MW-23B	MW-23B
Sample ID	Class GA	MW-23B	DMW-23B	DMW-23B	DMW-23B	DMW-23B	DMW-23B	DMW-23B	DMW-23BF
Laboratory ID	Ground	E0773-02A	F1193-11A	G2114-15	J0429-22A	K0942-27	K0942-28	L1807-26	L1808-22
Sample Date	Water	6/7/06	8/22/07	11/12/08	3/10/10	5/25/11	5/25/11	8/22/12	8/22/12
Filtered/Unfiltered	Criteria	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Filtered	Unfiltered	Filtered
		conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	2,450	632	406	2,820	1,810	ND	103 B	ND
Antimony	3	***3.2 B***	ND	ND	***6.2 B***	ND	ND	ND	ND
Arsenic	25	4.1 B	ND	ND	6.7 B	ND	ND	ND	ND
Barium	1,000	215	86.4 B	64.6 B	77.4 B	64.8 B	150 B	29.0 B	26.8 B
Beryllium	3	0.21 B	ND	0.13 B	0.3 B	ND	ND	ND	ND
Cadmium	5	***320***	***60.0***	***42.2***	***43.8***	***40.1***	***5.8***	***69.6***	***33.1***
Calcium	NC	21,500	25,100	15,700	24,400	24,800	21,700	18,100 E	17,700
Chromium	50	***74.9***	13.9 B	4.3 B	***61.6***	12.6 B	8.5 B	10.7 B	7.8 B
Cobalt	NC	4.8 B	2.4 BE	ND	3.5 B	1.7 B	0.91 B	ND	ND
Copper	200	94.6	19.8 B	24.6 B	54.8	25.6 B	13.9 B	4.1 B	ND
Iron	300	***8,220***	***2,140***	***1,270***	***7,870***	***5,200***	***36,100***	279 E	117 B
Lead	25	***35.7***	10.3	17.7	***43.9***	22.6	ND	ND	ND
Magnesium	35,000	1,890	1,290	1,590	2,730	4,150	2,460	2,950	2,910
Manganese	300	***548***	***508***	52.1	***398*** *	126	169	138	135
Mercury	0.7	0.11 B	ND	ND	0.11 B	ND	ND	ND	ND
Nickel	100	68.8	16.7 B	20.5 B	23.2 BE	14.8 B	10 B	2.4 B	1.3 B
Potassium	NC	2,400	1,970	1,660	1,650 E	2,450 E	2,110 E	1,760	1,820
Selenium	10	ND	8.6 B	ND	***19.3 B***	ND	ND	ND	ND
Silver	50	ND	5.0 B	0.81 B	ND	ND	ND	ND	ND
Sodium	20,000	2,390	3,870	2,200	***84,400***	18,900	18,500	15,000 E	14,700
Thallium	0.5	***3.1 B***	ND	ND	***6.1 B***	ND	ND	ND	ND
Vanadium	NC	17.7 B	9.0 B	5.9 B	12.1 B	12.9 B	ND	ND	ND
Zinc	2,000	417	145	198	376	410	47 B	17.7 B	ND

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Upgradient Wells
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Downgradient Wells
Willetts Creek Wells
Groundwater Contaminants of Concern

TABLE 3
DZUS FASTENERS SITE (1-52-033)
JUNE 2006 THROUGH MAY 2016 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location	NYSDEC	MW-23B	MW-23B	MW-23B	MW-23B	MW-23B	MW-23B
Sample ID	Class GA	DMW-23B	DMW-23BF	DMW-23B	DMW-23BF	DMW-23B	DMW-23B
Laboratory ID	Ground	AC75646-025	AC75646-026	AC83807-017	AC83807-018	AC91350-007	AC91350-008
Sample Date	Water	11/7/13	11/7/13	3/17/15	3/17/15	5/13/16	5/13/16
Filtered/Unfiltered	Criteria	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered
		conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	1,100	ND	730	ND	220	ND
Antimony	3	ND	ND	ND	ND	ND	ND
Arsenic	25	ND	ND	ND	ND	ND	ND
Barium	1,000	ND	ND	ND	ND	ND	ND
Beryllium	3	ND	ND	ND	ND	ND	ND
Cadmium	5	***45.0***	***35.0***	***27.0***	***31.0***	***42.0***	***37.0***
Calcium	NC	11,000	12,000	8,900	9,900	14,000	13,000
Chromium	50	***59.0***	ND	ND	ND	ND	ND
Cobalt	NC	ND	ND	ND	ND	ND	ND
Copper	200	ND	ND	ND	ND	ND	ND
Iron	300	***2,400***	ND	***1,600***	ND	***420***	ND
Lead	25	8.3	ND	5.6	ND	ND	ND
Magnesium	35,000	ND	ND	ND	ND	ND	ND
Manganese	300	52.0	ND	ND	ND	ND	ND
Mercury	0.7	ND	ND	ND	ND	ND	ND
Nickel	100	ND	ND	ND	ND	ND	ND
Potassium	NC	ND	ND	ND	ND	ND	ND
Selenium	10	ND	ND	ND	ND	ND	ND
Silver	50	ND	ND	ND	ND	ND	ND
Sodium	20,000	11,000	11,000	***25,000***	***27,000***	16,000	15,000
Thallium	0.5	ND	ND	ND	ND	ND	ND
Vanadium	NC	ND	ND	ND	ND	ND	ND
Zinc	2,000	95.0	ND	61.0	ND	ND	ND

Notes:
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Upgradient Wells
Source Area Wells
Downgradient Wells
Willetts Creek Wells
Groundwater Contaminants of Concern

TABLE 4
DZUS FASTENERS SITE (1-52-033)
JUNE 2006 THROUGH MAY 2016 SAMPLING EVENTS
SUMMARY OF TAL METALS IN WILLETTS CREEK AND LAKE CAPRI SURFACE WATER SAMPLES

Sample Location	NYSDEC Class A Surface Water Criteria	Lake Capri SW-1	Lake Capri SW-1	Lake Capri SW-1	Lake Capri SW-1	Lake Capri SW-1	Lake Capri SW-1	Lake Capri SW-1	Lake Capri SW-1	Lake Capri SW-1
Sample ID		E0868-01A	F1193-20A	G2136-11	J0376-01A	K0911-08	L1949-01	AC75648-158	AC84282-012	AC91487-001
Laboratory ID										
Sample Date		6/21/06	8/23/07	11/14/08	3/4/10	5/22/11	09/17/12	11/8/13	4/11/15	5/20/16
		conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	31.9 B	40.1 B	ND	29.6 B	ND	ND	ND	ND	ND
Antimony	3	ND	ND	***6.0 B***	ND	ND	ND	ND	ND	ND
Arsenic	50	ND	ND	ND	ND	ND	ND	0.56 JB	ND	ND
Barium	1,000	13.2 B	23.1 B	31.8 B	22.4 B	13.6 B	20.8 B	ND	ND	ND
Beryllium	3	ND	ND	ND	ND	ND U	ND	ND	ND	ND
Cadmium	5	1.1 B	2.3 B	1.5 B	2.6 B	1.6 B	ND	1.5 J	3.4	ND
Calcium	NC	15,100	14,100	14,300	15,300	13,900	14,900	16,000	15,000	15,000
Chromium	50	0.6 B	0.95 B	ND	0.52 B	1.3 B	ND	ND	ND	ND
Cobalt	NC	0.94 B	1.4 BE	ND	0.76 B	0.77 B	ND	0.80 J	ND	ND
Copper	200	8.9 B	3.1 B	ND	ND	ND	ND	ND	ND	ND
Iron	300	***691***	***738***	***598***	***387***	***416***	172 B	***1,100***	***370***	ND
Lead	50	ND	2.1 B	ND	ND	ND	ND	3.2	ND	ND
Magnesium	35,000	3,500	2,860	3,570	3,420	2,960	3,420	ND	ND	ND
Manganese	300	***1,050***	***862***	***1,610***	***996***	***1,000***	***552***	***1,700***	***760***	***540***
Mercury	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	100	1.3 B	0.6 B	ND	1.6 B	ND	ND	ND	ND	ND
Potassium	NC	2,000	1,930	2,250	2,070	2,040	2,300	ND	ND	ND
Selenium	10	ND	6.0 B	ND	ND	ND	ND	ND	ND	ND
Silver	50	1.8 B	2.8 B	0.98 B	ND	ND	ND	ND	ND	ND
Sodium	20,000	18,500	15,800	19,000	***22,500***	18,700	***24,600***	***25,000***	***24,000***	***23,000***
Thallium	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	NC	0.78 B	0.79 B	ND	2.6 B	ND	ND	ND	ND	ND
Zinc	2,000	22.4 B	22.8 B	22.3 B	38 B	22.3 B	10.1 B	ND	ND	ND

Notes:
All values in µg/L
E - Estimated due to matrix interference
* - Replicate RPDs were not within QC limits
BOLD/Italics - exceeds criterion
B - Estimated value (greater than MDL but less than RL)
NC - No Criteria
ND - Not Detected
Surface Water Contaminants of Concern

TABLE 4
DZUS FASTENERS SITE (1-52-033)
JUNE 2006 THROUGH MAY 2016 SAMPLING EVENTS
SUMMARY OF TAL METALS IN WILLETTS CREEK AND LAKE CAPRI SURFACE WATER SAMPLES

Sample Location	NYSDEC Class A Surface Water Criteria	Lake Capri	Lake Capri	Lake Capri	Lake Capri	Lake Capri	Lake Capri	Lake Capri	Lake Capri	Lake Capri
Sample ID		SW-2	SW-2	SW-2	SW-2	SW-2	SW-2	SW-2	SW-2	SW-2
Laboratory ID		E0868-03A	F1194-02A	G2136-09	J0376-02A	K0911-09	L1949-02	AC75648-159	AC84282-013	AC91487-002
Sample Date		6/21/06	8/23/07	11/14/08	3/4/10	5/22/11	09/17/12	11/8/13	4/11/15	5/20/16
		conc. Q	conc.	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	16.8 B	98.4 B	ND	33.2 B	ND	ND	ND	ND	300
Antimony	3	ND	ND	ND	***5.7 B***	ND	ND	0.58 J	ND	ND
Arsenic	50	ND	ND	ND	ND	ND	ND	1.1 JB	ND	ND
Barium	1,000	12.2 B	24.3 B	32.4 B	24.2 B	12.9 B	20.2 B	ND	ND	ND
Beryllium	3	ND	ND	ND	ND	ND	ND	0.33 J	ND	ND
Cadmium	5	1.0 B	2.1 B	2.0 B	2.8 B	1.7 B	ND	0.82 J	2.8	2.7
Calcium	NC	14,900	13,300	14,300	16,100	13,900	14,700	15,000	15,000	14,000
Chromium	50	0.52 B	1.2 B	ND	0.86 B	0.72 B	ND	ND	ND	ND
Cobalt	NC	0.92 B	1 B	ND	1 B	ND	ND	0.97 J	ND	ND
Copper	200	ND	4.4 B	ND	6.2 B	ND	ND	ND	ND	ND
Iron	300	***649***	***819***	***675***	***478***	***508***	176 B	***680***	***510***	***1,100***
Lead	50	ND	3.1 B	2.4 B	ND	ND	ND	1.5 J	ND	9.1
Magnesium	35,000	3,490	2,940	3,530	3,700	2,940	3,360	ND	ND	ND
Manganese	300	***1,010***	***819 E***	***1,560***	***968***	***1,080***	***564***	***1,300***	***840***	***410***
Mercury	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	100	1.1 B	0.81 B	ND	2.4 B	ND	ND	ND	ND	ND
Potassium	NC	1,990	1,990	2,320	2,080	1,990	2,330	ND	ND	ND
Selenium	10	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver	50	1.6 B	3.1 B	ND	ND	ND	ND	ND	ND	ND
Sodium	20,000	18,100	16,200 E	19,500	***22,000***	18,600	***23,800***	***21,000***	***24,000***	***21,000***
Thallium	0.5	ND	ND	ND	***7.2 B***	ND	ND	***0.74 J***	ND	ND
Vanadium	NC	ND	0.88 B	1.1 B	3.3 B	ND	ND	ND	ND	ND
Zinc	2,000	15.6 B	27.4 B	21 B	34.5 B	20.3 B	5.3 B	ND	ND	ND

Notes:
All values in µg/L
E - Estimated due to matrix interference
* - Replicate RPDs were not within QC limits
BOLD/Italics - exceeds criterion
B - Estimated value (greater than MDL but less than RL)
NC - No Criteria
ND - Not Detected
Surface Water Contaminants of Concern

TABLE 4
DZUS FASTENERS SITE (1-52-033)
JUNE 2006 THROUGH MAY 2016 SAMPLING EVENTS
SUMMARY OF TAL METALS IN WILLETTS CREEK AND LAKE CAPRI SURFACE WATER SAMPLES

Sample Location	NYSDEC Class A Surface Water Criteria	Lake Capri SW-3	Lake Capri SW-3	Lake Capri SW-3	Lake Capri SW-3	Lake Capri SW-3	Lake Capri SW-3	Lake Capri SW-3	Lake Capri SW-3	Lake Capri SW-3
Sample ID		E0868-05A	F1194-04A	G2136-13	J0376-03A	K0911-10	L1949-03	AC75648-165	AC84282-014	AC91487-003
Laboratory ID										
Sample Date		6/21/06	8/23/07	11/14/08	3/4/10	5/22/11	09/17/12	11/8/13	4/11/15	5/20/16
		conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	69.5 B	37 U	ND	27 B	ND	ND	ND	ND	ND
Antimony	3	ND	ND	ND	***7.2 B***	ND	ND	ND	ND	ND
Arsenic	50	ND	ND	ND	ND	ND	ND	0.62 JB	ND	ND
Barium	1,000	7.9 B	12.6 B	38.6 B	19.6 B	10.1 B	17.2 B	ND	ND	ND
Beryllium	3	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	5	1.9 B	0.32 B	0.97 B	2.8 B	1.4 B	ND	1.7 JB	ND	ND
Calcium	NC	15,200	13,100	14,000	15,000	13,900	14,500	16,000	15,000	14,000
Chromium	50	0.58 B	0.7 B	ND	0.59 B	0.67 B	ND	ND	ND	ND
Cobalt	NC	0.72 B	1.0 B	ND	ND	ND	ND	2.0	ND	ND
Copper	200	ND	3.9 B	ND	ND	ND	ND	ND	ND	ND
Iron	300	***788***	280	***772***	***332***	***311***	144 B	***590***	ND	ND
Lead	50	0.92 B	ND	ND	ND	ND	ND	3.5	ND	ND
Magnesium	35,000	3,540	2,990	3,440	3,380	3,030	3,310	ND	ND	ND
Manganese	300	***882***	73.9 E	***1,790***	***911***	***990***	***355***	***940***	***640***	130
Mercury	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	100	0.96 B	ND	ND	1.3 B	ND	ND	ND	ND	ND
Potassium	NC	2,000	2,020	2,290	2,000	2,000	2,210	ND	ND	ND
Selenium	10	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver	50	1.3 B	3.4 B	0.64 B	ND	ND	ND	ND	ND	ND
Sodium	20,000	18,300	16,800 E	17,700	***23,300***	18,800	***23,500***	***23,000***	***23,000***	***22,000***
Thallium	0.5	ND	ND	ND	***5.9 B***	ND	ND	ND	ND	ND
Vanadium	NC	0.7 B	0.42 B	ND	2.8 B	ND	ND	ND	ND	ND
Zinc	2,000	21.5 B	14 B	16.4 B	33.4 B	18.9 B	ND	ND	ND	ND

Notes:
All values in µg/L
E - Estimated due to matrix interference
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BOLD/Italics - exceeds criterion
B - Estimated value (greater than MDL but less than RL)
NC - No Criteria
ND - Not Detected
Surface Water Contaminants of Concern

TABLE 4
DZUS FASTENERS SITE (1-52-033)
JUNE 2006 THROUGH MAY 2016 SAMPLING EVENTS
SUMMARY OF TAL METALS IN WILLETTS CREEK AND LAKE CAPRI SURFACE WATER SAMPLES

Sample Location	NYSDEC Class A Surface Water Criteria	Lake Capri	Lake Capri	Lake Capri	Lake Capri	Lake Capri	Lake Capri	Lake Capri	Lake Capri	Lake Capri
Sample ID		SW-4	SW-4	SW-4	SW-4	SW-4	SW-4	SW-4	SW-4	SW-4
Laboratory ID		E0868-07A	F1194-06A	G2136-15	J0376-04A	K0911-11	L1949-04	AC75648-164	AC84282-015	AC91487-004
Sample Date		6/21/06	8/23/07	11/14/08	3/4/10	5/22/11	09/17/12	11/8/13	4/11/15	5/20/16
		conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	ND	ND	ND	27.4 B	ND	ND	ND	ND	ND
Antimony	3	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	50	ND	ND	ND	ND	ND	ND	0.50 JB	ND	ND
Barium	1,000	5.7 B	14 B	31.9 B	20.2 B	9.8 B	19.6 B	ND	ND	ND
Beryllium	3	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	5	0.89 B	0.77 B	0.63 B	2.6 B	1.4 B	ND	0.93 J	ND	ND
Calcium	NC	14,600	12,900	14,000	15,300	13,700	13,900	15,000	13,000	16,000
Chromium	50	ND	0.88 B	ND	0.51 B	0.75 B	ND	ND	ND	ND
Cobalt	NC	0.37 B	1.2 B	ND	ND	ND	ND	0.44 J	3.1	ND
Copper	200	11.7 B	4.9 B	ND	ND	ND	ND	ND	ND	ND
Iron	300	***610***	***609***	***741***	***344***	***322***	152 B	***450***	***390***	ND
Lead	50	ND	2.2 B	ND	ND	ND	ND	2.4 J	ND	ND
Magnesium	35,000	3,510	2,950	3,490	3,420	2,980	3,190	ND	ND	ND
Manganese	300	***786***	135 E	***1,630***	***943***	***918***	***463***	***910***	***550***	150
Mercury	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	100	0.6 B	ND	ND	0.88 B	ND	ND	ND	ND	ND
Potassium	NC	1,950	2,040	2,310	1,980	1,960	2,150	ND	ND	ND
Selenium	10	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver	50	ND	2.8 B	ND	ND	ND	ND	ND	ND	ND
Sodium	20,000	18,100	16,600 E	17,800	***22,900***	18,700	***23,900***	***22,000***	17,000	***23,000***
Thallium	0.5	ND	ND	ND	ND	ND	ND	ND	***2.0***	ND
Vanadium	NC	ND	ND	ND	2 B	ND	ND	ND	ND	ND
Zinc	2,000	20.2 B	18 B	9.7 B	31.9 B	18.9 B	5.3 B	ND	ND	ND

Notes: All values in µg/L
E - Estimated due to matrix interference
* - Replicate RPDs were not within QC limits
BOLD/Italics - exceeds criterion
B - Estimated value (greater than MDL but less than RL)
NC - No Criteria
ND - Not Detected
Surface Water Contaminants of Concern

TABLE 4
DZUS FASTENERS SITE (1-52-033)
JUNE 2006 THROUGH MAY 2016 SAMPLING EVENTS
SUMMARY OF TAL METALS IN WILLETTS CREEK AND LAKE CAPRI SURFACE WATER SAMPLES

Sample Location / Sample ID / Laboratory ID / Sample Date	NYSDEC Class A Surface Water Criteria	Willetts Creek SW-5 E0868-09A 6/21/06 conc. Q	Willetts Creek SW-5 F1193-18A 8/23/07 conc. Q	Willetts Creek SW-5 G2114-20 11/12/08 conc. Q	Willetts Creek SW-5 J0376-05A 3/4/10 conc. Q	Willetts Creek SW-5 K0911-12 5/22/11 conc. Q	Willetts Creek SW-5 L1949-05 09/18/12 conc. Q	Willetts Creek SW-5 AC75648-163 11/8/13 conc. Q	Willetts Creek SW-5 AC84282-003 4/11/15 conc. Q	Willetts Creek SW-5 AC91487-005 5/20/16 conc. Q
Aluminum	NC	15.3 B	ND	ND	79.3 B	305	ND	1,200	ND	1,700
Antimony	3	1.5 B	***4.4 B***	ND	ND	ND	ND	0.54 J	ND	ND
Arsenic	50	ND	ND	ND	5.2 B	ND	ND	3.7 B	ND	5.3
Barium	1,000	36.9 B	36.4 B	26.2 B	24.6 B	40.7 B	31.4 B	71.0	ND	82.0
Beryllium	3	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	5	***5.7***	***5.6***	3.0 B	***5.1***	***8.8***	4.1 B	***15.0***	***6.9***	***27.0***
Calcium	NC	14,400	16,100	12,500	17,800	19,200	15,200	12,000	15,000	16,000
Chromium	50	ND	0.39 B	ND	0.99 B	2.6 B	ND	ND	ND	ND
Cobalt	NC	0.82 B	1.9 BE	ND	ND	1.8 B	ND	5.4	ND	5.2
Copper	200	ND	1.7 B	ND	5.6 B	11.3 B	3.8 B	ND	ND	ND
Iron	300	***632***	***599***	***1,060***	***959***	***4,080***	***690***	***14,000***	***460***	***24,000***
Lead	50	ND	ND	ND	ND	10.2	ND	38.0	ND	***53.0***
Magnesium	35,000	3,550	3,420	3,100	3,960	4,020	3,510	ND	ND	ND
Manganese	300	***1,420***	***1,110***	***956***	***450***	***923***	***519***	***3,000***	***280***	***3,100***
Mercury	0.7	ND	ND	ND	ND	ND	ND	0.16 J	ND	ND
Nickel	100	0.98 B	0.85 B	ND	1.1 B	1.4 B	ND	ND	ND	ND
Potassium	NC	2,080	2,040	1,780	2,070	2,340	2,240	ND	ND	ND
Selenium	10	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver	50	ND	3.1 B	ND	ND	ND	ND	ND	ND	ND
Sodium	20,000	***21,100***	***21,800***	18,100	***20,300***	***26,900***	***28,100***	***22,000***	***24,000***	***24,000***
Thallium	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	NC	ND	ND	0.99 B	12.1 B	6.9 B	ND	ND	ND	ND
Zinc	2,000	22 B	21.2 B	10.4 B	38.5 B	98.7	15.9 B	78.0	ND	100

Notes:
All values in µg/L
E - Estimated due to matrix interference
* - Replicate RPDs were not within QC limits
BOLD/Italics - exceeds criterion
B - Estimated value (greater than MDL but less than RL)
NC - No Criteria
ND - Not Detected
Surface Water Contaminants of Concern

TABLE 4
DZUS FASTENERS SITE (1-52-033)
JUNE 2006 THROUGH MAY 2016 SAMPLING EVENTS
SUMMARY OF TAL METALS IN WILLETTS CREEK AND LAKE CAPRI SURFACE WATER SAMPLES

