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PNP 2018-027

Technical Specification 5.6.2

May 10, 2018

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Subject: 2017 Radiological Environmental Operating Report

Palisades Nuclear Plant
Docket 50-255
License No. DPR-20

Dear Sir or Madam:

Entergy Nuclear Operations, Inc. is submitting the enclosed Radiological Environmental Operating Report for the Palisades Nuclear Plant. This report was prepared in accordance with the requirements of Technical Specification 5.6.2. The period covered by the enclosed report is January 1, 2017, through December 31, 2017.

This letter contains no new commitments and no revision to existing commitments.

Sincerely,

A handwritten signature in black ink that reads "BE Watson for".

JAH/bed

Enclosure 1: Annual Radiological Environmental Operating Report January 1, 2017,
Through December 31, 2017

CC Administrator, Region III, USNRC
Project Manager, Palisades, USNRC
Resident Inspector, Palisades, USNRC

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Annual Radiological Environmental Operating Report January 1, 2017, Through December 31, 2017

I. INTRODUCTION

The Annual Radiological Environmental Operating Report provides a summary and data interpretation of the Palisades Nuclear Plant (PNP) Radiological Environmental Monitoring Program as conducted during the 2017 reporting period. This report was prepared in accordance with the requirements of 10 CFR 50, Appendix I, Sections IV.B.2, IV.B.3, IV.C, and Technical Specification 5.6.2.

II. NON-ROUTINE REPORTS

No reportable events occurred during this reporting period.

III. DISCUSSION AND INTERPRETATION OF RESULTS

A. Air Samples

There were 312 air samples collected and analyzed for gross beta and I-131 during 2017. Air iodine/particulate samples are collected weekly from six air-sampling locations. Air is metered into the sampling unit at an approximate one cubic foot per minute flow rate through a 47-mm air filter (air particulate) and an air iodine cartridge. Both filters are in-line with each other and housed within the same filter holder. An "as found" and "as left" leak test is performed at each station during each sample collection. Weekly samples were sent to Teledyne Brown Engineering Environmental Services for analysis.

Analysis of the airborne particulate sample data, between the five near-site indicator locations and the control location, demonstrated no statistical difference. The average concentration of gross beta activity among all indicator locations was $2.16\text{E-}02$ pCi/m³ and was $2.12\text{E-}02$ pCi/m³ for the control location. All I-131 activity results, for both indicator and control locations, were below the minimum detectable concentration (MDC).

All Sample Collection Anomalies are described in Section VI Table A. All anomalies involved air sample stations. Two of the anomalies involved a loss of power, one involved a failed pump, and the fourth involved a flowmeter instrument used past its calibration due date. The loss of power and the failed pump occurred at the air sample location 8SP. The total missed analysis time is estimated to be 9 days. The flowmeter used past its calibration due date occurred at the air sample location GR10 (control sample). Section VI Table A describes these events in more detail.

B. Lake Water (Surface Water)

Palisades' Lake In (Indicator) and Ludington (Control) lake water samples were collected daily and combined into monthly composite samples. One gallon of both Palisades' Lake-In and Ludington Lake-in composites was sent to Teledyne Brown Engineering, Inc. for monthly analysis for gross beta, gamma emitters, and tritium. No treatment of the water samples with preservative was required. Of the 12 indicator samples, 7 had detectable gross beta activity with an average concentration of 2.69 pCi/L. Of the 12 control samples analyzed, 8 had detectable gross beta activity with an average concentration of 3.09 pCi/L. No tritium was detected for indicator or control samples. The only gamma emitter's detected were naturally occurring isotopes at very low concentrations. None of the gross beta activity detected was greater than two standard deviations above the MDC. All sample results trended as expected.

No statistical difference was found between the indicator and control location samples and no PNP Offsite Dose Calculation Manual (ODCM) reporting limits were exceeded.

C. Drinking Water

Palisades' Domestic Water, South Haven Municipal Raw Water, Palisades' Park Community Water, (Indicators) and Ludington (Control) water samples were collected daily and combined into monthly composite samples. One gallon of each composite was sent to Teledyne Brown Engineering, Inc. for monthly analysis for gross beta, gamma emitters, and tritium. No treatment of the water samples with preservative was required. No tritium was detected in these samples. The only gamma emitter's detected were naturally occurring isotopes at very low concentrations. All sample results trended as expected.

Gross beta activity was detected in 5 of the 12 Palisades domestic water indicator samples. The average gross beta concentration in these samples was 2.78 pCi/L.

Gross beta activity was detected in 7 of the 12 South Haven Raw water indicator samples. The average gross beta concentration in these samples was 2.76 pCi/L.

Gross beta activity was detected in 0 of the 12 Palisades' Park Community water samples.

Gross beta activity was detected in 8 of the 12 Ludington (Control) samples. The average gross beta concentration in these samples was 3.09 pCi/L.

Out of the 20 samples which had detectable gross beta activity, 3 of those samples' activity was greater than 2 sigma above the MDC. All 3 of those samples were Ludington (Control) samples. No statistical difference was found between the indicator and control location samples and no PNP ODCM, reporting limits were exceeded.

D. Milk

There are no dairy farms meeting the sampling criteria of being within eight kilometers (km) of PNP. Because of a lack of dairy farms, PNP analyzes broad leaf vegetation samples as a substitute for milk sampling.

E. Thermoluminescent Dosimeters (TLDs) - Gamma Dose

Environmental gamma doses are measured quarterly by placement of TLDs at designated locations. Sensitivity for the TLDs is 3 mrem, with a linear response of 1 mrem to 50 rem.

The PNP direct radiation monitoring program consists of TLDs placed at 23 locations. There are ten inner ring TLDs, one on-site TLD, nine outer ring TLDs, and three control TLDs located in Grand Rapids, Kalamazoo and Dowagiac, MI. TLDs are collected and sent to an offsite vendor quarterly for analysis. All environmental TLDs were collected and analyzed during 2017 with no deviations from the sampling program. The on-site TLD is included with the inner ring (site boundary) TLDs for evaluating any dose effect that could be attributed to PNP operations.

The TLD data evaluations were performed by comparing the inner ring TLDs and the outer ring TLDs against the control TLDs.

The quarterly average gamma readings in mrem were:

Inner Ring = 9.3 mrem
Outer Ring = 11.1 mrem
Control = 10.9 mrem

The highest average quarterly reading was observed at outer ring location number 2 with an average value of 14.1 mrem and a maximum reading of 14.6 mrem. This location is historically the highest among the outer ring TLD's, but is not attributed to plant operations, since the inner ring in the same sector is relatively low (9.3 mrem). This location is on a dirt road by

an animal farm which contributes to the higher natural background due to radon daughter products.

The average control TLD dose was 10.9 mrem. Only two TLD locations had TLD results greater than 2 times the standard deviation of the control TLD's. These locations are location number 2 and location number 4. As mentioned above location number 2 is historically higher due to natural background in the area. Location number 4 is also located on an agricultural property and likely has higher background due to higher natural radon daughter products. Both location 2 and location 4 TLD results trended as typical for their locations.

The TLD data at each site was compared to values obtained from the same site over the time period from 2011 to 2016. For each site an average and a standard deviation was determined based upon the 2011 - 2016 data. A "normal range" was defined for each site by taking the average 2011-2016 value plus two standard deviations and the average 2011-2016 value minus two standard deviations. All quarterly TLD data for 2017 was within the respective normal range with the exception of two data points; 2nd quarter TLD location 7 and 2nd quarter TLD location 16. Both data points were lower than their normal range. The 2017 data demonstrates there is no statistical difference between 2017 TLD results and 2011-2016 TLD results.

The TLD data from 2017 demonstrates that there was no measureable offsite direct radiation effect due to PNP operations.

All TLD's were analyzed by Environmental Dosimetry Company. The Quality Assurance status report for Environmental Dosimetry Company is provided in Attachment G.

F. Crops

Two principal area crops (apples and blueberries) were collected in 2017. Approximately 1 kg of sample is placed in a plastic bag for shipment to the vendor for analysis. No special treatment of the samples with a preservative is necessary.

Both crops were grown locally and collected in the vicinity of indicator station 4JS (3.5 miles SE). There was no activity detected in the blueberry or apple samples with the exception of naturally occurring K-40 which was detected in the apple sample at a concentration of 7.90 E+02 pCi/kg wet and in the blueberry samples at a concentration of 1.11 E+03 pCi/kg wet. These values are typical of what is observed and is indicative of natural sources.

G. Sediment

Sediment samples are collected semi-annually from a location ½ mile north and at the southern site boundary of the plant along the waterline. No treatment of the samples with a preservative is necessary prior to shipment to the vendor for analysis. A total of four sediment samples were collected and analyzed in 2017.

The only gamma emitters detected in the sediment samples collected in 2017 were naturally occurring radionuclides. Naturally occurring K-40 and Th-228 were detected in all 4 samples and naturally occurring Th-232 was detected in 3 of the 4 samples. There was no statistical difference between samples collected north and south of the Palisades. The average concentration of K-40, Th-228, and Th-232 detected was 3.96 E+03 pCi/kg dry, 1.98E+02 pCi/kg dry, and 2.37E+02 pCi/kg dry respectively.

H. Fish

Fish samples are collected semi-annually. Samples consist of species of commercially and/or recreational importance near the plant discharge area. Control samples are obtained in an area not influenced by plant discharge. At least one common species is typically collected from the indicator and control locations during sampling. Each one-liter quantity of fish sample is frozen for preservation for shipment to Teledyne Brown Engineering, Inc. for analysis.

Five fish samples were collected in the vicinity of PNP and four control samples were collected from Ludington Pumped Storage Facility. The only activity detected in the control fish samples was naturally occurring K-40, with an average concentration of 3.06E+03 pCi/kg wet. Naturally occurring K-40 was also detected in PNP fish samples with an average concentration of 2.99 E+03 pCi/kg wet. These values of K-40 are typical and are not attributed to PNP effluents.

I. Broad Leaf Vegetation

PNP derived an acceptance criterion for broadleaf sample Cs-137 results for the sample locations historically used based upon background sampling. The acceptance value has been determined to be 146 pCi/Kg (which is the background average plus one standard deviation). This means that any sample result above this value would warrant additional evaluation pertaining to the source of activity. None of the broadleaf samples collected during 2017 had detectable Cs-137 above 146 pCi/kg.

An additional sample location, "location 3," was implemented in the summer of 2016 for broadleaf sampling. This sample location and the results are discussed in the 2016 Annual Radiological Environmental Operating Report. An evaluation was performed and the sample location was discontinued prior to the 2017 growing season. Broadleaf sampling location 3 was a temporary sampling site and was performed above and beyond what is required per Palisades' REMP program as defined in the ODCM.

There is documented evidence that Cs-137 exists in the biosphere from activities 25 to 50 plus years ago. Cs-137 is readily transported through the environment due to its chemical properties. When in solution (during rainfall events) it can be efficiently taken up by plants. The evidence presented documents that there is a fairly wide ranging span of Cs-137 concentration in the environment that is far enough away from the site to not be associated with deposits from plant effluents.

In support of this conclusion is the fact that Location 1 is in a wooded area where sample media would typically attain activity from the sediment rather than gaseous effluents. Location 2 and the control location are in areas that are more open (adjacent to a road) which allows a better opportunity to receive activity from gaseous releases. Cs-137 was detected in 3 of the 5 samples from location 1. Cs-137 was detected in 1 of the 10 samples from Location 2 and the control location. The average Cs-137 concentration at location 3 was 60.1 pCi/kg wet with a range from 45.5 pCi/kg to 79.9 pCi/kg wet. The sample which contained detectable Cs-137 from Location 2 was 40.8 pCi/kg.

J. Other Samples

Seven monthly samples were taken from the closest commercial well water at the seasonal Palisades Park housing subdivision south of PNP. Another seven samples were taken from the community well at the seasonal Palisades Park facility also. The community well sample results are discussed in section III. C. Wells are not turned on before April 15th and are secured by October 15th of each year. These samples were sent to Teledyne Brown Engineering, Inc. for analysis and analyzed for gross beta, gamma spectroscopy, and tritium. None of the community well samples contained any detectable tritium or gross beta activity.

K. Gaseous and Liquid Radwaste Effluent Composite Samples

Gaseous and liquid radwaste effluent composite samples were collected and analyzed on site and by Teledyne Brown Engineering, Inc. No special sample treatment with a preservative is required prior to laboratory

analysis. The liquid effluent composite sample is produced from samples collected from each batch release. The gaseous radwaste effluent weekly composite sample results are based on analyzing weekly stack gas particulate and iodine filters.

Although not a direct reporting component in the PNP Annual Radiological Environmental Operating Report, results of the gaseous and liquid monthly radwaste effluent composite samples in addition to normal release data are evaluated against overall environmental trending data. This evaluation assists in determining isotopic dispersion and deposition patterns within the surrounding environment of PNP.

IV. ASSESSMENT OF PALISADES OPERATION ENVIRONMENTAL IMPACT

In reviewing the 2017 PNP radiological environmental monitoring data, and comparing it to previous operational and pre-operational data, all trending parameters continue to indicate that the operation of PNP has minimal environmental impact. Isotopic activity is at environmental background levels. Evidence of an overall environmental isotopic buildup attributable to plant effluents remains negligible as well. The activity detected in crops, broadleaf, and fish samples are attributed to natural sources and historical global events (such as atmospheric bomb testing).

Palisades Nuclear Power Plant, Van Buren County, MI Docket 50-255, January 1, 2017 to December 31 2017

Table 10.4-1
Sampling and Analysis Summary

Medium	Collection Description	Location	Number of Samples Collected	Type of Analysis	Frequency of Analysis
Air	Continuous at ~1 cfm	Stations 4, 5, 8, 9, 10, and 19	260 Indicator 52 Control	Gross Beta, I-131	Weekly
				Gamma isotopic	Quarterly
Lake Water	1 gallon composite	Lake Intake and Ludington Control	12 Indicator 12 Control	Gamma isotopic, Gross Beta, Tritium	Monthly
Drinking Water	1 gallon composite	South Haven Municipal (Domestic Water), South Haven Raw, Palisades Park Community ^b , and Ludington Control	31 Indicator 12 Control	Gamma isotopic, Gross Beta, Tritium	Monthly
TLD	Continuous	Inner Ring, Outer Ring, Controls	80 Indicator 12 Control	Gamma dose	Quarterly
Food Products	1 kg grab	4-JS, 3.5 miles SE	2	Gamma isotopic and I-131	At time of harvest
Sediment ^a	1 L grab	Discharge 1/2 mile north and south of plant near site boundary	4	Gamma isotopic	Semiannually
Fish	1 L grab	Adjacent to Plant Discharge and Ludington	5 Indicator 4 Control	Gamma isotopic	Semiannually
Broad leaf Vegetation	1 kg grab	Plant boundary – S and SSE sectors, Control 9 to 18 miles NNE of plant	10 Indicator 5 Control	Gamma isotopic and I-131	Monthly during growing season

a. Only sediment samples 1/2 mile north of plant are required

b. Palisades Park Community sampled in-season only

Palisades Nuclear Power Plant, Van Buren County, MI Docket 50-255, January 1, 2017 to December 31 2017

Table 10.4-2
Sampling Data Summary

Medium or Pathway Sampled (Unit of Measure)	Type/Total Number of Analyses Performed	Lower Limit of Detection	All Indicator Locations Mean (f) ^b Range ^b	Greatest Mean Name Distance & Direction	Greatest Mean (f) ^b Range ^b	Control Locations Mean (f) ^b Range ^b	Number of Reportable Occurrences
Air (pCi/m ³)	I-131 / 300	0.07	< MDC (0/260)	NA	< MDC (0/260)	< MDC (0/52)	0
	Gross beta / 300	0.01	0.0216 (260/260) 0.0114-0.0382	8SP 0.595 mi NE	0.0255 (52/52) 0.0163-0.0382	0.0212 (52/52) 0.0129-0.0388	0
	Cs-134 / 24	0.05	< MDC (0/12)	NA	< MDC (0/12)	< MDC (0/12)	0
	Cs-137 / 24	0.06	< MDC (0/12)	NA	< MDC (0/12)	< MDC (0/12)	0
Lake Water (pCi/L) ^c	Gross beta / 24	4.0	2.69 (7/12) 2.36-2.91	Palisades Lake In	2.69 (7/12) 2.36-2.91	3.09 (8/12) 2.19-3.75	0
	Tritium / 24	2000	< MDC (0/12)	NA	< MDC (0/12)	< MDC (0/12)	0
	Mn-54 / 24	15	< MDC (0/12)	NA	< MDC (0/12)	< MDC (0/12)	0
	Fe-59 / 24	30	< MDC (0/12)	NA	< MDC (0/12)	< MDC (0/12)	0
	Co-58 / 24	15	< MDC (0/12)	NA	< MDC (0/12)	< MDC (0/12)	0
	Co-60 / 24	15	< MDC (0/12)	NA	< MDC (0/12)	< MDC (0/12)	0
	Zn-65 / 24	30	< MDC (0/12)	NA	< MDC (0/12)	< MDC (0/12)	0
	Zr-95 / 24	15	< MDC (0/12)	NA	< MDC (0/12)	< MDC (0/12)	0
	Nb-95 / 24	15	< MDC (0/12)	NA	< MDC (0/12)	< MDC (0/12)	0
	Cs-134 / 24	15	< MDC (0/12)	NA	< MDC (0/12)	< MDC (0/12)	0
	Cs-137 / 24	18	< MDC (0/12)	NA	< MDC (0/12)	< MDC (0/12)	0
	Ba-140 / 24	60	< MDC (0/12)	NA	< MDC (0/12)	< MDC (0/12)	0
La-140 / 24	15	< MDC (0/12)	NA	< MDC (0/12)	< MDC (0/12)	0	

Palisades Nuclear Power Plant, Van Buren County, MI Docket 50-255, January 1, 2017 to December 31 2017

Table 10.4-2
Sampling Data Summary

Medium or Pathway Sampled (Unit of Measure)	Type/Total Number of Analyses Performed	Lower Limit of Detection	All Indicator Locations Mean (f) ^b Range ^b	Greatest Mean Name Distance & Direction	Greatest Mean (f) ^b Range ^b	Control Locations Mean (f) ^b Range ^b	Number of Reportable Occurrences
Drinking Water (pCi/L) ^c	Gross beta / 43	4.0	2.77 (12/31) 2.23-3.43	Palisades Domestic	2.78 (5/12) 2.38-3.13	3.09 (8/12) 2.19-3.75	0
	Tritium / 43	2000	< MDC (0/31)	NA	< MDC (0/12)	< MDC (0/12)	0
	Mn-54 / 43	15	< MDC (0/31)	NA	< MDC (0/12)	< MDC (0/12)	0
	Fe-59 / 43	30	< MDC (0/31)	NA	< MDC (0/12)	< MDC (0/12)	0
	Co-58 / 43	15	< MDC (0/31)	NA	< MDC (0/12)	< MDC (0/12)	0
	Co-60 / 43	15	< MDC (0/31)	NA	< MDC (0/12)	< MDC (0/12)	0
	Zn-65 / 43	30	< MDC (0/31)	NA	< MDC (0/12)	< MDC (0/12)	0
	Zr-95 / 43	15	< MDC (0/31)	NA	< MDC (0/12)	< MDC (0/12)	0
	Nb-95 / 43	15	< MDC (0/31)	NA	< MDC (0/12)	< MDC (0/12)	0
	Cs-134 / 43	15	< MDC (0/31)	NA	< MDC (0/12)	< MDC (0/12)	0
	Cs-137 / 43	18	< MDC (0/31)	NA	< MDC (0/12)	< MDC (0/12)	0
	Ba-140 / 43	60	< MDC (0/31)	NA	< MDC (0/12)	< MDC (0/12)	0
	La-140 / 43	15	< MDC (0/31)	NA	< MDC (0/12)	< MDC (0/12)	0
Inner Ring (and control) TLD (Gamma mR) ^d	Gamma Dose / 56	Sensitivity of 3 mR per vendor	9.29 (44/44) 7.61-10.79	Station # 1 Palisades	10.58 (4/4) 10.41-10.79	10.93 (12/12) 9.71-12.03	0
Outer Ring (and control) TLD (Gamma mR) ^d	Gamma Dose / 48	Sensitivity of 3 mR per vendor	11.15 (36/36) 8.70-14.62	Station # 2 5.6 miles S	14.12 (4/4) 13.47 -14.62	10.93 (12/12) 9.71-12.03	0

Palisades Nuclear Power Plant, Van Buren County, MI Docket 50-255, January 1, 2017 to December 31 2017

**Table 10.4-2
Sampling Data Summary**

Medium or Pathway Sampled (Unit of Measure)	Type/Total Number of Analyses Performed	Lower Limit of Detection	All Indicator Locations Mean (f) ^b Range ^b	Greatest Mean Name Distance & Direction	Greatest Mean (f) ^b Range ^b	Control Locations Mean (f) ^b Range ^b	Number of Reportable Occurrences
Food Crops (pCi/kg wet)	I-131 / 2	60	< MDC (0/2)	NA	< MDC (0/2)	Control sample not required	0
	Cs-134 / 2	60	< MDC (0/2)	NA	< MDC (0/2)	Control sample not required	0
	Cs-137 / 2	80	< MDC (0/2)	NA	< MDC (0/2)	Control sample not required	0
Sediment (pCi/kg dry)	Cs-134 / 4	150	< MDC (0/4)	NA	< MDC (0/4)	Control sample not required	0
	Cs-137 / 4	180	< MDC (0/4)	NA	< MDC (0/4)	Control sample not required	0
Fish (pCi/kg wet)	Mn-54 / 9	130	< MDC (0/5)	NA	< MDC (0/5)	< MDC (0/4)	0
	Fe-59 / 9	260	< MDC (0/5)	NA	< MDC (0/5)	< MDC (0/4)	0
	Co-58 / 9	130	< MDC (0/5)	NA	< MDC (0/5)	< MDC (0/4)	0
	Co-60 / 9	130	< MDC (0/5)	NA	< MDC (0/5)	< MDC (0/4)	0
	Zn-65 / 9	260	< MDC (0/5)	NA	< MDC (0/5)	< MDC (0/4)	0
	Cs-134 / 9	130	64.9 (1/5) N/A	Palisades Site	64.9 (1/5) N/A	< MDC (0/4)	0
	Cs-137 / 9	150	65.1 (1/5) N/A	Palisades Site	65.1 (1/5) N/A	< MDC (0/4)	0
Broad Leaf Vegetation (pCi/kg wet)	I-131 / 15	60	< MDC (0/10)	NA	< MDC (0/8)	< MDC (0/5)	0
	Cs-134 / 15	60	< MDC (0/10)	NA	< MDC (0/8)	< MDC (0/5)	0
	Cs-137 / 15	80	55.3 (4/10) 40.8-79.9	Location BV-1 0.5 miles SSE	60.1 (3/5) 45.5-79.9	< MDC (0/5)	0

a - Nominal Lower Limit of Detection (LLD) as defined in table notation c of ODCM Table 1-9.

b - Mean and range based on detectable measurements only.

c - The Lake Water and the Drinking Water totals in column 2 both account for the use of the same samples from Ludington Control.

d - The Inner and Outer TLD totals in column 2 account for the use of the same control TLDs in both areas.

f - Fraction of detectable measurements at specific locations is indicated in parenthesis.

Table 10.4-3
Greatest Mean Sampling Location
 January 1, 2017 to December 31, 2017

Medium or Pathway Sampled (unit of measurement)	Type of Analysis	Location	High	Low	Mean
Air (pCi/m ³)	I-131	NA	< MDC	< MDC	< MDC
	Gross Beta	8SP	0.0382	0.0163	0.0255
	Gamma Isotopic	NA	< MDC	< MDC	< MDC
Lake Water (pCi/L)	Gross Beta	Palisades	2.91	2.36	2.69
	Tritium	NA	< MDC	< MDC	< MDC
	Gamma Isotopic	NA	< MDC	< MDC	< MDC
Drinking Water (pCi/L)	Gross Beta	Palisades	3.13	2.38	2.78
	Tritium	NA	< MDC	< MDC	< MDC
	Gamma Isotopic	NA	< MDC	< MDC	< MDC
Inner Ring TLD (gamma mR)	Quarterly	#1 (Palisades)	10.79	10.41	10.58
Outer Ring TLD (gamma mR)	Quarterly	# 2 5.6 miles S	14.62	13.47	14.12
Crops (pCi/kg wet)	I-131	NA	< MDC	< MDC	< MDC
	Other Gamma	NA	< MDC	< MDC	< MDC
Sediment (pCi/kg dry)	Gamma Emitters	NA	< MDC	< MDC	< MDC
Fish (pCi/gm wet)	Gamma Emitters	Palisades	65.1	64.9	65.0
Broad leaf vegetation (pCi/kg wet)	I-131	NA	< MDC	< MDC	< MDC
	Gamma Emitters	Site boundary SE	79.9	45.5	60.1

VI. ATTACHMENTS

ATTACHMENT A SAMPLE COLLECTION ANOMALIES

Sample Affected	Location	Date	Problem	Evaluation
Air Sample Station	8SP	10/30/2017	Pump failure	The pump at air sample station 8SP was found to be seized. These pumps are replaced on a two year frequency to prevent pump failure. This pump failed approximately 6 months prior to its replacement date. The failed pump was promptly replaced with a new pump. All required lower limit of detection values were achieved. The results were typical. It is estimated that the station was without power for less than 3.5 days.
Air Sample Station	8SP	04/03/2017	Loss of power	The air sample station at location 8SP was found to be without power. The volume of sample collected for the monitoring period was sufficient for obtaining quantitative results. All required lower limit of detection values were achieved. The results were typical. It is estimated that the station was without power for less than 4 days.
Air Sample Station	8SP	08/22/2017	Loss of power	The air sample station at location 8SP was found to be without power. The volume of sample collected for the monitoring period was sufficient for obtaining quantitative results. All required lower limit of detection values were achieved. The results were typical. It is estimated that the station was without power for less than 1.5 days.
Air Sample Station	A10	01/03/2018	Flowmeter used past calibration due date	At least once per 2 years the flowmeters used at the air sample stations are calibrated. The flowmeter used at the control air sample station A10 was in-use approximately 6 months past its calibration due date. Upon discovery the flowmeter was promptly replaced with a calibrated flowmeter. The flowmeter which was in-use was sent offsite for calibration. The calibration determined that "as-found" parameters for the flowmeter were within the acceptance criteria for a valid calibrated flowmeter. Therefore no past data was compromised by this condition. The paperwork which is completed during the weekly sample collection was expanded to prevent re-occurrence of this event.