Sample Location	NYSDEC Class A Surface Water Criteria	Willetts Creek	Willetts Creek	Willetts Creek	Willetts Creek	Willetts Creek	Willetts Creek	Willetts Creek	Willetts Creek	Willetts Creek	Lake Capri Cove
Sample ID		SW-6	SW-6	SW-6	SW-6	SW-6	SW-6	SW-6	SW-6	SW-6	SC-4
Laboratory ID		E0868-11A	F1194-08A	G2114-16	J0376-06	K0911-13	L1949-06		AC84282-004	AC91487-006	AC84282-005
Sample Date		6/21/06	8/23/07	11/12/08	3/4/10	5/22/11	09/17/12	11/8/13	4/11/15	5/20/16	4/11/15
		conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	40.5 B	ND	190 B	63.9 B	103 B	84.4 B		ND	420	ND
Antimony	3	ND	***8.0 B***	ND	ND	ND	ND	creekbed	ND	ND	ND
Arsenic	50	ND	ND	ND	ND	ND	ND	was dry	ND	4.7	ND
Barium	1,000	35.5 B	40.6 B	37.7 B	22.8 B	27.8 B	23.6 B	at the	ND	59	ND
Beryllium	3	ND	ND	ND	ND	ND	ND	time of	ND	ND	ND
Cadmium	5	0.55 B	2.8 B	***75.4***	ND	ND	ND	sampling	ND	ND	ND
Calcium	NC	26,700	27,200	20,100	19,200	25,100	21,400		21,000	30,000	15,000
Chromium	50	0.99 B	0.88 B	7.2 B	1.5 B	0.73 B	1.7 B		ND	ND	ND
Cobalt	NC	3.1 B	2.8 B	ND	ND	ND	ND		ND	ND	ND
Copper	200	ND	2.8 B	ND	ND	ND	ND		ND	ND	ND
Iron	300	***5,400***	***2,170***	***4,010***	***639***	***2,280***	***6,840***		***2,000***	***38,000***	ND
Lead	50	ND	2.5 B	9.8 B	ND	ND	ND		ND	4.4	ND
Magnesium	35,000	5,130	5,290	4,080	4,320	4,960	4,860		ND	5,000	ND
Manganese	300	***2,610***	***1,510 E***	***1,040***	***406***	***869***	***1,160***		***550***	***3,800***	***640***
Mercury	0.7	ND	ND	ND	ND	ND	ND		ND	ND	ND
Nickel	100	1.4 B	1.5 B	ND	1.8 B	ND	0.91 B		ND	ND	ND
Potassium	NC	2,230	2,480	2,830	2,250	2,810	2,460		ND	ND	ND
Selenium	10	ND	ND	ND	***10.5 B***	ND	ND		ND	ND	ND
Silver	50	ND	5.9 B	ND	ND	ND	ND		ND	ND	ND
Sodium	20,000	***29,200***	***33,600 E***	***26,000***	***20,500***	***33,800***	***32,100***		***28,000***	***33,000***	***23,000***
Thallium	0.5	ND	ND	ND	ND	ND	ND		ND	ND	ND
Vanadium	NC	1.1 B	0.63 B	1.6 B	1.6 B	ND	ND		ND	ND	ND
Zinc	2,000	35.6 B	32.2 B	48.2 B	43.3 B	35.8 B	21.3 B		ND	97.0	ND

Notes: All values in µg/L
E - Estimated due to matrix interference
* - Replicate RPDs were not within QC limits
BOLD/Italics - exceeds criterion
B - Estimated value (greater than MDL but less than RL)
NC - No Criteria
ND - Not Detected
Surface Water Contaminants of Concern

TABLE 5
DZUS FASTENERS SITE (1-52-033)
JUNE 2006 THROUGH MAY 2016 SAMPLING EVENTS
SUMMARY OF TAL METALS IN WILLETTS CREEK AND LAKE CAPRI SEDIMENT SAMPLES

Sample Location	NYSDEC Technical Guidance for Sediment Criteria		Lake Capri SED-1		Lake Capri SED-1		Lake Capri SED-1		Lake Capri SED-1		Lake Capri SED-1		Lake Capri SED-1		Lake Capri SED-1	
Sample ID			SED-1		SED-1		SED-1		SED-1		SED-1		SED-1		SED-1	
Laboratory ID			E0868-02A		F1193-19A		G2136-10		J0376-09A		K0911-01		L1949-09		AC75648-012		AC84282-006		AC91487-010	
Sample Date	Lowest Effect	Highest Effect	6/21/06		8/23/07		11/14/08		3/4/10		5/22/11		9/17/12		11/8/13		4/11/15		5/20/16	
			conc.	Q	conc.	Q	conc.	Q	conc.	Q	conc.	Q	conc.	Q	conc.	Q	conc.	Q	conc.	Q
Aluminum	NC	NC	5,020		895		7630	*	6,730	E	9,620		10,800		4,200		2,600		7,800	
Antimony	2.0	25	0.7	B	0.41	B	***2.2***	BN	***6.4***		ND		ND		ND		ND		ND	
Arsenic	6.0	33	***7.9***		1.5		***8.7***		***16.1***		***15.2***	*	***18.1***		ND		5.6		***17.0***	
Barium	NC	NC	81.2		31.9		67.7	B*E	175		445		203		73.0		39.0		170.0	
Beryllium	NC	NC	0.5	B	0.074	B	0.64	B	0.75	BE	0.87	B	0.34	B	ND		ND		ND	
Cadmium	0.6	9	***47.8***		***11.6***		***61.4***	N*E	***69.2***		***81.2***	*	***89.8***		***63.0***		***26.0***		***63.0***	
Calcium	NC	NC	2,540		646		3,140	*	5,180	*	7,440	*	3,340		ND		ND		5,800	
Chromium	26	110	20.7		2.8		***27.1***	E	***39.1***	*	***50.0***	*	***57.4***		ND		ND		***37.0***	
Cobalt	NC	NC	7.6		3.7		20.2	E	20.9		29.4	E	19.7	B	ND		ND		17.0	
Copper	16	110	***38.6***		***86.3***		***65.7***		***127***	*	***121***	*	***144***		***61.0***		***220***		***96.0***	
Iron	20,000	20,000	10,300		3,880		19,700	E	***36,000***		***44,600***	*	***26,700***		8,200		8,600		***33,000***	
Lead	31	110	***170***		19.3		***176***	N*E	***225***		***226***	N*	***289***		***110***		***72***		***200***	
Magnesium	NC	NC	1,300		217		1,260	*E	1,770		2,100	*E	2,170		ND		ND		2,600	
Manganese	460	1,100	***1,290***		***1,200***		181	*	***2,250***		***22,600***	*	***3,620***		***3,600***		310		***2,500***	
Mercury	0.15	1.3	***0.21***		0.0071	B	***0.34***		***0.38***		***0.33***	B	***0.52***		ND		ND		ND	
Nickel	16	50	11.4		3.0		***19.4***		***24.1***	***E***	***24.1***	*******	***27.3***		ND		ND		***24.0***	
Potassium	NC	NC	514		91.9		465	*	429		748		660		ND		ND		ND	
Selenium	NC	NC	1.6	B	0.64	B	ND		5.0	B	ND		6.1	B	ND		ND		ND	
Silver	1.0	2.2	ND		ND		ND		ND		***2.7***	***B***	ND		ND		ND		ND	
Sodium	NC	NC	117		44.2	B	136	B	339		433		388	B	ND		ND		ND	
Thallium	NC	NC	5.8		ND		ND		12.7		3.8	B	8.6	B	ND		ND		ND	
Vanadium	NC	NC	29.4		5.1		39.9	E	78.7	E	99.2		90.5		ND		ND		70.0	
Zinc	120	270	***215***		71.6		***445***	*E	***493***	*	***572***	*	***642***		***210***		***140***		***410***	

Notes:
B - Estimated value (greater than MDL but less than RL)
BOLD/Italics - exceeds lowest effects criterion
E - Replicate RPDs were not within QC limits
* - Percent recovery for duplicates were not within QC limits
N - Spike recoveries were not within QC limts

All values in mg/kg
NC - No Criteria
ND - Not Detected
Sediment Contaminants of Concern

TABLE 5
DZUS FASTENERS SITE (1-52-033)
JUNE 2006 THROUGH MAY 2016 SAMPLING EVENTS
SUMMARY OF TAL METALS IN WILLETTS CREEK AND LAKE CAPRI SEDIMENT SAMPLES

Sample Location	NYSDEC Technical Guidance for Sediment Criteria		Lake Capri	Lake Capri	Lake Capri	Lake Capri	Lake Capri	Lake Capri	Lake Capri	Lake Capri	Lake Capri
Sample ID			SED-2	SED-2	SED-2	SED-2	SED-2	SED-2	SED-2	SED-2	SED-2
Laboratory ID			E0868-04A	F1194-01A	G2136-08	J0376-10A	K0911-02	L1949-10	AC75648-012	AC84282-007	AC91487-011
Sample Date	Lowest Effect	Highest Effect	6/21/06	8/23/07	11/14/08	3/4/10	5/22/11	9/17/12	11/8/13	4/11/15	5/20/16
			conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	NC	15,500	1,850	2,800 *	9,050 E	8,310	8,300	9,100	12,000	13,000
Antimony	2.0	25	0.92 B	0.82 B	0.19 BN	1.3 B	ND	ND	ND	ND	ND
Arsenic	6.0	33	***19.7***	2.0 B	1.8	***20.2***	***13.4*** *	***19.2***	ND	***15.0***	***25.0***
Barium	NC	NC	89.8	57.9	40.8 *E	173	108	209	270	91.0	230
Beryllium	NC	NC	1.2	0.16 B	0.16 B	0.89 E	0.75 B	0.40 B	ND	ND	ND
Cadmium	0.6	9	***133***	***21.2***	***12.5*** N*E	***111***	***96.6*** *	***122***	***96.0***	***150***	***140***
Calcium	NC	NC	2,860	1,320	1,400 *	3,810 *	4,330 *	4,090	ND	ND	ND
Chromium	26	110	***33.7***	7.7	6.5 E	***49.4*** *	***45.2*** *	***47.7***	***45.0***	***49.0***	***72.0***
Cobalt	NC	NC	12.1	8.1	3 BE	17.8	11.1 E	16.5	20.0	13.0	19.0
Copper	16	110	***210***	***19.6***	15.6	***97.7*** *	***80.2*** *	***91.0***	***130***	***130***	***140***
Iron	20,000	20,000	***20,300***	8,940	3,850 E	***27,500***	17,300 *	***25,400***	***42,000***	17,000	***24,000***
Lead	31	110	***315***	***40.7***	25.8 N*E	***375***	***315*** N*	***408***	***280***	***340***	***600***
Magnesium	NC	NC	1,510	404	305 *E	1,690	1,360 *E	1,500	ND	ND	ND
Manganese	460	1,100	153	***1,300***	***769*** *	***3,510***	***1,480*** *	***3,790***	***6,800***	***1,900***	***2,600***
Mercury	0.15	1.3	***0.45***	0.047 BN	0.018 B	***0.35***	***0.5***	***0.49***	ND	***0.35***	***0.51***
Nickel	16	50	***17.6***	6.8 E	3.2 B	***22.0*** E	***17.6*** *	***21.9***	ND	ND	***30.0***
Potassium	NC	NC	555	200 E	123 *	373	389	428	ND	ND	ND
Selenium	NC	NC	2.2 B	1.2 B	ND	ND	ND	6.2 B	ND	ND	ND
Silver	1.0	2.2	0.33 B	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NC	NC	143	92.5 B	46.5 B	200	219	228	ND	ND	ND
Thallium	NC	NC	0.39 B	ND	ND	20.5	2.5 B	9.8	ND	ND	ND
Vanadium	NC	NC	55.9	11.9	5.8 E	61.3 E	54.0	60.8	84.0	ND	83.0
Zinc	120	270	***402***	***138***	67.9 *E	***495*** *	***406*** *	***526***	***550***	***480***	***770***

Notes:
B - Estimated value (greater than MDL but less than RL)
BOLD/Italics - exceeds lowest effects criterion
E - Replicate RPDs were not within QC limits
* - Percent recovery for duplicates were not within QC limits
N - Spike recoveries were not within QC limts

All values in mg/kg
NC - No Criteria
ND - Not Detected
Sediment Contaminants of Concern

TABLE 5
DZUS FASTENERS SITE (1-52-033)
JUNE 2006 THROUGH MAY 2016 SAMPLING EVENTS
SUMMARY OF TAL METALS IN WILLETTS CREEK AND LAKE CAPRI SEDIMENT SAMPLES

Sample Location	NYSDEC Technical Guidance for Sediment Criteria		Lake Capri	Lake Capri	Lake Capri	Lake Capri	Lake Capri	Lake Capri	Lake Capri	Lake Capri	Lake Capri
Sample ID			SED-3	SED-3	SED-3	SED-3	SED-3	SED-3	SED-3	SED-3	SED-3
Laboratory ID			E0868-06A	F1194-03A	G2136-14	J0376-11A	K0911-03	L1949-11	AC75648-015	AC84282-008	AC91487-012
Sample Date	Lowest Effect	Highest Effect	6/21/06	8/23/07	11/14/08	3/4/10	5/22/11	9/17/12	11/8/13	4/11/15	5/20/16
			conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	NC	690	2,010	5,860 *	3,490 E	5,890	1,580	6,000	6,600	15,000
Antimony	2.0	25	ND	0.35 B	0.63 BN	ND	ND	ND	ND	ND	ND
Arsenic	6.0	33	0.31 B	3.1	4.2 B	2.4	5.7 *	2.3	ND	4.2	***8.3***
Barium	NC	NC	6.7	29.7	88.2 *E	23.1	65.1	10.2 B	62.0	ND	130
Beryllium	NC	NC	0.047 B	0.18 B	0.30 B	0.29 BE	0.50	0.037 B	ND	ND	ND
Cadmium	0.6	9	***1.5***	***27.7***	***1.7*** N*E	***22.3***	***16.1*** *	***14.1***	***53.0***	***64.0***	***90.0***
Calcium	NC	NC	104	605	11,700 *	1,260 *	2,940 *	199	ND	ND	ND
Chromium	26	110	1.5	7.9	9.6 E	13.7 *	9.1 *	3.7	21.0	ND	***57.0***
Cobalt	NC	NC	0.66 B	4.7	12.6 E	3.6	5.7 E	2.4 B	9.8	ND	32.0
Copper	16	110	2.7	***16.7***	***32.4***	***32.5*** *	10.9 *	8.5	***57.0***	***70.0***	***160***
Iron	20,000	20,000	920	5,730	10,900 E	3,770	6,240 *	1,830	9,100	9,200	***26,000***
Lead	31	110	9.2	***44.2***	***34.0*** N*E	***85.9***	***46.0*** N*	21.4	***130***	***150***	***350***
Magnesium	NC	NC	121	326	4,200 *E	527	675 *E	158	ND	ND	ND
Manganese	460	1,100	89.8	***568***	***908*** *	357	***1,090*** *	132	***1,600***	370	***1,600***
Mercury	0.15	1.3	0.016 B	0.049 BN	0.074 B	0.11	0.061 B	0.032 B	ND	ND	ND
Nickel	16	50	1.6 B	5.0 E	8.5 B	7.4 E	5.8 *	2.4 B	ND	ND	***38.0***
Potassium	NC	NC	115	168 E	1,010 *	173	254	68.7	ND	ND	ND
Selenium	NC	NC	0.2 B	1.2 B	ND	ND	ND	ND	ND	ND	ND
Silver	1.0	2.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NC	NC	13.7 B	51.5 B	528	90.5	103	21.8 B	ND	ND	ND
Thallium	NC	NC	0.33 B	ND	ND	1.7	1.1 B	0.36 B	ND	ND	ND
Vanadium	NC	NC	1.8	9.5	36.4 E	12.5 E	10.7	3.3	ND	ND	60
Zinc	120	270	10.0	110	71.3 *E	106 *	73.5 *	44.7	***220***	***250***	***630***

Notes:
B - Estimated value (greater than MDL but less than RL)
BOLD/Italics - exceeds lowest effects criterion
E - Replicate RPDs were not within QC limits
* - Percent recovery for duplicates were not within QC limits
N - Spike recoveries were not within QC limts

All values in mg/kg
NC - No Criteria
ND - Not Detected
Sediment Contaminants of Concern

TABLE 5
DZUS FASTENERS SITE (1-52-033)
JUNE 2006 THROUGH MAY 2016 SAMPLING EVENTS
SUMMARY OF TAL METALS IN WILLETTS CREEK AND LAKE CAPRI SEDIMENT SAMPLES

Sample Location	NYSDEC Technical Guidance for Sediment Criteria		Lake Capri	Lake Capri	Lake Capri	Lake Capri	Lake Capri	Lake Capri	Lake Capri	Lake Capri	Lake Capri
Sample ID			SED-4	SED-4	SED-4	SED-4	SED-4	SED-4	SED-4	SED-4	SED-4
Laboratory ID			E0868-08A	F1194-05A	G2136-16	J0376-12A	K0911-04	L1949-12	AC75648-016	AC84282-009	AC91487-013
Sample Date	Lowest Effect	Highest Effect	6/21/06	8/23/07	11/14/08	3/4/10	5/22/11	9/17/12	11/8/13	4/11/15	5/20/16
			conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	NC	2,730	3,290	1,790 *	2,170 E	5,850	11,700	13,000	4,800	1,900
Antimony	2.0	25	0.22 B	0.76 B	0.42 BN	0.3 B	ND	ND	ND	ND	ND
Arsenic	6.0	33	3.4	4.0	3.9	1.9	4.4 *	***6.2 B***	ND	4.8	4.3
Barium	NC	NC	41.5	47.8	177 *E	18.7	64.8	103	110	66	19.0
Beryllium	NC	NC	0.2 B	0.22 B	0.13 B	0.19 BE	0.45 B	0.36 B	ND	ND	ND
Cadmium	0.6	9	***32.3***	***32.3***	***15.8*** N*E	***14.8***	***47.3*** *	***79.5***	***98.0***	***57.0***	***49.0***
Calcium	NC	NC	588	1,240	8,090 *	758 *	2,560 *	3,200	ND	ND	ND
Chromium	26	110	8.6	12.5	6.8 E	8.1 *	21.7 *	***45.4***	***47.0***	ND	ND
Cobalt	NC	NC	4.9	10.0	7.0 E	3.1	9.5 E	13.3 B	ND	11	6.3
Copper	16	110	***21.6***	***35.7***	***17.1***	***22.6*** *	***49.5*** *	***117***	***140***	***54***	***21.0***
Iron	20,000	20,000	4,450	9,330	7,280 E	2,540	9,170 *	12,800	17,000	9,000	4,300
Lead	31	110	***71.2***	***193***	***34.3*** N*E	***60.6***	***129*** N*	***297***	***310***	***110***	***43.0***
Magnesium	NC	NC	352	519	653 *E	304	868 *E	1,650	ND	ND	ND
Manganese	460	1,100	***837***	***845***	***11,700*** *	272	***1,150*** *	***1,820***	***2,300***	***1,100***	180
Mercury	0.15	1.3	0.096	0.059 BN	***0.21***	0.082	***0.18***	***0.39***	ND	ND	ND
Nickel	16	50	6.0	10.7 E	6.3	4.8 E	13 *	***25.3***	ND	ND	ND
Potassium	NC	NC	145	236 E	281 *	103	383	623	ND	ND	ND
Selenium	NC	NC	0.76 B	1.9 B	3.3	ND	ND	4.6 B	ND	ND	ND
Silver	1.0	2.2	ND	ND	***1.1 B***	ND	ND	ND	ND	ND	ND
Sodium	NC	NC	35.4 B	87.0	131	56 B	145 B	312 B	ND	ND	ND
Thallium	NC	NC	3.7	ND	2.8	1.6	1.7 B	4.6 B	ND	ND	ND
Vanadium	NC	NC	9.2	16.9	7.4 E	7.2 E	26.6	41.2	ND	ND	ND
Zinc	120	270	***122***	***186***	110 *E	71.3 *	***232*** *	***323***	***330***	***250***	110

Notes:
B - Estimated value (greater than MDL but less than RL)
BOLD/Italics - exceeds lowest effects criterion
E - Replicate RPDs were not within QC limits
* - Percent recovery for duplicates were not within QC limits
N - Spike recoveries were not within QC limts

All values in mg/kg
NC - No Criteria
ND - Not Detected
Sediment Contaminants of Concern

TABLE 5
DZUS FASTENERS SITE (1-52-033)
JUNE 2006 THROUGH MAY 2016 SAMPLING EVENTS
SUMMARY OF TAL METALS IN WILLETTS CREEK AND LAKE CAPRI SEDIMENT SAMPLES

Sample Location	NYSDEC Technical Guidance for Sediment Criteria		Willetts Creek		Willetts Creek		Willetts Creek		Willetts Creek		Willetts Creek		Willetts Creek		Willetts Creek		Willetts Creek	
Sample ID			SED-5		SED-5		SED-5		SED-5		SED-5		SED-5		SED-5		SED-5	
Laboratory ID			E0868-10A		F1193-17A		G2114-21		J0376-13A		K0911-05		L1949-13		AC75648-017		AC84282-010		AC91487-014	
Sample Date	Lowest Effect	Highest Effect	6/21/06		8/23/07		11/14/08		3/4/10		5/22/11		9/18/12		11/8/13		4/11/15		5/20/16	
			conc.	Q	conc.	Q	conc.	Q	conc.	Q	conc.	Q	conc.	Q	conc.	Q	conc.	Q	conc.	Q
Aluminum	NC	NC	1,060		552		5,150		2,540	E	6,300		345		820		5,300		9,900	
Antimony	2.0	25	0.074	B	0.27	B	1.1	BN	0.68	B	1.4	BN	ND		ND		ND		ND	
Arsenic	6.0	33	0.6	B	0.52	B	***8.2***		***6.5***		***9.3***	*	1.6		ND		***11.0***		***18.0***	
Barium	NC	NC	12.1		13.6		96.6		84.6		114		15.1		ND		120		150	
Beryllium	NC	NC	0.083	B	0.03	B	0.34	B	0.24	BE	0.57	B	0.010	B	ND		ND		ND	
Cadmium	0.6	9	0.43		***1.6***		***52.0***		***28.8***		***73.5***	*	***1.7***		***7.1***		***62.0***		***140***	
Calcium	NC	NC	228		1,430		4,150		3,470	*	7,960	*	330		ND		4,300		13,000	
Chromium	26	110	3.8		2.7		***33.3***		18.5	*	***44.0***	*	3.5		ND		***35.0***		***64.0***	
Cobalt	NC	NC	1.2	B	1.1	B	7.8		7.4		13.3	E	1.1	B	ND		13.0		20.0	
Copper	16	110	4.7		4.7		***103***		***54.0***	*	***166***	*	9.0		***42.0***		***110***		***210***	
Iron	20,000	20,000	3,400		3,410		***23,900***		***25,800***		***39,900***	*	4,180		5,100		***32,000***		***42,000***	
Lead	31	110	7.9		4.9		***215***	E	***83.3***		***229***	N*	9.4		***37.0***		***190***		***350***	
Magnesium	NC	NC	604		864		1,370		701		1,370	*E	75.8		ND		ND		2,500	
Manganese	460	1,100	174		291		***2,140***		***3,750***		***1,210***	*	417		***610***		***3,500***		***670***	
Mercury	0.15	1.3	0.016	B	0.0055	B	***0.48***		***0.26***		***0.37***		0.023	B	ND		***1.2***		***0.73***	
Nickel	16	50	1.6		1.0	B	***19.2***		8.0	E	***22.5***	*	1.9	B	ND		ND		***32.0***	
Potassium	NC	NC	135		58.3		320		188		360		29.6	B	ND		ND		ND	
Selenium	NC	NC	0.28	B	0.56	B	ND		2.3	B	ND		0.87	B	ND		ND		ND	
Silver	1.0	2.2	ND		ND		ND		0.52	B	ND		0.084	B	ND		ND		ND	
Sodium	NC	NC	18.3	B	102		204		141		323		11.7	B	ND		ND		ND	
Thallium	NC	NC	0.56	B	ND		2.1	B	20.1		1.9	B	0.76	B	ND		ND		ND	
Vanadium	NC	NC	5.6		4.5		54.2		44.6	E	175		7.8		27.0		60.0		130	
Zinc	120	270	13.2		26.2		***290***	E	***171***	*	***440***	*	24.2		78.0		***360***		***700***	

Notes:
B - Estimated value (greater than MDL but less than RL)
BOLD/Italics - exceeds lowest effects criterion
E - Replicate RPDs were not within QC limits
* - Percent recovery for duplicates were not within QC limits
N - Spike recoveries were not within QC limts

All values in mg/kg
NC - No Criteria
ND - Not Detected
Sediment Contaminants of Concern

TABLE 5
DZUS FASTENERS SITE (1-52-033)
JUNE 2006 THROUGH MAY 2016 SAMPLING EVENTS
SUMMARY OF TAL METALS IN WILLETTS CREEK AND LAKE CAPRI SEDIMENT SAMPLES

Sample Location	NYSDEC Technical Guidance for Sediment Criteria		Willetts Creek	Willetts Creek	Willetts Creek	Willetts Creek	Willetts Creek	Willetts Creek	Willetts Creek	Willetts Creek	Willetts Creek
Sample ID			SED-6	SED-6	SED-6	SED-6	SED-6	SED-6	SED-6	SED-6	SED-6
Laboratory ID			E0868-12A	F1194-07A	G2114-17	J0376-14	K0911-06	L1949-14	AC75648-018	AC84282-011	AC91487-015
Sample Date	Lowest Effect	Highest Effect	6/21/06	8/23/07	11/14/08	3/4/10	5/22/11	9/18/12	11/8/13	4/11/15	5/20/16
			conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	NC	1,030	775	7,700	802 E	1,370	574	1,000	810	3,700
Antimony	2.0	25	0.076	0.38 B	**2.6** N	0.38 B	0.44 BN	ND	ND	ND	ND
Arsenic	6.0	33	0.97	0.84 B	***6.4***	0.79	2.7 *	0.64 B	ND	0.56	2.7
Barium	NC	NC	7.4	4.7 B	89.7	3.6 B	10.4	2.7 B	ND	ND	28.0
Beryllium	NC	NC	0.094	0.049 B	0.36 B	0.069 BE	0.11 B	ND	ND	ND	ND
Cadmium	0.6	9	0.23	0.31	***101***	0.31	ND	0.30	ND	ND	***1.4***
Calcium	NC	NC	4,760	599	7,690	2,450 *	4,670 *	299	ND	ND	5,200
Chromium	26	110	2.4	3.4	***41.8***	4.4 *	15.9 *	5.4	ND	ND	***33.0***
Cobalt	NC	NC	1.8	0.77 B	8.1	0.65 B	1.9 BE	0.50 B	3.3	ND	ND
Copper	16	110	***28.3***	6.3	***77.3***	9.4 *	***21.5*** *	8.0	11.0	8.7	***54.0***
Iron	20,000	20,000	3,290	2,900	***25,600***	2,810	***36,900*** *	2,120	***27,000***	2,600	11,000
Lead	31	110	7.9	10.3	***109*** E	9.5	***39.7*** N*	8.7	***88.0***	7.2	***57.0***
Magnesium	NC	NC	2,930	468	1,980	1,410	1,290 *E	263	ND	ND	2,200
Manganese	460	1,100	102	30.4	***978***	21.3	118 *	16.2	***610***	18.0	100
Mercury	0.15	1.3	0.036 B	ND	***0.15***	ND	0.019 B	0.011 B	ND	ND	ND
Nickel	16	50	1.8	1.9 BE	***17.2***	1.8 BE	10.1 *	2.0 B	ND	ND	9.7
Potassium	NC	NC	118	122 E	528	66.4	97.5	54.2 B	ND	ND	ND
Selenium	NC	NC	ND	0.69 B	ND	ND	ND	ND	ND	ND	ND
Silver	1.0	2.2	ND	ND	ND	ND	ND	0.080 B	ND	ND	ND
Sodium	NC	NC	24.9 B	70.7	414	47.7	51.8	22.0 B	ND	ND	ND
Thallium	NC	NC	0.25 B	0.36 B	0.98 B	ND	ND	ND	ND	ND	ND
Vanadium	NC	NC	9.9	6.0	42.4	4.2 E	8.5	3.2	18.0	ND	23.0
Zinc	120	270	17.2	24.2	***409*** E	31.0 *	68.9 *	38.9	66.0	32.0	***300***

Notes:
B - Estimated value (greater than MDL but less than RL)
BOLD/Italics - exceeds lowest effects criterion
E - Replicate RPDs were not within QC limits
* - Percent recovery for duplicates were not within QC limits
N - Spike recoveries were not within QC limts

All values in mg/kg
NC - No Criteria
ND - Not Detected
Sediment Contaminants of Concern

TABLE 5
DZUS FASTENERS SITE (1-52-033)
JUNE 2006 THROUGH MAY 2016 SAMPLING EVENTS
SUMMARY OF TAL METALS IN WILLETTS CREEK AND LAKE CAPRI SEDIMENT SAMPLES

Sample Location	NYSDEC Technical Guidance for Sediment Criteria		Lake Capri Cove	Lake Capri Cove	Lake Capri Cove	Lake Capri Cove	Lake Capri Cove
Sample ID			SC-1	SC-2	SC-3	SC-4	SC-5
Laboratory ID			AC84282-016	AC84282-017	AC84282-018	AC84282-019	AC84282-020
Sample Date	Lowest Effect	Highest Effect	4/10/15 conc. Q	4/10/15 conc. Q	4/10/15 conc. Q	4/10/15 conc. Q	4/10/15 conc. Q
Aluminum	NC	NC	NC	NC	NC	600	NC
Antimony	2.0	25	NC	NC	NC	ND	NC
Arsenic	6.0	33	NC	NC	NC	0.52	NC
Barium	NC	NC	NC	NC	NC	ND	NC
Beryllium	NC	NC	NC	NC	NC	ND	NC
Cadmium	0.6	9	***12.0***	***0.82***	ND	ND	***1.4***
Calcium	NC	NC	NC	NC	NC	ND	NC
Chromium	26	110	NC	NC	NC	ND	NC
Cobalt	NC	NC	NC	NC	NC	ND	NC
Copper	16	110	NC	NC	NC	ND	NC
Iron	20,000	20,000	NC	NC	NC	1,400	NC
Lead	31	110	NC	NC	NC	ND	NC
Magnesium	NC	NC	NC	NC	NC	ND	NC
Manganese	460	1,100	NC	NC	NC	61.0	NC
Mercury	0.15	1.3	NC	NC	NC	ND	NC
Nickel	16	50	NC	NC	NC	ND	NC
Potassium	NC	NC	NC	NC	NC	ND	NC
Selenium	NC	NC	NC	NC	NC	ND	NC
Silver	1.0	2.2	NC	NC	NC	ND	NC
Sodium	NC	NC	NC	NC	NC	ND	NC
Thallium	NC	NC	NC	NC	NC	ND	NC
Vanadium	NC	NC	NC	NC	NC	ND	NC
Zinc	120	270	NC	NC	NC	ND	NC

Notes:
B - Estimated value (greater than MDL but less than RL)
BOLD/Italics - exceeds lowest effects criterion
E - Replicate RPDs were not within QC limits
* - Percent recovery for duplicates were not within QC limits
N - Spike recoveries were not within QC limts

All values in mg/kg
NC - No Criteria
ND - Not Detected
Sediment Contaminants of Concern

TABLE 6
DZUS FASTENERS SITE (SITE # 1-52-033)
SUMMARY OF CADMIUM RESULTS
JULY 2006 through MAY 2016

Media	Cleanup Criterion	Number of Samples Collected	Number of Detections	Range of Detections	# Detections Above Criterion	Comments
Groundwater	5 µg/L	121 unfiltered	90	0.23 - 1,080	64	Exceedances are mostly on the eastern side of the site. There is a downard trend in concentration in most wells.
		68 filtered	28	1.1 - 120	22	
Surface Water (µg/L)	5 µg/L	48	37	0.32 - 75.4	7	Exceedances are limited to creek samples.
Long Term Sediment Samples						
Lowest effects	0.6 mg/kg	53	49	0.23 - 150	44	3 of 4 lake samples are consistently above the criterion as is 1 creek sample.
Highest effects*	9 mg/kg	53	49	0.23 - 150	37	
Willetts Creek *Characterization Sediment Samples*	9 mg/kg	263	226	0.42 - 8,200	105	
Lake Capri *Characterization Sediment Samples*	9 mg/kg	27	27	19 - 150	27	

Notes:

* - Cleanup criterion for Lake Capri and Willetts Creek sediment is the highest effects level, 9 mg/kg.

Figures

USGS NY Bay Shore West Quadrangle

U.S.G.S. 1:24 000 SCALE TOPOGRAPHIC MAP

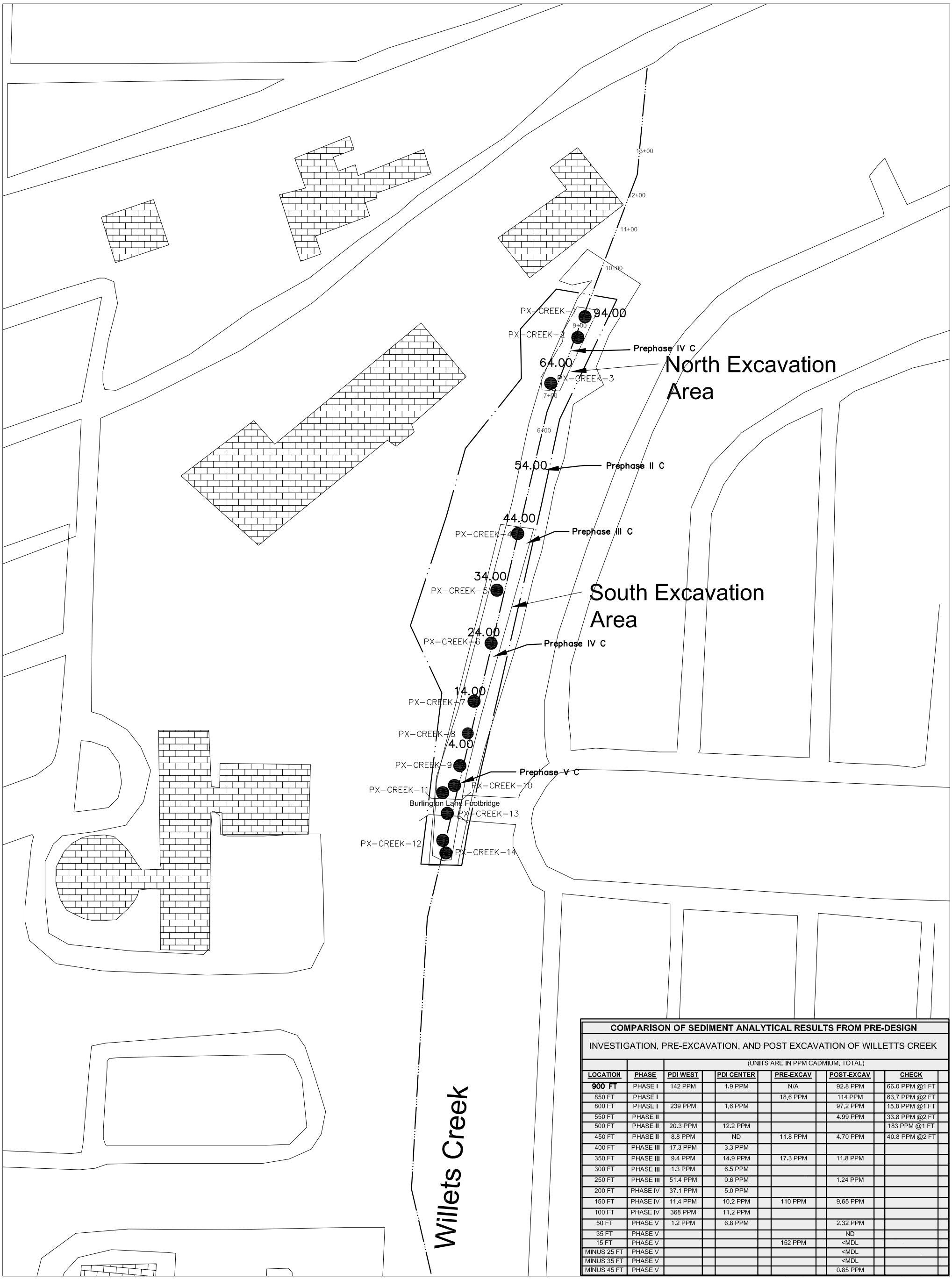
Prepared by: AECOM

Prepared for: NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Multi Site G
Operation, Maintenance & Monitoring

Site Location
Dzus Fasteners Site

Date:	Scale:	Figure No. :
January 2013	1 inch = 2,500 feet	1



COMPARISON OF SEDIMENT ANALYTICAL RESULTS FROM PRE-DESIGN INVESTIGATION, PRE-EXCAVATION, AND POST EXCAVATION OF WILLETTS CREEK

(UNITS ARE IN PPM CADMIUM, TOTAL)

LOCATION	PHASE	PDI WEST	PDI CENTER	PRE-EXCAV	POST-EXCAV	CHECK
900 FT	PHASE I	142 PPM	1.9 PPM	N/A	92.8 PPM	66.0 PPM @1 FT
850 FT	PHASE I			18.6 PPM	114 PPM	63.7 PPM @2 FT
800 FT	PHASE I	239 PPM	1.6 PPM		97.2 PPM	15.8 PPM @1 FT
550 FT	PHASE II				4.99 PPM	33.8 PPM @2 FT
500 FT	PHASE II	20.3 PPM	12.2 PPM			183 PPM @1 FT
450 FT	PHASE II	8.8 PPM	ND	11.8 PPM	4.70 PPM	40.8 PPM @2 FT
400 FT	PHASE III	17.3 PPM	3.3 PPM			
350 FT	PHASE III	9.4 PPM	14.9 PPM	17.3 PPM	11.8 PPM	
300 FT	PHASE III	1.3 PPM	6.5 PPM			
250 FT	PHASE III	51.4 PPM	0.6 PPM		1.24 PPM	
200 FT	PHASE IV	37.1 PPM	5.0 PPM			
150 FT	PHASE IV	11.4 PPM	10.2 PPM	110 PPM	9.65 PPM	
100 FT	PHASE IV	368 PPM	11.2 PPM			
50 FT	PHASE V	1.2 PPM	6.8 PPM		2.32 PPM	
35 FT	PHASE V				ND	
15 FT	PHASE V			152 PPM	<MDL	
MINUS 25 FT	PHASE V				<MDL	
MINUS 35 FT	PHASE V				<MDL	
MINUS 45 FT	PHASE V				0.85 PPM	

Legend

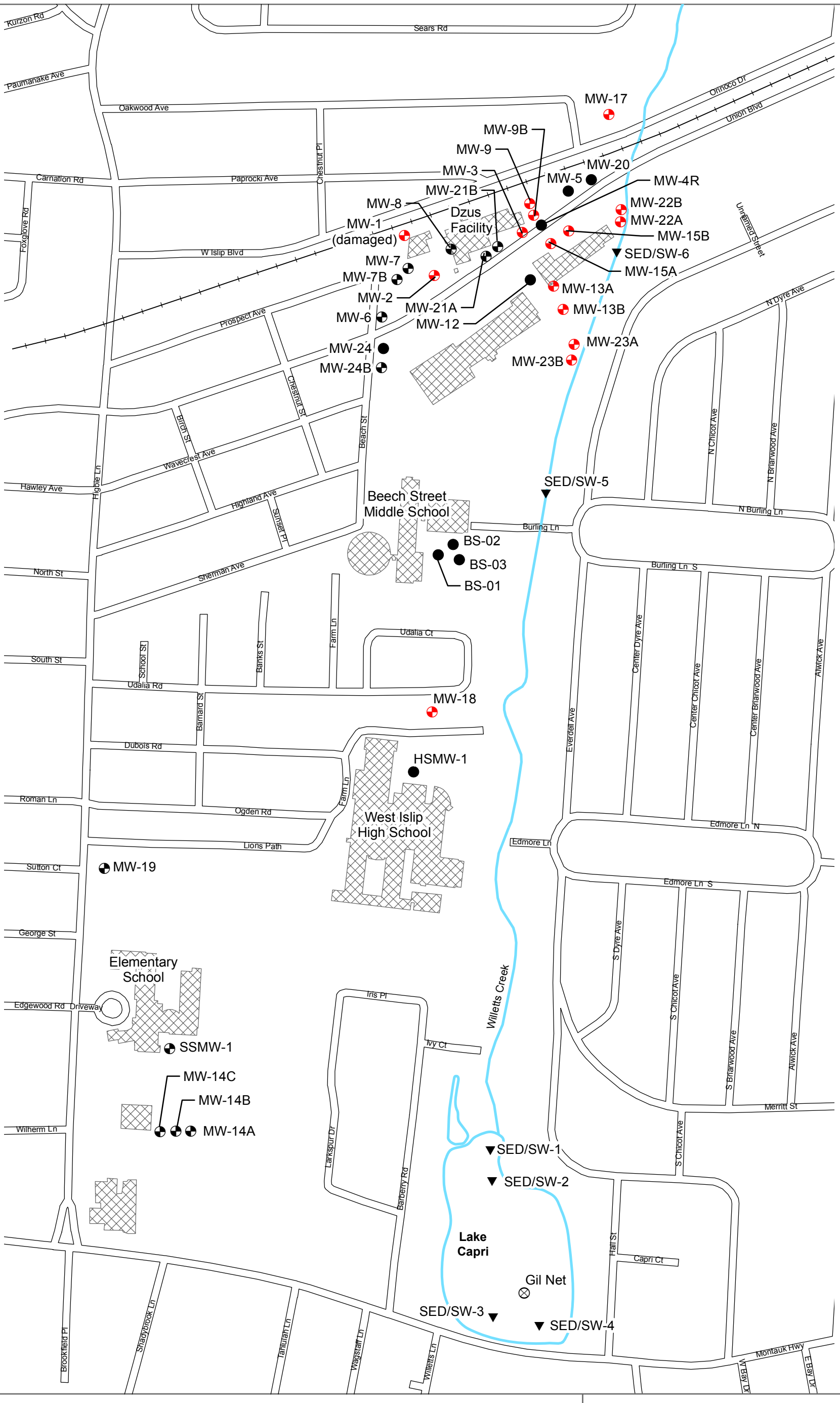
- Excavation Boundary
- Project Boundary
- Approximate Centerline of Creek Bed
- Wetlands Boundary

N

AECOM

Comparison of Pre and Post Excavation Results for Willett's Creek (adopted from Figure 4, Construction and Certification Report (OU2), 2000

Multi Site G	PROJECT NO. 95900.03	DWG NO. Figure 1A	REV 1
Dzus Fasteners	SCALE Not to Scale		SHEET

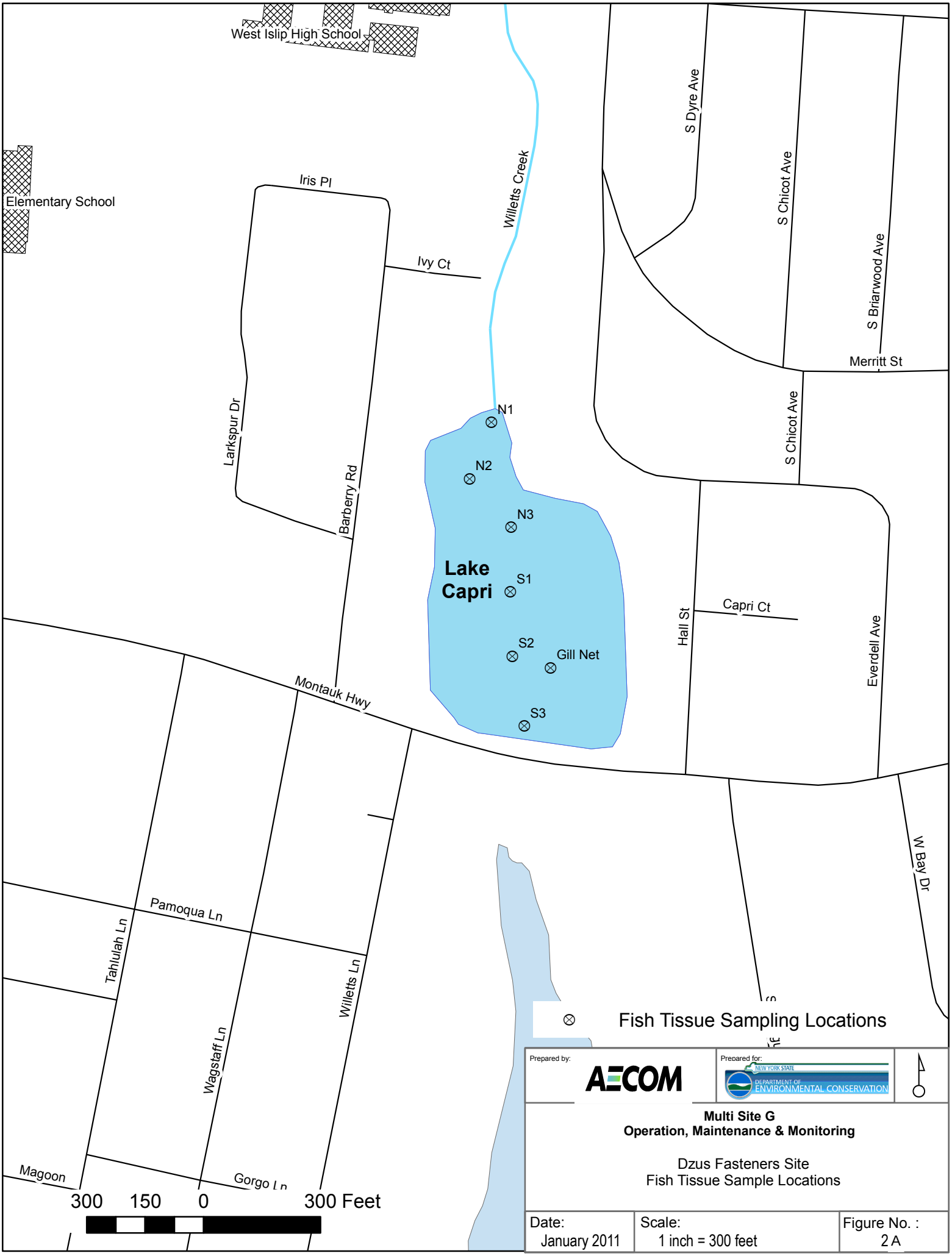


Legend

- EXISTING WELLS INCLUDED IN LTM
- EXISTING MONITORING WELLS
- MISSING MONITORING WELLS
- SURFACE WATER AND SEDIMENT SAMPLE LOCATION
- GIL NET