ATTACHMENT B PALISADES LAND USE CENSUS

2017 Land Use Census Report

The attached tables are the results of the Palisades Land Use Census conducted on 10/25/2017 and 10/26/2017. The first table references the distance from Palisades to the nearest residence, garden (greater than 500 square feet), beef cattle, dairy cattle and goat per meteorological sector. The next table identifies the locations of the nearest residence, garden, beef/dairy cattle and goats within a five (5) mile radius of Palisades per meteorological sector. The last table lists the critical receptor locations used to calculate offsite doses by the GASPARE computer program.

Closest Receptor by Sector

Sector	Residence	Garden	Beef Cattle	Dairy Cow	Goat
NNE	1.67	1.78	> 5	> 5	> 5
NE	1.14	1.90	> 5	> 5	2.45
ENE	1.19	2.58	3.38	> 5	>5
E	1.67	2.46	> 5	> 5	3.49
ESE	1.35	2.04	2.04	> 5	> 5
SE	0.87	2.55	3.88	> 5	> 5
SSE	0.80	0.70	> 5	> 5	> 5
S	0.51	>5	> 5	> 5	> 5
SSW	0.48	>5	> 5	> 5	> 5

Locations

Sector	Location Description	Item	Distance from Plant (miles)
NNE	20620 Ruggles Road	Residence	1.67
	77363 20th Ave South Haven	Garden	1.78
NE	Ruggles Road, State Park Manager	Residence	1.14
	77020 CR 380	Garden	1.90
	75522 CR 380	Goat	2.45
ENE	77198 24 th Avenue	Residence	1.19
	73103 CR 380	Cow	3.38
	74160 24th Ave South Haven	Garden	2.58
E	25112 76 th Street	Residence	1.67
	74494 28 th Avenue	Garden	2.46
	72375 28 th Avenue	Goat	3.49
ESE	28160 77 ½ Street	Residence	1.35
	75703 30th Ave Covert	Garden	1.66
	75703 30th Ave Covert	Cow	2.04
SE	30th Ave	Residence	0.87
	NorthWest Corner of 76th and 34th	Garden	2.55
	Across from REMP Air sample A4	Cow	3.88
SSE	Ravine Road	Residence	0.80
	Palisades Park Community Garden	Garden	0.70
S	Shorewood Lane	Residence	0.51
SSW	Shorewood Walk, Palisades Park	Residence	0.48

Critical Receptors

Atmospheric Dispersion			
Location Type	Direction From Site	Distance (miles)	X/Q (sec/m³)
Site Boundary ¹	SSE	0.48	2.30E-06
Residence ²	S	0.51	1.47E-06
Garden ¹	SSE	0.70	1.29E-06
Beef Cattle ²	ESE	2.04	2.09E-07
Goat ²	NE	2.45	1.88E-07
Atmospheric Deposition			
Location Type	Direction From Site	Distance (miles)	D/Q (1/m²)
Site Boundary ¹	SSE	0.48	1.97E-08
Residence ¹	SSE	0.80	8.47E-09
Garden ¹	SSE	0.70	1.06E-08
Beef Cattle ²	ESE	2.04	1.29E-09
Goat ²	NE	2.45	9.33E-10

¹ Values from 2016 Land Use Census using Meteorological data from 1/1/2006 to 12/31/2015.

² Values from 2017 Land Use Census using Meteorological data from 1/1/2007 to 12/31/2016.

ATTACHMENT C
CHEMISTRY PROCEDURE CH 6.10, "PALISADES RADIOLOGICAL
ENVIRONMENTAL MONITORING PROGRAM

42 Pages Follow

PALISADES NUCLEAR PLANT
CHEMISTRY PROCEDURE

TITLE: RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM

Approved: JCBritting / 4/23/18
Procedure Sponsor Date

Process Applicability Exclusion

New Procedure/Revision Summary

Editorial, Rev 22

Specific Changes:

DRN-18-00280 - Update references.

Revision 21:

DRN-17-00554 - change direction in Step 5.3.14o to notify REMP/RETS analyst if the expiration date is within 30 days.

Minor changes to driving location for TLD 16 on page 1 of 2 Attachment 11.

Per CR-PLP-2017-04038 CA-00003, Step 1.4 of Attachment 10 (page 2 of 2) created to direct user to obtain and retain a copy of the vendors scientific collectors permit.

Some places in the procedure directed user to obtain 1 kg of fish sample and some places directed user to obtain 1 liter of fish sample. Procedure now directs user to obtain 1 liter of fish sample throughout.

Revision 20:

DRN-17-00422 - Added step to shipping TLDs to add "Do not X-ray" stickers to the box.

Revision 19:

DRN-16-01087 - include directions for fish collection, include driving directions for TLD change-out, include direction to ensure activity is less than environmental LLDs prior to shipping, added septic sample to shipping checklist in Attachment 9.

TITLE: RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM

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ATTACHMENTS

- Attachment 1, "Environmental Sample Collection Schedule"
- Attachment 2, "REMP Sample Locations"
- Attachment 3, "Sample Shipment Identification"
- Attachment 4, "Sample Packaging and Shipment"
- Attachment 5, "Environmental Air Sample Data Sheet"
- Attachment 6, "REMP Sample Collection Checklist"
- Attachment 7, "REMP Analytical Requirements"
- Attachment 8, "Environmental Monitoring Locations"
- Attachment 9, "Shipping Checklist"
- Attachment 10, "Fish Collection"
- Attachment 11, "TLD Driving Directions"

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REFERENCE USE

- **Procedure and Procedure Precautions and Limitations are at the work location for reference.**
- **Review and understand segments before performing any steps.**
- **Signoff steps are completed, when included, before starting the next step.**
- **Place keep in accordance with EN-HU-106, "Procedure and Work Instruction Use and Adherence."**
- **Review the Procedure to verify segments have been completed.**

1.0 PURPOSE

This procedure provides instructions for collection of environmental samples in support of the Radiological Environmental Monitoring Program (REMP) as required by the Offsite Dose Calculation Manual (ODCM). In addition to the ODCM required samples, additional required sampling is listed.

2.0 REFERENCES

2.1 SOURCE DOCUMENTS

- 2.1.1 Reg Guide 4.15 (Revision 2, July 2007), "Quality Assurance for Radiological Monitoring Programs (Inception through Normal Operations to License Termination) - Effluent Streams and the Environment"
- 2.1.2 10CFR50, Appendix I, "Numerical Guides for Design Objectives and Limiting Conditions for Operation to Meet the Criterion 'As Low as is Reasonably Achievable' for Radioactive Material in Light-Water-Cooled Nuclear Power Reactor Effluents"
- 2.1.3 Offsite Dose Calculation Manual (ODCM)
- 2.1.4 Branch Technical Position (Revision 1, 1979), "Radiological Portion of the Environmental Monitoring Program"
- 2.1.5 NRC IE Bulletin 80-10 (May 1980), "Contamination of Nonradioactive System and Resulting Potential for Unmonitored, Uncontrolled Release of Radioactivity to Environment"
- 2.1.6 Entergy Procedure EN-RP-121, "Radioactive Material Control"

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2.2 REFERENCE DOCUMENTS

- 2.2.1 Palisades ODCM, Sections 1.4, 2.2.2, and Tables 1-7, 1-8, and 1-9
- 2.2.2 Entergy Procedure EN-AD-103, "Document Control and Records Management Programs"
- 2.2.3 Entergy Procedure EN- CY-100, "Conduct of Chemistry" |
- 2.2.4 Chemistry Procedure CH 4.39, "Gamma Ray Spectroscopy System"
- 2.2.5 Chemistry Procedure CH 6.50, "Annual Radiological Environmental Operating Report"
- 2.2.6 Entergy Procedure EN-HU-106, "Procedure and Work Instruction Use and Adherence"

2.3 COMMITMENTS

- 2.3.1 [CMT 022011097], IE Bulletin 80-10 Response - "Contamination of Nonradioactive System and Resulting Potential for Unmonitored, Uncontrolled Release of Radioactivity to Environment"
- 2.3.2 [CMT 032011144], IE Bulletin 80-10 Response - "Contamination of Nonradioactive System and Resulting Potential for Unmonitored, Uncontrolled Release of Radioactivity to Environment"

3.0 PREREQUISITES

None

4.0 PRECAUTIONS AND LIMITATIONS

- 4.1 Any revisions to this procedure shall be reviewed against Palisades ODCM Specifications to verify compliance to all requirements.
- 4.2 Deviations from the required sampling schedule shall be documented in the Annual Radiological Environmental Operating Report.
- 4.3 Every effort shall be made to complete corrective action on malfunctioning sampling equipment prior to the end of the next sampling period.

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- 4.4 If it is not possible to obtain the required samples, suitable alternative media and locations shall be substituted within 30 days.
- 4.5 Samples shall be collected, prepared, and shipped for analysis in a timely manner to ensure detection requirements are met. Other specific handling precautions for sample media are indicated in Section 5.0 as required.
- 4.6 Any deviation in the Radiological Environmental Monitoring Program including missing samples, unusual analytical results, elevated LLDs, etc, shall be investigated, evaluated, corrected, and documented.
- 4.7 If an air sampling unit is discovered not operating, attempt to find the cause and repair. If this cannot be done, replace applicable component and document on air sample collection data sheet.
- 4.8 Calibrate airflow meters every two years.
- 4.9 Change out airflow meters prior to the expiration of calibration dates.
- 4.10 Change out air sample pumps every two years.
- 4.11 Ensure trees and bushes in the vicinity of air sampler locations are removed, along with any branches extending over the top of the sampler. The goal is to keep every station away from the drip line.
- 4.12 In the event that the Radiological Environmental Monitoring Programs sampling are not substantially conducted as described in Palisades ODCM, Section 1.4, or an unusual or important event occurs from Plant operation that causes a significant environmental impact or affects a potential environmental impact, a report shall be submitted to the NRC within 30 days.
- 4.13 Record sample collected or shipped in Chemistry Database Management System (NuclearIQ).
- 4.14 All shipping time frames listed in this procedure are administrative in nature and do not need to be strictly adhered to in order to meet the intent of this procedure. Time frames are listed to ensure prompt shipping in order to avoid delays and reduce the possibility of not meeting LLD requirements. Time frames should be met every time if possible or inform the REMP Analyst as to the cause of the delay.

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5.0 PROCEDURE

REFERENCE USE
<ul style="list-style-type: none">• Procedure and Procedure Precautions and Limitations are at the work location for reference.• Review and understand segments before performing any steps.• Signoff steps are completed, when included, before starting the next step.• Place keep in accordance with EN-HU-106, "Procedure and Work Instruction Use and Adherence."• Review the Procedure to verify segments have been completed.

5.1 LAKE-IN WATER SAMPLE COLLECTION - DAILY - ODCM REQUIRED [CMT 032011144]

- 5.1.1 **FILL** a 500 ml sample bottle from water downstream of "bio-box" located in the screen house.
- 5.1.2 **ADD** the sample to the composite container (carboy).

<p>NOTE: At the end of each month, check the composite container (carboy), the field sampling bottle and the graduated cylinder for cleanliness (ie, no excessive algae growth, excessively dirty or broken) and clean or replace as necessary.</p>

- 5.1.3 At end of the month, **OBTAIN** a 1-gallon sample from carboy.
- 5.1.4 **PACKAGE AND SHIP** sample per Attachment 4 within 5 days of sampling.
- 5.2 DRINKING WATER SAMPLE COLLECTION - DAILY - ODCM REQUIRED**
- 5.2.1 **OBTAIN** a 500 ml sample from any potable water sink.
- 5.2.2 **ADD** the sample to the monthly sample container (carboy).

<p>NOTE: At the end of each month, check the composite container (carboy), the field sampling bottle and the graduated cylinder for cleanliness (ie, no excessive algae growth, excessively dirty or broken) and clean or replace as necessary.</p>

- 5.2.3 At end of the month, **OBTAIN** a 1-gallon sample from carboy.
- 5.2.4 **PACKAGE AND SHIP** sample per Attachment 4 within 5 days of sampling.

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5.3 ENVIRONMENTAL AIR SAMPLE COLLECTION - WEEKLY - ODCM REQUIRED

5.3.1 **OPEN** cover at air sample station.

5.3.2 **DETERMINE** "As Found Leakage" by blocking air flow and checking air flow meter for movement.

- a. IF no leakage, THEN MARK N in As Found Leakage column on Air Sample Data Sheet.
- b. IF leakage is indicated, THEN MARK Y in As Found Leakage column, determine cause and repair.

5.3.3 **REMOVE** old sampler assembly.

5.3.4 **REMOVE** protective cover from new sampler assembly and place on old sampler assembly.

5.3.5 **INSTALL** new sampler assembly.

5.3.6 **DETERMINE** "As Left Leakage" by blocking air flow and checking air flow meter for movement.

- a. IF no leakage, THEN MARK N in As Left Leakage column.
- b. IF leakage is indicated, THEN DETERMINE cause AND REPAIR.

5.3.7 **RECORD** the Flow Meter Cal Due Date, Removed Date, Removed Time, Removed Meter Reading (ft³) and Pump Replacement Date.

5.3.8 **CLOSE AND LATCH** the air sample station cover.

5.3.9 **PROCEED** to the next station and continue process.

5.3.10 After completing air sample change out, **COMPLETE** the following for each sampler assembly:

- a. **REMOVE** particulate filter and place in glassine envelope.
- b. **PLACE** filter envelope and charcoal cartridge in labeled zip-lock bag.
- c. **CLEAN** out any residue or moisture buildup in sampler head.
- d. **CHECK** condition of O-rings AND REPLACE if necessary.

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- 5.3.11 **PLACE** new particulate filter (fuzzy side out) and charcoal cartridge in sampler assembly **AND SCREW** on cap.
- 5.3.12 **PLACE** protective cover on sampler assembly.
- 5.3.13 **PREPARE** new air sample packages for following week.
- 5.3.14 **TRANSFER** data to vendor Chain of Custody sample data sheet.
- OPEN** network folder J:/Chem_Rad/RETS/Environmental Air Samples.
 - OPEN** the folder for the current year.
 - SELECT AND OPEN** the previous week's Excel spreadsheet.
 - SELECT** Save-As from the File dropdown menu.
 - SAVE** the file as ASxxyyzz (where xx is the two digit month, yy is the two digit day and zz is the two digit year).
 - COPY** the cells in GH9-GH14.

NOTE: Copy the cells; do not Cut the cells as this will change the formatting.

- PASTE** the cells into EF9-EF14. This will copy over the previous data in those cells.
- DELETE** the information in cells GH9-GH14.
- COPY** the cells in J9-J14.
- PASTE** the cells into I9-I14.
- DELETE** the information in J9-J14.
- ENTER** the monitoring stop Date/Time as appropriate into cells GH9-GH14.
- ENTER** the Stop Meter Reading into cells J9-J14 as appropriate.
- IF** volume is less than 100 m³, **THEN NOTIFY** REMP/RETS analyst.

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- o. IF the "Pump Replacement Date" OR the "Flow Meter Cal Due Date" is due within 30 days THEN NOTIFY REMP/RETS analyst.

NOTE: Sample volumes as low as 60 m ³ have been found to meet LLDs provided there is no delay in shipping and count times are met.

- p. **CHANGE** the "Collected By" cell, as appropriate.
- q. **SAVE** the spreadsheet.
- r. **PRINT** the spreadsheet.
- s. **SIGN** in the Relinquished box under Chain of Custody AND ASSIGN the current date and time.
- t. **PACKAGE** the printout with the air samples for shipping.
- 5.3.15 WHEN control air sample is obtained, THEN PACKAGE AND SHIP samples per Attachment 4 within 2 days of sampling.
- 5.4 REPLACING ENVIRONMENTAL AIR FLOWMETER**
- 5.4.1 **DE-ENERGIZE** the pump.
- 5.4.2 Using a pipe wrench or another tool, **REMOVE** the flowmeter by loosening the threaded nuts connected to the flowmeter.
- 5.4.3 Using a pipe wrench or another tool, **ATTACH** the new flowmeter by tightening the threaded nuts connected to the flowmeter.
- 5.4.4 **RE-ENERGIZE** the pump.
- 5.4.5 **PERFORM** a leak test by blocking the air flow to the pump and checking the airflow meter for movement.
- a. IF leakage is indicated, THEN REPEAT Steps 5.4.1 through 5.4.4.
- b. IF no leakage, THEN PROCEED to Step 5.4.6.
- 5.4.6 **RECORD** the calibrated flowmeter reading in Attachment 5 so that the following week's volume will have the correct starting point.

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5.5 REPLACING ENVIRONMENTAL AIR PUMP

5.5.1 **DE-ENERGIZE** the pump.

5.5.2 Using a screwdriver or some other tool, **REMOVE** the pump from the inlet and outlet air hose by removing the hose clamps.

5.5.3 Using a screwdriver or some other tool, **CONNECT** the new pump to the inlet and outlet air hose.

5.5.4 **RE-ENERGIZE** the pump.

5.5.5 **PERFORM** a leak test by blocking the air flow to the pump and checking the airflow meter for movement.

a. IF leakage is indicated, THEN REPEAT Steps 5.5.1 through 5.5.4.

b. IF no leakage, THEN PROCEED to Step 5.5.6.

5.5.6 **RECORD** the pump replacement date in Attachment 5 as 2 years from the date the new pump was installed.

**5.6 SOUTH HAVEN RAW WATER SAMPLE COLLECTION
(SHRAW) - MONTHLY - ODCM REQUIRED**

NOTE: Water treatment plant personnel add approximately 150 ml of raw water per day to sample containers.

5.6.1 **PREPARE** a 1-gallon container labeled "SHRAW," "PAL," month and year.

5.6.2 **DROP OFF** container at the South Haven Municipal Water Treatment Plant.

5.6.3 **PICK UP** previous month's container.

5.6.4 **PACKAGE AND SHIP** samples per Attachment 4 within 5 days of obtaining.

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5.7 BROADLEAF VEGETATION SAMPLE COLLECTION - MONTHLY-ODCM REQUIRED

5.7.1 **VALIDATE** with REMP/RETS Analyst that the denoted sectors are still the highest D/Q (SE and SSE) and a least prevalent D/Q (NE or NNE).

5.7.2 **OBTAIN** 1 kg (2.2 lbs) samples of three different kinds of broadleaf vegetation in both the SE and SSE sectors. BV-1 is collected on the trail in the woods near the site boundary in the SSE quadrant. BV-2 is collected near the site boundary in the empty lot just off of Blue Star Highway in the SE quadrant.

5.7.3 **OBTAIN** 1 kg (2.2 lbs.) samples of the similar broadleaf vegetation 15 - 30 km (9.3 to 18.6 miles) distant in the NNE or NE sector (this is the BV-C sample).

5.7.4 **OBTAIN** samples monthly during growing season.

5.7.5 **PACKAGE AND SHIP** samples per Attachment 4 within 2 days of sampling.

5.8 ENVIRONMENTAL TLD COLLECTION - QUARTERLY-ODCM REQUIRED

5.8.1 Upon receipt of TLDs from the laboratory contractor, **INVENTORY** all TLDs **AND PLACE** in lead cave.

<p>NOTE: Field TLDs are removed from the lead cave only for delivery to their proper locations. All control TLDs remain in the lead cave throughout the entire exposure period.</p>

5.8.2 **CHANGE-OUT** TLDs at each sample location. The TLD should be displayed so that it is visible from the side and not tucked up under the spherical cap.

5.8.3 Attachment 11 may be used to assist with locating TLDs. Attachment 11 lists practical directions which may assist with locating the TLDs.

5.8.4 For any missing TLDs, then:

- a. **SEARCH** immediate area.
- b. **IF** lost TLD is found, **THEN COLLECT** it **AND PERFORM** standard change-out procedure.
- c. **IF** lost TLD is not found, **THEN POST** the new TLD in proper location.

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- 5.8.5 **STORE** collected field TLDs in lead cave along with control TLDs until ready for mailing to laboratory contractor.
- 5.8.6 **PACKAGE AND SHIP** samples per Attachment 4 within 5 days of change-out.
- 5.9 **PLANT AIR SAMPLE COLLECTION - QUARTERLY - NON-ODCM REQUIRED [CMT 0220011097]**
- 5.9.1 **OBTAIN** 1-liter air samples from Air Receiver Tanks T-8A, 8B and 8C.
- 5.9.2 **COUNT** samples per the posting on the MCA or CH 4.39, "Gamma Ray Spectroscopy System," to ensure LLDs are met.
- 5.9.3 **REVIEW** printout AND **FORWARD** to REMP Specialist.
- 5.10 **SEPTIC SYSTEM SAMPLE COLLECTION - QUARTERLY - NON-ODCM REQUIRED**
- 5.10.1 **OBTAIN** a 1 liter liquid sample from sanitary system septic tank.
- 5.10.2 **COUNT** sample per the posting on the MCA or CH 4.39, "Gamma Ray Spectroscopy System," to ensure LLDs are met.
- 5.10.3 **PACKAGE AND SHIP** samples per Attachment 4 within 5 days of sampling.
- 5.11 **SEDIMENT SAMPLE COLLECTION - SEMIANNUALLY - ODCM REQUIRED**
- 5.11.1 **COLLECT** a 1-liter sediment sample semiannually 1/2 mile north of discharge.
- 5.11.2 **COLLECT** a 1-liter sediment sample semiannually south of discharge near site boundary (Non-ODCM Required).
- 5.11.3 **LABEL** containers with sample type, location, and date.
- 5.11.4 **PACKAGE AND SHIP** samples per Attachment 4 within 5 days of sampling.
- 5.12 **FOOD PRODUCT SAMPLE COLLECTION - YEARLY - ODCM REQUIRED**
- 5.12.1 **OBTAIN** one sample each of approximately 1 kg each of blueberries and apples from the Arellanos' store, or other local service in appropriate section.
- 5.12.2 **LABEL** containers with sample type, location, and date.

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- 5.12.3 **PACKAGE AND SHIP** samples per Attachment 4 within 5 days of sampling.
- 5.13 PALISADES PARK SAMPLES - MONTHLY WHILE IN SERVICE - ODCM REQUIRED**
- 5.13.1 **CALL** Palisades Park Manager (Jim Thornton) at 269-214-2011 to align sampling.
- 5.13.2 **COLLECT** 1 gallon of sample from each well (1 - Community Well, 1 - Commercial Well).
- 5.13.3 **PACKAGE AND SHIP** samples per Attachment 4 within 5 days of sampling.
- 5.14 MISCELLANEOUS SAMPLES - ODCM REQUIRED**
- 5.14.1 Ludington - Control Lake-In daily composite samples are collected daily and shipped to Palisades monthly.
- 5.14.2 **PACKAGE AND SHIP** samples per Attachment 4 within 5 days of receiving.
- 5.15 MONTHLY SAMPLE COLLECTION VERIFICATION**
- 5.15.1 Attachment 6, "REMP Sample Collection Checklist," may be used to track collection and shipment of Environmental Samples.
- 5.15.2 **VERIFY** that the indicated number and type of samples required by the ODCM were collected.
- a. **DOCUMENT** any unusual collection conditions or missing samples.
- 5.15.3 **IDENTIFY** new locations for obtaining replacement samples **AND ADD** them to the Radiological Environmental Monitoring Program (REMP) within thirty (30) days if milk or fresh leafy vegetable samples become unavailable from one or more of the sample locations. The specific locations from which samples were unavailable may then be deleted from the monitoring program.
- a. **IDENTIFY** the cause(s) of sample unavailability **AND LIST** the new location(s) for obtaining replacement samples in the next Annual Radiological Environmental Operating Report.

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5.16 REVIEW OF SAMPLE ANALYSIS RESULTS

5.16.1 The sample analysis results should be reviewed by the REMP/RETS Analyst upon receipt of the analyses from the laboratory contractor.

5.16.2 **COMPARE** the monthly analytical results to the appropriate ODCM requirements (Attachment 7 of this procedure) to verify the following:

- a. The required analyses were performed.
- b. Any results exceeding the action level shall be checked against ODCM Specification reporting requirements.
- c. LLD sensitivity levels were reached. If sample LLDs are not reached, **EVALUATE AND DOCUMENT** contributing factors.
- d. The action taken if either isotopic action levels and/or NRC reporting levels are exceeded.
- e. Any specific types of evaluation required.
- f. Any action related to unusual or missing sample results.

5.17 AIR FLOW METER CALIBRATION

5.17.1 **WHEN** Air flow meter calibration due date is approaching, **THEN SHIP** a spare flow meter for calibration, approximately two weeks in advance to allow for time to calibrate and return. Calibration frequency is currently every two years.

5.17.2 **SHIP** the meter that requires calibration to the following address:

Meter Technology Center
1975 W Parnell Road
Jackson, MI 49201

5.17.3 Calibration takes place at this facility in accordance with Department of Consumer and Industry Services Public Service Commission Technical Standards for Gas Service and then returned for use.

5.17.4 As found documentation should accompany flow meters back and be retained or submitted as records.

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5.18 SPECIAL REPORT

5.18.1 **PREPARE AND SUBMIT** to the NRC (within 30 days) a special report identifying the following, if the level of radioactivity as a result of Plant effluents in an environmental sampling medium at a specified location exceeds Palisades ODCM, Table 1-8, reporting levels when averaged over any calendar quarter.

- a. The cause(s) for exceeding the limit(s).
- b. Corrective action(s) taken to reduce radioactive effluents.

5.18.2 The NRC Special Report shall be submitted if more than one (1) of the radionuclides listed in the specifications (Palisades ODCM, Table 1-8) are detected in an environmental sample medium and:

$$\frac{\text{Concentration (1)}}{\text{Reporting Level (1)}} + \frac{\text{Concentration (2)}}{\text{Reporting Level (2)}} + \dots \geq 1.0$$

The quarterly sum of fractions calculation shall be completed within 90 days of end of quarter.

5.18.3 If radionuclides other than those listed in the specifications (Palisades ODCM, Table 1-8), are detected and are the result of Plant effluents, the NRC Special Report shall be submitted if the potential annual dose to a member of the public is equal to or greater than the calendar year limits specifications (Palisades ODCM, Sections 1.1.3, 1.1.4, 1.2.3). An NRC Special Report is not required if the measured level of radioactivity is not the result of Plant effluents. The condition shall be described in the Annual Radiological Environmental Operating Report.

Under all conditions, any radiological environmental surveillance sample possessing sufficient isotopic activity above the action level where an action level is listed in Attachment 2 but still below ODCM reporting requirements shall be evaluated. If no action level is listed in Attachment 2, any isotopic activity trending up shall be evaluated.