Prepared by: AECOM

SUBMITTED BY: PK	MULTI SITE G - Dzus Fasteners SITE NO. 1-52-033
DRAWN BY: CF	SITE PLAN
APPROVED BY: PK	DATE: JULY 2015 / SCALE: 1 " = 400 feet / DRAWING NO.: 2


West Islip High School
Elementary School
Iris Pl
Ivy Ct
Willetts Creek
S Dyre Ave
S Chicot Ave
S Briarwood Ave
Merritt St
Larkspur Dr
Barberry Rd
N1
N2
N3
Lake Capri
S1
S2
Gill Net
S3
Hall St
Capri Ct
Everdell Ave
Montauk Hwy
W Bay Dr
Pamoqua Ln
Tahlulah Ln
Wagstaff Ln
Willetts Ln
Magoon
Gorgo Ln
300 150 0 300 Feet
Fish Tissue Sampling Locations
Prepared by:
AECOM
Prepared for:
NEW YORK STATE
DEPARTMENT OF
ENVIRONMENTAL CONSERVATION
Multi Site G
Operation, Maintenance & Monitoring
Dzus Fasteners Site
Fish Tissue Sample Locations
Date:
January 2011
Scale:
1 inch = 300 feet
Figure No. :
2 A

Legend

▽ Cove Sampling Locations

0 25 50 100 Feet

N

Sources:
Aerials from 2013 Half Foot 4 Band Long Island Zone New York Statewide Digital Orthoimagery Program

Prepared by: AECOM

SUBMITTED BY: PK	MULTI SITE G - Dzus Fasteners SITE NO. 1-52-033		
DRAWN BY: CF	LAKE CAPRI COVE SAMPLE LOCATIONS		
APPROVED BY: PK	DATE: JULY 2015	SCALE: 1 " = 75 feet	DRAWING NO.: 2B

MW-17
(NO ELEVATION DATA)

MW-9
(13.59)

MW-9B
(13.55)

MW-3
(13.40)

MW-15B
(13.34)

MW-1
(13.17)

MW-22B
(13.41)

MW-22A
(13.57)

MW-15A
(13.32)

MW-13B
(12.87)

MW-13A
(13.00)

MW-2
(12.91)

MW-23A
(12.54)

MW-18
(9.36)

13.5
13
12.5
12
11.5
11
10.5
10
9.5

Dzus Facility

West Islip High School

Beech Street Middle School

Elementary School

Lake Capri

Willetts Creek

Kurzon Rd
Sears Rd
Paumanake Ave
Oakwood Ave
Chestnut Pl
Orinoco Dr
Union Blvd
Carnation Rd
Paprocki Ave
Foxglove Rd
W Islip Blvd
Unnamed Street
Prospect Ave
N Dyre Ave
Beach St
Chestnut St
Birch St
Waverest Ave
Hawley Ave
Higbie Ln
Highland Ave
Sunset Pl
N Chicot Ave
N Briarwood Ave
N Burling Ln
Burling Ln
Burling Ln S
North St
Sherman Ave
Udalia Ct
School St
Banks St
Farm Ln
Udalia Rd
South St
Barnard St
Dubois Rd
Roman Ln
Ogden Rd
Lions Path
Sutton Ct
George St
Edgewood Rd
Driveway
Iris Pl
Ivy Ct
Center Dyre Ave
Center Chicot Ave
Center Briarwood Ave
Atwick Ave
Everdell Ave
Edmore Ln
Edmore Ln N
Edmore Ln S
S Dyre Ave
S Chicot Ave
S Briarwood Ave
Merritt St
Wilhelm Ln
Larkspur Dr
Barberry Rd
Hart St
Capri Ct
Brookfield Pl
Shadybrook Ln
Tahiuan Ln
Wagstaff Ln
Willetts Ln
Montauk Hwy
E Bay Dr

N

Legend

0 200 400 800 Feet

GROUNDWATER CONTOUR INTERVAL - 0.5 ft

(9.96) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL

EXISTING WELLS INCLUDED IN LTM

EXISTING MONITORING WELLS

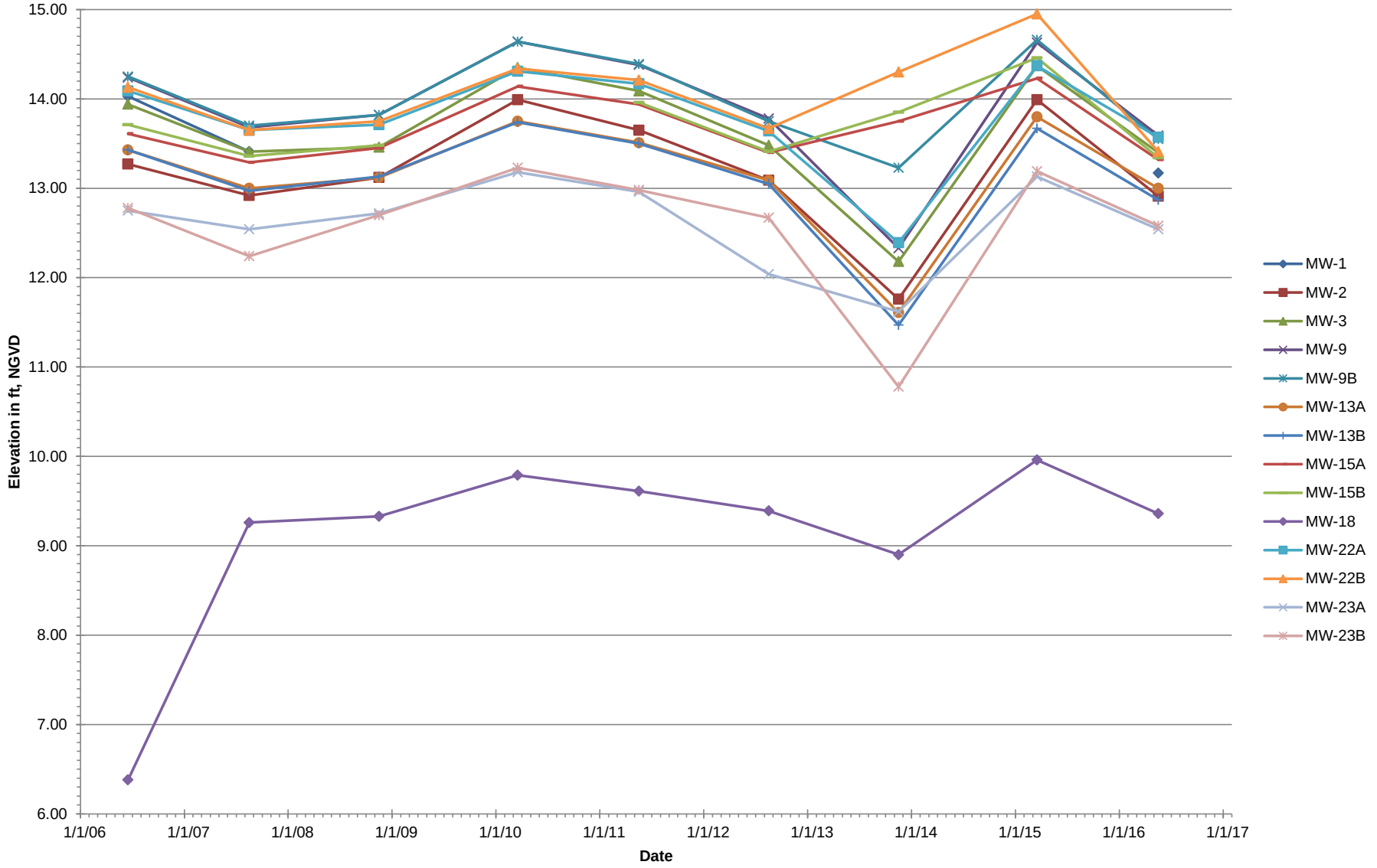
MISSING MONITORING WELLS

SURFACE WATER AND SEDIMENT SAMPLE LOCATION

Prepared by: AECOM

SUBMITTED BY: PK	MULTI SITE G - Dzus Fasteners SITE NO. 1-52-033 GROUNDWATER CONTOUR MAP MAY 2016
DRAWN BY: CF	
APPROVED BY: PK	DATE: JULY 2015 / SCALE: 1 " = 400 feet / DRAWING NO.: 3

Figure 3A
Dzus Fasteners (1-52-077)
Groundwater Hydrograph



MW-1 was destroyed in December 2007, replaced in August 2015

Compound	MW-9 May-16 U	MW-9 May-16 F
Iron	**1200**	ND
Sodium	**39,000**	**40,000**

MW-9B May-16 U	MW-9B May-16 F
No exceedances	

Compound	MW-17 May-16 U	MW-17 May-16 F
Iron	**1900**	ND
Manganese	**490**	52

Compound	MW-3 May-16 U	MW-3 May-16 F
Cadmium	**11.0**	**9.4**
Iron	**980**	ND

Compound	MW-22B May-16 U	MW-22B May-16 F
Manganese	**500**	**500**

Compound	MW-1 May-16 U	MW-1 May-16 F
Iron	**340**	ND
Sodium	29,000	**30,000**

Compound	MW-22A May-16 U	MW-22A May-16 F
Iron	**2,900**	**2500**
Manganese	**450**	**420**
Sodium	**41,000**	**39,000**

Compound	MW-2 May-16 U	MW-2 May-16 F
Iron	**6,100**	**7,400**
Sodium	**35,000**	**38,000**

Compound	MW-13A May-16 U	MW-13A May-16 F
Cadmium	**10**	**8.5**
Iron	**3,200**	**1,700**
Manganese	**360**	**350**
Sodium	**39,000**	**37,000**

Compound	MW-15A May-16 U	MW-15A May-16 F
Cadmium	**11.0**	4.8
Iron	**360**	ND
Sodium	**25,000**	**25,000**

Compound	MW-15B May-16 U	MW-15B May-16 F
Iron	**720**	**710**
Sodium	**20,000**	19,000

Compound	MW-13B May-16 U	MW-13B May-16 F
Cadmium	**6.9**	**6.6**
Sodium	**43,000**	**41,000**

Compound	MW-23A May-16 U	MW-23A May-16 F
Cadmium	**8.9**	ND
Iron	**11,000**	**10,000**
Manganese	**930**	**920**
Sodium	**130,000**	**130,000**

Compound	MW-23B May-16 U	MW-23B May-16 F
Cadmium	**42.0**	**37.0**
Iron	**420**	ND

Compound	MW-18 May-16 U	MW-18 May-16 F
Sodium	**60,000**	**61,000**

Dzus Facility

Beech Street Middle School

West Islip High School

Elementary School

Lake Capri

Willetts Creek

Kurzon Rd, Udall Rd, Alice Rd, Patricia Ave, Orinoco Dr, Paumanake Ave, Oakwood Ave, Carnation Rd, Foxglove Rd, Union Blvd, North St, Sherman Ave, Banks St, Farm Ln, Udalia Ct, South St, School St, Udalia Rd, Barnard St, Dubois Rd, Roman Ln, Ogden Rd, Lions Path, Sutton Ct, George St, Edgewood Rd, Higbie Ln, Wilhelm Ln, Brookfield Pl, adybrook Ln, Tahtulah Ln, Montauk Hwy, Wagstaff Ln, Larkspur Dr, Barberry Rd, Iris Pl, Ivy Ct, Burling Ln, Burling Ln S, Everdell Ave, Center Dyre Ave, Center Chicot Ave, Center Briarwood Ave, Atwick Ave, Edmore Ln, Edmore Ln N, Edmore Ln S, S Dyre Ave, S Chicot Ave, S Briarwood Ave, Merritt St, Keith Ln, Hall St, Capri Ct

0 200 400 800 Feet

N

Legend

- EXISTING WELLS INCLUDED IN LTM
- EXISTING MONITORING WELLS
- MISSING MONITORING WELLS
- SURFACE WATER/SEDIMENT SAMPLE LOCATION
- UPGRADIENT WELLS
- SOURCE AREA WELLS
- DOWNGRADIENT WELLS
- WILLETTS CREEK WELLS

Compound	NYSDEC Criteria
Cadmium	5
Chromium	50
Iron	300
Manganese	300
Sodium	20,000
U - Unfiltered sample	
F - Filtered sample	

Notes:
Contaminants of Concern
All values in µg/L
BOLD/Italics exceeds criterion

Prepared by: AECOM

SUBMITTED BY: PK

DRAWN BY: CF

APPROVED BY: PK

MULTI SITE G - Dzus Fasteners
SITE NO. 1-52-033

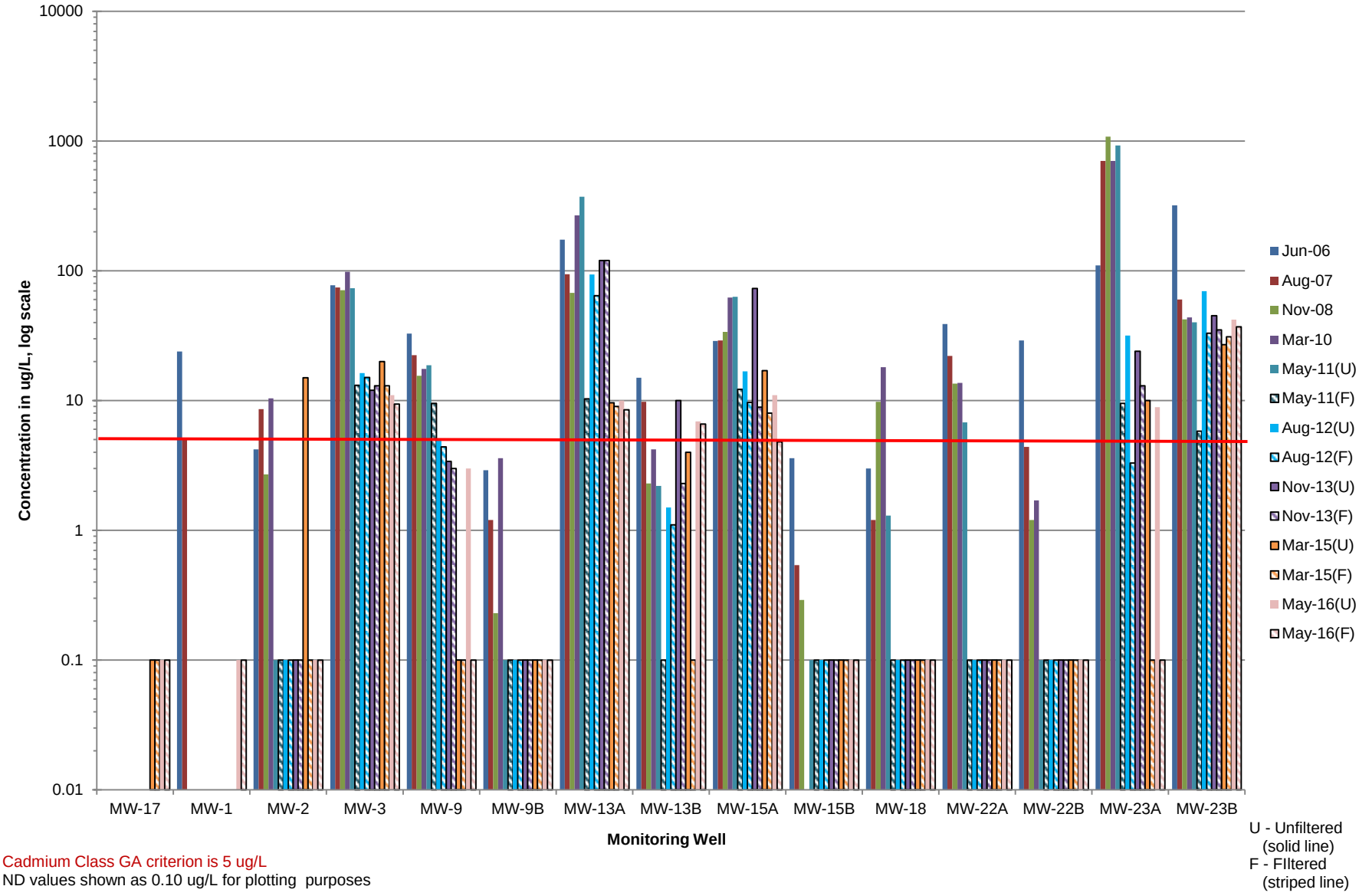
SUMMARY OF TAL METALS IN GROUNDWATER MAY 2016

DATE: JULY 2016

SCALE: 1 " = 400 feet

DRAWING NO.: **4**

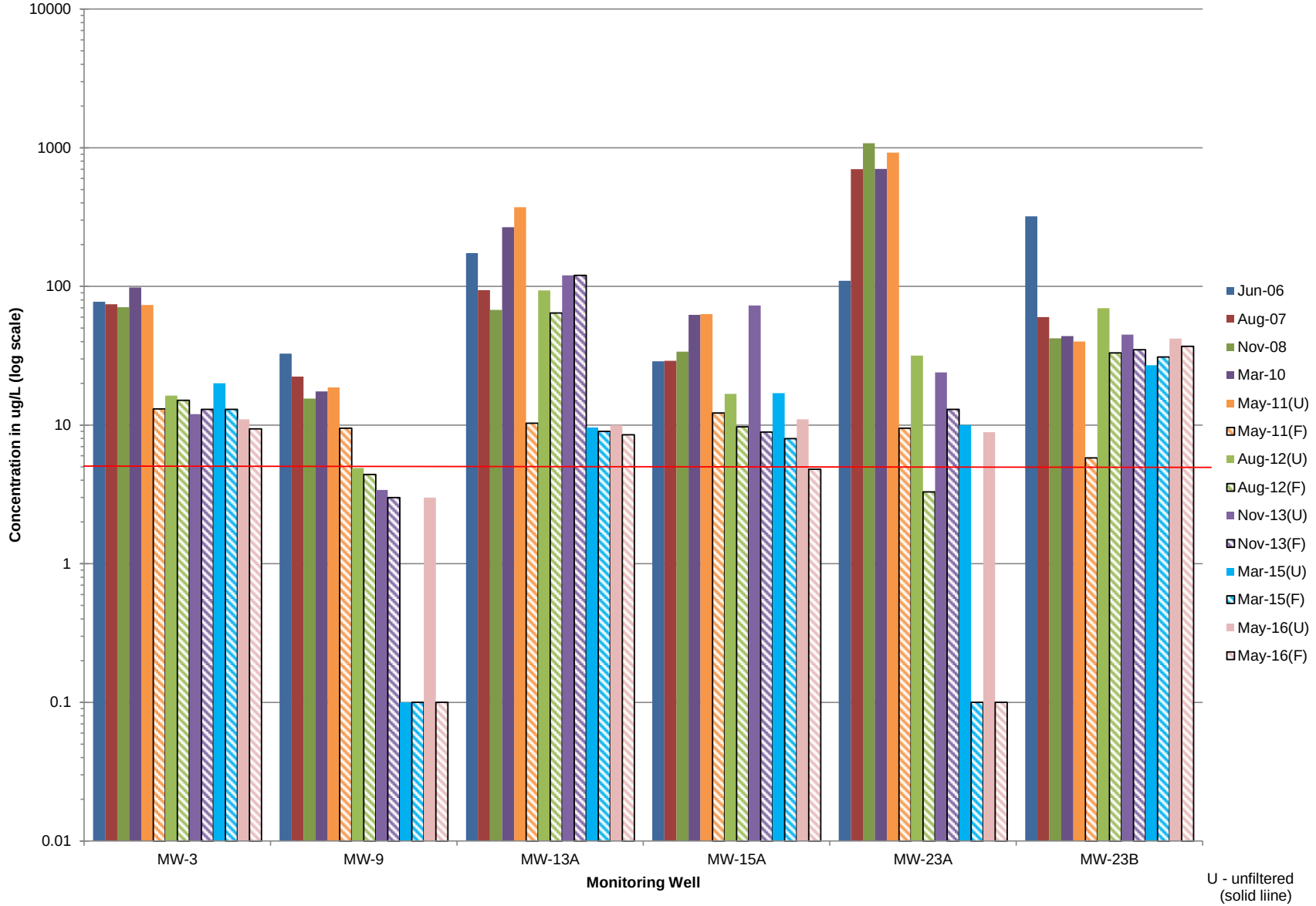
FIGURE 5
CADMIUM CONCENTRATIONS IN LONG TERM MONITORING WELLS
DZUS FASTRENERS SITE (1-52-033)



Cadmium Class GA criterion is 5 ug/L
ND values shown as 0.10 ug/L for plotting purposes