TITLE: RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM

6.0 ATTACHMENTS AND RECORDS

6.1 ATTACHMENTS

- 6.1.1 Attachment 1, "Environmental Sample Collection Schedule"
- 6.1.2 Attachment 2, "REMP Sample Locations"
- 6.1.3 Attachment 3, "Sample Shipment Identification"
- 6.1.4 Attachment 4, "Sample Packaging and Shipment"
- 6.1.5 Attachment 5, "Environmental Air Sample Data Sheet"
- 6.1.6 Attachment 6, "REMP Sample Collection Checklist"
- 6.1.7 Attachment 7, "REMP Analytical Requirements"
- 6.1.8 Attachment 8, "Environmental Monitoring Locations"
- 6.1.9 Attachment 9, "Shipping Checklist"
- 6.1.10 Attachment 10, "Fish Collection"
- 6.1.11 Attachment 11, "TLD Driving Directions"

6.2 RECORDS

- 6.2.1 Analytical Results and Special Reports are included in the Annual Radiological Operating Report (Chemistry Procedure CH 6.50, "Annual Radiological Environmental Operating Report"); this report is sent to Records per Entergy Procedure EN-AD-103, "Document Control and Records Management Program." Attachment 3, "Sample Shipment Identification," Attachment 5, "Environmental Air Sample Data Sheet," and Attachment 6, "REMP Sample Collection Checklist," are considered guidelines and are not considered to be Plant Records. Sample activities/schedules are listed in Chemistry Database Management System (NuclearIQ) in accordance with EN-CY-100, "Conduct of Chemistry." NuclearIQ Reports will be generated for submittals in accordance with Entergy Procedure EN-AD-103, "Document Control and Records Management Programs"

7.0 SPECIAL REVIEWS

None

ENVIRONMENTAL SAMPLE COLLECTION SCHEDULE

Sample	Number of Samples and Locations	Sample Type	Collection/Analysis Frequency
Airborne Particulates and Iodines	5 within a 10 km radius 1 at 25 - 82 km distant	Continuous at approximately 1 cfm	Weekly
Drinking Water	1 - South Haven Municipal - Raw	Daily 150 sample collection to obtain a one-gallon composite	Monthly
Drinking Water	1 - Plant drinking water	Daily 500 sample collection to obtain a one-gallon composite	Monthly
Lake Surface	1 - Lake In, Screen-house downstream of "bio-box"	Daily 500 sample collection to obtain a one-gallon composite	Monthly
Lake Surface	1 - Control at Ludington	Daily composite to obtain one-gallon sample	Monthly
Sediment	1- ½ mile north of plant	One-liter grab	Semi-annually
Sediment	1- South site boundary	One-liter grab	Semi-annually
Food Products	1 sample each of blueberries and apples	1 kg grab sample	During growing season

ENVIRONMENTAL SAMPLE COLLECTION SCHEDULE

Sample	Number of Samples and Locations	Sample Type	Collection/Analysis Frequency
Food Products	1 sample each of three different kinds of broadleaf vegetation in two sectors near plant boundary 1 - sample of each of similar broadleaf vegetation 15 - 30 km distant (9 to 18 miles)	1 kg grab samples	Monthly during growing season
Fish	2 - location in vicinity of plant discharge 2 - Ludington Control	One-liter of fish flesh from two different species. Obtain same species from control location (if available)	Sample in season or semiannually if they are not seasonal
TLD	11 - General vicinity of Site Boundary 9 - Within 12 km radius 3 - Control Stations	Continuous	Quarterly
Waste Water	1 - Septic system	1 liter grab	Quarterly
Plant Air	3 - T-8A, B & C	1 liter grab	Quarterly
Ground Water	1-Palisades Park Community Well 1-Palisades Park Commercial Well	1 Gallon Carboy from each well	Monthly while wells are in Service

REMP SAMPLE LOCATIONS

Station	Code *		Location *	Air Part and Iodine	Lake Water	Milk	Food Products	Sediment	TLD	Fish	Ground Water
1	ST	Palisades Nuclear Plant	Onsite, on tree near NW corner of bag crew bldg.		X				X		
1	ST	Palisades Nuclear Plant	Plant discharge area.							X	
2	TH	RR 3 Coloma, MI 5.6 miles S	TLD located on Becht Road, west side on post, 50 yards south of 48 th Ave.						X		
3	HS	76182 48th Ave Covert, MI 5.8 miles SSE	Along 48th Ave, 1/4 mile west of 76th St. In barnyard 50 yds. off north side of road.						X		
4	JS	36197 M-140 Hwy Covert, MI 3-1/2 miles SE	Just north of Arellanos fruit stand, in grape arbor.				X		X		
4	JS	36 th Avenue, 1/2 miles east of M-140	South side of road.	X							
5	PR	72723 CR 378 Covert, MI 3-1/2 miles ESE	Along CR 378, 3/4 mile east of M-140, 30 ft off north side of road. TLD located at Paul Rood residence; on tree in back yard just past driveway.	X					X		
6	RB	RR 3 South Haven, MI 4-1/2 miles NE	Along 12th Ave (CR 384), turn NW past maple grove, go 1/4 mile located in orchard on north side of road.						X		
7	SN21	Emergency Siren 21 4.1 miles NNE	On Monroe Blvd, at corner of 76 th and 11th Street.						X		

*Distances listed in Code/Location are approximates, and actual are listed in Attachment 8.

REMP SAMPLE LOCATIONS

Station	Code *		Location *	Air Part and Iodine	Lake Water	Milk	Food Products	Sediment	TLD	Fish	Ground Water
8	SP	State Park 1 mile N	Onsite along the dump road, north of Plant. One mile from main gate. Near State Park boundary, on side of road as road turns west.	X					X		
9	TP	Covert Township Park 1.5 miles SSW	Along 32nd Ave, 1/4 mile west of Blue Star Hwy. 5 ft off south side of road. TLD located at end of road, at entrance to residence on beach, attached to emergency siren SN38.	X					X		
10	GR	Grand Rapids, MI 55 miles NNE	Grand Rapids Service Center, in storage area. Air sample on west side near shed. Control TLD 100 feet north of air sample station.	X					X		
11	KZ	Kalamazoo, MI 35 miles E	Kalamazoo Service Center, in parking area on post in SE corner Control TLD.						X		
12	DG	58399 Wilbur Road, Dowagiac, MI 30 miles SSE	TLD located on pole approx 20 yards from road, NE of house.						X		
13	ST	Perimeter of Palisades NNE	Past #8 along dirt road. Proceed west up dune path at right of containment test structure. At first crest, turn north and proceed up adjacent hill to #13 at top (approx. 50 yds. from crest). Near State Park fence line.						X		
14	ST	Perimeter of Palisades NE	25 yards of east of Station #34 between State Park and DFS Building.						X		
15	ST	Perimeter of Palisades E	North along Blue Star Hwy, 0.75 miles from access road, 10 ft off west side of road.						X		

*Distances listed in Code/Location are approximates, and actual are listed in Attachment 8.

REMP SAMPLE LOCATIONS

Station	Code *		Location *	Air Part and Iodine	Lake Water	Milk	Food Products	Sediment	TLD	Fish	Ground Water
16	ST	Perimeter of Palisades E	North along Blue Star Hwy, 0.4 miles from access road, 50 ft off west side of road.						X		
17	ST	Perimeter of Palisades ESE	Along access road, 25 yds. south of southern power line, 15 yds. off east side of road.						X		
18	ST	Perimeter of Palisades SE	20 yds. from access road along south road. 40 yds. off south road.						X		
19	ST	Perimeter of Palisades SSE	0.2 miles along south road from access road, 30 ft off north side of road. TLD 30 ft off south side of road	X					X		
20	ST	Perimeter of Palisades S	0.4 miles along south road from access road, 20 ft off south side of road.						X		
21	ST	Perimeter of Palisades SSW	0.7 miles along south road from access road, just past top of hill. Near Lake Michigan Bluff.						X		
22	PW	Palisades Warehouse	Control TLD in lead cave.						X		
23	SN19	Emergency Siren 19 3 miles ENE	On CR 380.						X		
24	SN26	Emergency Siren 26 6 miles E	On 67th Street.						X		
25	SH	South Haven, MI 5-1/2 miles NNE	South Haven Water Treatment Plant.		X						
30	STN	1/2 mile N of discharge						X			

*Distances listed in Code/Location are approximates, and actual are listed in Attachment 8.

REMP SAMPLE LOCATIONS

Station	Code *		Location *	Air Part and Iodine	Lake Water	Milk	Food Products	Sediment	TLD	Fish	Ground Water
31	STS	South site boundary	Beach at the south site boundary					X			
32	LP	Ludington Pumped Storage 125 Miles N			X					X	
46	PP	Palisades Park - Community Well	South of Plant.								X
47	PP	Palisades Park - Commercial Well	South of Plant.								X

*Distances listed in Code/Location are approximates, and actual are listed in Attachment 8.

SAMPLE SHIPMENT IDENTIFICATION

Palisades

Location	Type	Date	Amount	Remarks
South Haven	Raw Water	Monthly Composite -	1 Gallon	
Lake In	Lake Water	Monthly Composite -	1 Gallon	
Plant Drinking Water	Domestic Water	Monthly Composite -	1 Gallon	
Ludington - Lake	Control Sample	Monthly Composite -	1 Gallon	
½ mile N of Plant	Sediment	Semi-annually	1 Liter	
South site boundary	Sediment	Semi-annually	1 Liter	
Palisades Perimeter	Vegetation	Monthly during growing season	6 kg	
Control	Vegetation	Monthly during growing season	3 kg	
Arellanos Market	Blueberries	Annually	1 kg	
Arellanos Market	Apples	Annually	1 kg	
Palisades	Fish	Semi-annually	1 L	
Control	Fish	Semi-annually	1 L	
Palisades Park - Community Well	Drinking Water	Monthly during open season	1 Gallon	
Palisades Park - Commercial Well	Drinking Water	Monthly during open season	1 Gallon	
Sanitary Wastewater	Wastewater	Quarterly	1 Liter	

This form is not required to be retained as a quality record.

SAMPLE PACKAGING AND SHIPMENT

1. Label samples clearly as to their contents.
2. Seal liquid sample containers with tape to prevent leakage.
3. Use sufficient packing material to avoid sample container damage during shipment.
4. Package air filters in glassine or plastic envelopes.
5. For TLD shipments;
 - a. **ENSURE** that vendor's shipment instructions are followed. The address to ship TLDs is as follows:

Jim Giard
Environmental Dosimetry Company
10 Ashton Lane
Sterling, MA 01564
 - b. "Do not X-ray" stickers should be placed on the shipping package.
7. Ship samples to vendor laboratory with minimal delay after collection so as to avoid elevated analytical levels of detection.

ENVIRONMENTAL AIR SAMPLE DATA SHEET

PALISADES

A/S Station	As Found Leakage (Y / N)	As Left Leakage (Y / N)	Removed Date	Removed Time	Flow Meter Reading (ft ³)	Flow Meter Cal Due Date	Pump Replacement Date
8SP							
9TP							
4JS							
5PR							
GR10							
19ST							

Comments _____

Completed By _____ Date _____

Reviewed By _____ Date _____

REMP SAMPLE COLLECTION CHECKLIST

Month _____ Year _____

	Collected	Shipped
WEEKLY Air Samples		
Week 1	_____	_____
Week 2	_____	_____
Week 3	_____	_____
Week 4	_____	_____
Week 5	_____	_____
MONTHLY Broadleaf Veg	_____	_____
Lake In	_____	_____
Drinking Water	_____	_____
SHRAW	_____	_____
Ludington Ctrl	_____	_____
Palisades Park	_____	_____

REMP SAMPLE COLLECTION CHECKLIST

Year _____

	Collected	Shipped
QUARTERLY		
TLDs		
1Q	_____	_____
2Q	_____	_____
3Q	_____	_____
4Q	_____	_____
Sanitary Wastewater		
1Q	_____	_____
2Q	_____	_____
3Q	_____	_____
4Q	_____	_____
Plant Air		
1Q	_____	_____
2Q	_____	_____
3Q	_____	_____
4Q	_____	_____
SEMI-ANNUAL		
Sediment		
1	_____	_____
2	_____	_____
Fish - Indicator		
1	_____	_____
2	_____	_____
Fish - Control		
1	_____	_____
2	_____	_____
ANNUAL		
Blueberries	_____	_____
Apples	_____	_____

This form is not required to be retained as a quality record.

REMP ANALYTICAL REQUIREMENTS

Media	Sampling Interval	Required Analysis	LLD	NRC ^f Reporting Levels	Unusual Results ^h	
					Action Level	Action Required
Direct by TLD	Quarterly	Gamma Dose	10 mR			
Environmental Air	Quarterly	Gamma ⁱ Cs-134 Cs-137	0.05 pCi/m ³ 0.06 pCi/m ³	10 pCi/m ³ 20 pCi/m ³	5 pCi/m ³ 5 pCi/m ³	Notify and perform gamma isotopic.
Environmental Air	Weekly	Gross Beta I-131	0.01 pCi/m ³ 0.07 pCi/m ³	 0.9 pCi/m ³	See note g 0.2 pCi/m ³	Notify and perform gamma isotopic. Notify
Water Surface Drinking	Monthly	H-3 ⁱ Gross Beta Gamma ^{a,j} Mn-54 Fe-59 Co-58 Co-60 Zn-65 Zr-95 Nb-95 Cs-134 Cs-137 Ba-140 La-140 I-131	2000 pCi/L 4 pCi/L 15 pCi/L 30 pCi/L 15 pCi/L 15 pCi/L 30 pCi/L 30 pCi/L 30 pCi/L 15 pCi/L 15 pCi/L 18 pCi/L 60 pCi/L 15 pCi/L 1 pCi/L	20,000 pCi/L 1000 pCi/L 400 pCi/L 1000 pCi/L 300 pCi/L 300 pCi/L 400 pCi/L 400 pCi/L 30 pCi/L 50 pCi/L 200 pCi/L 200 pCi/L 2 pCi/L	1000 pCi/L 10 pCi/L Any gamma ≥ 30 pCi/L 2 pCi/L	Notify Notify within 24 h if beta ≥ 10 pCi/L. Perform gamma analysis. Notify Notify
Sediment	Semiannual	Gamma ⁱ Cs-134 Cs-137	150 pCi/g 180 pCi/g		Any gamma ≥ 1 pCi/g	Notify

*Acceptance is < Average Background concentration plus 1 Standard Deviation. Current Values Documented in WT-WTPLP-2013-00125

REMP ANALYTICAL REQUIREMENTS

Media	Sampling Interval	Required Analysis	LLD	NRC ^f Reporting Levels	Unusual Results ^h	
					Action Level	Action Required
Fish	Semiannual	Gamma ⁱ Mn-54 Fe-59 Co-58 Co-60 Zn-65 Cs-134 Cs-137	0.13 pCi/g 0.26 pCi/g 0.13 pCi/g 0.13 pCi/g 0.26 pCi/g 0.13 pCi/g 0.15 pCi/g	30 pCi/g 10 pCi/g 30 pCi/g 10 pCi/g 20 pCi/g 1 pCi/g 2 pCi/g	Any gamma ≥ 1 pCi/g	Notify
Broad Leaf Vegetation	Monthly when available	I-131 Gamma ⁱ Cs-134 Cs-137	0.06 pCi/g 0.06 pCi/g 0.08 pCi/g	0.1 pCi/g 1 pCi/g 2 pCi/g	0.1 pCi/g Any gamma ≥ 1 pCi/g > 146 pCi/g*	Notify Notify
Food Products	At time of harvest	Gamma ⁱ Cs-134 Cs-137 I-131	0.06 pCi/g 0.08 pCi/g 0.06 pCi/g	1 pCi/g 2 pCi/g 0.1 pCi/g	Any gamma ≥ 1 pCi/g	Notify
					0.1 pCi/g	Notify
Palisades Park	Monthly while wells are in operation	H-3 ⁱ Gross Beta Gamma ^{a,j}	2000 pCi/L 4 pCi/L	20,000 pCi/L	1000 pCi/L 10 pCi/L	Notify Notify within 24 h if beta ≥ 10 pCi/L. Perform gamma analysis.
		Mn-54 Fe-59 Co-58 Co-60 Zn-65 Zr-95 Nb-95 Cs-134 Cs-137 Ba-140 La-140 I-131	15 pCi/L 30 pCi/L 15 pCi/L 15 pCi/L 30 pCi/L 30 pCi/L 15 pCi/L 15 pCi/L 18 pCi/L 60 pCi/L 15 pCi/L 1 pCi/L	1000 pCi/L 400 pCi/L 1000 pCi/L 300 pCi/L 300 pCi/L 400 pCi/L 400 pCi/L 30 pCi/L 50 pCi/L 200 pCi/L 200 pCi/L 2 pCi/L	Any gamma ≥ 30 pCi/L	Notify
					2 pCi/L	Notify

*Acceptance is < Average Background concentration plus 1 Standard Deviation. Current Values Documented in WT-WTLP-2013-00125

REMP ANALYTICAL REQUIREMENTS

^dRadioactivity levels may cause LLD levels to be exceeded.

^eMonthly composite of weekly filters.

^fReporting levels per ODCM, Section 1.4 and Table 1-8.

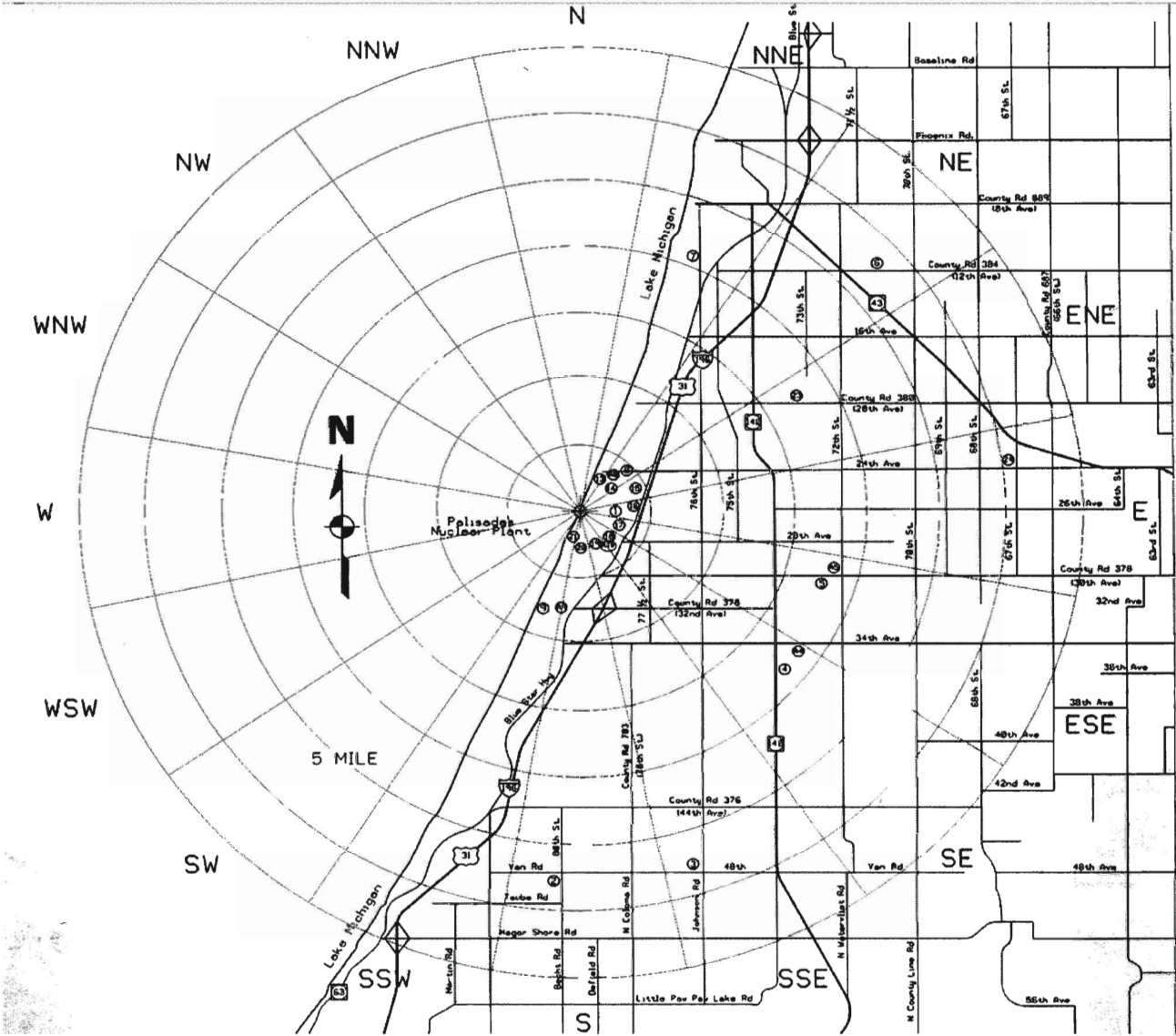
^gIf gross beta activity is greater than or equal to 1 pCi/m³ or greater than or equal to ten times last year's mean of control samples, perform gamma analysis on the individual samples.

^hWhenever the Unusual Results Action Level is reached or exceeded, the word "Notify" under the Action Required column signifies that the Contract Laboratory performing the analysis is required to notify Palisades.

ⁱNot required for South Haven raw water sample.

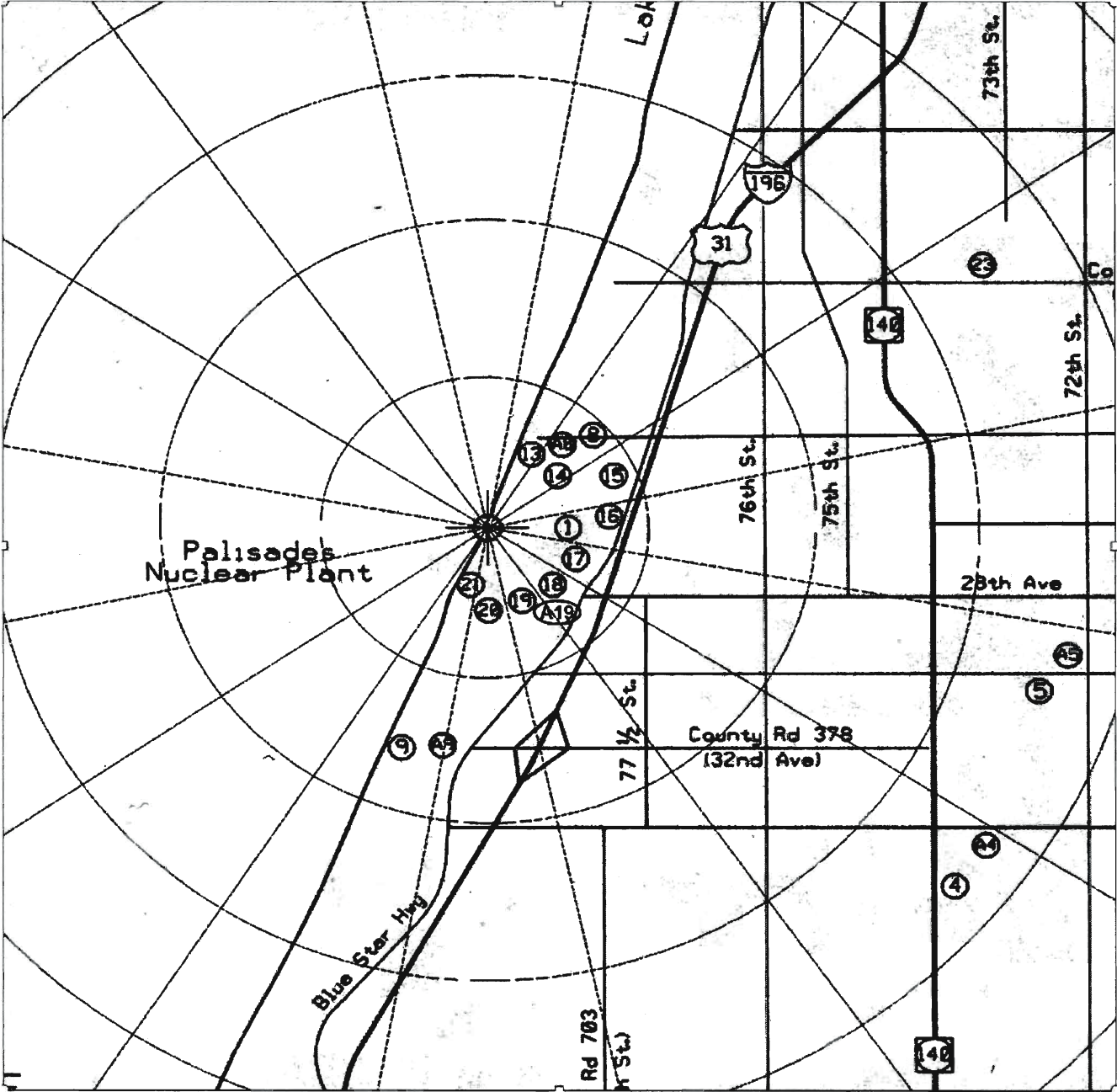
^jGamma isotopic analysis means the identification and quantification of gamma emitting radionuclides that may be attributable to the effluents from the facility.