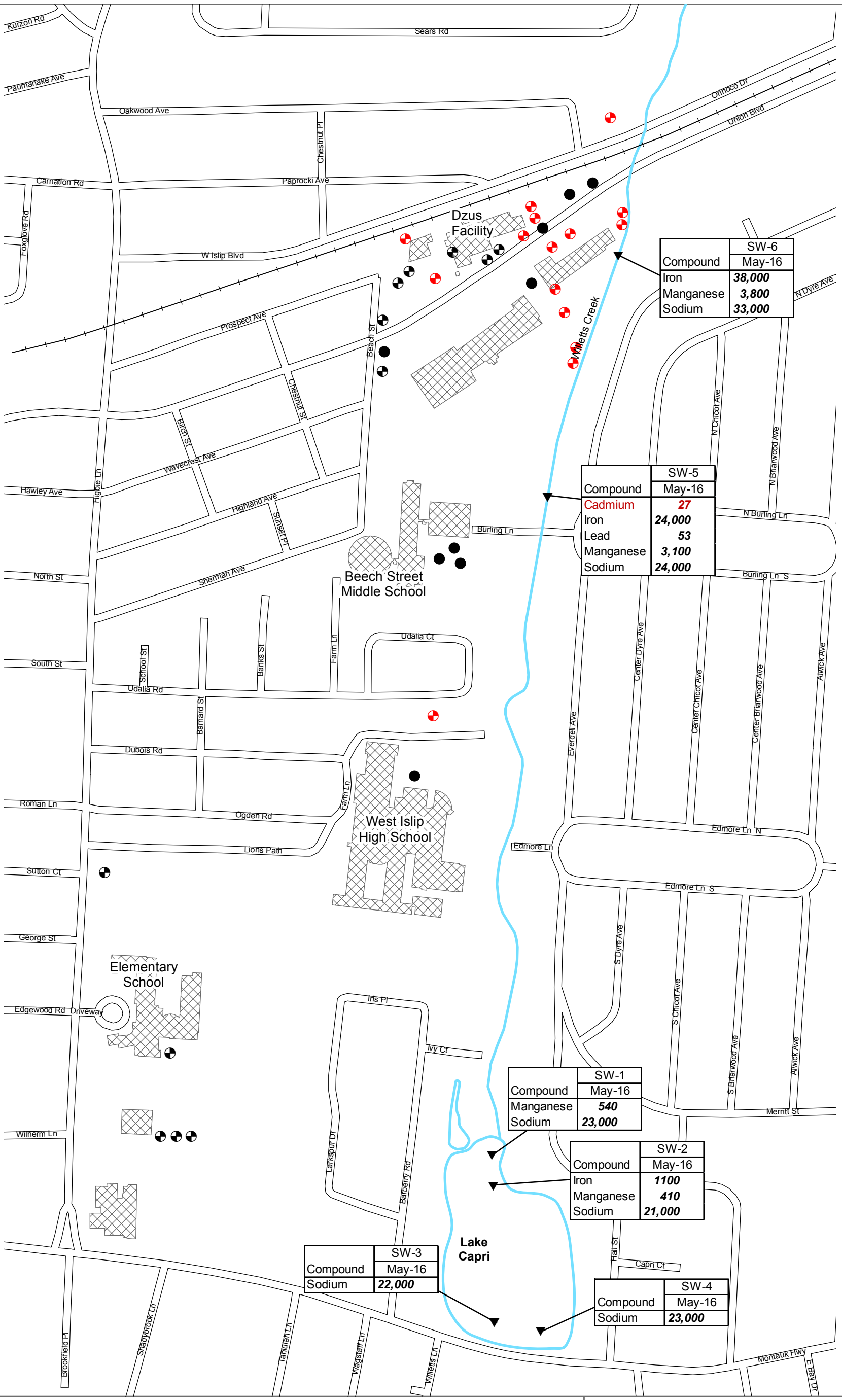
U - Unfiltered (solid line)
F - FIltered (striped line)

FIGURE 6
CADMIUM CONCENTRATIONS IN SELECTED MONITORING WELLS
DZUS FASTENERS SITE (1-52-033)



Cadmium Class GA criterion is 5 ug/L
ND values shown as 0.10 ug/L for plotting purposes

U - unfiltered (solid liine)
F - filtered (striped line)



Legend

- EXISTING WELLS INCLUDED IN LTM
- EXISTING MONITORING WELLS
- MISSING MONITORING WELLS
- SURFACE WATER AND SEDIMENT SAMPLE LOCATION

0 200 400 800 Feet

Compound	Surface Water Criteria
Cadmium	5
Iron	300
Manganese	300
Sodium	20,000

Notes:
Contaminants of Concern
All values in ug/L
BOLD/Italics exceeds criterion

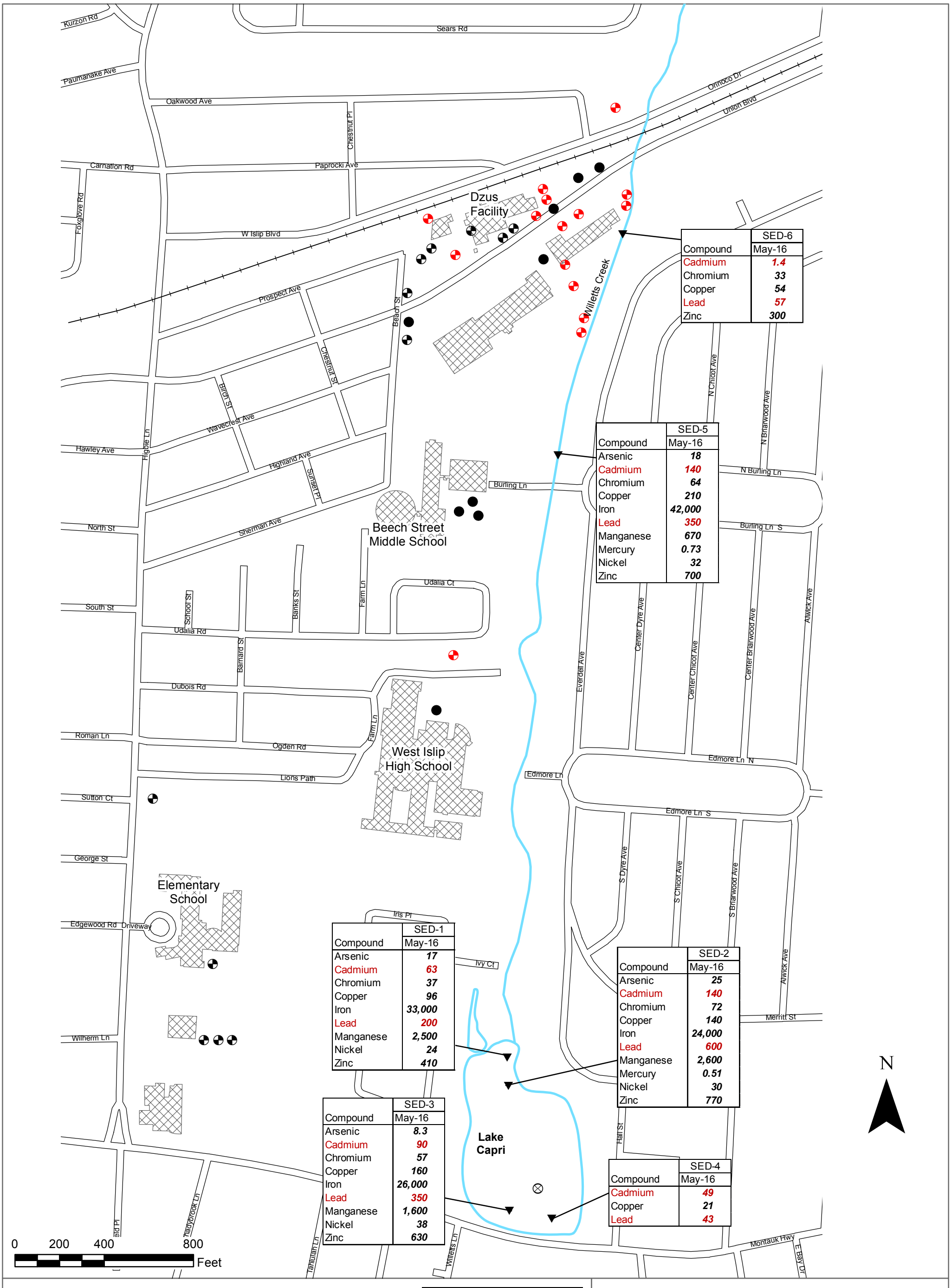
Prepared by: AECOM

SUBMITTED BY: PK
DRAWN BY: CF
APPROVED BY: PK

MULTI SITE G - Dzus Fasteners
SITE NO. 1-52-033

SUMMARY OF TAL METALS IN SURFACE WATER MAY 2016

DATE: JULY 2016
SCALE: 1 " = 400 feet
DRAWING NO.: 7



	SED-6
Compound	May-16
Cadmium	***1.4***
Chromium	***33***
Copper	***54***
Lead	***57***
Zinc	***300***

	SED-5
Compound	May-16
Arsenic	***18***
Cadmium	***140***
Chromium	***64***
Copper	***210***
Iron	***42,000***
Lead	***350***
Manganese	***670***
Mercury	***0.73***
Nickel	***32***
Zinc	***700***

	SED-1
Compound	May-16
Arsenic	***17***
Cadmium	***63***
Chromium	***37***
Copper	***96***
Iron	***33,000***
Lead	***200***
Manganese	***2,500***
Nickel	***24***
Zinc	***410***

	SED-2
Compound	May-16
Arsenic	***25***
Cadmium	***140***
Chromium	***72***
Copper	***140***
Iron	***24,000***
Lead	***600***
Manganese	***2,600***
Mercury	***0.51***
Nickel	***30***
Zinc	***770***

	SED-3
Compound	May-16
Arsenic	***8.3***
Cadmium	***90***
Chromium	***57***
Copper	***160***
Iron	***26,000***
Lead	***350***
Manganese	***1,600***
Nickel	***38***
Zinc	***630***

	SED-4
Compound	May-16
Cadmium	***49***
Copper	***21***
Lead	***43***

Legend

- EXISTING WELLS INCLUDED IN LTM
- EXISTING MONITORING WELLS
- MISSING MONITORING WELLS
- SURFACE WATER AND SEDIMENT SAMPLE LOCATION

Notes:
All values in mg/kg
BOLD/Italics exceeds criterion
Contaminants of Concern

Compound	NYSDEC Sediment Criteria Lowest Effect	Highest Effect
Arsenic	6.0	33
Cadmium	0.6	9
Chromium	26	110
Copper	16	110
Iron	20,000	20,000
Lead	31	110
Manganese	460	1,100
Mercury	0.15	1.3
Nickel	16	50
Zinc	120	270

Prepared by: AECOM

SUBMITTED BY: PK

DRAWN BY: CF

APPROVED BY: PK

MULTI SITE G - Dzus Fasteners
SITE NO. 1-52-033

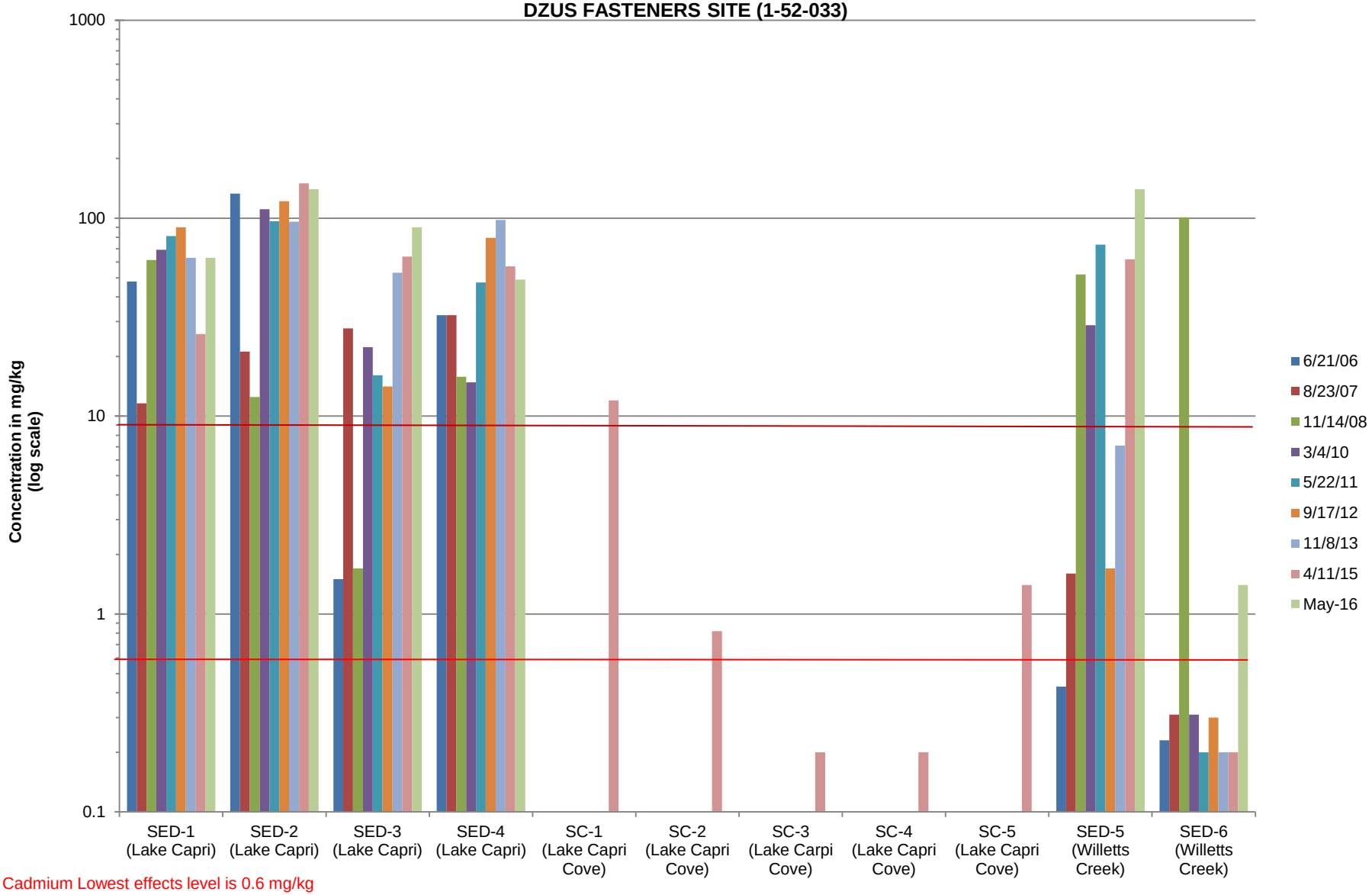
SUMMARY OF TAL METALS IN SEDIMENT MAY 2016

DATE: JULY 2016

SCALE: 1 " = 400 feet

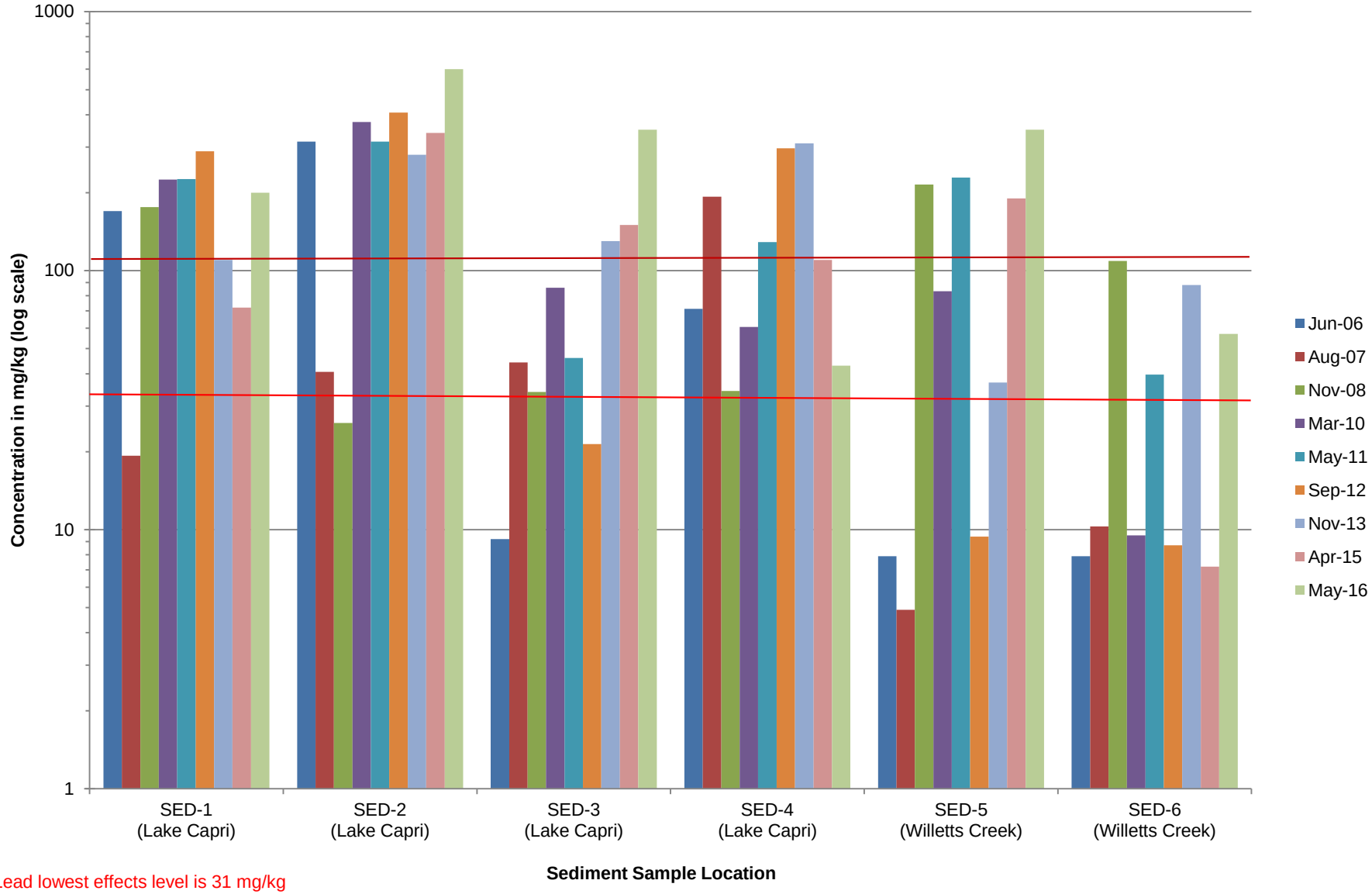
DRAWING NO.: **8**

FIGURE 9
CADMIUM CONCENTRATIONS IN LAKE CAPRI AND WILLETTS CREEK SEDIMENT SAMPLES
DZUS FASTENERS SITE (1-52-033)



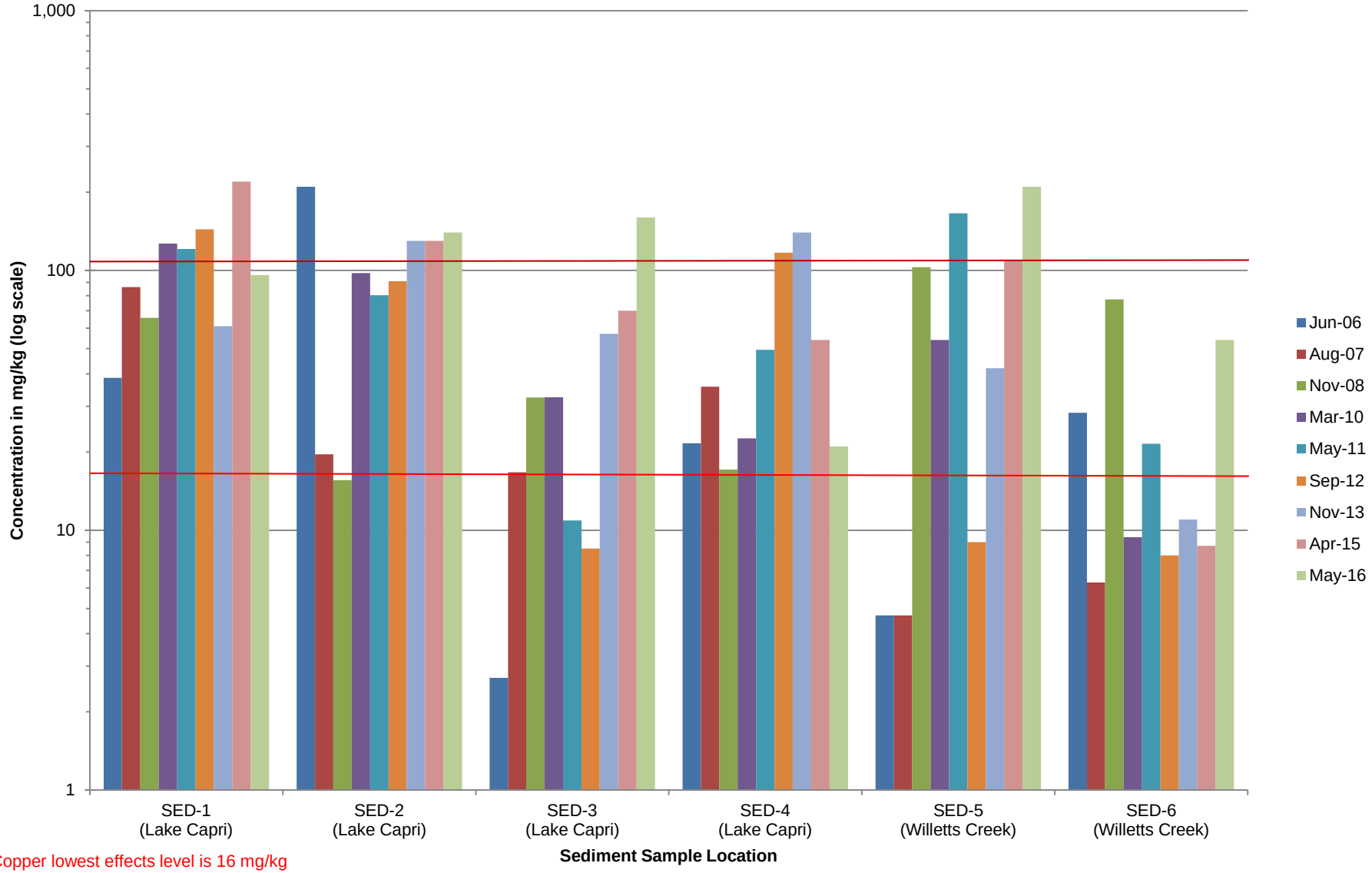
Cadmium Lowest effects level is 0.6 mg/kg
Highest effects level is 9 mg/kg (ROD cleanup criteria)
ND values set to 0.2 mg/kg for plotting purposes

FIGURE 10
LEAD CONCENTRATIONS IN LAKE CAPRI AND WILLETTS CREEK SEDIMENT SAMPLES
DZUS FASTENERS SITE (1-52-033)



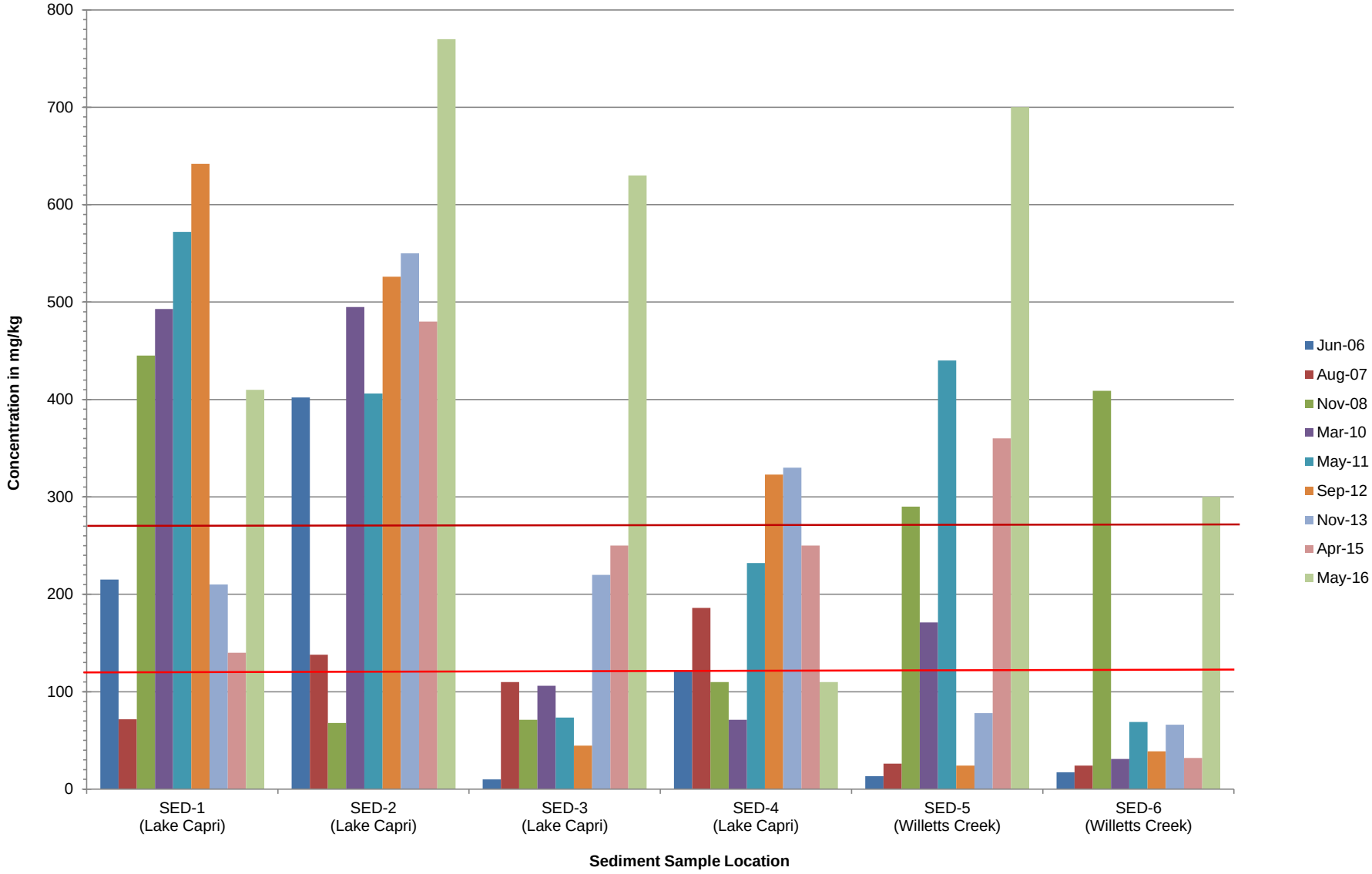
Lead lowest effects level is 31 mg/kg
Lead highest effects level is 110 mg/kg

FIGURE 11
COPPER CONCENTRATIONS IN LAKE CAPRI AND WILLETTS CREEK SEDIMENT SAMPLES
DZUS FASTENERS SITE (1-52-033)

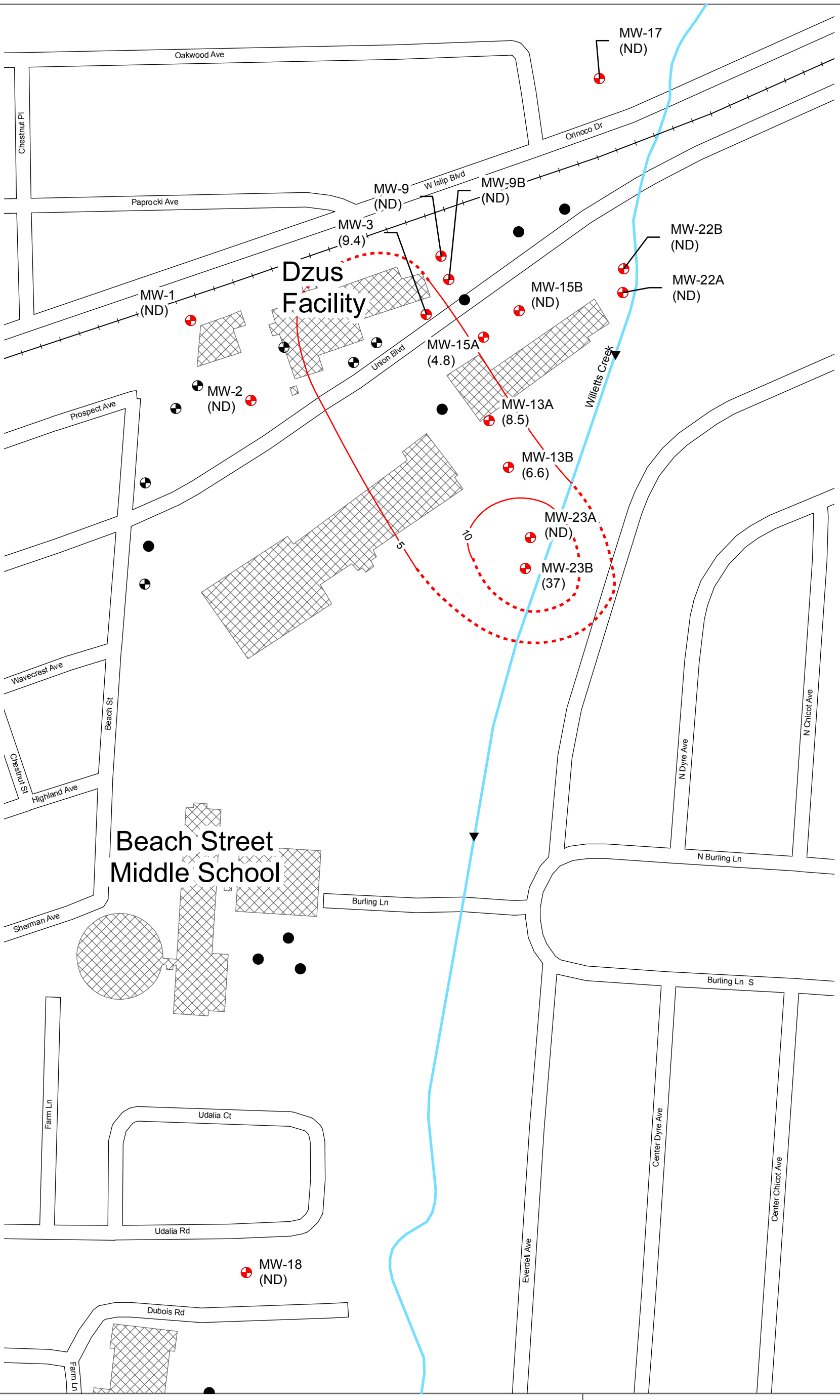


Copper lowest effects level is 16 mg/kg
Copper highest effects level is 110 mg/kg

FIGURE 12
ZINC CONCENTRATIONS IN LAKE CAPRI AND WILLETTS CREEK SEDIMENT SAMPLES
DZUS FASTENERS SITE (1-52-033)



lowest effects level is 120 mg/kg
highest effects level is 270 mg/kg



Legend

- EXISTING WELLS INCLUDED IN LTM
- EXISTING MONITORING WELLS
- MISSING MONITORING WELLS
- SURFACE WATER AND SEDIMENT SAMPLE LOCATION
- NS Not Sampled
- ND Not Detected
- (13.0) FILTERED CADMIUM CONCENTRATION IN ug/L
- CADMIUM ISOCONCENTRATION LINE. CONTOUR INTERVAL IS 5ug/L. DASHED WHERE INFERRED

00 200 400 Feet

Prepared by: AECOM

SUBMITTED BY:	PK
DRAWN BY:	CF
APPROVED BY:	PK

MULTI SITE G - Dzus Fasteners
SITE NO. 1-52-033

FILTERED CADMIUM ISOCONCENTRATION MAP MAY 2016

DATE:	SCALE:	DRAWING NO.:
JULY 2015	1 " = 200 feet	13

Appendix A

IC/EC Certification

Enclosure 2
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form

Site Details **Box 1**

Site No. 152033

Site Name Dzus Fastener Co., Inc.

Site Address: 425 Union Boulevard Zip Code: 11795
City/Town: West Islip
County: Suffolk
Site Acreage: 1.0

Reporting Period: January 01, 2016 to January 01, 2017

		YES	NO
1.	Is the information above correct?	Y	☐
	If NO, include handwritten above or on a separate sheet.		
2.	Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?	☐	N
3.	Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	☐	N
4.	Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	☐	N
	If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.		
5.	Is the site currently undergoing development?	Y	☐

Box 2

		YES	NO
6.	Is the current site use consistent with the use(s) listed below? Commercial and Industrial	Y	☐
7.	Are all ICs/ECs in place and functioning as designed?	Y	☐

IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

_____ _____
Signature of Owner, Remedial Party or Designated Representative Date

SITE NO. 152033

Description of Institutional Controls

Parcel	Owner	Institutional Control
455-01-64.1	Stephen Meshover	Landuse Restriction Site Management Plan Soil Management Plan Monitoring Plan IC/EC Plan

Deed restriction-Restricting land use and ground water use
Site Management Plan-Including Groundwater monitoring, Surface Water Monitoring, Sediment monitoring, Biota monitoring Plans, Soil Management plan, Instuitional control/engineering control plan.

Description of Engineering Controls

Parcel	Engineering Control
455-01-64.1	Cover System

Topsoil/asphalt cover at the eastern portion of the Site, which protects the stabilized treatment cells from erosion
Long-term monitoring program to evaluate the effectiveness of the on-site remedy and to verify that existing groundwater plume does not impact public health or environment.

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted

YES	NO
Y	☐

2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

(a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

(b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

(c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

(d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

(e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES	NO
Y	☐

IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

_____ _____

Signature of Owner, Remedial Party or Designated Representative Date

IC CERTIFICATIONS
SITE NO. 152033

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1,2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I _____ at _____,
print name print business address

am certifying as _____(Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

_____ _____
Signature of Owner, Remedial Party, or Designated Representative Rendering Certification Date

IC/EC CERTIFICATIONS

Box 7

Professional Engineer Signature

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Michael L. Spera at AECOM, 125 Broad St, NY, NY 10004,
print name print business address

am certifying as a Professional Engineer for the NYSDEC
(Owner or Remedial Party)

Michael L Spera 5/18/17

Signature of Professional Engineer, for the Owner or Remedial Party, Rendering Certification | Stamp (Required for PE) | Date

Appendix B

Post-Dredging Results

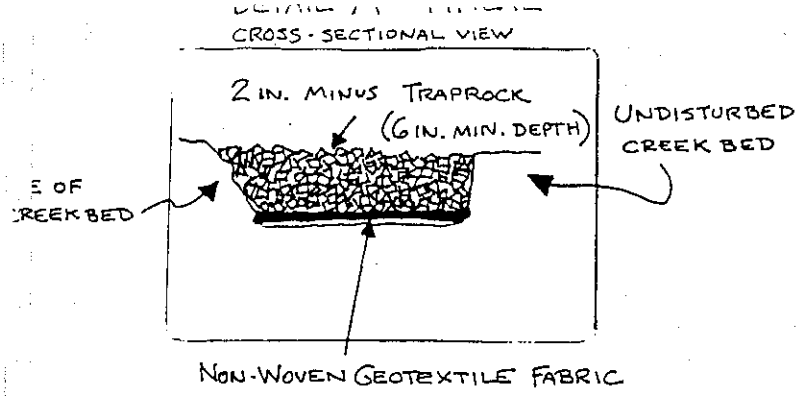
DZUS Fastener Site
NYSDEC Site ID Number 1-52-033

COMPARISON OF ANALYTICAL RESULTS FROM PRE-DESIGN INVESTIGATION, PRE-EXCAVATION, AND POST-EXCAVATION OF WILLETTS CREEK

Location (In Feet)	PDI West	PDI Centerline	Pre-Excavation	Post-Excavation
900	142 ppm	1.9 ppm		92.8 ppm
850			18.6 ppm	114.0 ppm
800	239 ppm	1.6 ppm		97.2 ppm
550				4.99 ppm
500	20.3 ppm	12.2 ppm		
450	8.8 ppm	ND	11.8 ppm	4.70 ppm
400	17.3 ppm	3.3 ppm		
350	9.4 ppm	14.9 ppm	17.3 ppm	11.8 ppm
300	1.3 ppm	6.5 ppm		
250	51.4 ppm	0.6 ppm		1.24 ppm
200	37.1 ppm	5.0 ppm		
150	11.4 ppm	10.2 ppm	110 ppm	9.65 ppm
100	368 ppm	11.2 ppm		
50	1.2 ppm	6.8 ppm		2.32 ppm, ND*
00	37.6 ppm	9.7 ppm	152 ppm	<MDL*
-50				

* These samples were not taken exactly at 50 ft north of bridge, but within 15 - 35 feet north of bridge.

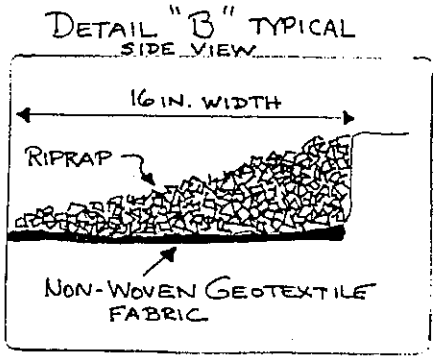
NOTE: The analytical results was the basis for decision to encapsulate per detail "Willets Creek Backfill Detail".

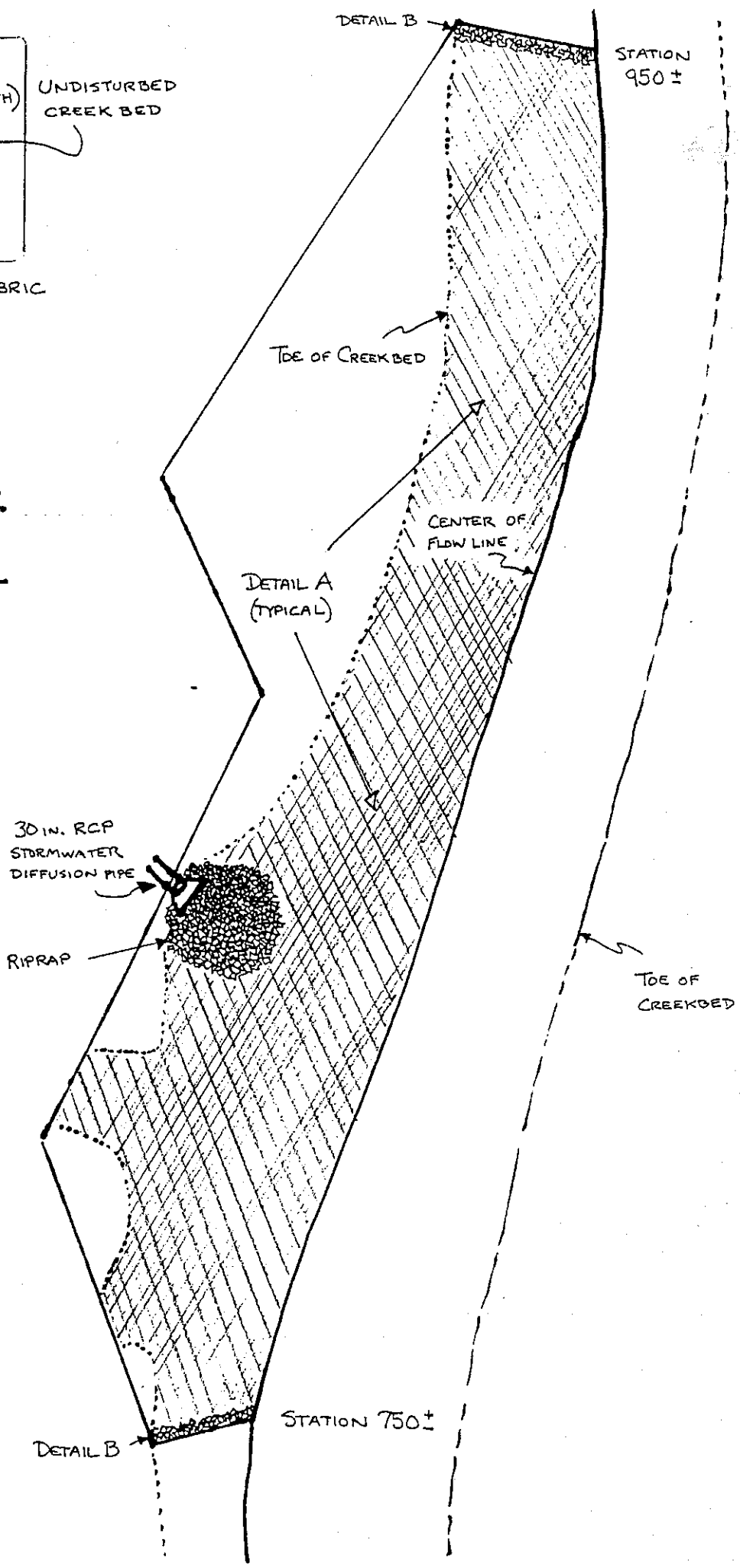


WILLETT'S CREEK

BACKFILL DETAIL

[N.T.S.]





CONSTRUCTION CERTIFICATION REPORT

DZUS FASTENER SITE (OU2)

APPENDIX D

POST DREDGING/EXCAVATON DATA

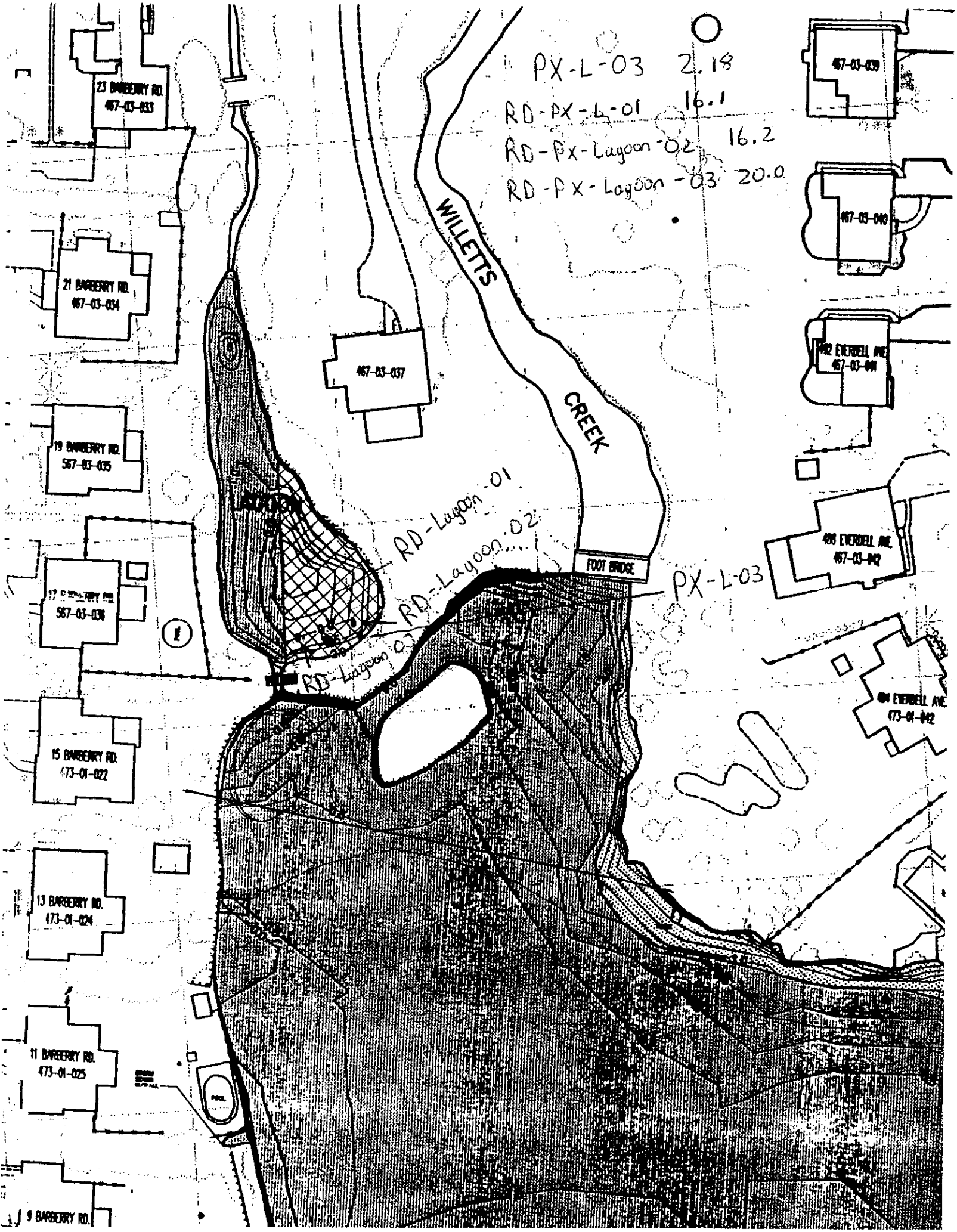
LAGOON ANALYTICAL DATA SUMMARY

DZUS Fastener Site
NYSDEC Site ID Number 1-52-033
POST- EXCAVATION SAMPLING REQUIREMENTS

NORTH LAGOON AREA

POST EXCAVATION SAMPLES

ID#	Collection Date	Collected By	Collection Time	Analytical Results		Comments
PX-L-01	07/20/99	JShn	1455 hrs.	<0.5 ppm Cd total		
PX-L-02	07/22/99	JShn	1400 hrs.	0.42 ppm		
PX-L-03	07/22/99	JShn	1415 hrs	2.18 ppm		
				11.7 ppm	(SciLab)	split check
RD-PX-L-01	07/28/99	JShn	1515 hrs	16.1 ppm		post redredge
				6.5 ppm	(SciLab)	split check
RD-PX-L-02	08/03/99	Jwolf	1540 hrs	18.2 ppm		6ft under H20
				12.7 ppm	(SciLab)	
RD-PX-L-03	08/03/99	Jwolf	1550 hrs	20.0 ppm		8ft under H20
				24.3 ppm	(SciLab)	
RD-PX-L-04	09/10/99	Jwolf	1330 hrs	50.5 ppm		
RD-PX-L-05	09/10/99	Jwolf	1340 hrs	131 ppm		
RD-PX-L-06	09/10/99	Jwolf	1350 hrs	1.14 ppm		
RD-PX-L-07	09/10/99	Jwolf	0400 hrs	0.30 ppm		
RD-PX-L-08	09/13/99	Jwolf	1500 hrs	0.17 ppm		
				2.3 ppm	(SciLab)	
RD-PX-L-09	09/13/99	Jwolf	1515 hrs	0.23 ppm		
				0.93 ppm	(SciLab)	


PX-L-03 2.18
RD-PX-L-01 16.1
RD-PX-Lagoon-02 16.2
RD-PX-Lagoon-03 20.0
WILLETTS
CREEK
RD-Lagoon-01
RD-Lagoon-02
RD-Lagoon-03
FOOT BRIDGE
PX-L-03
23 BARBERRY RD. 467-03-033
21 BARBERRY RD. 467-03-034
19 BARBERRY RD. 567-03-035
15 BARBERRY RD. 473-01-022
13 BARBERRY RD. 473-01-024
11 BARBERRY RD. 473-01-025
9 BARBERRY RD.
467-03-037
467-03-039
467-03-040
492 EVERDELL AVE. 467-03-041
488 EVERDELL AVE. 467-03-042
484 EVERDELL AVE. 473-01-042

CONSTRUCTION CERTIFICATION REPORT

DZUS FASTENER SITE (OU2)