ENVIRONMENTAL MONITORING LOCATIONS



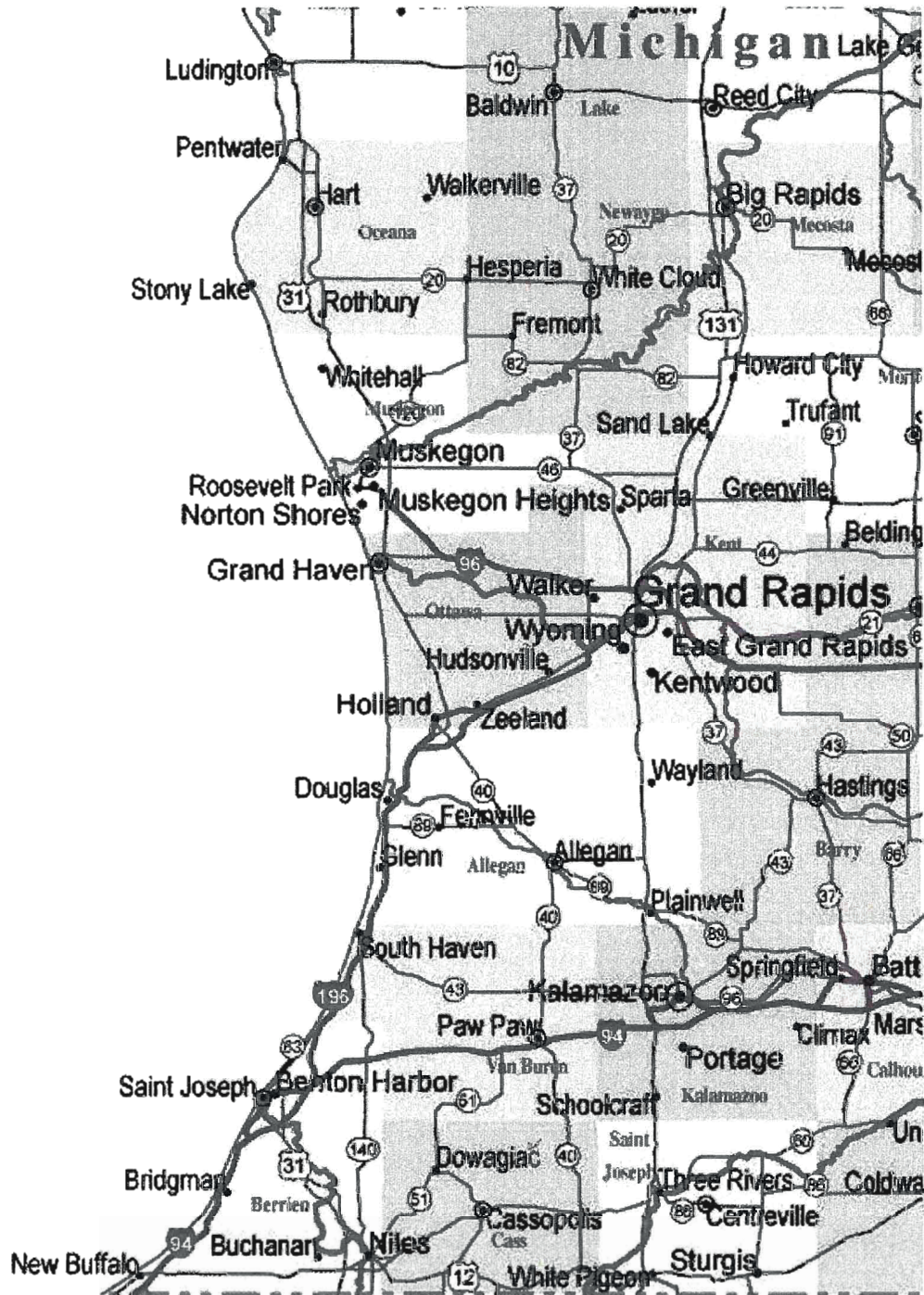
Google Earth/MAP were used to update coordinates and distances between stack and location.

ENVIRONMENTAL MONITORING LOCATIONS



Google Earth/MAP were used to update coordinates and distances between stack and location.

ENVIRONMENTAL MONITORING LOCATIONS



Google Earth/MAP were used to update coordinates and distances between stack and location.

ENVIRONMENTAL MONITORING LOCATIONS

TLDs

Location	Coordinates	Distance (mi)	Degrees	Sector
Stack	N 42 19 22.5 W 86 18 50.8			
1	N 42 19 20.5 W 86 18 36.1	0.213	100.36	E
Inner Ring				
13	N 42 19 47.2 W 86 18 34.1	0.530	26.56	NNE
8	N 42 19 46.8 W 86 18 24.0	0.602	39.19	NE
14	N 42 19 41.1 W 86 18 21.2	0.551	49.64	NE
15	N 42 19 41.7 W 86 17 58.1	0.834	63.76	ENE
16	N 42 19 28.0 W 86 17 54.6	0.804	82.45	E
17	N 42 19 10.5 W 86 18 13.9	0.572	113.74	ESE
18	N 42 19 4.2 W 86 18 28.9	0.469	138.49	SE
19	N 42 19 05 W 86 18 40	0.443	159.19	SSE
20	N 42 19 1.1 W 86 18 48.8	0.412	176.05	S
21	N 42 19 3.4 W 86 18 58.4	0.382	196.40	SSW
Outer Ring				
7	N 42 22 40.8 W 86 17 0.4	4.115	22.35	NNE
6	N 42 22 30.6 W 86 14 15.9	5.314	47.18	NE
23	N 42 20 44.6 W 86 15 35.4	3.189	60.37	ENE
24	N 42 19 59.5 W 86 11 49.4	6.021	83.19	E
5	N 42 18 27.6 W 86 14 57.5	3.475	107.63	ESE

ENVIRONMENTAL MONITORING LOCATIONS

Location	Coordinates	Distance (mi)	Degrees	Sector
4	N 42 17 10.8 W 86 15 43.5	3.668	133.54	SE
3	N 42 14 37.9 W 86 16 00	5.684	163.92	SSE
2	N 42 14 33.4 W 86 19 16.4	5.560	183.75	S
9	N 42 18 1.73 W 86 19 34.6	1.670	201.86	SSW
Control TLDs				
10	N 42 53 16.7 W 85 40 35.9	50.746	39.49	NE
11	N 42 15 24.5 W 85 32 49.3	39.472	96.39	E
12	N 41 56 54.3 W 86 6 24.5	27.971	157.61	SSE

TLD # 10 is located within the Consumers Energy Grand Rapids service facility attached to a pole located adjacent to the south fence.

TLD # 11 is located within the Consumers Energy Kalamazoo service facility attached to a pole in the far NE corner of the facility - past the employee parking lot.

TLD # 12 is located approximately 30 yards from the road, NE and next to a private residence located at 58399 Wilbur Road, Dowagiac, MI.

ENVIRONMENTAL MONITORING LOCATIONS

Air Sample Stations

Location	Coordinates	Distance (mi)	Degrees	Sector
A8 (State Park)	N 42 19 46.8 W 86 18 24.8	0.595	38.34	NE
A9 (Township Park)	N 42 18 4.6 W 86 19 12.0	1.525	191.38	SSW
A4 (Covert)	N 42 17 12.1 W 86 15 21.7	3.882	130.12	SE
A5 (Rood)	N 42 18 30.5 W 86 14 47.8	3.590	106.12	ESE
A10 (Grand Rapids)	N 42 53 16.7 W 85 40 33.8	50.765	39.52	NE
A19 (Walking Trail)	N 42 19 3.65 W 86 18 35.30	0.423	148.70	SSE

Air Sample Station # 10 is located within the Consumers Energy Grand Rapids service facility, south side, next to a small service building and due East of TLD # 10.

Control fish and water samples are normally obtained from the Consumers Energy Pump Storage Facility located in Ludington, MI, or another location not influenced by Palisades Plant Discharge.

Palisades Park Wells

Location	Coordinates	Distance (mi)	Degrees	Sector
Community Well	N 42 18 47.5 W 86 19 11.4	.729	203.63	SSW
Commercial Well	N 42 18 48.5 W 86 18 46.8	.652	175.06	S

The Community Well services the community residents with well water to their homes; the Commercial Well services the community garden and drinking fountains on the east side of the property.

SHIPPING CHECKLIST

1.0 Prior to shipping, **VERIFY** all reactor product nuclides are less than environmental LLDs.

Weekly Shipment to Vendor

SAMPLE	QUANTITY	ANALYSIS
Environmental air samples ¹	1 filter AND 1 cartridge	Gross Beta AND I-131

Monthly Shipment to Vendor

SAMPLE	QUANTITY	ANALYSIS
Lake IN	1 gallon	Gamma, Tritium, Gross BETA
Drinking Water	1 gallon	Gamma, Tritium, Gross BETA
SHRAW	1 gallon	Gamma, Tritium, Gross BETA
Ludington Ctrl	1 gallon	Gamma, Tritium, Gross BETA
Palisades Park community well ²	1 gallon	Gamma, Tritium, Gross BETA
Palisades Park commercial well ²	1 gallon	Gamma, Tritium, Gross BETA
Broadleaf BV-1 ²	1 kg	Gamma, I-131
Broadleaf BV-2 ²	1 kg	Gamma, I-131
Broadleaf Control ²	1 kg	Gamma, I-131

⁽²⁾ Sample when in season only.

⁽¹⁾ Add note for vendor to retain sample for quarterly gamma analysis.

Quarterly Shipment to Vendor

SAMPLE	QUANTITY	ANALYSIS
TLD	All field TLDs	Gamma dose
Septic Sample	1 liter	Gamma, Tritium

Semiannual Shipment to Vendor

SAMPLE	QUANTITY	ANALYSIS
Sediment (North of plant)	1 liter	Gamma
Sediment (South of plant)	1 liter	Gamma
Fish (indicator)	1 liter	Gamma
Fish (control)	1 liter	Gamma

Annual Shipment to Vendor

SAMPLE	QUANTITY	ANALYSIS
Blueberries	1 kg	Gamma, I-131
Apples	1 kg	Gamma, I-131

FISH COLLECTION

NOTE: To perform fish collection one must have their name on the scientific collectors permit from the Department of Natural Resources of the State of Michigan.

1.0 COLLECT samples twice during the season of greatest abundance (typically May through October) as follows:

- a. **COLLECT** at least two species (1L each) of commercially and/or recreationally important fish in the vicinity of the Plant discharge area and the same species in an area not influenced by the Plant discharge (eg, Ludington Pump Storage Plant). One liter of flesh should be collected for each species caught for analysis accuracy.
- b. Normally fish will be collected first from the vicinity of the discharge, then the same or similar species at Ludington Pump Storage or other area not influenced by Palisades Plant effluents.

1.1 IF performing fish collection within two weeks, **THEN ENSURE** the following are true.

- a. Permit is valid for the sampling period.
- b. Permit is valid for personnel collecting the fish.
- c. Permit is valid for method by which fish will be collected.
- d. **CONTACT** the local fish biologist OR fisheries division supervisor of the management unit AND local DNR representative at least 48 hours before sampling.

NOTE: Gillnets may only be used after consultation with Southern Lake Michigan Management Unit for work in waters off Van Buren County.

Contact information: Both contacts in Step 1.1d of Attachment 10 can be made by calling Operational Service Center at,

Southern Lake Michigan Management Unit
621 N. 10th St.
Plainwell MI 49080
269-685-6851

FISH COLLECTION

- 1.2 IF performing fish collection NOT on Palisades' property, THEN ENSURE the following are true.
- a. A permit to use land has been obtained and is on record IF required for the area.
 - b. **NOTIFY** district law supervisor for the county 48 hours before collection.
 - c. Step 1.1 of Attachment 10 is satisfied.
- 1.3 During Fish collection, **ENSURE** the following are true.
- a. A copy of the permit must be in hand during the collection.
 - b. IF an endangered or threatened fish is collected, THEN RELEASE it immediately.
 - c. IF an Asian Carp is collected THEN do not release AND REPORT it.
 - d. **CLEAN** fish AND SEND fillets to vendor for analysis per Attachment 9.
- 1.4 IF using a vendor to perform fish collection THEN PERFORM the following.
- a. **OBTAIN** a copy of the vendors scientific collectors permit.
 - b. **RETAIN** the copy of the scientific collectors permit in records.
- 2.0** At the end of the calendar year, perform the following.
- a. **ENSURE** a copy of "all reports and scientific papers" (ie, lab results AND applicable AREOR section) to the DNR.
 - b. **PROVIDE** a collectors report form to the DNR.
 - c. **APPLY** for a new scientific collectors permit for the following year.

TLD DRIVING DIRECTIONS

Number	Location
	1
8	Between A/S station number 8 and guard shack by State parking lot.
13	Uphill past old CTMT mockup.
14	South of state park fence, between State Park and DFS Building, 25 yards from road.
	2
17	Onsite, east side of access road close to orange topped buried optic cable pole, 15 yards from road.
18	Trail south of Plant, 0.2 miles in, north side (right of trail) back side of tree, directly opposite the double tree.
19	0.4 miles in on trail, south (left) side, near old Consumers sign.
20	0.5 miles in on trail, left side of trail atop small hill.
21	0.7 miles in, just past top of hill south side on tree.
	3
9	Siren pole next to old Sarno residence on road to Covert Township Park.
2	Blue Star to 376, 376 east over I-196, take right (South) on 80th, right on 48, immediate south on Becht, 30 yards in on west side of road on pole.
3	East on 48th (dirt road) cross paved road (CR 703) on left side by white house with many pine trees in front, house # 76182, just before 76th street.
4	East on 48th, North on M140 heading into Covert, Arellannos fruit stand on right, in grape arbor.
5	Continue north on M140, right on Bangor Covert Road, CR378 E, Paul Rood residence on right, past house in tree.
23	North on M140, right on airport road (CR380) north side by airport building on siren pole.
24	Continue east on CR380, right on M43, continue south, take right on 67th (just past curve in road, Snapper Lawnmower sign). 1/2 mile in on right on siren pole.
6	Back north on M43, right on CR384 (south fork) by Maple Grove party store, 1/2 mile on left, in orchard on pole, follow power line to shed. Flashing yellow light marks intersection.
	4
7	Back on M43, continue into South Haven, through stoplight, left on Aylworth, past High School fields, left on Monroe, just past First Baptist Church, 76th and 11th, right side of road, NW corner of intersection.
15	South of Welcome to Covert sign 10 yards in from first Deadly Force sign.
16	Between arrow and < sign that are read when traveling north. North of the cut grassy hillside, North of the Met tower.
1	Onsite on tree next to BAG crew building.
	5
10	Grand Rapids Service Center, 4000 Clay Ave, Grand Rapids MI 49501 – contact is Chris Walters 616-437-8126 or Bob Haasjes 616-437-8118.
11	KZ service center, 2500 East Cork Street, Kalamazoo MI – contact is Brian Long, cell = 269-207-8304; office = 269-337-2407 (try cell first).
12	Dowagiac - 58399 Wilbur Hill Road.
22	Cave located in warehouse

TLD DRIVING DIRECTIONS

Number	Location
Spare 1, 2, & 3	Cave located in warehouse
Shield 1, 2, & 3	On the shelf above the Cave located in warehouse
Controls 1 & 2	Cave located in warehouse

Directions to Dowagiac TLD

From Kalamazoo – take 94 West, take exit 56 - Decatur and Dowagiac. Take 51 south past Decatur and straight through downtown Dowagiac on South Front Street. Left on East High Street, street curves right and becomes Cass Street. Continue south; Cass becomes Wilbur. In about 2-3 miles is 58399 Wilbur Road on left (east) side of street. Turn in driveway. Straight ahead is pole with TLD holder (faded green conical hat) maybe 30 yards from the street to the left of the house.

From Palisades – from Covert, go south on M-140 until M-62. Go east on M-62 until you reach Dowagiac. Take right on Main Street then right on South Front Street. Left on East High Street, street curves right and becomes Cass Street. Continue south; Cass becomes Wilbur. In about 2-3 miles is 58399 Wilbur Road on left (east) side of street. Turn in driveway. Straight ahead is pole with TLD holder (faded green conical hat) maybe 30 yards from the street to the left of the house.

Directions to Kalamazoo TLD

Go east on I-94 past 131 and exit on Sprinkle Road. Go left on Sprinkle road and take left on E. Cork Street. Go past railroad tracks and on left is Consumers Energy. TLD is in far corner of employee parking lot attached to siren pole.

Directions to Grand Rapids

North on 131 to 44th street exit, go east and take first left at light – Clay Avenue. About a block on the right is Consumers Energy. TLD is on a pole by south fence of service compound – about 20 yards west of the air sample station.

**ATTACHMENT D
YEAR-END REPORT FOR PALISADES
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM (REMP)
AS PROVIDED BY Teledyne Brown Engineering Environmental Services**

4JS

AIR PARTICULATE

LAB ID	STATION	COLLECT START	COLLECT STOP	NUCLIDE	REPORTABLE	ACTIVITY	ERROR	MDC	LLD	UNITS
L71261-3	4JS	01/03/17	01/09/17	GR-B	2.10E-02	2.10E-02	3.93E-03	3.52E-03	1.00E-02	pCi/cu m
L71371-3	4JS	01/09/17	01/16/17	GR-B	2.98E-02	2.98E-02	4.05E-03	2.72E-03	1.00E-02	pCi/cu m
L71444-3	4JS	01/16/17	01/23/17	GR-B	2.37E-02	2.37E-02	3.93E-03	3.29E-03	1.00E-02	pCi/cu m
L71533-3	4JS	01/23/17	01/30/17	GR-B	1.73E-02	1.73E-02	3.19E-03	2.63E-03	1.00E-02	pCi/cu m
L71631-3	4JS	01/30/17	02/06/17	GR-B	1.61E-02	1.61E-02	3.64E-03	3.85E-03	1.00E-02	pCi/cu m
L71689-3	4JS	02/06/17	02/13/17	GR-B	1.97E-02	1.97E-02	3.44E-03	2.83E-03	1.00E-02	pCi/cu m
L71745-3	4JS	02/13/17	02/20/17	GR-B	1.75E-02	1.75E-02	3.36E-03	2.92E-03	1.00E-02	pCi/cu m
L71861-3	4JS	02/20/17	02/27/17	GR-B	2.20E-02	2.20E-02	3.63E-03	2.75E-03	1.00E-02	pCi/cu m
L71949-3	4JS	02/27/17	03/06/17	GR-B	1.98E-02	1.98E-02	3.82E-03	3.69E-03	1.00E-02	pCi/cu m
L71993-3	4JS	03/06/17	03/13/17	GR-B	1.77E-02	1.77E-02	3.26E-03	2.61E-03	1.00E-02	pCi/cu m
L72111-3	4JS	03/13/17	03/20/17	GR-B	1.83E-02	1.83E-02	3.55E-03	3.37E-03	1.00E-02	pCi/cu m
L72182-3	4JS	03/20/17	03/27/17	GR-B	2.28E-02	2.28E-02	3.48E-03	2.58E-03	1.00E-02	pCi/cu m
L72269-3	4JS	03/27/17	04/03/17	GR-B	1.30E-02	1.30E-02	3.12E-03	3.46E-03	1.00E-02	pCi/cu m
L72421-3	4JS	04/03/17	04/10/17	GR-B	2.05E-02	2.05E-02	3.42E-03	2.85E-03	1.00E-02	pCi/cu m
L72522-3	4JS	04/10/17	04/17/17	GR-B	1.74E-02	1.74E-02	3.33E-03	3.07E-03	1.00E-02	pCi/cu m
L72587-3	4JS	04/17/17	04/25/17	GR-B	1.40E-02	1.40E-02	2.87E-03	2.90E-03	1.00E-02	pCi/cu m
L72692-3	4JS	04/25/17	05/01/17	GR-B	1.67E-02	1.67E-02	3.67E-03	3.71E-03	1.00E-02	pCi/cu m
L72769-3	4JS	05/01/17	05/08/17	GR-B	1.46E-02	1.46E-02	2.99E-03	2.86E-03	1.00E-02	pCi/cu m
L72857-3	4JS	05/08/17	05/15/17	GR-B	2.28E-02	2.28E-02	3.88E-03	3.45E-03	1.00E-02	pCi/cu m
L72987-3	4JS	05/15/17	05/22/17	GR-B	1.61E-02	1.61E-02	3.21E-03	3.08E-03	1.00E-02	pCi/cu m
L73115-3	4JS	05/22/17	05/30/17	GR-B	1.65E-02	1.65E-02	3.14E-03	3.04E-03	1.00E-02	pCi/cu m
L73156-3	4JS	05/30/17	06/05/17	GR-B	2.24E-02	2.24E-02	4.18E-03	3.89E-03	1.00E-02	pCi/cu m
L73270-3	4JS	06/05/17	06/13/17	GR-B	1.77E-02	1.77E-02	3.23E-03	2.94E-03	1.00E-02	pCi/cu m
L73360-3	4JS	06/13/17	06/20/17	GR-B	1.56E-02	1.56E-02	3.44E-03	3.70E-03	1.00E-02	pCi/cu m
L73445-3	4JS	06/20/17	06/27/17	GR-B	1.20E-02	1.20E-02	3.11E-03	3.52E-03	1.00E-02	pCi/cu m
L73560-3	4JS	06/27/17	07/04/17	GR-B	1.77E-02	1.77E-02	3.38E-03	3.13E-03	1.00E-02	pCi/cu m
L73719-3	4JS	07/04/17	07/11/17	GR-B	1.80E-02	1.80E-02	3.36E-03	2.77E-03	1.00E-02	pCi/cu m
L73804-3	4JS	07/11/17	07/18/17	GR-B	1.76E-02	1.76E-02	3.39E-03	2.98E-03	1.00E-02	pCi/cu m
L73933-3	4JS	07/18/17	07/24/17	GR-B	2.02E-02	2.02E-02	4.05E-03	3.99E-03	1.00E-02	pCi/cu m
L74071-3	4JS	07/24/17	08/01/17	GR-B	2.02E-02	2.02E-02	3.30E-03	2.71E-03	1.00E-02	pCi/cu m
L74062-3	4JS	08/01/17	08/07/17	GR-B	2.09E-02	2.09E-02	4.39E-03	4.82E-03	1.00E-02	pCi/cu m
L74188-3	4JS	08/07/17	08/15/17	GR-B	1.93E-02	1.93E-02	3.30E-03	3.05E-03	1.00E-02	pCi/cu m
L74272-3	4JS	08/15/17	08/22/17	GR-B	2.68E-02	2.68E-02	4.14E-03	3.56E-03	1.00E-02	pCi/cu m
L74371-3	4JS	08/22/17	08/29/17	GR-B	1.80E-02	1.80E-02	3.39E-03	3.07E-03	1.00E-02	pCi/cu m
L74392-3	4JS	08/29/17	09/05/17	GR-B	2.22E-02	2.22E-02	3.82E-03	3.42E-03	1.00E-02	pCi/cu m
L74517-3	4JS	09/05/17	09/12/17	GR-B	1.34E-02	1.34E-02	3.16E-03	3.47E-03	1.00E-02	pCi/cu m
L74585-3	4JS	09/12/17	09/18/17	GR-B	2.23E-02	2.23E-02	4.21E-03	4.02E-03	1.00E-02	pCi/cu m

L74716-3	4JS	09/18/17	09/26/17	GR-B	2.77E-02	2.77E-02	3.91E-03	3.33E-03	1.00E-02	pCi/cu m
L74874-3	4JS	09/26/17	10/03/17	GR-B	2.59E-02	2.59E-02	4.13E-03	3.71E-03	1.00E-02	pCi/cu m
L74938-3	4JS	10/03/17	10/10/17	GR-B	2.26E-02	2.26E-02	3.87E-03	3.62E-03	1.00E-02	pCi/cu m
L75063-3	4JS	10/10/17	10/16/17	GR-B	1.88E-02	1.88E-02	3.87E-03	3.88E-03	1.00E-02	pCi/cu m
L75153-3	4JS	10/16/17	10/24/17	GR-B	2.36E-02	2.36E-02	3.59E-03	2.94E-03	1.00E-02	pCi/cu m
L75175-3	4JS	10/24/17	10/30/17	GR-B	1.41E-02	1.41E-02	3.18E-03	3.00E-03	1.00E-02	pCi/cu m
L75300-3	4JS	10/30/17	11/06/17	GR-B	1.81E-02	1.81E-02	3.43E-03	3.39E-03	1.00E-02	pCi/cu m
L75390-3	4JS	11/06/17	11/13/17	GR-B	2.28E-02	2.28E-02	3.65E-03	3.06E-03	1.00E-02	pCi/cu m
L75435-3	4JS	11/13/17	11/20/17	GR-B	2.46E-02	2.46E-02	3.67E-03	2.75E-03	1.00E-02	pCi/cu m
L75515-3	4JS	11/20/17	11/27/17	GR-B	2.95E-02	2.95E-02	4.15E-03	3.27E-03	1.00E-02	pCi/cu m
L75580-3	4JS	11/27/17	12/04/17	GR-B	2.43E-02	2.43E-02	3.77E-03	3.07E-03	1.00E-02	pCi/cu m
L75697-3	4JS	12/04/17	12/11/17	GR-B	2.30E-02	2.30E-02	3.63E-03	2.98E-03	1.00E-02	pCi/cu m
L75765-3	4JS	12/11/17	12/19/17	GR-B	2.06E-02	2.06E-02	3.27E-03	2.79E-03	1.00E-02	pCi/cu m
L75819-3	4JS	12/19/17	12/25/17	GR-B	2.32E-02	2.32E-02	4.29E-03	4.17E-03	1.00E-02	pCi/cu m
L75943-3	4JS	12/25/17	01/02/18	GR-B	2.16E-02	2.16E-02	3.15E-03	2.29E-03	1.00E-02	pCi/cu m
L72488-3	4JS	01/03/17	04/03/17	BE-7	1.41E-01	1.41E-01	3.61E-02	3.99E-02		pCi/cu m
L73736-3	4JS	04/03/17	07/04/17	BE-7	1.02E-01	1.02E-01	3.64E-02	4.17E-02		pCi/cu m
L75654-3	4JS	07/04/17	10/03/17	BE-7	1.88E-01	1.88E-01	6.25E-02	8.96E-02		pCi/cu m
L76252-3	4JS	10/03/17	01/02/18	BE-7	1.00E-01	1.00E-01	3.39E-02	3.01E-02		pCi/cu m
L72488-3	4JS	01/03/17	04/03/17	CS-134	< 2.21E-03	-6.42E-04	1.49E-03	2.21E-03	5.00E-02	pCi/cu m
L73736-3	4JS	04/03/17	07/04/17	CS-134	< 2.99E-03	9.15E-05	1.79E-03	2.99E-03	5.00E-02	pCi/cu m
L75654-3	4JS	07/04/17	10/03/17	CS-134	< 2.84E-03	4.02E-05	1.73E-03	2.84E-03	5.00E-02	pCi/cu m
L76252-3	4JS	10/03/17	01/02/18	CS-134	< 1.88E-03	-1.86E-04	1.17E-03	1.88E-03	5.00E-02	pCi/cu m
L72488-3	4JS	01/03/17	04/03/17	CS-137	< 2.01E-03	-5.70E-04	1.32E-03	2.01E-03	6.00E-02	pCi/cu m
L73736-3	4JS	04/03/17	07/04/17	CS-137	< 2.36E-03	-5.33E-04	1.53E-03	2.36E-03	6.00E-02	pCi/cu m
L75654-3	4JS	07/04/17	10/03/17	CS-137	< 2.29E-03	4.26E-04	1.31E-03	2.29E-03	6.00E-02	pCi/cu m
L76252-3	4JS	10/03/17	01/02/18	CS-137	< 1.65E-03	-3.45E-04	1.06E-03	1.65E-03	6.00E-02	pCi/cu m
L72488-3	4JS	01/03/17	04/03/17	TH-228	2.85E-03	2.85E-03	1.61E-03	2.66E-03		pCi/cu m