APPENDIX D

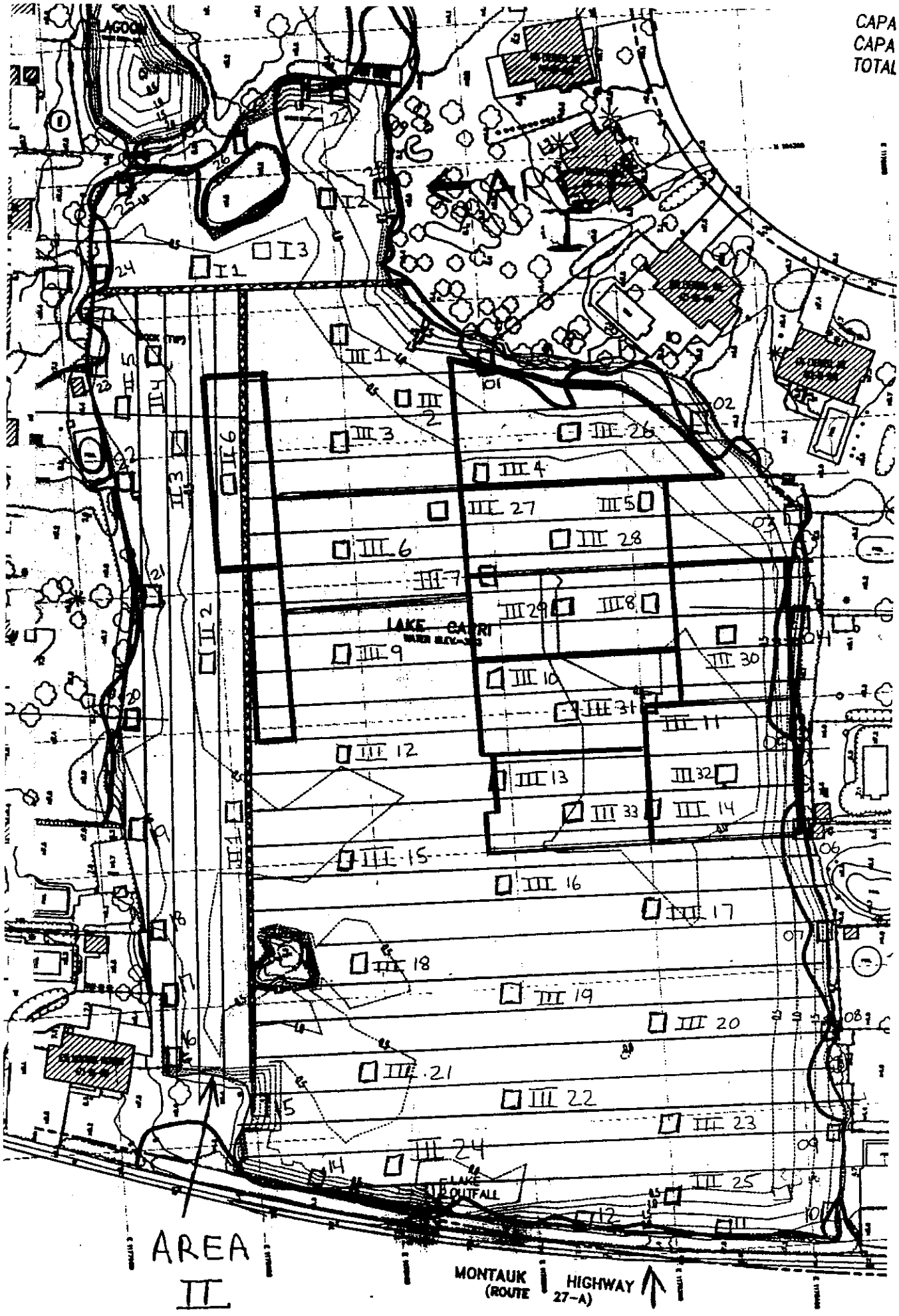
POST DREDGING/EXCAVATION DATA

LAKE CAPRI ANALYTICAL DATA SUMMARY

Lake

DZUS Fastener Site
NYSDEC Site ID Number 1-52-033
SHORELINE POST-EXCAVATION SAMPLES - Total Cd (ppm)

PX	Dry	Wet	Wet + 4hr	QA/QC
1	1.02	0.41		
2	0.71	0.70		
3	0.11	0.45		
4	9.96	0.17		
4d	1.13			
4s	8.60			
5	0.98	0.55		
6	0.70	1.13		
7	0.89	1.56		1.30
8	1.98		2.07	
9	NA		1.59	0.90
10	NA	1.73		
11	NA	61.20	3.37	
12	NA	0.47	6.47	
13	NA		1.77	
14	NA			
15	NA			
16	NA			
17	NA			
18	NA	1.43		0.80
19	NA	0.29		
20	NA	0.62		
21	NA	0.74	0.86	0.70
22	NA	0.25	0.70	
23	NA	0.82	0.22	<0.1
24	NA	2.45		
25	NA	0.18		
26	NA			
27	NA	0.31		
28	NA	1.00		



Shoreline Samples: PX - Shoreline - 01 → PX - Shoreline - 28

Lake Samples: PX - Lake - I - 1

Area ↑ ↓ Sample #

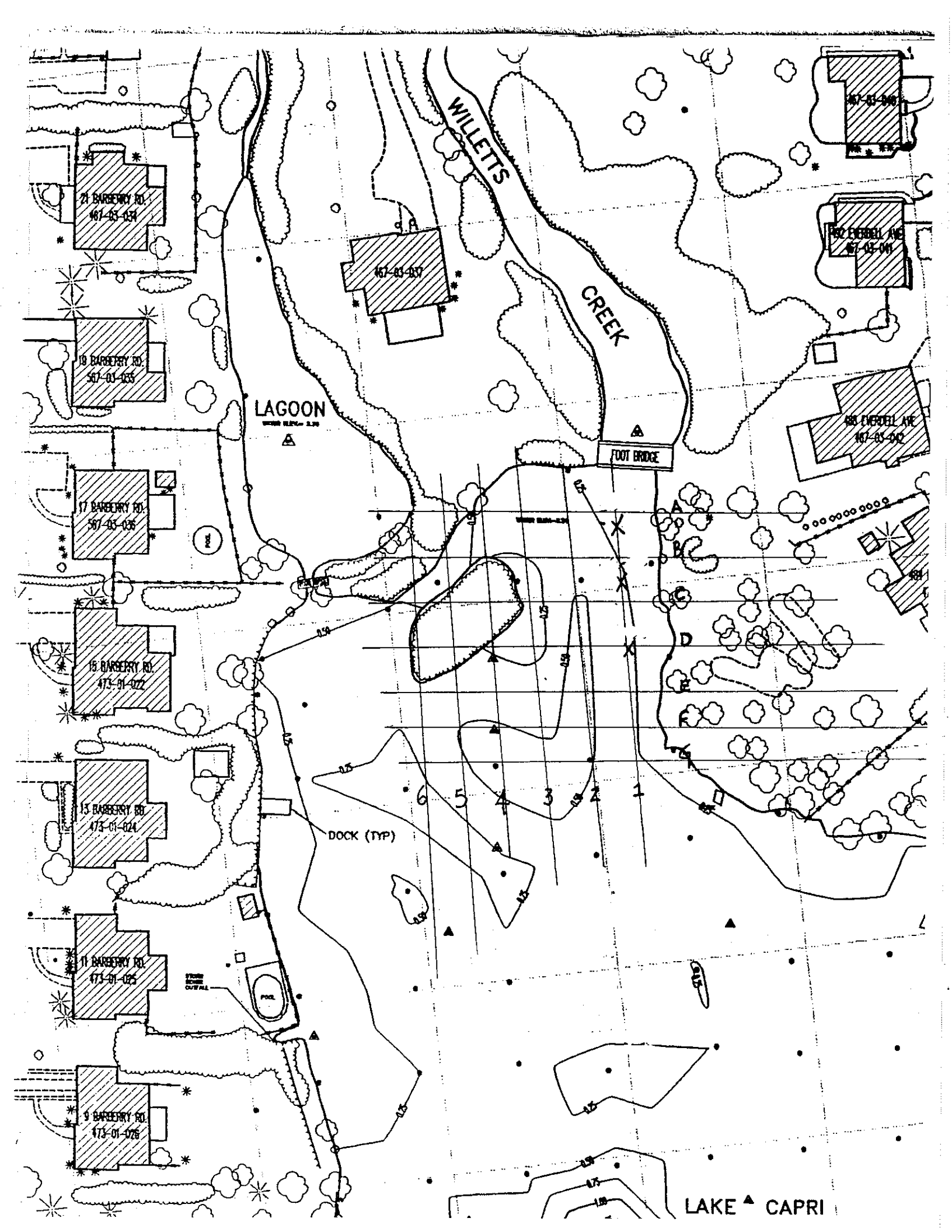
DZUS Fastener Site
NYSDEC Site ID Number 1-52-033
ANALYTICAL RESULTS FOR NORTHEAST COVE AREA - Total Cadmium

GRID LOCATION	*AT GRADE*	*12 in < GRADE*	*30 in < GRADE*
A1	0.12 ppm	<MDL	
B1			
C1	37.8 ppm	0.4 ppm	3.7 ppm
D1			
E1	11.5 ppm	0.7 ppm	
F1		0.3 ppm	
G1			
A2			
B2	12.4 ppm	1.2 ppm	73 ppm
C2			6.5 ppm
D2	24.1 ppm	11.0 ppm	1.0 ppm /1.7 ppm
E2			
F2	5.96 ppm	0.1 ppm	<MDL
G2			
A3	28.6 ppm	1.1 ppm	
B3			
C3	10.3 ppm	2.7 ppm	
D3			
E3	44.9 ppm		0.20 ppm
F3		3.9 ppm	
G3	31.0 ppm		
A4			
B4			
C4			
D4			
E4			0.70 ppm
F4			
G4			

DZUS Fastener Site
NYSDEC Site ID Number 1-52-033
ANALYTICAL RESULTS FOR NORTHEAST COVE AREA - Total Cadmium

GRID LOCATION	*AT GRADE*	*12 in < GRADE*	*30 in < GRADE*
A5			
B5			
C5			
D5			
E5			
F5	135 ppm	0.1 ppm	
G5			
A6			
B6			
C6			
D6			
E6			
F6			
G6	1.0 ppm /4.0 ppm		
A7			
B7			
C7			
D7			
E7			
F7			
G7			
A8			
B8			
C8			
D8			
E8			

Note: samples collected in September and October 1999.


WILLETTS
CREEK
LAGOON
FOOT BRIDGE
21 BARBERRY RD.
467-03-034
19 BARBERRY RD.
467-03-035
17 BARBERRY RD.
467-03-036
15 BARBERRY RD.
473-01-022
13 BARBERRY RD.
473-01-024
11 BARBERRY RD.
473-01-025
9 BARBERRY RD.
473-01-026
467-03-037
692 EVERGELL AVE.
467-03-041
688 EVERGELL AVE.
467-03-042
POOL
DOCK (TYP)
A
B
C
D
E
F
6
5
4
3
2
1
LAKE CAPRI

DZUS Fastener Site
NYSDEC Site ID Number 1-52-033

POST EXCAVATION (TOTAL CADMIUM) LABORATORY ANALYTICAL RESULTS

Chain of Custody #	ERM Sample ID	Date Collected	Date Analyzed	Date Data Received	Date Cat B Package Received	Earth Tech Analytical Results (ppm)	ERM/BWE Analytical Results (ppm)	Notes
COC#								
I 7116-1	Dup 091799	09/17/99	09/18/99	09/20/99	10/15/99		34.8	
I 7116-2	PX-Cove-A1	09/17/99	09/18/99	09/20/99	10/15/99		0.13	J - Concentration detected below MDL
I 5258-1	PX-Cove-A1-RD	10/28/99	10/29/99	10/29/99	12/08/99		0.44	J - Concentration detected below MDL Revised 12/2/99 Orig. reported as 0.34 ppm U
I 7116-3	PX-Cove-C1	09/17/99	09/18/99	09/20/99	10/15/99		37.8	
I 5258-2	PX-Cove-C1-RD	10/28/99	10/29/99	10/29/99	12/08/99		2.71	
I 7116-4	PX-Cove-E1	09/17/99	09/18/99	09/20/99	10/15/99		11.5	
I 5258-3	PX-Cove-E1-RD	10/28/99	10/29/99	10/29/99	12/08/99		2.01	
I 7116-9	PX-Cove-B2	09/17/99	09/18/99	09/20/99	10/15/99		12.4	
J 5254-2	PX-Cove-B2-RD	10/27/99	10/28/99	10/28/99	12/02/99		1.95	Experimental Sample 1' below grade Revised 11/29/99 Orig. reported as 1.95 ppm
I 7116-7	PX-Cove-D2	09/17/99	09/18/99	09/20/99	10/15/99		24.1	
J 5254-1	PX-Cove-D2-RD	10/26/99	10/28/99	10/28/99	12/02/99		174.1	Experimental Sample 1' below grade Revised 11/29/99
I 7116-5	PX-Cove-F2	09/17/99	09/18/99	09/20/99	10/15/99		6.02	
J 5254-3	PX-Cove-F2-RD	10/27/99	10/28/99	10/28/99	12/02/99		57.3	Experimental Sample 1' below grade Revised 11/29/99
I 7116-10	PX-Cove-A3	09/17/99	09/18/99	09/20/99	10/15/99		28.6	
I 7116-11	PX-Cove-A3 MS/MSD	09/17/99	09/18/99	09/20/99	10/15/99		28.5	
J 5253-3	PX-Cove-A3-RD	10/26/99	10/28/99	10/28/99	12/02/99		60.8	Experimental Sample 1' below grade Revised 11/29/99 Orig. reported as 60.9 ppm
I 7116-8	PX-Cove-C3	09/17/99	09/18/99	09/20/99	10/15/99		10.4	
J 5253-2	PX-Cove-C3-RD	10/26/99	10/28/99	10/28/99	12/02/99		8.63	Experimental Sample 1' below grade Revised 11/29/99

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DZUS Fastener Site
NYSDEC Site ID Number 1-52-033

POST EXCAVATION (TOTAL CADMIUM) LABORATORY ANALYTICAL RESULTS

Chain of Custody #	ERM Sample ID	Date Collected	Date Analyzed	Date Data Received	Date Cat B Package Received	Earth Tech Analytical Results (ppm)	ERM/BWE Analytical Results (ppm)	Notes
I 7116-6	PX-Cove-E3	09/17/99	09/18/99	09/20/99	10/15/99		44.8	
J 5253-1	PX-Cove-E3-RD	10/26/99	10/28/99	10/28/99	12/02/99		38.0	Experimental Sample 1' below grade Revised 11/29/99
LAKE BOTTOM								
I 5160-1	PX-LB-201	10/09/99	10/11/99	10/12/99	11/19/99		0.22	J - Concentration detected below MDL
J 3965-1	PX-Lake-25A	12/10/99	12/13/99	12/15/99	01/19/00		14.1	
J 4623-1	PX-Lake-25A +4	12/17/99	10/20/99	12/21/99	01/19/00	.80/.90/.90	1.99	Revised 1/13/00 Orig. reported as 1.98 ppm
SHORELINE								
I 9836-1	PX-Shoreline-01	09/29/99	09/29/99	09/30/99	11/19/99		0.41	
I 9836-2	PX-Shoreline-02	09/29/99	09/29/99	09/30/99	11/19/99		0.70	
I 9836-3	PX-Shoreline-03	09/29/99	09/29/99	09/30/99	11/19/99		0.45	
I 9836-4	PX-Shoreline-04	09/29/99	09/29/99	09/30/99	11/19/99		0.17	
I 9836-5	PX-Shoreline-05	09/29/99	09/29/99	09/30/99	11/19/99		0.55	
I 9836-6	PX-Shoreline-06	09/29/99	09/29/99	09/30/99	11/19/99		1.13	
J 3953-2	PX-Shoreline-07 +4	12/05/99	12/07/99	12/07/99	01/19/00	1.3	1.59	Revised 1/11/00 Orig. reported as 1.56 ppm
J 3956-2	PX-Shoreline-08 +4	12/08/99	12/10/99	12/13/99	01/19/00		2.06	Revised 1/12/00 Orig. reported as 2.07 ppm
J 3962-2	PX-Shoreline-09 +4	12/09/99	12/13/99	12/14/99	01/19/00	0.9	1.59	
J 3946-2	PX-Shoreline-10	12/03/99	12/04/99	12/06/99	01/19/00		1.73	Prior to Augering
J 3946-3	PX-Shoreline-11	12/03/99	12/04/99	12/06/99	01/19/00		61.0	Revised 1/11/00 Orig reported as 61.2 ppm Prior to Augering
J 3964-2	PX-Shoreline-11 +4	12/10/99	12/14/99	12/14/99	01/19/00		3.37	Revised 1/12/00 Orig. reported as 3.40 ppm
J 4619-4	PX-Shoreline-11 +4 RS	12/15/99	12/16/99	12/16/99	01/19/00		1.58	Revised 1/13/00 Orig. reported as 1.6 ppm
J 3946-4	PX-Shoreline-12	12/03/99	12/04/99	12/06/99	01/19/00		0.92	Prior to Augering J - Concentration detected below MDL

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DZUS Fastener Site
NYSDEC Site ID Number 1-52-033

POST EXCAVATION (TOTAL CADMIUM) LABORATORY ANALYTICAL RESULTS

Chain of Custody #	ERM Sample ID	Date Collected	Date Analyzed	Date Data Received	Date Cat B Package Received	Earth Tech Analytical Results (ppm)	ERM/BWE Analytical Results (ppm)	Notes
J 3964-3	PX-Shoreline-12 +4	12/10/99	12/14/99	12/14/99	01/19/00		6.47	
J 4620-1	PX-Shoreline-12 +4 RD	12/15/99	12/16/99	12/16/99	01/19/00		0.46	
J 3964-4	PX-Shoreline-13 +4	12/10/99	12/14/99	12/14/99	01/19/00		1.76	Revised 1/12/00 Orig. reported as 1.77 ppm
J 3966-2	PX-Shoreline-14	12/10/99	12/13/99	12/15/99	01/24/00		69.8	
J 4620-3	PX-Shoreline-14 +4	12/15/99	12/16/99	12/16/99	01/19/00		1.63	
J 3966-3	PX-Shoreline-15	12/10/99	12/13/99	12/15/99	01/24/00		2.09	
J 4619-1	PX-Shoreline-15 +4	12/15/99	12/16/99	12/16/99	01/19/00		2.51	Revised 1/13/00 Orig. reported as 2.52 ppm
J 4619-2	PX-Shoreline-16 +4	12/15/99	12/16/99	12/16/99	01/19/00		2.75	Revised 1/13/00 Orig. reported as 2.76 ppm
J 4618-2	PX-Shoreline-17 +4	12/14/99	12/15/99	12/15/99	01/19/00	0.2	0.69	
J 3414-3	PX-Shoreline-18	11/13/99	11/18/99	11/19/99	01/07/00	0.8	1.43	
J 3414-2	PX-Shoreline-19	11/13/99	11/18/99	11/19/99	01/07/00		0.48	
J 3414-1	PX-Shoreline-20	11/13/99	11/18/99	11/19/99	01/07/00		0.62	
J 3411-1	111299 Dup	11/12/99	11/18/99	11/18/99	01/07/00		0.47	J - Concentration detected below MDL
J 3411-2	PX-Shoreline-21	11/12/99	11/15/99	11/18/99	01/07/00		0.75	Revised 1/04/00 Orig. reported as 0.74 ppm
J 3415-3	PX-Shoreline-21 +4	11/13/99	11/21/99	11/22/99	01/07/00	0.7	0.86	
J 3411-3	PX-Shoreline-22	11/12/99	11/15/99	11/18/99	01/07/00		0.49	J - Concentration detected below MDL
J 3415-2	PX-Shoreline-22 +4	11/13/99	11/21/99	11/22/99	01/07/00		0.70	
I 5165-1	PX-Shoreline-23	10/14/99	10/18/99	10/20/99	12/02/99		1.05	Revised 11/29/99 Orig. reported as 0.82 ppm
J 3415-1	PX-Shoreline-23 +4	11/13/99	11/21/99	11/22/99	01/07/00	BDL	0.48	J - Concentration detected below MDL
I 5164-1	PX-Shoreline-24	10/14/99	10/15/99	10/18/99	11/19/99		2.44	
I 5162-1	PX-Shoreline-25	10/13/99	10/15/99	10/18/99	11/19/99		0.18	J - Concentration detected below MDL
I 5075	PX-Shoreline 26 is PX-Lake-01	07/26/99					1.02	

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DZUS Fastener Site
NYSDEC Site ID Number 1-52-033

POST EXCAVATION (TOTAL CADMIUM) LABORATORY ANALYTICAL RESULTS

Chain of Custody #	ERM Sample ID	Date Collected	Date Analyzed	Date Data Received	Date Cat B Package Received	Earth Tech Analytical Results (ppm)	ERM/BWE Analytical Results (ppm)	Notes
I 5257-1	PX-Shoreline-27	10/27/99	10/29/99	10/29/99	12/08/99		0.47	J - Concentration detected below MDL
I 5261-1	PX-Shoreline-28	10/28/99	10/29/99	10/29/99	12/08/99		1.00	
LAKE I								
I 5256-1	PX-Lake-I-2	10/27/99	10/29/99	10/29/99	12/02/99		35.8	Revised 11/29/99 Orig. reported as 37.2 ppm
I 5256-2	102799	10/27/99	10/29/99	10/29/99	12/02/99		30.6	Duplicate Revised 11/29/99 Orig. reported as 30.3 ppm
I 7123-1	PX-Lake-I-2-RD	11/05/99	11/10/99	11/11/99	12/08/99		2.98	Revised 12/2/99 Orig. reported as 2.99 ppm
J 3416-2	PX-Lake-I-3 +4	11/15/99	11/18/99	11/19/99	01/07/00		0.43	U - Analytical value is a non-detect
LAKE II								
I 7126-2	PX-Lake-II-1	11/08/99	11/10/99	11/16/99	12/08/99		0.450	J - Concentration detected below MDL Revised 12/2/99 Orig. reported as 0.34 ppm U
J 3415-4	PX-Lake-II-1 +4	11/13/99	11/21/99	11/22/99	01/07/00	1.7	1.45	
I 7126-3	PX-Lake-II-2	11/09/99	11/10/99	11/16/99	12/08/99		0.45	J - Concentration detected below MDL
J 3415-5	PX-Lake-II-2 +4	11/13/99	11/21/99	11/22/99	01/07/00		0.43	
J 3409-1	PX-Lake-II-3	11/11/99	11/15/99	11/17/99	01/19/00		0.43	U - Analytical value is a non-detect
J 3415-6	PX-Lake-II-3 +4	11/13/99	11/21/99	11/22/99	01/07/00		0.45	J - Concentration detected below MDL
J 3409-2	PX-Lake-II-4	11/11/99	11/15/99	11/17/99	01/19/00		0.42	J - Concentration detected below MDL
J 3415-7	PX-Lake-II-4 +4	11/13/99	11/21/99	11/22/99	01/07/00		0.51	
J 3411-4	PX-Lake-II-5	11/12/99	11/15/99	11/18/99	01/07/00		0.45	J - Concentration detected below MDL
J 3415-8	PX-Lake-II-5 +4	11/13/99	11/21/99	11/22/99	01/07/00		0.45	J - Concentration detected below MDL
I 7126-1	PX-Lake-II-6	11/08/99	11/10/99	11/16/99	12/08/99		0.45	J - Concentration detected below MDL
J 3415-9	PX-Lake-II-6 +4	11/13/99	11/21/99	11/22/99	01/07/00	0.1	0.83	Revised 01/04/00 Orig. reported as 1.48 ppm
LAKE III								

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Appendix C

Site Inspection Form

AECOM

SITE INSPECTION FORM

Dzus Fasteners Site
425 Union Boulevard, West Islip, Suffolk County, NY
NYSDEC Site ID # 1-52-033

Client: New York State Department of Environmental Conservation

Preparer's Name: Celeste Foster Date/Time: 06/07/2016 13:30

Asphalt Cap			
Has the condition of the asphalt degraded since the last inspection?	☐ YES	☒ NO	☐ NA
Are any cracks visible in the asphalt pavement?	☒ YES	☐ NO	☐ NA
Is there evidence of uneven settling and or ponding?	☐ YES	☒ NO	☐ NA
Is there damage to any surface coverage?	☐ YES	☒ NO	☐ NA
Willetts Creek			
Has the riprap in the creek been disturbed?	☐ YES	☐ NO	☒ NA
Lake Capri			
Is there evidence of excessive weed growth in the Lake?	☒ YES	☐ NO	☐ NA
Is the fence/gate along Sunrise Highway functioning properly?	☐ YES	☐ NO	☒ NA
Has the Lake level changed significantly from the previous inspection?	☐ YES	☒ NO	☐ NA
Site Condition			
Is there any evidence of illegal disposal?	☐ YES	☒ NO	☐ NA
Is there uncontrolled vegetation growth?	☐ YES	☒ NO	☐ NA
Is there any evidence of unauthorized entry?	☐ YES	☒ NO	☐ NA

If yes to any question above, provide additional information below.