SPR

AIR PARTICULATE

LAB ID	STATION	COLLECT START	COLLECT STOP	NUCLIDE	REPORTABLE	ACTIVITY	ERROR	MDC	LLD	UNITS
L71261-4	SPR	01/03/17	01/09/17	GR-B	2.12E-02	2.12E-02	4.96E-03	4.97E-03	1.00E-02	pCi/cu m
L71371-4	SPR	01/09/17	01/16/17	GR-B	2.88E-02	2.88E-02	4.08E-03	2.83E-03	1.00E-02	pCi/cu m
L71444-4	SPR	01/16/17	01/23/17	GR-B	2.76E-02	2.76E-02	5.19E-03	4.66E-03	1.00E-02	pCi/cu m
L71533-4	SPR	01/23/17	01/30/17	GR-B	1.87E-02	1.87E-02	3.35E-03	2.71E-03	1.00E-02	pCi/cu m
L71631-4	SPR	01/30/17	02/06/17	GR-B	1.99E-02	1.99E-02	5.00E-03	5.51E-03	1.00E-02	pCi/cu m
L71689-4	SPR	02/06/17	02/13/17	GR-B	2.71E-02	2.71E-02	4.01E-03	2.96E-03	1.00E-02	pCi/cu m
L71745-4	SPR	02/13/17	02/20/17	GR-B	1.70E-02	1.70E-02	4.18E-03	4.13E-03	1.00E-02	pCi/cu m
L71861-4	SPR	02/20/17	02/27/17	GR-B	2.38E-02	2.38E-02	3.84E-03	2.86E-03	1.00E-02	pCi/cu m

L71949-4	5PR	02/27/17	03/06/17	GR-B	2.31E-02	2.31E-02	5.11E-03	5.26E-03	1.00E-02	pCi/cu m
L71993-4	5PR	03/06/17	03/13/17	GR-B	1.61E-02	1.61E-02	3.23E-03	2.74E-03	1.00E-02	pCi/cu m
L72111-4	5PR	03/13/17	03/20/17	GR-B	1.77E-02	1.77E-02	4.48E-03	4.78E-03	1.00E-02	pCi/cu m
L72182-4	5PR	03/20/17	03/27/17	GR-B	2.18E-02	2.18E-02	3.51E-03	2.70E-03	1.00E-02	pCi/cu m
L72269-4	5PR	03/27/17	04/03/17	GR-B	1.33E-02	1.33E-02	4.05E-03	4.96E-03	1.00E-02	pCi/cu m
L72421-4	5PR	04/03/17	04/10/17	GR-B	1.56E-02	1.56E-02	3.16E-03	2.97E-03	1.00E-02	pCi/cu m
L72522-4	5PR	04/10/17	04/17/17	GR-B	1.81E-02	1.81E-02	4.29E-03	4.45E-03	1.00E-02	pCi/cu m
L72587-4	5PR	04/17/17	04/25/17	GR-B	1.67E-02	1.67E-02	3.13E-03	3.00E-03	1.00E-02	pCi/cu m
L72692-4	5PR	04/25/17	05/01/17	GR-B	1.54E-02	1.54E-02	4.58E-03	5.36E-03	1.00E-02	pCi/cu m
L72769-4	5PR	05/01/17	05/08/17	GR-B	1.69E-02	1.69E-02	3.23E-03	2.97E-03	1.00E-02	pCi/cu m
L72857-4	5PR	05/08/17	05/15/17	GR-B	2.69E-02	2.69E-02	5.18E-03	4.97E-03	1.00E-02	pCi/cu m
L72987-4	5PR	05/15/17	05/22/17	GR-B	1.67E-02	1.67E-02	3.32E-03	3.18E-03	1.00E-02	pCi/cu m
L73115-4	5PR	05/22/17	05/30/17	GR-B	2.17E-02	2.17E-02	4.40E-03	4.40E-03	1.00E-02	pCi/cu m
L73156-4	5PR	05/30/17	06/05/17	GR-B	2.36E-02	2.36E-02	4.39E-03	4.08E-03	1.00E-02	pCi/cu m
L73270-4	5PR	06/05/17	06/13/17	GR-B	1.91E-02	1.91E-02	4.15E-03	4.18E-03	1.00E-02	pCi/cu m
L73360-4	5PR	06/13/17	06/20/17	GR-B	1.73E-02	1.73E-02	3.63E-03	3.82E-03	1.00E-02	pCi/cu m
L73445-4	5PR	06/20/17	06/27/17	GR-B	1.53E-02	1.53E-02	4.30E-03	5.05E-03	1.00E-02	pCi/cu m
L73560-4	5PR	06/27/17	07/04/17	GR-B	1.95E-02	1.95E-02	3.58E-03	3.23E-03	1.00E-02	pCi/cu m
L73719-4	5PR	07/04/17	07/11/17	GR-B	2.61E-02	2.61E-02	4.81E-03	3.94E-03	1.00E-02	pCi/cu m
L73804-4	5PR	07/11/17	07/18/17	GR-B	1.78E-02	1.78E-02	3.49E-03	3.11E-03	1.00E-02	pCi/cu m
L73933-4	5PR	07/18/17	07/24/17	GR-B	2.26E-02	2.26E-02	5.32E-03	5.71E-03	1.00E-02	pCi/cu m
L74071-4	5PR	07/24/17	08/01/17	GR-B	1.93E-02	1.93E-02	3.31E-03	2.81E-03	1.00E-02	pCi/cu m
L74062-4	5PR	08/01/17	08/07/17	GR-B	1.90E-02	1.90E-02	5.46E-03	6.80E-03	1.00E-02	pCi/cu m
L74188-4	5PR	08/07/17	08/15/17	GR-B	2.56E-02	2.56E-02	3.76E-03	3.16E-03	1.00E-02	pCi/cu m
L74272-4	5PR	08/15/17	08/22/17	GR-B	2.76E-02	2.76E-02	5.21E-03	5.04E-03	1.00E-02	pCi/cu m
L74371-4	5PR	08/22/17	08/29/17	GR-B	1.97E-02	1.97E-02	3.55E-03	3.15E-03	1.00E-02	pCi/cu m
L74392-4	5PR	08/29/17	09/05/17	GR-B	2.62E-02	2.62E-02	5.12E-03	4.94E-03	1.00E-02	pCi/cu m
L74517-4	5PR	09/05/17	09/12/17	GR-B	1.23E-02	1.23E-02	3.15E-03	3.59E-03	1.00E-02	pCi/cu m
L74585-4	5PR	09/12/17	09/18/17	GR-B	2.63E-02	2.63E-02	5.58E-03	5.67E-03	1.00E-02	pCi/cu m
L74716-4	5PR	09/18/17	09/26/17	GR-B	2.67E-02	2.67E-02	3.93E-03	3.43E-03	1.00E-02	pCi/cu m
L74874-4	5PR	09/26/17	10/03/17	GR-B	2.53E-02	2.53E-02	5.11E-03	5.25E-03	1.00E-02	pCi/cu m
L74938-4	5PR	10/03/17	10/10/17	GR-B	2.68E-02	2.68E-02	4.21E-03	3.75E-03	1.00E-02	pCi/cu m
L75063-4	5PR	10/10/17	10/16/17	GR-B	2.09E-02	2.09E-02	5.09E-03	5.54E-03	1.00E-02	pCi/cu m
L75153-4	5PR	10/16/17	10/24/17	GR-B	2.60E-02	2.60E-02	3.82E-03	3.05E-03	1.00E-02	pCi/cu m
L75175-4	5PR	10/24/17	10/30/17	GR-B	1.92E-02	1.92E-02	4.48E-03	4.32E-03	1.00E-02	pCi/cu m
L75300-4	5PR	10/30/17	11/06/17	GR-B	1.64E-02	1.64E-02	3.39E-03	3.52E-03	1.00E-02	pCi/cu m
L75390-4	5PR	11/06/17	11/13/17	GR-B	2.58E-02	2.58E-02	4.75E-03	4.35E-03	1.00E-02	pCi/cu m
L75435-4	5PR	11/13/17	11/20/17	GR-B	2.28E-02	2.28E-02	3.64E-03	2.86E-03	1.00E-02	pCi/cu m
L75515-4	5PR	11/20/17	11/27/17	GR-B	2.80E-02	2.80E-02	5.04E-03	4.64E-03	1.00E-02	pCi/cu m
L75580-4	5PR	11/27/17	12/04/17	GR-B	2.02E-02	2.02E-02	3.58E-03	3.17E-03	1.00E-02	pCi/cu m

L75697-4	5PR	12/04/17	12/11/17	GR-B	2.83E-02	2.83E-02	4.91E-03	4.28E-03	1.00E-02	pCi/cu m
L75765-4	5PR	12/11/17	12/19/17	GR-B	2.91E-02	2.91E-02	3.85E-03	2.90E-03	1.00E-02	pCi/cu m
L75819-4	5PR	12/19/17	12/25/17	GR-B	2.66E-02	2.66E-02	5.61E-03	5.85E-03	1.00E-02	pCi/cu m
L75943-4	5PR	12/25/17	01/02/18	GR-B	2.42E-02	2.42E-02	3.37E-03	2.37E-03	1.00E-02	pCi/cu m
L72488-4	5PR	01/03/17	04/03/17	BE-7	1.11E-01	1.11E-01	4.38E-02	5.24E-02		pCi/cu m
L73736-4	5PR	04/03/17	07/04/17	BE-7	1.40E-01	1.40E-01	3.62E-02	3.46E-02		pCi/cu m
L75654-4	5PR	07/04/17	10/03/17	BE-7	2.03E-01	2.03E-01	1.07E-01	1.21E-01		pCi/cu m
L76252-4	5PR	10/03/17	01/02/18	BE-7	1.12E-01	1.12E-01	3.90E-02	6.84E-02		pCi/cu m
L72488-4	5PR	01/03/17	04/03/17	CS-134	< 3.29E-03	-1.51E-03	2.25E-03	3.29E-03	5.00E-02	pCi/cu m
L73736-4	5PR	04/03/17	07/04/17	CS-134	< 2.69E-03	3.70E-04	1.58E-03	2.69E-03	5.00E-02	pCi/cu m
L75654-4	5PR	07/04/17	10/03/17	CS-134	< 4.64E-03	-7.90E-04	2.93E-03	4.64E-03	5.00E-02	pCi/cu m
L76252-4	5PR	10/03/17	01/02/18	CS-134	< 4.27E-03	6.68E-04	2.47E-03	4.27E-03	5.00E-02	pCi/cu m
L72488-4	5PR	01/03/17	04/03/17	CS-137	< 3.16E-03	7.46E-04	1.82E-03	3.16E-03	6.00E-02	pCi/cu m
L73736-4	5PR	04/03/17	07/04/17	CS-137	< 1.93E-03	-6.69E-04	1.27E-03	1.93E-03	6.00E-02	pCi/cu m
L75654-4	5PR	07/04/17	10/03/17	CS-137	< 2.65E-03	-1.79E-03	1.93E-03	2.65E-03	6.00E-02	pCi/cu m
L76252-4	5PR	10/03/17	01/02/18	CS-137	< 3.02E-03	-3.32E-05	1.83E-03	3.02E-03	6.00E-02	pCi/cu m

8SP

AIR PARTICULATE

LAB ID	STATION	COLLECT START	COLLECT STOP	NUCLIDE	REPORTABLE	ACTIVITY	ERROR	MDC	LLD	UNITS
L71261-1	8SP	01/03/17	01/09/17	GR-B	2.54E-02	2.54E-02	6.37E-03	6.58E-03	1.00E-02	pCi/cu m
L71371-1	8SP	01/09/17	01/16/17	GR-B	3.58E-02	3.58E-02	6.35E-03	5.10E-03	1.00E-02	pCi/cu m
L71444-1	8SP	01/16/17	01/23/17	GR-B	2.59E-02	2.59E-02	6.20E-03	6.28E-03	1.00E-02	pCi/cu m
L71533-1	8SP	01/23/17	01/30/17	GR-B	1.87E-02	1.87E-02	4.99E-03	4.99E-03	1.00E-02	pCi/cu m
L71631-1	8SP	01/30/17	02/06/17	GR-B	2.30E-02	2.30E-02	6.38E-03	7.28E-03	1.00E-02	pCi/cu m
L71689-1	8SP	02/06/17	02/13/17	GR-B	3.16E-02	3.16E-02	6.21E-03	5.47E-03	1.00E-02	pCi/cu m
L71745-1	8SP	02/13/17	02/20/17	GR-B	2.06E-02	2.06E-02	5.48E-03	5.61E-03	1.00E-02	pCi/cu m
L71861-1	8SP	02/20/17	02/27/17	GR-B	2.84E-02	2.84E-02	6.07E-03	5.38E-03	1.00E-02	pCi/cu m
L71949-1	8SP	02/27/17	03/06/17	GR-B	2.50E-02	2.50E-02	6.50E-03	7.15E-03	1.00E-02	pCi/cu m
L71993-1	8SP	03/06/17	03/13/17	GR-B	2.55E-02	2.55E-02	5.68E-03	5.10E-03	1.00E-02	pCi/cu m
L72111-1	8SP	03/13/17	03/20/17	GR-B	2.45E-02	2.45E-02	6.00E-03	6.31E-03	1.00E-02	pCi/cu m
L72182-1	8SP	03/20/17	03/27/17	GR-B	3.43E-02	3.43E-02	6.07E-03	4.99E-03	1.00E-02	pCi/cu m
L72269-1	8SP	03/27/17	04/03/17	GR-B	2.27E-02	2.27E-02	1.10E-02	1.56E-02	1.00E-02	pCi/cu m
L72421-1	8SP	04/04/17	04/10/17	GR-B	2.22E-02	2.22E-02	5.92E-03	6.46E-03	1.00E-02	pCi/cu m
L72522-1	8SP	04/10/17	04/17/17	GR-B	2.35E-02	2.35E-02	5.71E-03	5.99E-03	1.00E-02	pCi/cu m
L72587-1	8SP	04/17/17	04/25/17	GR-B	1.86E-02	1.86E-02	4.99E-03	5.71E-03	1.00E-02	pCi/cu m
L72692-1	8SP	04/25/17	05/01/17	GR-B	2.25E-02	2.25E-02	6.40E-03	7.35E-03	1.00E-02	pCi/cu m
L72769-1	8SP	05/01/17	05/08/17	GR-B	2.20E-02	2.20E-02	5.36E-03	5.62E-03	1.00E-02	pCi/cu m
L72857-1	8SP	05/08/17	05/15/17	GR-B	2.63E-02	2.63E-02	6.27E-03	6.72E-03	1.00E-02	pCi/cu m
L72987-1	8SP	05/15/17	05/22/17	GR-B	1.79E-02	1.79E-02	5.20E-03	6.01E-03	1.00E-02	pCi/cu m

L73115-1	8SP	05/22/17	05/30/17	GR-B	2.12E-02	2.12E-02	5.24E-03	5.58E-03	1.00E-02	pCi/cu m
L73156-1	8SP	05/30/17	06/05/17	GR-B	3.82E-02	3.82E-02	7.89E-03	7.79E-03	1.00E-02	pCi/cu m
L73270-1	8SP	06/05/17	06/13/17	GR-B	2.11E-02	2.11E-02	5.36E-03	5.83E-03	1.00E-02	pCi/cu m
L73360-1	8SP	06/13/17	06/20/17	GR-B	1.89E-02	1.89E-02	5.95E-03	7.44E-03	1.00E-02	pCi/cu m
L73445-1	8SP	06/20/17	06/27/17	GR-B	2.08E-02	2.08E-02	5.87E-03	6.92E-03	1.00E-02	pCi/cu m
L73560-1	8SP	06/27/17	07/04/17	GR-B	2.78E-02	2.78E-02	6.15E-03	6.19E-03	1.00E-02	pCi/cu m
L73719-1	8SP	07/04/17	07/11/17	GR-B	2.58E-02	2.58E-02	5.90E-03	5.55E-03	1.00E-02	pCi/cu m
L73804-1	8SP	07/11/17	07/18/17	GR-B	2.75E-02	2.75E-02	6.23E-03	6.05E-03	1.00E-02	pCi/cu m
L73933-1	8SP	07/18/17	07/24/17	GR-B	2.36E-02	2.36E-02	6.86E-03	8.09E-03	1.00E-02	pCi/cu m
L74071-1	8SP	07/24/17	08/01/17	GR-B	2.22E-02	2.22E-02	5.30E-03	5.46E-03	1.00E-02	pCi/cu m
L74062-1	8SP	08/01/17	08/07/17	GR-B	2.79E-02	2.79E-02	7.89E-03	9.78E-03	1.00E-02	pCi/cu m
L74188-1	8SP	08/07/17	08/15/17	GR-B	2.15E-02	2.15E-02	5.50E-03	6.24E-03	1.00E-02	pCi/cu m
L74272-1	8SP	08/15/17	08/22/17	GR-B	3.15E-02	3.15E-02	7.39E-03	8.00E-03	1.00E-02	pCi/cu m
L74371-1	8SP	08/22/17	08/29/17	GR-B	3.05E-02	3.05E-02	7.09E-03	7.27E-03	1.00E-02	pCi/cu m
L74392-1	8SP	08/29/17	09/05/17	GR-B	2.64E-02	2.64E-02	6.50E-03	7.08E-03	1.00E-02	pCi/cu m
L74517-1	8SP	09/05/17	09/12/17	GR-B	1.76E-02	1.76E-02	5.68E-03	7.11E-03	1.00E-02	pCi/cu m
L74585-1	8SP	09/12/17	09/18/17	GR-B	3.32E-02	3.32E-02	7.90E-03	8.69E-03	1.00E-02	pCi/cu m
L74716-1	8SP	09/18/17	09/26/17	GR-B	3.27E-02	3.27E-02	6.61E-03	6.91E-03	1.00E-02	pCi/cu m
L74874-1	8SP	09/26/17	10/03/17	GR-B	3.00E-02	3.00E-02	6.93E-03	7.59E-03	1.00E-02	pCi/cu m
L74938-1	8SP	10/03/17	10/10/17	GR-B	3.19E-02	3.19E-02	7.09E-03	7.63E-03	1.00E-02	pCi/cu m
L75063-1	8SP	10/10/17	10/16/17	GR-B	2.26E-02	2.26E-02	6.82E-03	8.16E-03	1.00E-02	pCi/cu m
L75153-1	8SP	10/16/17	10/24/17	GR-B	3.29E-02	3.29E-02	6.84E-03	6.77E-03	1.00E-02	pCi/cu m
L75175-1	8SP	10/24/17	10/30/17	GR-B	3.29E-02	3.29E-02	1.09E-02	1.31E-02	1.00E-02	pCi/cu m
L75300-1	8SP	10/30/17	11/06/17	GR-B	1.63E-02	1.63E-02	3.47E-03	3.64E-03	1.00E-02	pCi/cu m
L75390-1	8SP	11/06/17	11/13/17	GR-B	2.33E-02	2.33E-02	4.06E-03	3.59E-03	1.00E-02	pCi/cu m
L75435-1	8SP	11/13/17	11/20/17	GR-B	2.84E-02	2.84E-02	4.04E-03	2.93E-03	1.00E-02	pCi/cu m
L75515-1	8SP	11/20/17	11/27/17	GR-B	2.88E-02	2.88E-02	4.21E-03	3.40E-03	1.00E-02	pCi/cu m
L75580-1	8SP	11/27/17	12/04/17	GR-B	2.21E-02	2.21E-02	3.71E-03	3.17E-03	1.00E-02	pCi/cu m
L75697-1	8SP	12/04/17	12/11/17	GR-B	2.20E-02	2.20E-02	4.32E-03	4.06E-03	1.00E-02	pCi/cu m
L75765-1	8SP	12/11/17	12/19/17	GR-B	2.60E-02	2.60E-02	4.02E-03	3.36E-03	1.00E-02	pCi/cu m
L75819-1	8SP	12/19/17	12/25/17	GR-B	2.21E-02	2.21E-02	4.34E-03	4.37E-03	1.00E-02	pCi/cu m
L75943-1	8SP	12/25/17	01/02/18	GR-B	2.10E-02	2.10E-02	3.22E-03	2.43E-03	1.00E-02	pCi/cu m
L72488-1	8SP	01/03/17	04/03/17	BE-7	1.04E-01	1.04E-01	6.40E-02	8.50E-02		pCi/cu m
L73736-1	8SP	04/04/17	07/04/17	BE-7	1.60E-01	1.60E-01	3.62E-02	4.45E-02		pCi/cu m
L75654-1	8SP	07/04/17	10/03/17	BE-7	2.20E-01	2.20E-01	1.46E-01	1.46E-01		pCi/cu m
L76252-1	8SP	10/03/17	01/02/18	BE-7	9.65E-02	9.65E-02	4.37E-02	3.06E-02		pCi/cu m
L72488-1	8SP	01/03/17	04/03/17	CS-134	< 5.16E-03	-2.03E-03	3.49E-03	5.16E-03	5.00E-02	pCi/cu m
L73736-1	8SP	04/04/17	07/04/17	CS-134	< 3.18E-03	-1.78E-03	2.24E-03	3.18E-03	5.00E-02	pCi/cu m
L75654-1	8SP	07/04/17	10/03/17	CS-134	< 4.91E-03	1.37E-03	2.70E-03	4.91E-03	5.00E-02	pCi/cu m
L76252-1	8SP	10/03/17	01/02/18	CS-134	< 2.45E-03	9.52E-04	1.32E-03	2.45E-03	5.00E-02	pCi/cu m

L72488-1	8SP	01/03/17	04/03/17	CS-137	< 4.70E-03	-2.69E-04	2.92E-03	4.70E-03	6.00E-02	pCi/cu m
L73736-1	8SP	04/04/17	07/04/17	CS-137	< 3.18E-03	7.33E-04	1.84E-03	3.18E-03	6.00E-02	pCi/cu m
L75654-1	8SP	07/04/17	10/03/17	CS-137	< 4.88E-03	2.90E-03	2.47E-03	4.88E-03	6.00E-02	pCi/cu m
L76252-1	8SP	10/03/17	01/02/18	CS-137	< 1.78E-03	-1.04E-03	1.25E-03	1.78E-03	6.00E-02	pCi/cu m

9TP

AIR PARTICULATE

LAB ID	STATION	COLLECT START	COLLECT STOP	NUCLIDE	REPORTABLE	ACTIVITY	ERROR	MDC	LLD	UNITS
L71261-2	9TP	01/03/17	01/09/17	GR-B	2.13E-02	2.13E-02	4.39E-03	4.14E-03	1.00E-02	pCi/cu m
L71371-2	9TP	01/09/17	01/16/17	GR-B	2.76E-02	2.76E-02	4.33E-03	3.22E-03	1.00E-02	pCi/cu m
L71444-2	9TP	01/16/17	01/23/17	GR-B	2.56E-02	2.56E-02	4.46E-03	3.84E-03	1.00E-02	pCi/cu m
L71533-2	9TP	01/23/17	01/30/17	GR-B	1.88E-02	1.88E-02	3.66E-03	3.11E-03	1.00E-02	pCi/cu m
L71631-2	9TP	01/30/17	02/06/17	GR-B	1.74E-02	1.74E-02	4.20E-03	4.55E-03	1.00E-02	pCi/cu m
L71689-2	9TP	02/06/17	02/13/17	GR-B	2.26E-02	2.26E-02	4.04E-03	3.36E-03	1.00E-02	pCi/cu m
L71745-2	9TP	02/13/17	02/20/17	GR-B	1.58E-02	1.58E-02	3.59E-03	3.42E-03	1.00E-02	pCi/cu m
L71861-2	9TP	02/20/17	02/27/17	GR-B	2.27E-02	2.27E-02	4.14E-03	3.33E-03	1.00E-02	pCi/cu m
L71949-2	9TP	02/27/17	03/06/17	GR-B	2.05E-02	2.05E-02	4.32E-03	4.35E-03	1.00E-02	pCi/cu m
L71993-2	9TP	03/06/17	03/13/17	GR-B	2.07E-02	2.07E-02	3.87E-03	3.13E-03	1.00E-02	pCi/cu m
L72111-2	9TP	03/13/17	03/20/17	GR-B	1.85E-02	1.85E-02	3.99E-03	3.98E-03	1.00E-02	pCi/cu m
L72182-2	9TP	03/20/17	03/27/17	GR-B	2.19E-02	2.19E-02	3.81E-03	3.09E-03	1.00E-02	pCi/cu m
L72269-2	9TP	03/27/17	04/03/17	GR-B	1.16E-02	1.16E-02	3.39E-03	4.07E-03	1.00E-02	pCi/cu m
L72421-2	9TP	04/03/17	04/10/17	GR-B	1.75E-02	1.75E-02	3.61E-03	3.43E-03	1.00E-02	pCi/cu m
L72522-2	9TP	04/10/17	04/17/17	GR-B	1.77E-02	1.77E-02	3.75E-03	3.65E-03	1.00E-02	pCi/cu m
L72587-2	9TP	04/17/17	04/25/17	GR-B	1.66E-02	1.66E-02	3.44E-03	3.48E-03	1.00E-02	pCi/cu m
L72692-2	9TP	04/25/17	05/01/17	GR-B	1.80E-02	1.80E-02	4.21E-03	4.41E-03	1.00E-02	pCi/cu m
L72769-2	9TP	05/01/17	05/08/17	GR-B	1.83E-02	1.83E-02	3.66E-03	3.46E-03	1.00E-02	pCi/cu m
L72857-2	9TP	05/08/17	05/15/17	GR-B	2.06E-02	2.06E-02	4.13E-03	4.05E-03	1.00E-02	pCi/cu m
L72987-2	9TP	05/15/17	05/22/17	GR-B	1.84E-02	1.84E-02	3.79E-03	3.71E-03	1.00E-02	pCi/cu m
L73115-2	9TP	05/22/17	05/30/17	GR-B	1.58E-02	1.58E-02	3.39E-03	3.36E-03	1.00E-02	pCi/cu m
L73156-2	9TP	05/30/17	06/05/17	GR-B	2.88E-02	2.88E-02	5.42E-03	5.07E-03	1.00E-02	pCi/cu m
L73270-2	9TP	06/05/17	06/13/17	GR-B	1.86E-02	1.86E-02	3.83E-03	3.75E-03	1.00E-02	pCi/cu m
L73360-2	9TP	06/13/17	06/20/17	GR-B	1.66E-02	1.66E-02	4.27E-03	4.93E-03	1.00E-02	pCi/cu m
L73445-2	9TP	06/20/17	06/27/17	GR-B	1.60E-02	1.60E-02	4.10E-03	4.63E-03	1.00E-02	pCi/cu m
L73560-2	9TP	06/27/17	07/04/17	GR-B	2.63E-02	2.63E-02	4.67E-03	4.14E-03	1.00E-02	pCi/cu m
L73719-2	9TP	07/04/17	07/11/17	GR-B	2.36E-02	2.36E-02	4.44E-03	3.68E-03	1.00E-02	pCi/cu m
L73804-2	9TP	07/11/17	07/18/17	GR-B	2.04E-02	2.04E-02	4.31E-03	4.01E-03	1.00E-02	pCi/cu m
L73933-2	9TP	07/18/17	07/24/17	GR-B	2.29E-02	2.29E-02	5.07E-03	5.27E-03	1.00E-02	pCi/cu m
L74071-2	9TP	07/24/17	08/01/17	GR-B	2.14E-02	2.14E-02	4.05E-03	3.67E-03	1.00E-02	pCi/cu m
L74062-2	9TP	08/01/17	08/07/17	GR-B	2.73E-02	2.73E-02	5.77E-03	6.37E-03	1.00E-02	pCi/cu m
L74188-2	9TP	08/07/17	08/15/17	GR-B	1.95E-02	1.95E-02	3.73E-03	3.66E-03	1.00E-02	pCi/cu m

L74272-2	9TP	08/15/17	08/22/17	GR-B	2.60E-02	2.60E-02	4.34E-03	3.92E-03	1.00E-02	pCi/cu m
L74371-2	9TP	08/22/17	08/29/17	GR-B	2.35E-02	2.35E-02	4.01E-03	3.43E-03	1.00E-02	pCi/cu m
L74392-2	9TP	08/29/17	09/05/17	GR-B	2.39E-02	2.39E-02	4.16E-03	3.76E-03	1.00E-02	pCi/cu m
L74517-2	9TP	09/05/17	09/12/17	GR-B	1.30E-02	1.30E-02	3.37E-03	3.87E-03	1.00E-02	pCi/cu m
L74585-2	9TP	09/12/17	09/18/17	GR-B	2.68E-02	2.68E-02	5.05E-03	4.81E-03	1.00E-02	pCi/cu m
L74716-2	9TP	09/18/17	09/26/17	GR-B	2.40E-02	2.40E-02	3.80E-03	3.48E-03	1.00E-02	pCi/cu m
L74874-2	9TP	09/26/17	10/03/17	GR-B	2.34E-02	2.34E-02	4.17E-03	4.00E-03	1.00E-02	pCi/cu m
L74938-2	9TP	10/03/17	10/10/17	GR-B	2.19E-02	2.19E-02	4.13E-03	4.09E-03	1.00E-02	pCi/cu m
L75063-2	9TP	10/10/17	10/16/17	GR-B	2.37E-02	2.37E-02	4.45E-03	4.23E-03	1.00E-02	pCi/cu m
L75153-2	9TP	10/16/17	10/24/17	GR-B	2.46E-02	2.46E-02	3.90E-03	3.29E-03	1.00E-02	pCi/cu m
L75175-2	9TP	10/24/17	10/30/17	GR-B	1.18E-02	1.18E-02	3.34E-03	3.77E-03	1.00E-02	pCi/cu m
L75300-2	9TP	10/30/17	11/06/17	GR-B	1.81E-02	1.81E-02	3.71E-03	3.83E-03	1.00E-02	pCi/cu m
L75390-2	9TP	11/06/17	11/13/17	GR-B	2.42E-02	2.42E-02	3.94E-03	3.35E-03	1.00E-02	pCi/cu m
L75435-2	9TP	11/13/17	11/20/17	GR-B	2.65E-02	2.65E-02	4.08E-03	3.13E-03	1.00E-02	pCi/cu m
L75515-2	9TP	11/20/17	11/27/17	GR-B	2.82E-02	2.82E-02	4.30E-03	3.57E-03	1.00E-02	pCi/cu m
L75580-2	9TP	11/27/17	12/04/17	GR-B	2.20E-02	2.20E-02	3.90E-03	3.45E-03	1.00E-02	pCi/cu m
L75697-2	9TP	12/04/17	12/11/17	GR-B	2.03E-02	2.03E-02	3.76E-03	3.42E-03	1.00E-02	pCi/cu m
L75765-2	9TP	12/11/17	12/19/17	GR-B	2.33E-02	2.33E-02	3.71E-03	3.16E-03	1.00E-02	pCi/cu m
L75819-2	9TP	12/19/17	12/25/17	GR-B	2.97E-02	2.97E-02	4.92E-03	4.49E-03	1.00E-02	pCi/cu m
L75943-2	9TP	12/25/17	01/02/18	GR-B	2.70E-02	2.70E-02	3.73E-03	2.60E-03	1.00E-02	pCi/cu m
L72488-2	9TP	01/03/17	04/03/17	BE-7	9.75E-02	9.75E-02	3.19E-02	3.38E-02		pCi/cu m
L73736-2	9TP	04/03/17	07/04/17	BE-7	1.49E-01	1.49E-01	4.17E-02	3.53E-02		pCi/cu m
L75654-2	9TP	07/04/17	10/03/17	BE-7	1.43E-01	1.43E-01	6.00E-02	7.17E-02		pCi/cu m
L76252-2	9TP	10/03/17	01/02/18	BE-7	1.38E-01	1.38E-01	3.45E-02	3.95E-02		pCi/cu m
L72488-2	9TP	01/03/17	04/03/17	CS-134	< 1.85E-03	-5.22E-04	1.24E-03	1.85E-03	5.00E-02	pCi/cu m
L73736-2	9TP	04/03/17	07/04/17	CS-134	< 2.81E-03	-9.88E-04	1.87E-03	2.81E-03	5.00E-02	pCi/cu m
L75654-2	9TP	07/04/17	10/03/17	CS-134	< 1.58E-03	-1.05E-03	1.26E-03	1.58E-03	5.00E-02	pCi/cu m
L76252-2	9TP	10/03/17	01/02/18	CS-134	< 2.07E-03	-3.39E-04	1.35E-03	2.07E-03	5.00E-02	pCi/cu m
L72488-2	9TP	01/03/17	04/03/17	CS-137	< 2.17E-03	-4.87E-05	1.31E-03	2.17E-03	6.00E-02	pCi/cu m
L73736-2	9TP	04/03/17	07/04/17	CS-137	< 2.45E-03	-2.16E-04	1.53E-03	2.45E-03	6.00E-02	pCi/cu m
L75654-2	9TP	07/04/17	10/03/17	CS-137	< 1.71E-03	-7.53E-04	1.19E-03	1.71E-03	6.00E-02	pCi/cu m
L76252-2	9TP	10/03/17	01/02/18	CS-137	< 2.09E-03	9.91E-04	1.07E-03	2.09E-03	6.00E-02	pCi/cu m

GR10/10GR

AIR PARTICULATE

LAB ID	STATION	COLLECT START	COLLECT STOP	NUCLIDE	REPORTABLE	ACTIVITY	ERROR	MDC	LLD	UNITS
L71371-5	GR10	01/03/17	01/09/17	GR-B	2.02E-02	2.02E-02	3.84E-03	3.22E-03	1.00E-02	pCi/cu m
L71444-5	GR10	01/09/17	01/16/17	GR-B	3.55E-02	3.55E-02	4.62E-03	3.32E-03	1.00E-02	pCi/cu m
L71533-5	GR10	01/16/17	01/23/17	GR-B	2.03E-02	2.03E-02	3.56E-03	2.84E-03	1.00E-02	pCi/cu m

L71631-5	GR10	01/23/17	01/30/17	GR-B	1.94E-02	1.94E-02	3.92E-03	3.93E-03	1.00E-02	pCi/cu m
L71689-5	GR10	01/30/17	02/06/17	GR-B	1.58E-02	1.58E-02	3.21E-03	2.87E-03	1.00E-02	pCi/cu m
L71745-5	GR10	02/06/17	02/13/17	GR-B	2.32E-02	2.32E-02	3.85E-03	3.06E-03	1.00E-02	pCi/cu m
L71861-5	GR10	02/13/17	02/20/17	GR-B	2.34E-02	2.34E-02	3.74E-03	2.77E-03	1.00E-02	pCi/cu m
L71949-5	GR10	02/20/17	02/27/17	GR-B	2.54E-02	2.54E-02	4.26E-03	3.84E-03	1.00E-02	pCi/cu m
L71993-5	GR10	02/27/17	03/06/17	GR-B	2.25E-02	2.25E-02	3.70E-03	2.76E-03	1.00E-02	pCi/cu m
L72111-5	GR10	03/06/17	03/13/17	GR-B	1.54E-02	1.54E-02	3.37E-03	3.38E-03	1.00E-02	pCi/cu m
L72182-5	GR10	03/13/17	03/20/17	GR-B	2.08E-02	2.08E-02	3.50E-03	2.77E-03	1.00E-02	pCi/cu m
L72269-5	GR10	03/20/17	03/27/17	GR-B	2.05E-02	2.05E-02	3.66E-03	3.49E-03	1.00E-02	pCi/cu m
L72421-5	GR10	03/27/17	04/03/17	GR-B	1.32E-02	1.32E-02	3.02E-03	3.04E-03	1.00E-02	pCi/cu m
L72522-5	GR10	04/03/17	04/10/17	GR-B	2.04E-02	2.04E-02	3.51E-03	3.01E-03	1.00E-02	pCi/cu m
L72587-5	GR10	04/10/17	04/17/17	GR-B	1.99E-02	1.99E-02	3.69E-03	3.51E-03	1.00E-02	pCi/cu m
L72692-5	GR10	04/17/17	04/24/17	GR-B	1.68E-02	1.68E-02	3.34E-03	3.10E-03	1.00E-02	pCi/cu m
L72769-5	GR10	04/24/17	05/01/17	GR-B	1.42E-02	1.42E-02	3.16E-03	3.16E-03	1.00E-02	pCi/cu m
L72857-5	GR10	05/01/17	05/08/17	GR-B	1.89E-02	1.89E-02	3.58E-03	3.40E-03	1.00E-02	pCi/cu m
L72987-5	GR10	05/08/17	05/15/17	GR-B	1.66E-02	1.66E-02	3.36E-03	3.25E-03	1.00E-02	pCi/cu m
L73115-5	GR10	05/15/17	05/22/17	GR-B	1.66E-02	1.66E-02	3.45E-03	3.49E-03	1.00E-02	pCi/cu m
L73156-5	GR10	05/22/17	05/30/17	GR-B	1.97E-02	1.97E-02	3.47E-03	3.12E-03	1.00E-02	pCi/cu m
L73270-5	GR10	05/30/17	06/05/17	GR-B	1.99E-02	1.99E-02	4.05E-03	3.93E-03	1.00E-02	pCi/cu m
L73360-5	GR10	06/05/17	06/12/17	GR-B	1.53E-02	1.53E-02	3.53E-03	3.89E-03	1.00E-02	pCi/cu m
L73445-5	GR10	06/12/17	06/19/17	GR-B	1.92E-02	1.92E-02	3.69E-03	3.61E-03	1.00E-02	pCi/cu m
L73560-5	GR10	06/19/17	06/26/17	GR-B	1.44E-02	1.44E-02	3.20E-03	3.23E-03	1.00E-02	pCi/cu m
L73719-5	GR10	06/26/17	07/03/17	GR-B	1.96E-02	1.96E-02	3.48E-03	2.77E-03	1.00E-02	pCi/cu m
L73804-5	GR10	07/03/17	07/10/17	GR-B	2.08E-02	2.08E-02	3.75E-03	3.16E-03	1.00E-02	pCi/cu m
L73933-5	GR10	07/10/17	07/17/17	GR-B	1.87E-02	1.87E-02	3.63E-03	3.52E-03	1.00E-02	pCi/cu m
L74071-5	GR10	07/17/17	07/24/17	GR-B	2.39E-02	2.39E-02	3.85E-03	3.12E-03	1.00E-02	pCi/cu m
L74062-5	GR10	07/24/17	07/31/17	GR-B	1.56E-02	1.56E-02	3.68E-03	4.25E-03	1.00E-02	pCi/cu m
L74188-5	GR10	07/31/17	08/07/17	GR-B	2.45E-02	2.45E-02	4.05E-03	3.66E-03	1.00E-02	pCi/cu m
L74272-5	GR10	08/07/17	08/14/17	GR-B	2.29E-02	2.29E-02	4.03E-03	3.75E-03	1.00E-02	pCi/cu m
L74371-5	GR10	08/14/17	08/21/17	GR-B	2.54E-02	2.54E-02	3.97E-03	3.20E-03	1.00E-02	pCi/cu m
L74392-5	GR10	08/21/17	08/28/17	GR-B	1.93E-02	1.93E-02	3.63E-03	3.42E-03	1.00E-02	pCi/cu m
L74517-5	GR10	08/28/17	09/05/17	GR-B	2.10E-02	2.10E-02	3.38E-03	2.81E-03	1.00E-02	pCi/cu m
L74585-5	GR10	09/05/17	09/11/17	GR-B	1.29E-02	1.29E-02	3.51E-03	4.02E-03	1.00E-02	pCi/cu m
L74716-5	GR10	09/11/17	09/18/17	GR-B	2.34E-02	2.34E-02	4.05E-03	3.89E-03	1.00E-02	pCi/cu m
L74874-5	GR10	09/18/17	09/25/17	GR-B	3.88E-02	3.88E-02	5.04E-03	3.96E-03	1.00E-02	pCi/cu m
L74938-5	GR10	09/25/17	10/02/17	GR-B	2.38E-02	2.38E-02	3.96E-03	3.65E-03	1.00E-02	pCi/cu m
L75063-5	GR10	10/02/17	10/10/17	GR-B	2.25E-02	2.25E-02	3.50E-03	2.97E-03	1.00E-02	pCi/cu m
L75153-5	GR10	10/10/17	10/16/17	GR-B	2.24E-02	2.24E-02	4.33E-03	4.12E-03	1.00E-02	pCi/cu m
L75175-5	GR10	10/16/17	10/23/17	GR-B	2.98E-02	2.98E-02	4.11E-03	2.77E-03	1.00E-02	pCi/cu m
L75300-5	GR10	10/23/17	10/30/17	GR-B	1.46E-02	1.46E-02	3.26E-03	3.50E-03	1.00E-02	pCi/cu m

L75390-5	GR10	10/30/17	11/06/17	GR-B	1.64E-02	1.64E-02	3.30E-03	3.19E-03	1.00E-02	pCi/cu m
L75435-5	GR10	11/06/17	11/13/17	GR-B	2.10E-02	2.10E-02	3.53E-03	2.88E-03	1.00E-02	pCi/cu m
L75515-5	GR10	11/13/17	11/20/17	GR-B	3.39E-02	3.39E-02	4.44E-03	3.31E-03	1.00E-02	pCi/cu m
L75580-5	GR10	11/20/17	11/27/17	GR-B	2.80E-02	2.80E-02	4.02E-03	3.09E-03	1.00E-02	pCi/cu m
L75697-5	GR10	11/27/17	12/04/17	GR-B	2.70E-02	2.70E-02	3.93E-03	3.05E-03	1.00E-02	pCi/cu m
L75765-5	GR10	12/04/17	12/11/17	GR-B	2.47E-02	2.47E-02	4.01E-03	3.47E-03	1.00E-02	pCi/cu m
L75819-5	GR10	12/11/17	12/18/17	GR-B	2.07E-02	2.07E-02	3.68E-03	3.50E-03	1.00E-02	pCi/cu m
L75943-5	GR10	12/18/17	12/26/17	GR-B	2.34E-02	2.34E-02	3.39E-03	2.45E-03	1.00E-02	pCi/cu m
L75984-5	GR10	12/26/17	01/02/18	GR-B	2.44E-02	2.44E-02	3.91E-03	3.39E-03	1.00E-02	pCi/cu m
L72488-5	GR10	01/03/17	04/03/17	BE-7	9.86E-02	9.86E-02	2.97E-02	2.59E-02		pCi/cu m
L73736-5	GR10	04/03/17	07/03/17	BE-7	1.35E-01	1.35E-01	3.89E-02	3.16E-02		pCi/cu m
L75654-5	GR10	07/03/17	10/02/17	BE-7	1.56E-01	1.56E-01	7.17E-02	9.58E-02		pCi/cu m
L76252-5	GR10	10/02/17	01/02/18	BE-7	1.02E-01	1.02E-01	2.91E-02	2.92E-02		pCi/cu m
L72488-5	GR10	01/03/17	04/03/17	CS-134	< 2.23E-03	5.28E-04	1.27E-03	2.23E-03	5.00E-02	pCi/cu m
L73736-5	GR10	04/03/17	07/03/17	CS-134	< 2.53E-03	-4.74E-04	1.63E-03	2.53E-03	5.00E-02	pCi/cu m
L75654-5	GR10	07/03/17	10/02/17	CS-134	< 2.92E-03	4.51E-04	1.69E-03	2.92E-03	5.00E-02	pCi/cu m
L76252-5	GR10	10/02/17	01/02/18	CS-134	< 1.42E-03	-5.21E-04	1.01E-03	1.42E-03	5.00E-02	pCi/cu m
L72488-5	GR10	01/03/17	04/03/17	CS-137	< 1.81E-03	2.90E-05	1.08E-03	1.81E-03	6.00E-02	pCi/cu m
L73736-5	GR10	04/03/17	07/03/17	CS-137	< 2.32E-03	7.14E-04	1.28E-03	2.32E-03	6.00E-02	pCi/cu m
L75654-5	GR10	07/03/17	10/02/17	CS-137	< 2.17E-03	-8.53E-04	1.48E-03	2.17E-03	6.00E-02	pCi/cu m
L76252-5	GR10	10/02/17	01/02/18	CS-137	< 1.96E-03	9.11E-04	1.03E-03	1.96E-03	6.00E-02	pCi/cu m

**19ST
AIR PARTICULATE**

LAB ID	STATION	COLLECT START	COLLECT STOP	NUCLIDE	REPORTABLE	ACTIVITY	ERROR	MDC	LLD	UNITS
L71261-6	19ST	01/03/17	01/09/17	GR-B	2.07E-02	2.07E-02	3.93E-03	3.56E-03	1.00E-02	pCi/cu m
L71371-6	19ST	01/09/17	01/16/17	GR-B	3.02E-02	3.02E-02	4.19E-03	2.85E-03	1.00E-02	pCi/cu m
L71444-6	19ST	01/16/17	01/23/17	GR-B	2.18E-02	2.18E-02	3.96E-03	3.48E-03	1.00E-02	pCi/cu m
L71533-6	19ST	01/23/17	01/30/17	GR-B	1.53E-02	1.53E-02	3.06E-03	2.65E-03	1.00E-02	pCi/cu m
L71631-6	19ST	01/30/17	02/06/17	GR-B	1.90E-02	1.90E-02	3.87E-03	3.90E-03	1.00E-02	pCi/cu m
L71689-6	19ST	02/06/17	02/13/17	GR-B	2.20E-02	2.20E-02	3.71E-03	2.99E-03	1.00E-02	pCi/cu m
L71745-6	19ST	02/13/17	02/20/17	GR-B	1.89E-02	1.89E-02	3.47E-03	2.95E-03	1.00E-02	pCi/cu m
L71861-6	19ST	02/20/17	02/27/17	GR-B	1.94E-02	1.94E-02	3.66E-03	3.21E-03	1.00E-02	pCi/cu m
L71949-6	19ST	02/27/17	03/06/17	GR-B	2.08E-02	2.08E-02	3.90E-03	3.72E-03	1.00E-02	pCi/cu m
L71993-6	19ST	03/06/17	03/13/17	GR-B	1.91E-02	1.91E-02	3.49E-03	2.78E-03	1.00E-02	pCi/cu m
L72111-6	19ST	03/13/17	03/20/17	GR-B	1.54E-02	1.54E-02	3.34E-03	3.34E-03	1.00E-02	pCi/cu m
L72182-6	19ST	03/20/17	03/27/17	GR-B	2.16E-02	2.16E-02	3.53E-03	2.75E-03	1.00E-02	pCi/cu m
L72269-6	19ST	03/27/17	04/03/17	GR-B	1.43E-02	1.43E-02	3.17E-03	3.38E-03	1.00E-02	pCi/cu m
L72421-6	19ST	04/03/17	04/10/17	GR-B	1.64E-02	1.64E-02	3.27E-03	3.04E-03	1.00E-02	pCi/cu m

L72522-6	19ST	04/10/17	04/17/17	GR-B	1.64E-02	1.64E-02	3.32E-03	3.16E-03	1.00E-02	pCi/cu m
L72587-6	19ST	04/17/17	04/25/17	GR-B	1.45E-02	1.45E-02	2.99E-03	3.02E-03	1.00E-02	pCi/cu m
L72692-6	19ST	04/25/17	05/01/17	GR-B	1.47E-02	1.47E-02	3.49E-03	3.58E-03	1.00E-02	pCi/cu m
L72769-6	19ST	05/01/17	05/08/17	GR-B	1.77E-02	1.77E-02	3.31E-03	3.00E-03	1.00E-02	pCi/cu m
L72857-6	19ST	05/08/17	05/15/17	GR-B	1.73E-02	1.73E-02	3.52E-03	3.48E-03	1.00E-02	pCi/cu m
L72987-6	19ST	05/15/17	05/22/17	GR-B	1.55E-02	1.55E-02	3.27E-03	3.23E-03	1.00E-02	pCi/cu m
L73115-6	19ST	05/22/17	05/30/17	GR-B	1.57E-02	1.57E-02	3.12E-03	3.09E-03	1.00E-02	pCi/cu m
L73156-6	19ST	05/30/17	06/05/17	GR-B	2.07E-02	2.07E-02	4.16E-03	4.04E-03	1.00E-02	pCi/cu m
L73270-6	19ST	06/05/17	06/13/17	GR-B	1.75E-02	1.75E-02	3.24E-03	2.98E-03	1.00E-02	pCi/cu m
L73360-6	19ST	06/13/17	06/20/17	GR-B	1.54E-02	1.54E-02	3.49E-03	3.82E-03	1.00E-02	pCi/cu m
L73445-6	19ST	06/20/17	06/27/17	GR-B	1.14E-02	1.14E-02	3.14E-03	3.65E-03	1.00E-02	pCi/cu m
L73560-6	19ST	06/27/17	07/04/17	GR-B	1.47E-02	1.47E-02	3.20E-03	3.20E-03	1.00E-02	pCi/cu m
L73719-6	19ST	07/04/17	07/11/17	GR-B	1.93E-02	1.93E-02	3.48E-03	2.82E-03	1.00E-02	pCi/cu m
L73804-6	19ST	07/11/17	07/18/17	GR-B	1.83E-02	1.83E-02	3.49E-03	3.05E-03	1.00E-02	pCi/cu m
L73933-6	19ST	07/18/17	07/24/17	GR-B	1.87E-02	1.87E-02	3.99E-03	4.07E-03	1.00E-02	pCi/cu m
L74071-6	19ST	07/24/17	08/01/17	GR-B	1.91E-02	1.91E-02	3.28E-03	2.79E-03	1.00E-02	pCi/cu m
L74062-6	19ST	08/01/17	08/07/17	GR-B	2.17E-02	2.17E-02	4.47E-03	4.87E-03	1.00E-02	pCi/cu m
L74188-6	19ST	08/07/17	08/15/17	GR-B	2.01E-02	2.01E-02	3.41E-03	3.13E-03	1.00E-02	pCi/cu m
L74272-6	19ST	08/15/17	08/22/17	GR-B	2.99E-02	2.99E-02	5.09E-03	4.65E-03	1.00E-02	pCi/cu m
L74371-6	19ST	08/22/17	08/29/17	GR-B	2.30E-02	2.30E-02	4.39E-03	4.02E-03	1.00E-02	pCi/cu m
L74392-6	19ST	08/29/17	09/05/17	GR-B	2.91E-02	2.91E-02	4.98E-03	4.45E-03	1.00E-02	pCi/cu m
L74517-6	19ST	09/05/17	09/12/17	GR-B	1.45E-02	1.45E-02	3.32E-03	3.40E-03	1.00E-02	pCi/cu m
L74585-6	19ST	09/12/17	09/18/17	GR-B	2.56E-02	2.56E-02	4.46E-03	4.06E-03	1.00E-02	pCi/cu m
L74716-6	19ST	09/18/17	09/26/17	GR-B	2.48E-02	2.48E-02	3.80E-03	3.41E-03	1.00E-02	pCi/cu m
L74874-6	19ST	09/26/17	10/03/17	GR-B	2.45E-02	2.45E-02	4.06E-03	3.73E-03	1.00E-02	pCi/cu m
L74938-6	19ST	10/03/17	10/10/17	GR-B	2.34E-02	2.34E-02	3.98E-03	3.71E-03	1.00E-02	pCi/cu m
L75063-6	19ST	10/10/17	10/16/17	GR-B	1.62E-02	1.62E-02	3.77E-03	4.02E-03	1.00E-02	pCi/cu m
L75153-6	19ST	10/16/17	10/24/17	GR-B	2.22E-02	2.22E-02	3.56E-03	3.01E-03	1.00E-02	pCi/cu m
L75175-6	19ST	10/24/17	10/30/17	GR-B	1.33E-02	1.33E-02	3.16E-03	3.08E-03	1.00E-02	pCi/cu m
L75300-6	19ST	10/30/17	11/06/17	GR-B	1.66E-02	1.66E-02	3.40E-03	3.50E-03	1.00E-02	pCi/cu m
L75390-6	19ST	11/06/17	11/13/17	GR-B	2.72E-02	2.72E-02	3.97E-03	3.13E-03	1.00E-02	pCi/cu m
L75435-6	19ST	11/13/17	11/20/17	GR-B	2.58E-02	2.58E-02	3.83E-03	2.86E-03	1.00E-02	pCi/cu m
L75515-6	19ST	11/20/17	11/27/17	GR-B	2.60E-02	2.60E-02	3.98E-03	3.31E-03	1.00E-02	pCi/cu m
L75580-6	19ST	11/27/17	12/04/17	GR-B	1.98E-02	1.98E-02	3.51E-03	3.12E-03	1.00E-02	pCi/cu m
L75697-6	19ST	12/04/17	12/11/17	GR-B	2.58E-02	2.58E-02	3.87E-03	3.07E-03	1.00E-02	pCi/cu m
L75765-6	19ST	12/11/17	12/19/17	GR-B	2.64E-02	2.64E-02	3.67E-03	2.86E-03	1.00E-02	pCi/cu m
L75819-6	19ST	12/19/17	12/25/17	GR-B	2.69E-02	2.69E-02	4.53E-03	4.17E-03	1.00E-02	pCi/cu m
L75943-6	19ST	12/25/17	01/02/18	GR-B	2.18E-02	2.18E-02	3.23E-03	2.37E-03	1.00E-02	pCi/cu m
L72488-6	19ST	01/03/17	04/03/17	BE-7	9.17E-02	9.17E-02	4.71E-02	3.97E-02		pCi/cu m
L73736-6	19ST	04/03/17	07/04/17	BE-7	1.73E-01	1.73E-01	3.09E-02	4.16E-02		pCi/cu m