Some cracks visible in the pavement. They do not appear to be detrimental to the cap.

Lake Capri contained excessive weed growth.

Appendix D

Well Sampling Logs

AECOM

WELL NO. MW-1

WELL SAMPLING FORM	PROJECT: Dzus Fasteners	PROJECT No.: 60277021	SHEET: 1 OF 1 SHEETS
LOCATION: West Islip, NY		DATE WELL SAMPLED: 5/12/2016	
CLIENT: NYSDEC		NAME OF INSPECTOR: Celeste Foster and Rita Papagian	

ONE WELL VOLUME : 1.59 gallons WELL TD: 18.6 ft PUMP INTAKE DEPTH: 16 ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
10:05	8.86								Static water level
10:15	8.87	250	14.77	0.138	4.24	5.29	165	162	pump on at 10:07
10:25	8.87	250	14.66	0.143	4.12	5.31	187	233	
10:35	8.87	250	14.55	0.138	4.15	5.34	202	26.3	
10:45	8.87	250	14.74	0.137	4.07	5.36	213	11.9	
10:55	8.87	250	14.73	0.136	4.08	5.37	222	6.9	
11:05	8.87	250	14.64	0.132	4.04	5.38	229	4.3	
11:15	8.87	250	14.64	0.132	3.95	5.38	229	4.7	
11:20									Unfiltered Sample DMW-1 Collected
11:23									Filtered Sample DMW-1F Collected
									1/4" poly tubing put back into the well.

Pump Type: Peristaltic Pump

Analytical Parameters: TAL Metals (Total and Field Filtered)

AECOM

WELL NO. MW-2

WELL SAMPLING FORM	PROJECT: Dzus Fasteners	PROJECT No.: 60277021	SHEET: 1 OF 1 SHEETS
LOCATION: West Islip, NY		DATE WELL SAMPLED: 5/12/2016	
CLIENT: NYSDEC		NAME OF INSPECTOR: Celeste Foster and Rita Papagian	

ONE WELL VOLUME : 0.94 gallons WELL TD: 14.3 ft PUMP INTAKE DEPTH: 11.3 ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
8:50	8.51								Static water level, new tubing needed
8:55									pump on
9:05	8.52	250	13.68	0.153	0.64	5.18	97	44.1	
9:10	8.52	250	13.81	0.156	0.45	5.25	84	38.6	
9:15	8.52	250	13.85	0.160	0.32	5.35	70	33.2	
9:20	8.52	250	13.90	0.162	0.24	5.41	61	30.7	
9:25	8.52	250	14.00	0.165	0.18	5.50	50	31.4	
9:30	8.52	250	14.06	0.165	0.14	5.52	47	32.1	
9:35	8.52	250	14.23	0.168	0.09	5.58	40	30.0	
9:40									Unfiltered Sample DMW-2 Collected
9:43									Filtered Sample DMW-2F Collected
									1/4" poly tubing put back into the well.

Pump Type: Peristaltic Pump

Analytical Parameters: TAL Metals (Total and Field Filtered)

AECOM

WELL NO. MW-3

WELL SAMPLING FORM	PROJECT: Dzus Fasteners	PROJECT No.: 60277021	SHEET: 1 OF 1
LOCATION: West Islip, NY		DATE WELL SAMPLED: 5/12/2016	
CLIENT: NYSDEC		NAME OF INSPECTOR: Celeste Foster and Rita Papagian	

ONE WELL VOLUME : 1.42 gallons WELL TD: 15.0 ft PUMP INTAKE DEPTH: 13 ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
11:45	6.31								Static water level
11:50									pump on
11:55	6.33	250	21.67	0.007	5.26	6.34	169	94	
12:00	6.33	250	17.45	0.093	2.61	5.57	217	19.1	
12:05	6.33	250	17.45	0.093	2.57	5.59	218	15.4	
12:10	6.32	250	17.00	0.093	2.70	5.59	222	10.6	
12:15	6.32	250	16.67	0.093	2.69	5.49	226	10.2	
12:20	6.32	250	16.75	0.093	2.70	5.47	226	9.8	
12:25	6.32	250	16.70	0.093	2.71	5.45	220	9.4	
12:30									Unfiltered Sample DMW-3 Collected
12:32									Filtered Sample DMW-3F Collected
									1/4" poly tubing put back into the well.

Pump Type: Peristaltic Pump

Analytical Parameters: TAL Metals (Total and Field Filtered)

AECOM

WELL NO. MW-9A

WELL SAMPLING FORM	PROJECT: Dzus Fasteners	PROJECT No.: 60277021	SHEET: 1 OF 1
LOCATION: West Islip, NY		DATE WELL SAMPLED: 5/12/2016	
CLIENT: NYSDEC		NAME OF INSPECTOR: Celeste Foster and Rita Papagian	

ONE WELL VOLUME : 1.10 gallons WELL TD: 12.00 ft PUMP INTAKE DEPTH: 10 ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
8:30	5.24								Static water level
8:35									pump on
8:40	5.25	250	14.20	0.245	3.87	5.61	348	65.2	
8:45	5.25	250	14.50	0.250	3.67	5.64	347	35.1	
8:50	5.25	250	14.63	0.269	3.70	5.68	345	32.5	
8:55	5.25	250	14.67	0.270	3.70	5.65	342	29.2	
9:00	5.25	250	14.69	0.270	3.69	5.67	342	29.9	
9:05									Unfiltered Sample DMW-9A Collected
9:10									Filtered Sample DMW-9AF Collected
									1/4" poly tubing put back into the well.

Pump Type: Peristaltic Pump

Analytical Parameters: TAL Metals (Total and Field Filtered)

AECOM

WELL NO. MW-9B

WELL SAMPLING FORM	PROJECT: Dzus Fasteners	PROJECT No.: 60277021	SHEET: 1 OF 1
LOCATION: West Islip, NY		DATE WELL SAMPLED: 5/12/2016	
CLIENT: NYSDEC		NAME OF INSPECTOR: Celeste Foster and Rita Papagian	

ONE WELL VOLUME : 6.32 gallons WELL TD: 44.0 ft PUMP INTAKE DEPTH: 42 ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
9:10	5.20								Static water level
9:20									pump on
9:25	5.20	250	15.82	0.153	2.09	5.32	341	42.9	
9:35	5.20	250	15.99	0.165	1.11	5.35	348	3.7	
9:40	5.20	250	16.15	0.166	1.00	5.35	347	7.3	
9:45	5.20	250	16.19	0.167	0.95	5.33	345	8.0	
9:50	5.20	250	16.17	0.166	0.97	5.35	345	7.9	
10:00									Unfiltered Sample DMW-9B Collected + MS/MSD
10:03									Duplicate Unfiltered Sample DMW-59 Collected
10:05									Filtered Sample DMW-9BF Collected + MS/MSD
10:08									Duplicate Filtered Sample DMW-59F Collected
									1/4" poly tubing put back into the well.

Pump Type: Peristaltic Pump

Analytical Parameters: TAL Metals (Total and Field Filtered)

AECOM

WELL NO. MW-13A

WELL SAMPLING FORM	PROJECT: Dzus Fasteners	PROJECT No.: 60277021	SHEET: 1 OF 1
LOCATION: West Islip, NY		DATE WELL SAMPLED: 5/12/2016	
CLIENT: NYSDEC		NAME OF INSPECTOR: Celeste Foster and Rita Papagian	

ONE WELL VOLUME : 1.25 gallons WELL TD: 10.7 ft PUMP INTAKE DEPTH: 9.7 ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
14:00	3.02								Static water level
14:10	3.02	250	17.36	0.173	4.22	6.38	42	473	pump on at 14:05
14:20	3.02	250	16.77	0.194	0.37	6.72	-26	504	
14:30	3.02	250	16.75	0.202	0.21	6.82	-37	462	
14:40	3.02	250	16.77	0.204	0.11	6.89	-45	385	
14:50	3.02	250	16.83	0.213	0.03	6.92	-52	347	
15:00	3.02	250	16.84	0.215	0.00	6.94	-57	280	
15:10	3.02	250	16.85	0.220	0.00	6.96	-60	279	
15:15	3.02	250	16.82	0.218	0.00	6.97	-60	276	
15:20									Unfiltered Sample DMW-13A Collected
15:23									Filtered Sample DMW-13AF Collected
									1/4" poly tubing put back into the well.

Pump Type: Peristaltic Pump

Analytical Parameters: TAL Metals (Total and Field Filtered)

AECOM

WELL NO. MW-13B

WELL SAMPLING FORM	PROJECT: Dzus Fasteners	PROJECT No.: 60277021	SHEET: 1 OF 1
LOCATION: West Islip, NY		DATE WELL SAMPLED: 5/12/2016	
CLIENT: NYSDEC		NAME OF INSPECTOR: Celeste Foster and Rita Papagian	

ONE WELL VOLUME : 6.77 gallons WELL TD: 44.5 ft PUMP INTAKE DEPTH: 42.5 ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
14:00	2.95								Static water level
14:05									pump on
14:10	2.95	250	20.63	0.249	3.53	5.70	330	13.6	
14:20	2.95	250	16.59	0.340	2.41	5.47	336	4.2	
14:25	2.95	250	16.62	0.339	2.44	5.48	336	4.3	
14:30	2.95	250	16.56	0.352	2.48	5.52	332	9.7	
14:35	2.95	250	16.60	0.354	2.50	5.52	332	10.2	
14:40	2.95	250	16.62	0.359	2.46	5.58	326	4.7	
14:45	2.95	250	16.63	0.359	2.46	5.58	326	4.4	
14:50	2.95	250	16.66	0.361	2.41	5.60	323	4.1	
14:55	2.95	250	16.65	0.362	2.41	5.67	322	4.3	
15:00									Unfiltered Sample DMW-13B Collected
15:03									Filtered Sample DMW-13BF Collected
									1/4" poly tubing put back into the well.

Pump Type: Peristaltic Pump

Analytical Parameters: TAL Metals (Total and Field Filtered)

AECOM

WELL NO. MW-15A

WELL SAMPLING FORM	PROJECT: Dzus Fasteners	PROJECT No.: 60277021	SHEET: 1 OF 1
LOCATION: West Islip, NY		DATE WELL SAMPLED: 5/11/2016	
CLIENT: NYSDEC		NAME OF INSPECTOR: Celeste Foster and Rita Papagian	

ONE WELL VOLUME : 3.75 gallons WELL TD: 28.8 ft PUMP INTAKE DEPTH: 26.8 ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
13:15	5.77								Static water level
13:20									pump on
13:30	5.79	250	20.56	0.118	2.67	5.51	214	71.3	
13:40	5.78	250	18.28	0.118	2.02	5.30	230	21.2	
13:50	5.78	250	18.28	0.117	1.93	5.12	241	30.6	
13:55	5.78	250	18.05	0.118	1.93	5.08	245	37.4	
14:00	5.78	250	17.92	0.117	1.88	5.19	243	36.7	
14:05	5.78	250	17.59	0.118	1.94	5.11	250	34.9	
14:10									Unfiltered Sample DMW-15A Collected
14:12									Filtered Sample DMW-15AF Collected
									1/4" poly tubing put back into the well.

Pump Type: Peristaltic Pump

Analytical Parameters: TAL Metals (Total and Field Filtered)

AECOM

WELL NO. MW-15B

WELL SAMPLING FORM	PROJECT: Dzus Fasteners	PROJECT No.: 60277021	SHEET: 1 OF 1
LOCATION: West Islip, NY		DATE WELL SAMPLED: 5/11/2016	
CLIENT: NYSDEC		NAME OF INSPECTOR: Celeste Foster and Rita Papagian	

ONE WELL VOLUME : 12.43 gallons WELL TD: 85.0 ft PUMP INTAKE DEPTH: 82 ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
13:15	8.72								Static water level
13:20									pump on
13:25	8.72	250	19.39	0.155	0.21	6.49	261	20.3	
13:35	8.73	250	17.40	0.140	0.00	6.28	266	11	
13:45	8.72	250	16.72	0.137	0.09	6.25	263	12.9	
13:55	8.72	250	16.44	0.137	0.05	6.23	259	5.3	
14:05	8.72	250	16.30	0.138	0.03	6.21	257	5.5	
14:15	8.72	250	16.21	0.139	0.03	6.20	254	5.0	
14:20									Unfiltered Sample DMW-15B Collected
14:23									Filtered Sample DMW-15BF Collected
									1/4" poly tubing put back into the well.

Pump Type: Peristaltic Pump

Analytical Parameters: TAL Metals (Total and Field Filtered)

AECOM

WELL NO. MW-17

WELL SAMPLING FORM	PROJECT: Dzus Fasteners	PROJECT No.: 60277021	SHEET: 1 OF 1
LOCATION: West Islip, NY		DATE WELL SAMPLED: 5/11/2016	
CLIENT: NYSDEC		NAME OF INSPECTOR: Celeste Foster and Rita Papagian	

ONE WELL VOLUME : 1.44 gallons WELL TD*: 16.5 ft PUMP INTAKE DEPTH: 14.5 ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
15:20	7.68								Static water level, 3' stick up
15:30	7.68	250	19.96	0.137	0.71	7.02	199	642	pump on at 15:25
15:35	7.68	250	18.96	0.135	0.81	6.92	197	427	
15:40	7.68	250	18.63	0.132	0.63	6.90	196	318	
15:45	7.68	250	18.41	0.131	0.59	6.86	196	270	
15:50	7.68	250	18.32	0.131	0.54	6.84	195	215	
15:55	7.68	250	18.33	0.131	0.55	6.84	193	149	
16:00	7.68	250	18.36	0.130	0.56	6.84	192	109	
16:05	7.68	250	18.52	0.130	0.45	6.85	189	76.0	
16:10	7.68	250	18.56	0.129	0.45	6.85	182	75.8	
16:20	7.68	250	18.57	0.129	0.43	6.85	190	75.1	
16:25									Unfiltered Sample DMW-17 Collected
16:28									Filtered Sample DMW-17F Collected
									1/4" poly tubing put back into the well.

Pump Type: Peristaltic Pump

Analytical Parameters: TAL Metals (Total and Field Filtered)

AECOM

WELL NO. MW-18

WELL SAMPLING FORM	PROJECT: Dzus Fasteners	PROJECT No.: 60277021	SHEET: 1 OF 1
LOCATION: West Islip, NY		DATE WELL SAMPLED: 5/11/2016	
CLIENT: NYSDEC		NAME OF INSPECTOR: Celeste Foster and Rita Papagian	

ONE WELL VOLUME : 1.39 gallons WELL TD*: 13.5 ft PUMP INTAKE DEPTH: 11.5 ft

*difficult to get past 6.7 ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
14:30	4.95								Static water level
14:35									pump on
14:40	4.97	250	19.89	0.260	0.95	6.10	212	25.4	
14:45	4.97	250	19.02	0.262	0.89	6.23	210	24.9	
14:50	4.98	250	18.66	0.263	0.84	6.26	209	30.5	
14:55	4.98	250	18.34	0.264	0.81	6.29	208	31.5	
15:00	4.97	250	18.29	0.264	0.83	6.30	208	32.8	
15:05									Unfiltered Sample DMW-18 Collected
15:07									Filtered Sample DMW-18F Collected
									1/4" poly tubing put back into the well.

Pump Type: Peristaltic Pump

Analytical Parameters: TAL Metals (Total and Field Filtered)

AECOM

WELL NO. MW-22A

WELL SAMPLING FORM	PROJECT: Dzus Fasteners	PROJECT No.: 60277021	SHEET: 1 OF 1
LOCATION: West Islip, NY		DATE WELL SAMPLED: 5/13/2016	
CLIENT: NYSDEC		NAME OF INSPECTOR: Celeste Foster and Rita Papagian	

ONE WELL VOLUME : 1.28 gallons WELL TD: 14.4 ft PUMP INTAKE DEPTH: 12.4 ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
10:00	6.52								Static water level
10:05	6.54	250	14.22	0.276	30.36	6.73	7	11	pump on
10:10	6.54	250	14.00	0.264	0.43	6.62	6	79.2	
10:15	6.54	250	13.85	0.261	0.19	6.52	8	67.9	
10:25	6.54	250	13.84	0.264	0.13	6.51	6	33.1	
10:30	6.54	250	13.81	0.265	0.11	6.55	3	14.7	
10:35	6.54	250	13.80	0.269	0.09	6.54	3	10.9	
10:40	6.54	250	13.85	0.264	0.07	6.55	2	10.7	
10:45	6.54	250	13.82	0.263	0.07	6.56	2	10.9	
10:50									Unfiltered Sample DMW-22A Collected
10:53									Filtered Sample DMW-22AF Collected
									1/4" poly tubing put back into the well.

Pump Type: Peristaltic Pump

Analytical Parameters: TAL Metals (Total and Field Filtered)

AECOM

WELL NO. MW-22B

WELL SAMPLING FORM	PROJECT: Dzus Fasteners	PROJECT No.: 60277021	SHEET: 1 OF 1
LOCATION: West Islip, NY		DATE WELL SAMPLED: 5/13/2016	
CLIENT: NYSDEC		NAME OF INSPECTOR: Celeste Foster and Rita Papagian	

ONE WELL VOLUME : 6.19 gallons WELL TD: 44.50 ft PUMP INTAKE DEPTH: 42.5 ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
9:50	6.54								Static water level
9:55									pump on
10:00	6.54	250	14.81	0.256	6.47	6.45	309	11.1	
10:05	6.54	250	14.45	0.258	6.46	6.49	300	4.4	
10:10	6.54	250	14.45	0.259	6.52	6.65	300	4.1	
10:15	6.54	250	14.39	0.260	1.76	6.29	307	1.8	
10:25	6.54	250	14.35	0.264	0.95	6.05	318	2.2	
10:30	6.54	250	14.20	0.265	0.44	6.15	313	2.1	
10:35	6.54	250	14.19	0.266	0.04	6.12	314	2.3	
10:40	6.54	250	14.20	0.266	0.02	6.12	314	2.0	
10:45									Unfiltered Sample DMW-22B Collected
10:47									Filtered Sample DMW-22BF Collected
									1/4" poly tubing put back into the well.

Pump Type: Peristaltic Pump

Analytical Parameters: TAL Metals (Total and Field Filtered)

AECOM

WELL NO. MW-23A

WELL SAMPLING FORM	PROJECT: Dzus Fasteners	PROJECT No.: 60277021	SHEET: 1 OF 1
LOCATION: West Islip, NY		DATE WELL SAMPLED: 5/13/2016	
CLIENT: NYSDEC		NAME OF INSPECTOR: Celeste Foster and Rita Papagian	

ONE WELL VOLUME : 1.55 gallons WELL TD: 14.30 ft PUMP INTAKE DEPTH: 12 ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
8:50	4.80								Static water level
8:55									pump on
9:00	4.80	250	14.75	1.45	6.38	6.26	1	32.0	
9:10	4.80	250	14.47	1.25	0.52	6.55	-22	18.5	
9:15	4.80	250	14.40	1.19	0.35	6.52	-23	22.5	
9:20	4.80	250	14.36	1.16	0.27	6.55	-24	12.6	
9:25	4.80	250	14.38	0.647	0.19	6.57	-27	9.7	
9:30	4.80	250	14.37	0.629	0.10	6.57	-29	8.4	
9:35	4.80	250	14.36	0.627	0.10	6.58	-29	8.1	
9:40	4.80	250	14.37	0.627	0.09	6.58	-29	8.2	
9:45									Unfiltered Sample DMW-23A Collected
9:47									Filtered Sample DMW-23AF Collected
									1/4" poly tubing put back into the well.

Pump Type: Peristaltic Pump

Analytical Parameters: TAL Metals (Total and Field Filtered)

AECOM

WELL NO. MW-23B

WELL SAMPLING FORM	PROJECT: Dzus Fasteners	PROJECT No.: 60277021	SHEET: 1 OF 1
LOCATION: West Islip, NY		DATE WELL SAMPLED: 5/13/2016	
CLIENT: NYSDEC		NAME OF INSPECTOR: Celeste Foster and Rita Papagian	

ONE WELL VOLUME : 6.49 gallons WELL TD: 44.5 ft PUMP INTAKE DEPTH: 42 ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
8:50	4.71								Static water level
8:55									pump on
9:00	4.71	250	14.55	0.133	0.10	5.97	323	48.1	
9:05	4.71	250	14.52	0.139	0.12	5.86	324	42.9	
9:10	4.71	250	14.52	0.143	0.23	5.82	325	53.1	
9:15	4.71	250	14.59	0.148	0.57	5.75	326	28.5	
9:20	4.71	250	14.57	0.148	0.58	5.75	327	27.3	
9:25	4.71	250	14.57	0.152	0.75	5.71	327	10.2	
9:30	4.71	250	14.65	0.153	0.79	5.69	327	9.6	
9:35	4.71	250	14.68	0.153	0.79	5.68	327	9.0	
9:40									Unfiltered Sample DMW-23B Collected
9:43									Filtered Sample DMW-23BF Collected
									1/4" poly tubing put back into the well.

Pump Type: Peristaltic Pump

Analytical Parameters: TAL Metals (Total and Field Filtered)