L75654-6	19ST	07/04/17	10/03/17	BE-7	1.33E-01	1.33E-01	7.26E-02	1.13E-01		pCi/cu m
L76252-6	19ST	10/03/17	01/02/18	BE-7	8.67E-02	8.67E-02	3.32E-02	3.69E-02		pCi/cu m
L72488-6	19ST	01/03/17	04/03/17	CS-134	< 2.36E-03	8.04E-04	1.28E-03	2.36E-03	5.00E-02	pCi/cu m
L73736-6	19ST	04/03/17	07/04/17	CS-134	< 2.57E-03	-4.94E-04	1.47E-03	2.57E-03	5.00E-02	pCi/cu m
L75654-6	19ST	07/04/17	10/03/17	CS-134	< 2.93E-03	-1.77E-04	1.63E-03	2.93E-03	5.00E-02	pCi/cu m
L76252-6	19ST	10/03/17	01/02/18	CS-134	< 2.02E-03	-4.83E-04	1.32E-03	2.02E-03	5.00E-02	pCi/cu m
L72488-6	19ST	01/03/17	04/03/17	CS-137	< 1.64E-03	-1.45E-03	1.29E-03	1.64E-03	6.00E-02	pCi/cu m
L73736-6	19ST	04/03/17	07/04/17	CS-137	< 2.42E-03	9.49E-04	1.24E-03	2.42E-03	6.00E-02	pCi/cu m
L75654-6	19ST	07/04/17	10/03/17	CS-137	< 2.36E-03	-1.29E-03	1.45E-03	2.36E-03	6.00E-02	pCi/cu m
L76252-6	19ST	10/03/17	01/02/18	CS-137	< 1.93E-03	2.25E-04	1.14E-03	1.93E-03	6.00E-02	pCi/cu m

4JS

CHARCOAL FILTER

LAB ID	STATION	COLLECT START	COLLECT STOP	NUCLIDE	REPORTABLE	ACTIVITY	ERROR	MDC	LLD	UNITS
L71261-9	4JS	01/03/17	01/09/17	I-131	< 2.38E-02	-6.37E-03	1.50E-02	2.38E-02	7.00E-02	pCi/cu m
L71371-9	4JS	01/09/17	01/16/17	I-131	< 3.43E-02	-4.87E-03	2.16E-02	3.43E-02	7.00E-02	pCi/cu m
L71444-9	4JS	01/16/17	01/23/17	I-131	< 6.46E-03	1.05E-03	3.80E-03	6.46E-03	7.00E-02	pCi/cu m
L71533-9	4JS	01/23/17	01/30/17	I-131	< 1.53E-02	-4.17E-03	9.58E-03	1.53E-02	7.00E-02	pCi/cu m
L71631-9	4JS	01/30/17	02/06/17	I-131	< 3.24E-02	-3.05E-03	1.99E-02	3.24E-02	7.00E-02	pCi/cu m
L71689-9	4JS	02/06/17	02/13/17	I-131	< 2.02E-02	2.02E-03	1.20E-02	2.02E-02	7.00E-02	pCi/cu m
L71745-9	4JS	02/13/17	02/20/17	I-131	< 2.03E-02	-9.32E-03	1.31E-02	2.03E-02	7.00E-02	pCi/cu m
L71861-9	4JS	02/20/17	02/27/17	I-131	< 2.73E-02	4.46E-03	1.62E-02	2.73E-02	7.00E-02	pCi/cu m
L71949-9	4JS	02/27/17	03/06/17	I-131	< 2.47E-02	-7.53E-03	1.53E-02	2.47E-02	7.00E-02	pCi/cu m
L71993-9	4JS	03/06/17	03/13/17	I-131	< 1.68E-02	-1.75E-03	1.03E-02	1.68E-02	7.00E-02	pCi/cu m
L72111-9	4JS	03/13/17	03/20/17	I-131	< 2.32E-02	-4.49E-03	1.43E-02	2.32E-02	7.00E-02	pCi/cu m
L72182-9	4JS	03/20/17	03/27/17	I-131	< 1.13E-02	-1.77E-04	6.84E-03	1.13E-02	7.00E-02	pCi/cu m
L72269-9	4JS	03/27/17	04/03/17	I-131	< 1.29E-02	1.11E-04	7.80E-03	1.29E-02	7.00E-02	pCi/cu m
L72421-9	4JS	04/03/17	04/10/17	I-131	< 1.16E-02	-2.90E-03	7.26E-03	1.16E-02	7.00E-02	pCi/cu m
L72522-9	4JS	04/10/17	04/17/17	I-131	< 3.73E-02	6.33E-03	2.19E-02	3.73E-02	7.00E-02	pCi/cu m
L72587-9	4JS	04/17/17	04/25/17	I-131	< 9.29E-03	-1.62E-03	6.01E-03	9.29E-03	7.00E-02	pCi/cu m
L72692-9	4JS	04/25/17	05/01/17	I-131	< 3.91E-02	7.55E-03	2.34E-02	3.91E-02	7.00E-02	pCi/cu m
L72769-9	4JS	05/01/17	05/08/17	I-131	< 1.05E-02	-3.66E-03	6.89E-03	1.05E-02	7.00E-02	pCi/cu m
L72857-9	4JS	05/08/17	05/15/17	I-131	< 4.08E-02	-6.55E-03	2.54E-02	4.08E-02	7.00E-02	pCi/cu m
L72987-9	4JS	05/15/17	05/22/17	I-131	< 3.46E-02	-4.03E-03	2.12E-02	3.46E-02	7.00E-02	pCi/cu m
L73115-9	4JS	05/22/17	05/30/17	I-131	< 3.99E-02	-3.25E-03	2.45E-02	3.99E-02	7.00E-02	pCi/cu m
L73156-9	4JS	05/30/17	06/05/17	I-131	< 5.31E-02	-5.50E-03	3.29E-02	5.31E-02	7.00E-02	pCi/cu m
L73270-9	4JS	06/05/17	06/13/17	I-131	< 2.45E-02	-8.49E-04	1.41E-02	2.45E-02	7.00E-02	pCi/cu m
L73360-9	4JS	06/13/17	06/20/17	I-131	< 3.05E-02	9.84E-04	1.88E-02	3.05E-02	7.00E-02	pCi/cu m
L73445-9	4JS	06/20/17	06/27/17	I-131	< 3.05E-02	-5.54E-04	1.84E-02	3.05E-02	7.00E-02	pCi/cu m
L73560-9	4JS	06/27/17	07/04/17	I-131	< 1.09E-02	1.09E-03	6.36E-03	1.09E-02	7.00E-02	pCi/cu m

L73719-9	4JS	07/04/17	07/11/17	I-131	< 4.41E-02	-2.77E-03	2.69E-02	4.41E-02	7.00E-02	pCi/cu m
L73804-9	4JS	07/11/17	07/18/17	I-131	< 4.02E-02	-4.06E-03	2.46E-02	4.02E-02	7.00E-02	pCi/cu m
L73933-9	4JS	07/18/17	07/24/17	I-131	< 5.08E-02	-1.23E-02	3.23E-02	5.08E-02	7.00E-02	pCi/cu m
L74071-9	4JS	07/24/17	08/01/17	I-131	< 2.59E-02	-5.52E-03	1.58E-02	2.59E-02	7.00E-02	pCi/cu m
L74062-9	4JS	08/01/17	08/07/17	I-131	< 4.02E-02	-7.16E-03	2.49E-02	4.02E-02	7.00E-02	pCi/cu m
L74188-9	4JS	08/07/17	08/15/17	I-131	< 2.97E-02	-1.20E-02	1.91E-02	2.97E-02	7.00E-02	pCi/cu m
L74272-9	4JS	08/15/17	08/22/17	I-131	< 3.06E-02	-7.91E-03	1.92E-02	3.06E-02	7.00E-02	pCi/cu m
L74371-9	4JS	08/22/17	08/29/17	I-131	< 3.27E-02	3.02E-03	2.00E-02	3.27E-02	7.00E-02	pCi/cu m
L74392-9	4JS	08/29/17	09/05/17	I-131	< 2.79E-02	1.28E-02	1.59E-02	2.79E-02	7.00E-02	pCi/cu m
L74517-9	4JS	09/05/17	09/12/17	I-131	< 2.51E-02	8.93E-03	1.45E-02	2.51E-02	7.00E-02	pCi/cu m
L74585-9	4JS	09/12/17	09/18/17	I-131	< 2.02E-02	6.32E-03	1.18E-02	2.02E-02	7.00E-02	pCi/cu m
L74716-9	4JS	09/18/17	09/26/17	I-131	< 1.94E-02	-3.81E-03	1.19E-02	1.94E-02	7.00E-02	pCi/cu m
L74874-9	4JS	09/26/17	10/03/17	I-131	< 2.66E-02	1.32E-03	1.60E-02	2.66E-02	7.00E-02	pCi/cu m
L74938-9	4JS	10/03/17	10/10/17	I-131	< 2.05E-02	-5.89E-03	1.28E-02	2.05E-02	7.00E-02	pCi/cu m
L75063-9	4JS	10/10/17	10/16/17	I-131	< 2.23E-02	-1.31E-02	1.41E-02	2.23E-02	7.00E-02	pCi/cu m
L75153-9	4JS	10/16/17	10/24/17	I-131	< 2.10E-02	-8.76E-03	1.35E-02	2.10E-02	7.00E-02	pCi/cu m
L75175-9	4JS	10/24/17	10/30/17	I-131	< 1.36E-02	-8.33E-03	8.74E-03	1.36E-02	7.00E-02	pCi/cu m
L75300-9	4JS	10/30/17	11/06/17	I-131	< 3.00E-02	8.50E-03	1.73E-02	3.00E-02	7.00E-02	pCi/cu m
L75390-9	4JS	11/06/17	11/13/17	I-131	< 2.57E-02	8.77E-03	1.50E-02	2.57E-02	7.00E-02	pCi/cu m
L75435-9	4JS	11/13/17	11/20/17	I-131	< 3.20E-02	8.75E-03	1.83E-02	3.20E-02	7.00E-02	pCi/cu m
L75515-9	4JS	11/20/17	11/27/17	I-131	< 4.21E-02	5.88E-03	2.47E-02	4.21E-02	7.00E-02	pCi/cu m
L75580-9	4JS	11/27/17	12/04/17	I-131	< 3.76E-02	2.41E-04	2.27E-02	3.76E-02	7.00E-02	pCi/cu m
L75697-9	4JS	12/04/17	12/11/17	I-131	< 2.22E-02	-3.79E-03	1.43E-02	2.22E-02	7.00E-02	pCi/cu m
L75765-9	4JS	12/11/17	12/19/17	I-131	< 1.31E-02	-4.07E-03	8.70E-03	1.31E-02	7.00E-02	pCi/cu m
L75819-9	4JS	12/19/17	12/25/17	I-131	< 2.79E-02	-7.86E-03	1.86E-02	2.79E-02	7.00E-02	pCi/cu m
L75943-9	4JS	12/25/17	01/02/18	I-131	< 3.49E-02	1.27E-03	2.06E-02	3.49E-02	7.00E-02	pCi/cu m

SPR

CHARCOAL FILTER

LAB ID	STATION	COLLECT START	COLLECT STOP	NUCLIDE	REPORTABLE	ACTIVITY	ERROR	MDC	LLD	UNITS
L71261-10	SPR	01/03/17	01/09/17	I-131	< 3.34E-02	-8.95E-03	2.11E-02	3.34E-02	7.00E-02	pCi/cu m
L71371-10	SPR	01/09/17	01/16/17	I-131	< 3.61E-02	1.11E-02	2.03E-02	3.61E-02	7.00E-02	pCi/cu m
L71444-10	SPR	01/16/17	01/23/17	I-131	< 2.36E-02	3.81E-03	1.38E-02	2.36E-02	7.00E-02	pCi/cu m
L71533-10	SPR	01/23/17	01/30/17	I-131	< 1.58E-02	-4.29E-03	9.86E-03	1.58E-02	7.00E-02	pCi/cu m
L71631-10	SPR	01/30/17	02/06/17	I-131	< 4.64E-02	-4.38E-03	2.85E-02	4.64E-02	7.00E-02	pCi/cu m
L71689-10	SPR	02/06/17	02/13/17	I-131	< 2.11E-02	2.12E-03	1.26E-02	2.11E-02	7.00E-02	pCi/cu m
L71745-10	SPR	02/13/17	02/20/17	I-131	< 2.88E-02	-1.32E-02	1.86E-02	2.88E-02	7.00E-02	pCi/cu m
L71861-10	SPR	02/20/17	02/27/17	I-131	< 2.84E-02	4.63E-03	1.69E-02	2.84E-02	7.00E-02	pCi/cu m
L71949-10	SPR	02/27/17	03/06/17	I-131	< 3.53E-02	-1.08E-02	2.19E-02	3.53E-02	7.00E-02	pCi/cu m
L71993-10	SPR	03/06/17	03/13/17	I-131	< 1.76E-02	-1.83E-03	1.08E-02	1.76E-02	7.00E-02	pCi/cu m

L72111-10	5PR	03/13/17	03/20/17	I-131	< 3.29E-02	-6.39E-03	2.03E-02	3.29E-02	7.00E-02	pCi/cu m
L72182-10	5PR	03/20/17	03/27/17	I-131	< 2.83E-02	-4.42E-04	1.71E-02	2.83E-02	7.00E-02	pCi/cu m
L72269-10	5PR	03/27/17	04/03/17	I-131	< 7.77E-03	6.66E-05	4.68E-03	7.77E-03	7.00E-02	pCi/cu m
L72421-10	5PR	04/03/17	04/10/17	I-131	< 2.88E-02	-7.18E-03	1.80E-02	2.88E-02	7.00E-02	pCi/cu m
L72522-10	5PR	04/10/17	04/17/17	I-131	< 5.42E-02	9.20E-03	3.18E-02	5.42E-02	7.00E-02	pCi/cu m
L72587-10	5PR	04/17/17	04/25/17	I-131	< 2.48E-02	-4.31E-03	1.60E-02	2.48E-02	7.00E-02	pCi/cu m
L72692-10	5PR	04/25/17	05/01/17	I-131	< 5.64E-02	1.09E-02	3.38E-02	5.64E-02	7.00E-02	pCi/cu m
L72769-10	5PR	05/01/17	05/08/17	I-131	< 2.01E-02	-7.00E-03	1.32E-02	2.01E-02	7.00E-02	pCi/cu m
L72857-10	5PR	05/08/17	05/15/17	I-131	< 5.88E-02	-9.42E-03	3.66E-02	5.88E-02	7.00E-02	pCi/cu m
L72987-10	5PR	05/15/17	05/22/17	I-131	< 5.88E-02	7.01E-03	3.44E-02	5.88E-02	7.00E-02	pCi/cu m
L73115-10	5PR	05/22/17	05/30/17	I-131	< 4.89E-02	-1.78E-03	2.81E-02	4.89E-02	7.00E-02	pCi/cu m
L73156-10	5PR	05/30/17	06/05/17	I-131	< 4.61E-02	-8.34E-05	2.63E-02	4.61E-02	7.00E-02	pCi/cu m
L73270-10	5PR	06/05/17	06/13/17	I-131	< 3.48E-02	-1.21E-03	2.00E-02	3.48E-02	7.00E-02	pCi/cu m
L73360-10	5PR	06/13/17	06/20/17	I-131	< 3.16E-02	1.02E-03	1.94E-02	3.16E-02	7.00E-02	pCi/cu m
L73445-10	5PR	06/20/17	06/27/17	I-131	< 4.37E-02	-7.95E-04	2.63E-02	4.37E-02	7.00E-02	pCi/cu m
L73560-10	5PR	06/27/17	07/04/17	I-131	< 2.91E-02	2.90E-03	1.69E-02	2.91E-02	7.00E-02	pCi/cu m
L73719-10	5PR	07/04/17	07/11/17	I-131	< 5.52E-02	6.21E-03	3.20E-02	5.52E-02	7.00E-02	pCi/cu m
L73804-10	5PR	07/11/17	07/18/17	I-131	< 3.33E-02	-1.12E-02	2.06E-02	3.33E-02	7.00E-02	pCi/cu m
L73933-10	5PR	07/18/17	07/24/17	I-131	< 6.85E-02	-2.32E-03	4.16E-02	6.85E-02	7.00E-02	pCi/cu m
L74071-10	5PR	07/24/17	08/01/17	I-131	< 2.69E-02	-5.72E-03	1.64E-02	2.69E-02	7.00E-02	pCi/cu m
L74062-10	5PR	08/01/17	08/07/17	I-131	< 5.67E-02	-1.01E-02	3.51E-02	5.67E-02	7.00E-02	pCi/cu m
L74188-10	5PR	08/07/17	08/15/17	I-131	< 3.07E-02	-1.25E-02	1.97E-02	3.07E-02	7.00E-02	pCi/cu m
L74272-10	5PR	08/15/17	08/22/17	I-131	< 4.33E-02	-1.12E-02	2.72E-02	4.33E-02	7.00E-02	pCi/cu m
L74371-10	5PR	08/22/17	08/29/17	I-131	< 3.34E-02	3.09E-03	2.05E-02	3.34E-02	7.00E-02	pCi/cu m
L74392-10	5PR	08/29/17	09/05/17	I-131	< 4.02E-02	1.84E-02	2.29E-02	4.02E-02	7.00E-02	pCi/cu m
L74517-10	5PR	09/05/17	09/12/17	I-131	< 2.59E-02	9.21E-03	1.50E-02	2.59E-02	7.00E-02	pCi/cu m
L74585-10	5PR	09/12/17	09/18/17	I-131	< 2.85E-02	8.91E-03	1.67E-02	2.85E-02	7.00E-02	pCi/cu m
L74716-10	5PR	09/18/17	09/26/17	I-131	< 2.00E-02	-3.92E-03	1.22E-02	2.00E-02	7.00E-02	pCi/cu m
L74874-10	5PR	09/26/17	10/03/17	I-131	< 3.76E-02	1.86E-03	2.26E-02	3.76E-02	7.00E-02	pCi/cu m
L74938-10	5PR	10/03/17	10/10/17	I-131	< 2.12E-02	-6.09E-03	1.33E-02	2.12E-02	7.00E-02	pCi/cu m
L75063-10	5PR	10/10/17	10/16/17	I-131	< 3.18E-02	-1.86E-02	2.01E-02	3.18E-02	7.00E-02	pCi/cu m
L75153-10	5PR	10/16/17	10/24/17	I-131	< 2.18E-02	-9.08E-03	1.39E-02	2.18E-02	7.00E-02	pCi/cu m
L75175-10	5PR	10/24/17	10/30/17	I-131	< 1.96E-02	-1.20E-02	1.26E-02	1.96E-02	7.00E-02	pCi/cu m
L75300-10	5PR	10/30/17	11/06/17	I-131	< 3.12E-02	8.84E-03	1.80E-02	3.12E-02	7.00E-02	pCi/cu m
L75390-10	5PR	11/06/17	11/13/17	I-131	< 3.66E-02	1.25E-02	2.13E-02	3.66E-02	7.00E-02	pCi/cu m
L75435-10	5PR	11/13/17	11/20/17	I-131	< 2.78E-02	7.62E-03	1.60E-02	2.78E-02	7.00E-02	pCi/cu m
L75515-10	5PR	11/20/17	11/27/17	I-131	< 5.99E-02	8.36E-03	3.52E-02	5.99E-02	7.00E-02	pCi/cu m
L75580-10	5PR	11/27/17	12/04/17	I-131	< 3.88E-02	2.48E-04	2.34E-02	3.88E-02	7.00E-02	pCi/cu m
L75697-10	5PR	12/04/17	12/11/17	I-131	< 2.67E-02	-4.56E-03	1.73E-02	2.67E-02	7.00E-02	pCi/cu m
L75765-10	5PR	12/11/17	12/19/17	I-131	< 1.37E-02	-4.23E-03	9.05E-03	1.37E-02	7.00E-02	pCi/cu m

L75819-10	5PR	12/19/17	12/25/17	I-131	< 3.92E-02	-1.10E-02	2.61E-02	3.92E-02	7.00E-02	pCi/cu m
L75943-10	5PR	12/25/17	01/02/18	I-131	< 3.61E-02	1.31E-03	2.13E-02	3.61E-02	7.00E-02	pCi/cu m

8SP

CHARCOAL FILTER

LAB ID	STATION	COLLECT START	COLLECT STOP	NUCLIDE	REPORTABLE	ACTIVITY	ERROR	MDC	LLD	UNITS
L71261-7	8SP	01/03/17	01/09/17	I-131	< 4.45E-02	-1.19E-02	2.81E-02	4.45E-02	7.00E-02	pCi/cu m
L71371-7	8SP	01/09/17	01/16/17	I-131	< 2.70E-02	-3.83E-03	1.70E-02	2.70E-02	7.00E-02	pCi/cu m
L71444-7	8SP	01/16/17	01/23/17	I-131	< 3.18E-02	5.15E-03	1.87E-02	3.18E-02	7.00E-02	pCi/cu m
L71533-7	8SP	01/23/17	01/30/17	I-131	< 1.23E-02	-3.35E-03	7.70E-03	1.23E-02	7.00E-02	pCi/cu m
L71631-7	8SP	01/30/17	02/06/17	I-131	< 2.58E-02	-2.44E-03	1.59E-02	2.58E-02	7.00E-02	pCi/cu m
L71689-7	8SP	02/06/17	02/13/17	I-131	< 1.64E-02	1.64E-03	9.75E-03	1.64E-02	7.00E-02	pCi/cu m
L71745-7	8SP	02/13/17	02/20/17	I-131	< 1.64E-02	-7.54E-03	1.06E-02	1.64E-02	7.00E-02	pCi/cu m
L71861-7	8SP	02/20/17	02/27/17	I-131	< 2.24E-02	3.66E-03	1.33E-02	2.24E-02	7.00E-02	pCi/cu m
L71949-7	8SP	02/27/17	03/06/17	I-131	< 1.87E-02	-5.69E-03	1.16E-02	1.87E-02	7.00E-02	pCi/cu m
L71993-7	8SP	03/06/17	03/13/17	I-131	< 1.28E-02	-1.33E-03	7.84E-03	1.28E-02	7.00E-02	pCi/cu m
L72111-7	8SP	03/13/17	03/20/17	I-131	< 1.83E-02	-3.55E-03	1.13E-02	1.83E-02	7.00E-02	pCi/cu m
L72182-7	8SP	03/20/17	03/27/17	I-131	< 5.25E-02	-8.20E-04	3.17E-02	5.25E-02	7.00E-02	pCi/cu m
L72269-7	8SP	03/27/17	04/03/17	I-131	< 5.84E-02	5.01E-04	3.52E-02	5.84E-02	7.00E-02	pCi/cu m
L72421-7	8SP	04/04/17	04/10/17	I-131	< 6.28E-02	-1.57E-02	3.93E-02	6.28E-02	7.00E-02	pCi/cu m
L72522-7	8SP	04/10/17	04/17/17	I-131	< 3.07E-02	5.21E-03	1.80E-02	3.07E-02	7.00E-02	pCi/cu m
L72587-7	8SP	04/17/17	04/25/17	I-131	< 4.74E-02	-8.25E-03	3.06E-02	4.74E-02	7.00E-02	pCi/cu m
L72692-7	8SP	04/25/17	05/01/17	I-131	< 3.01E-02	5.82E-03	1.81E-02	3.01E-02	7.00E-02	pCi/cu m
L72769-7	8SP	05/01/17	05/08/17	I-131	< 3.82E-02	-1.33E-02	2.51E-02	3.82E-02	7.00E-02	pCi/cu m
L72857-7	8SP	05/08/17	05/15/17	I-131	< 5.99E-02	-3.76E-02	3.69E-02	5.99E-02	7.00E-02	pCi/cu m
L72987-7	8SP	05/15/17	05/22/17	I-131	< 6.76E-02	-7.88E-03	4.15E-02	6.76E-02	7.00E-02	pCi/cu m
L73115-7	8SP	05/22/17	05/30/17	I-131	< 3.33E-02	-2.71E-03	2.04E-02	3.33E-02	7.00E-02	pCi/cu m
L73156-7	8SP	05/30/17	06/05/17	I-131	< 4.46E-02	-4.62E-03	2.76E-02	4.46E-02	7.00E-02	pCi/cu m
L73270-7	8SP	06/05/17	06/13/17	I-131	< 1.89E-02	-6.55E-04	1.09E-02	1.89E-02	7.00E-02	pCi/cu m
L73360-7	8SP	06/13/17	06/20/17	I-131	< 3.41E-02	1.10E-03	2.10E-02	3.41E-02	7.00E-02	pCi/cu m
L73445-7	8SP	06/20/17	06/27/17	I-131	< 2.52E-02	-4.59E-04	1.52E-02	2.52E-02	7.00E-02	pCi/cu m
L73560-7	8SP	06/27/17	07/04/17	I-131	< 5.60E-02	5.59E-03	3.26E-02	5.60E-02	7.00E-02	pCi/cu m
L73719-7	8SP	07/04/17	07/11/17	I-131	< 3.71E-02	-2.34E-03	2.26E-02	3.71E-02	7.00E-02	pCi/cu m
L73804-7	8SP	07/11/17	07/18/17	I-131	< 3.45E-02	-3.47E-03	2.11E-02	3.45E-02	7.00E-02	pCi/cu m
L73933-7	8SP	07/18/17	07/24/17	I-131	< 3.63E-02	-8.75E-03	2.31E-02	3.63E-02	7.00E-02	pCi/cu m
L74071-7	8SP	07/24/17	08/01/17	I-131	< 5.24E-02	-1.12E-02	3.19E-02	5.24E-02	7.00E-02	pCi/cu m
L74062-7	8SP	08/01/17	08/07/17	I-131	< 3.43E-02	-6.11E-03	2.12E-02	3.43E-02	7.00E-02	pCi/cu m
L74188-7	8SP	08/07/17	08/15/17	I-131	< 6.07E-02	-2.47E-02	3.90E-02	6.07E-02	7.00E-02	pCi/cu m
L74272-7	8SP	08/15/17	08/22/17	I-131	< 2.89E-02	-7.47E-03	1.81E-02	2.89E-02	7.00E-02	pCi/cu m
L74371-7	8SP	08/22/17	08/29/17	I-131	< 6.49E-02	6.00E-03	3.97E-02	6.49E-02	7.00E-02	pCi/cu m

L74392-7	8SP	08/29/17	09/05/17	I-131	< 2.42E-02	1.11E-02	1.38E-02	2.42E-02	7.00E-02	pCi/cu m
L74517-7	8SP	09/05/17	09/12/17	I-131	< 2.16E-02	7.69E-03	1.25E-02	2.16E-02	7.00E-02	pCi/cu m
L74585-7	8SP	09/12/17	09/18/17	I-131	< 3.50E-02	1.09E-02	2.05E-02	3.50E-02	7.00E-02	pCi/cu m
L74716-7	8SP	09/18/17	09/26/17	I-131	< 4.03E-02	-7.92E-03	2.47E-02	4.03E-02	7.00E-02	pCi/cu m
L74874-7	8SP	09/26/17	10/03/17	I-131	< 2.30E-02	1.14E-03	1.38E-02	2.30E-02	7.00E-02	pCi/cu m
L74938-7	8SP	10/03/17	10/10/17	I-131	< 1.81E-02	-5.20E-03	1.13E-02	1.81E-02	7.00E-02	pCi/cu m
L75063-7	8SP	10/10/17	10/16/17	I-131	< 3.92E-02	-2.30E-02	2.48E-02	3.92E-02	7.00E-02	pCi/cu m
L75153-7	8SP	10/16/17	10/24/17	I-131	< 2.04E-02	-8.49E-03	1.30E-02	2.04E-02	7.00E-02	pCi/cu m
L75175-7	8SP	10/24/17	10/30/17	I-131	< 2.19E-02	-1.34E-02	1.41E-02	2.19E-02	7.00E-02	pCi/cu m
L75300-7	8SP	10/30/17	11/06/17	I-131	< 3.23E-02	9.15E-03	1.87E-02	3.23E-02	7.00E-02	pCi/cu m
L75390-7	8SP	11/06/17	11/13/17	I-131	< 3.03E-02	1.03E-02	1.76E-02	3.03E-02	7.00E-02	pCi/cu m
L75435-7	8SP	11/13/17	11/20/17	I-131	< 3.41E-02	9.35E-03	1.96E-02	3.41E-02	7.00E-02	pCi/cu m
L75515-7	8SP	11/20/17	11/27/17	I-131	< 4.40E-02	6.14E-03	2.58E-02	4.40E-02	7.00E-02	pCi/cu m
L75580-7	8SP	11/27/17	12/04/17	I-131	< 3.87E-02	2.48E-04	2.33E-02	3.87E-02	7.00E-02	pCi/cu m
L75697-7	8SP	12/04/17	12/11/17	I-131	< 3.02E-02	-5.16E-03	1.95E-02	3.02E-02	7.00E-02	pCi/cu m
L75765-7	8SP	12/11/17	12/19/17	I-131	< 1.59E-02	-4.91E-03	1.05E-02	1.59E-02	7.00E-02	pCi/cu m
L75819-7	8SP	12/19/17	12/25/17	I-131	< 2.94E-02	-8.26E-03	1.95E-02	2.94E-02	7.00E-02	pCi/cu m
L75943-7	8SP	12/25/17	01/02/18	I-131	< 3.73E-02	1.36E-03	2.20E-02	3.73E-02	7.00E-02	pCi/cu m

9TP

CHARCOAL FILTER

LAB ID	STATION	COLLECT START	COLLECT STOP	NUCLIDE	REPORTABLE	ACTIVITY	ERROR	MDC	LLD	UNITS
L71261-8	9TP	01/03/17	01/09/17	I-131	< 2.79E-02	-7.49E-03	1.76E-02	2.79E-02	7.00E-02	pCi/cu m
L71371-8	9TP	01/09/17	01/16/17	I-131	< 4.05E-02	-5.75E-03	2.55E-02	4.05E-02	7.00E-02	pCi/cu m
L71444-8	9TP	01/16/17	01/23/17	I-131	< 1.94E-02	3.14E-03	1.14E-02	1.94E-02	7.00E-02	pCi/cu m
L71533-8	9TP	01/23/17	01/30/17	I-131	< 1.82E-02	-4.94E-03	1.14E-02	1.82E-02	7.00E-02	pCi/cu m
L71631-8	9TP	01/30/17	02/06/17	I-131	< 3.83E-02	-3.62E-03	2.36E-02	3.83E-02	7.00E-02	pCi/cu m
L71689-8	9TP	02/06/17	02/13/17	I-131	< 2.40E-02	2.40E-03	1.43E-02	2.40E-02	7.00E-02	pCi/cu m
L71745-8	9TP	02/13/17	02/20/17	I-131	< 2.38E-02	-1.09E-02	1.54E-02	2.38E-02	7.00E-02	pCi/cu m
L71861-8	9TP	02/20/17	02/27/17	I-131	< 3.30E-02	5.39E-03	1.96E-02	3.30E-02	7.00E-02	pCi/cu m
L71949-8	9TP	02/27/17	03/06/17	I-131	< 2.92E-02	-8.90E-03	1.81E-02	2.92E-02	7.00E-02	pCi/cu m
L71993-8	9TP	03/06/17	03/13/17	I-131	< 2.03E-02	-2.10E-03	1.24E-02	2.03E-02	7.00E-02	pCi/cu m
L72111-8	9TP	03/13/17	03/20/17	I-131	< 2.75E-02	-5.33E-03	1.70E-02	2.75E-02	7.00E-02	pCi/cu m
L72182-8	9TP	03/20/17	03/27/17	I-131	< 3.24E-02	-5.06E-04	1.96E-02	3.24E-02	7.00E-02	pCi/cu m
L72269-8	9TP	03/27/17	04/03/17	I-131	< 1.53E-02	1.31E-04	9.19E-03	1.53E-02	7.00E-02	pCi/cu m
L72421-8	9TP	04/03/17	04/10/17	I-131	< 3.33E-02	-8.32E-03	2.08E-02	3.33E-02	7.00E-02	pCi/cu m
L72522-8	9TP	04/10/17	04/17/17	I-131	< 4.45E-02	7.55E-03	2.61E-02	4.45E-02	7.00E-02	pCi/cu m
L72587-8	9TP	04/17/17	04/25/17	I-131	< 2.87E-02	-5.00E-03	1.86E-02	2.87E-02	7.00E-02	pCi/cu m
L72692-8	9TP	04/25/17	05/01/17	I-131	< 4.65E-02	8.98E-03	2.78E-02	4.65E-02	7.00E-02	pCi/cu m
L72769-8	9TP	05/01/17	05/08/17	I-131	< 2.33E-02	-8.15E-03	1.54E-02	2.33E-02	7.00E-02	pCi/cu m

L72857-8	9TP	05/08/17	05/15/17	I-131	< 4.80E-02	-7.70E-03	2.99E-02	4.80E-02	7.00E-02	pCi/cu m
L72987-8	9TP	05/15/17	05/22/17	I-131	< 4.17E-02	-4.86E-03	2.56E-02	4.17E-02	7.00E-02	pCi/cu m
L73115-8	9TP	05/22/17	05/30/17	I-131	< 4.78E-02	-3.90E-03	2.94E-02	4.78E-02	7.00E-02	pCi/cu m
L73156-8	9TP	05/30/17	06/05/17	I-131	< 6.87E-02	-7.12E-03	4.26E-02	6.87E-02	7.00E-02	pCi/cu m
L73270-8	9TP	06/05/17	06/13/17	I-131	< 3.12E-02	-1.08E-03	1.79E-02	3.12E-02	7.00E-02	pCi/cu m
L73360-8	9TP	06/13/17	06/20/17	I-131	< 4.09E-02	1.32E-03	2.51E-02	4.09E-02	7.00E-02	pCi/cu m
L73445-8	9TP	06/20/17	06/27/17	I-131	< 4.00E-02	-7.27E-04	2.41E-02	4.00E-02	7.00E-02	pCi/cu m
L73560-8	9TP	06/27/17	07/04/17	I-131	< 3.73E-02	3.72E-03	2.17E-02	3.73E-02	7.00E-02	pCi/cu m
L73719-8	9TP	07/04/17	07/11/17	I-131	< 5.85E-02	-3.68E-03	3.57E-02	5.85E-02	7.00E-02	pCi/cu m
L73804-8	9TP	07/11/17	07/18/17	I-131	< 5.43E-02	-5.47E-03	3.33E-02	5.43E-02	7.00E-02	pCi/cu m
L73933-8	9TP	07/18/17	07/24/17	I-131	< 6.72E-02	-1.62E-02	4.27E-02	6.72E-02	7.00E-02	pCi/cu m
L74071-8	9TP	07/24/17	08/01/17	I-131	< 3.52E-02	-7.49E-03	2.15E-02	3.52E-02	7.00E-02	pCi/cu m
L74062-8	9TP	08/01/17	08/07/17	I-131	< 5.31E-02	-9.46E-03	3.29E-02	5.31E-02	7.00E-02	pCi/cu m
L74188-8	9TP	08/07/17	08/15/17	I-131	< 3.57E-02	-1.45E-02	2.29E-02	3.57E-02	7.00E-02	pCi/cu m
L74272-8	9TP	08/15/17	08/22/17	I-131	< 3.38E-02	-8.73E-03	2.12E-02	3.38E-02	7.00E-02	pCi/cu m
L74371-8	9TP	08/22/17	08/29/17	I-131	< 3.66E-02	3.38E-03	2.24E-02	3.66E-02	7.00E-02	pCi/cu m
L74392-8	9TP	08/29/17	09/05/17	I-131	< 3.07E-02	1.41E-02	1.75E-02	3.07E-02	7.00E-02	pCi/cu m
L74517-8	9TP	09/05/17	09/12/17	I-131	< 2.79E-02	9.95E-03	1.62E-02	2.79E-02	7.00E-02	pCi/cu m
L74585-8	9TP	09/12/17	09/18/17	I-131	< 2.42E-02	7.57E-03	1.42E-02	2.42E-02	7.00E-02	pCi/cu m
L74716-8	9TP	09/18/17	09/26/17	I-131	< 2.03E-02	-3.98E-03	1.24E-02	2.03E-02	7.00E-02	pCi/cu m
L74874-8	9TP	09/26/17	10/03/17	I-131	< 2.88E-02	1.42E-03	1.73E-02	2.88E-02	7.00E-02	pCi/cu m
L74938-8	9TP	10/03/17	10/10/17	I-131	< 2.32E-02	-6.66E-03	1.45E-02	2.32E-02	7.00E-02	pCi/cu m
L75063-8	9TP	10/10/17	10/16/17	I-131	< 2.44E-02	-1.43E-02	1.54E-02	2.44E-02	7.00E-02	pCi/cu m
L75153-8	9TP	10/16/17	10/24/17	I-131	< 2.35E-02	-9.80E-03	1.50E-02	2.35E-02	7.00E-02	pCi/cu m
L75175-8	9TP	10/24/17	10/30/17	I-131	< 1.49E-02	-9.16E-03	9.61E-03	1.49E-02	7.00E-02	pCi/cu m
L75300-8	9TP	10/30/17	11/06/17	I-131	< 3.39E-02	9.60E-03	1.96E-02	3.39E-02	7.00E-02	pCi/cu m
L75390-8	9TP	11/06/17	11/13/17	I-131	< 2.82E-02	9.60E-03	1.64E-02	2.82E-02	7.00E-02	pCi/cu m
L75435-8	9TP	11/13/17	11/20/17	I-131	< 3.64E-02	9.98E-03	2.09E-02	3.64E-02	7.00E-02	pCi/cu m
L75515-8	9TP	11/20/17	11/27/17	I-131	< 4.61E-02	6.44E-03	2.71E-02	4.61E-02	7.00E-02	pCi/cu m
L75580-8	9TP	11/27/17	12/04/17	I-131	< 4.22E-02	2.71E-04	2.55E-02	4.22E-02	7.00E-02	pCi/cu m
L75697-8	9TP	12/04/17	12/11/17	I-131	< 2.55E-02	-4.35E-03	1.65E-02	2.55E-02	7.00E-02	pCi/cu m
L75765-8	9TP	12/11/17	12/19/17	I-131	< 1.49E-02	-4.61E-03	9.86E-03	1.49E-02	7.00E-02	pCi/cu m
L75819-8	9TP	12/19/17	12/25/17	I-131	< 3.01E-02	-8.48E-03	2.00E-02	3.01E-02	7.00E-02	pCi/cu m
L75943-8	9TP	12/25/17	01/02/18	I-131	< 3.96E-02	1.44E-03	2.34E-02	3.96E-02	7.00E-02	pCi/cu m

**10GR/GR10
CHARCOAL FILTER**

LAB ID	STATION	COLLECT START	COLLECT STOP	NUCLIDE	REPORTABLE	ACTIVITY	ERROR	MDC	LLD	UNITS
L71371-11	GR10	01/03/17	01/09/17	I-131	< 2.79E-02	8.59E-03	1.57E-02	2.79E-02	7.00E-02	pCi/cu m
L71444-11	GR10	01/09/17	01/16/17	I-131	< 3.07E-02	4.96E-03	1.80E-02	3.07E-02	7.00E-02	pCi/cu m

L71533-11	GR10	01/16/17	01/23/17	I-131	< 3.05E-02	-8.29E-03	1.91E-02	3.05E-02	7.00E-02	pCi/cu m
L71631-11	GR10	01/23/17	01/30/17	I-131	< 6.09E-02	-5.75E-03	3.74E-02	6.09E-02	7.00E-02	pCi/cu m
L71689-11	GR10	01/30/17	02/06/17	I-131	< 3.76E-02	3.76E-03	2.24E-02	3.76E-02	7.00E-02	pCi/cu m
L71745-11	GR10	02/06/17	02/13/17	I-131	< 3.92E-02	-1.80E-02	2.53E-02	3.92E-02	7.00E-02	pCi/cu m
L71861-11	GR10	02/13/17	02/20/17	I-131	< 5.01E-02	8.18E-03	2.98E-02	5.01E-02	7.00E-02	pCi/cu m
L71949-11	GR10	02/20/17	02/27/17	I-131	< 4.65E-02	-1.42E-02	2.88E-02	4.65E-02	7.00E-02	pCi/cu m
L71993-11	GR10	02/27/17	03/06/17	I-131	< 3.22E-02	-3.34E-03	1.97E-02	3.22E-02	7.00E-02	pCi/cu m
L72111-11	GR10	03/06/17	03/13/17	I-131	< 4.19E-02	-8.14E-03	2.59E-02	4.19E-02	7.00E-02	pCi/cu m
L72182-11	GR10	03/13/17	03/20/17	I-131	< 5.24E-02	-8.19E-04	3.17E-02	5.24E-02	7.00E-02	pCi/cu m
L72269-11	GR10	03/20/17	03/27/17	I-131	< 2.38E-02	2.04E-04	1.43E-02	2.38E-02	7.00E-02	pCi/cu m
L72421-11	GR10	03/27/17	04/03/17	I-131	< 5.39E-02	-1.34E-02	3.37E-02	5.39E-02	7.00E-02	pCi/cu m
L72522-11	GR10	04/03/17	04/10/17	I-131	< 6.68E-02	1.13E-02	3.92E-02	6.68E-02	7.00E-02	pCi/cu m
L72587-11	GR10	04/10/17	04/17/17	I-131	< 5.47E-02	-9.52E-03	3.54E-02	5.47E-02	7.00E-02	pCi/cu m
L72692-11	GR10	04/17/17	04/24/17	I-131	< 6.56E-02	1.27E-02	3.93E-02	6.56E-02	7.00E-02	pCi/cu m
L72769-11	GR10	04/24/17	05/01/17	I-131	< 3.93E-02	-1.37E-02	2.59E-02	3.93E-02	7.00E-02	pCi/cu m
L72857-11	GR10	05/01/17	05/08/17	I-131	< 3.10E-02	-4.97E-03	1.93E-02	3.10E-02	7.00E-02	pCi/cu m
L72987-11	GR10	05/08/17	05/15/17	I-131	< 4.30E-02	5.13E-03	2.52E-02	4.30E-02	7.00E-02	pCi/cu m
L73115-11	GR10	05/15/17	05/22/17	I-131	< 2.90E-02	-1.05E-03	1.67E-02	2.90E-02	7.00E-02	pCi/cu m
L73156-11	GR10	05/22/17	05/30/17	I-131	< 2.52E-02	-4.56E-05	1.44E-02	2.52E-02	7.00E-02	pCi/cu m
L73270-11	GR10	05/30/17	06/05/17	I-131	< 6.04E-02	-2.09E-03	3.47E-02	6.04E-02	7.00E-02	pCi/cu m
L73360-11	GR10	06/05/17	06/12/17	I-131	< 6.43E-02	2.07E-03	3.95E-02	6.43E-02	7.00E-02	pCi/cu m
L73445-11	GR10	06/12/17	06/19/17	I-131	< 6.23E-02	-1.13E-03	3.75E-02	6.23E-02	7.00E-02	pCi/cu m
L73560-11	GR10	06/19/17	06/26/17	I-131	< 5.78E-02	5.77E-03	3.37E-02	5.78E-02	7.00E-02	pCi/cu m
L73719-11	GR10	06/26/17	07/03/17	I-131	< 3.00E-02	3.38E-03	1.74E-02	3.00E-02	7.00E-02	pCi/cu m
L73804-11	GR10	07/03/17	07/10/17	I-131	< 6.75E-02	-2.27E-02	4.16E-02	6.75E-02	7.00E-02	pCi/cu m
L73933-11	GR10	07/10/17	07/17/17	I-131	< 3.59E-02	-1.22E-03	2.18E-02	3.59E-02	7.00E-02	pCi/cu m
L74071-11	GR10	07/17/17	07/24/17	I-131	< 2.39E-02	-5.10E-03	1.46E-02	2.39E-02	7.00E-02	pCi/cu m
L74062-11	GR10	07/24/17	07/31/17	I-131	< 6.66E-02	-1.19E-02	4.12E-02	6.66E-02	7.00E-02	pCi/cu m
L74188-11	GR10	07/31/17	08/07/17	I-131	< 3.72E-02	-1.51E-02	2.39E-02	3.72E-02	7.00E-02	pCi/cu m
L74272-11	GR10	08/07/17	08/14/17	I-131	< 6.48E-02	-1.68E-02	4.06E-02	6.48E-02	7.00E-02	pCi/cu m
L74371-11	GR10	08/14/17	08/21/17	I-131	< 6.92E-02	6.39E-03	4.23E-02	6.92E-02	7.00E-02	pCi/cu m
L74392-11	GR10	08/21/17	08/28/17	I-131	< 5.62E-02	2.57E-02	3.20E-02	5.62E-02	7.00E-02	pCi/cu m
L74517-11	GR10	08/28/17	09/05/17	I-131	< 4.42E-02	1.58E-02	2.56E-02	4.42E-02	7.00E-02	pCi/cu m
L74585-11	GR10	09/05/17	09/11/17	I-131	< 3.72E-02	1.16E-02	2.18E-02	3.72E-02	7.00E-02	pCi/cu m
L74716-11	GR10	09/11/17	09/18/17	I-131	< 4.37E-02	-8.57E-03	2.68E-02	4.37E-02	7.00E-02	pCi/cu m
L74874-11	GR10	09/18/17	09/25/17	I-131	< 5.32E-02	2.63E-03	3.20E-02	5.32E-02	7.00E-02	pCi/cu m
L74938-11	GR10	09/25/17	10/02/17	I-131	< 4.17E-02	-1.20E-02	2.61E-02	4.17E-02	7.00E-02	pCi/cu m
L75063-11	GR10	10/02/17	10/10/17	I-131	< 3.11E-02	-1.82E-02	1.97E-02	3.11E-02	7.00E-02	pCi/cu m
L75153-11	GR10	10/10/17	10/16/17	I-131	< 5.37E-02	-2.24E-02	3.44E-02	5.37E-02	7.00E-02	pCi/cu m
L75175-11	GR10	10/16/17	10/23/17	I-131	< 2.42E-02	-1.48E-02	1.55E-02	2.42E-02	7.00E-02	pCi/cu m

L75300-11	GR10	10/23/17	10/30/17	I-131	< 2.39E-02	6.79E-03	1.38E-02	2.39E-02	7.00E-02	pCi/cu m
L75390-11	GR10	10/30/17	11/06/17	I-131	< 2.07E-02	7.06E-03	1.21E-02	2.07E-02	7.00E-02	pCi/cu m
L75435-11	GR10	11/06/17	11/13/17	I-131	< 6.21E-02	1.70E-02	3.56E-02	6.21E-02	7.00E-02	pCi/cu m
L75515-11	GR10	11/13/17	11/20/17	I-131	< 3.33E-02	4.65E-03	1.96E-02	3.33E-02	7.00E-02	pCi/cu m
L75580-11	GR10	11/20/17	11/27/17	I-131	< 2.93E-02	1.88E-04	1.77E-02	2.93E-02	7.00E-02	pCi/cu m
L75697-11	GR10	11/27/17	12/04/17	I-131	< 4.14E-02	-7.06E-03	2.67E-02	4.14E-02	7.00E-02	pCi/cu m
L75765-11	GR10	12/04/17	12/11/17	I-131	< 2.61E-02	-8.08E-03	1.73E-02	2.61E-02	7.00E-02	pCi/cu m
L75819-11	GR10	12/11/17	12/18/17	I-131	< 3.79E-02	-1.07E-02	2.52E-02	3.79E-02	7.00E-02	pCi/cu m
L75943-11	GR10	12/18/17	12/26/17	I-131	< 5.73E-02	2.09E-03	3.38E-02	5.73E-02	7.00E-02	pCi/cu m
L75984-11	GR10	12/26/17	01/02/18	I-131	< 4.47E-02	-8.29E-03	2.75E-02	4.47E-02	7.00E-02	pCi/cu m

**19ST
CHARCOAL FILTER**

LAB ID	STATION	COLLECT START	COLLECT STOP	NUCLIDE	REPORTABLE	ACTIVITY	ERROR	MDC	LLD	UNITS
L71261-12	19ST	01/03/17	01/09/17	I-131	< 2.40E-02	-6.43E-03	1.51E-02	2.40E-02	7.00E-02	pCi/cu m
L71371-12	19ST	01/09/17	01/16/17	I-131	< 3.64E-02	1.12E-02	2.05E-02	3.64E-02	7.00E-02	pCi/cu m
L71444-12	19ST	01/16/17	01/23/17	I-131	< 1.76E-02	2.85E-03	1.04E-02	1.76E-02	7.00E-02	pCi/cu m
L71533-12	19ST	01/23/17	01/30/17	I-131	< 1.55E-02	-4.21E-03	9.66E-03	1.55E-02	7.00E-02	pCi/cu m
L71631-12	19ST	01/30/17	02/06/17	I-131	< 3.29E-02	-3.11E-03	2.02E-02	3.29E-02	7.00E-02	pCi/cu m
L71689-12	19ST	02/06/17	02/13/17	I-131	< 2.14E-02	2.14E-03	1.27E-02	2.14E-02	7.00E-02	pCi/cu m
L71745-12	19ST	02/13/17	02/20/17	I-131	< 2.05E-02	-9.41E-03	1.32E-02	2.05E-02	7.00E-02	pCi/cu m
L71861-12	19ST	02/20/17	02/27/17	I-131	< 2.87E-02	4.68E-03	1.70E-02	2.87E-02	7.00E-02	pCi/cu m
L71949-12	19ST	02/27/17	03/06/17	I-131	< 2.50E-02	-7.60E-03	1.55E-02	2.50E-02	7.00E-02	pCi/cu m
L71993-12	19ST	03/06/17	03/13/17	I-131	< 1.80E-02	-1.86E-03	1.10E-02	1.80E-02	7.00E-02	pCi/cu m
L72111-12	19ST	03/13/17	03/20/17	I-131	< 2.30E-02	-4.46E-03	1.42E-02	2.30E-02	7.00E-02	pCi/cu m
L72182-12	19ST	03/20/17	03/27/17	I-131	< 2.87E-02	-4.49E-04	1.74E-02	2.87E-02	7.00E-02	pCi/cu m
L72269-12	19ST	03/27/17	04/03/17	I-131	< 1.27E-02	1.09E-04	7.63E-03	1.27E-02	7.00E-02	pCi/cu m
L72421-12	19ST	04/03/17	04/10/17	I-131	< 2.93E-02	-7.32E-03	1.83E-02	2.93E-02	7.00E-02	pCi/cu m
L72522-12	19ST	04/10/17	04/17/17	I-131	< 3.83E-02	6.50E-03	2.25E-02	3.83E-02	7.00E-02	pCi/cu m
L72587-12	19ST	04/17/17	04/25/17	I-131	< 2.50E-02	-4.35E-03	1.62E-02	2.50E-02	7.00E-02	pCi/cu m
L72692-12	19ST	04/25/17	05/01/17	I-131	< 3.99E-02	7.70E-03	2.39E-02	3.99E-02	7.00E-02	pCi/cu m
L72769-12	19ST	05/01/17	05/08/17	I-131	< 2.03E-02	-7.08E-03	1.33E-02	2.03E-02	7.00E-02	pCi/cu m
L72857-12	19ST	05/08/17	05/15/17	I-131	< 4.12E-02	-6.61E-03	2.57E-02	4.12E-02	7.00E-02	pCi/cu m
L72987-12	19ST	05/15/17	05/22/17	I-131	< 5.99E-02	7.14E-03	3.51E-02	5.99E-02	7.00E-02	pCi/cu m
L73115-12	19ST	05/22/17	05/30/17	I-131	< 3.44E-02	-1.25E-03	1.98E-02	3.44E-02	7.00E-02	pCi/cu m
L73156-12	19ST	05/30/17	06/05/17	I-131	< 4.57E-02	-8.28E-05	2.61E-02	4.57E-02	7.00E-02	pCi/cu m
L73270-12	19ST	06/05/17	06/13/17	I-131	< 2.49E-02	-8.62E-04	1.43E-02	2.49E-02	7.00E-02	pCi/cu m
L73360-12	19ST	06/13/17	06/20/17	I-131	< 3.16E-02	1.02E-03	1.95E-02	3.16E-02	7.00E-02	pCi/cu m
L73445-12	19ST	06/20/17	06/27/17	I-131	< 3.16E-02	-5.74E-04	1.90E-02	3.16E-02	7.00E-02	pCi/cu m
L73560-12	19ST	06/27/17	07/04/17	I-131	< 2.89E-02	2.89E-03	1.68E-02	2.89E-02	7.00E-02	pCi/cu m

L73719-12	19ST	07/04/17	07/11/17	I-131	< 3.96E-02	4.46E-03	2.30E-02	3.96E-02	7.00E-02	pCi/cu m
L73804-12	19ST	07/11/17	07/18/17	I-131	< 1.28E-02	-4.30E-03	7.88E-03	1.28E-02	7.00E-02	pCi/cu m
L73933-12	19ST	07/18/17	07/24/17	I-131	< 4.90E-02	-1.66E-03	2.97E-02	4.90E-02	7.00E-02	pCi/cu m
L74071-12	19ST	07/24/17	08/01/17	I-131	< 2.67E-02	-5.69E-03	1.63E-02	2.67E-02	7.00E-02	pCi/cu m
L74062-12	19ST	08/01/17	08/07/17	I-131	< 4.06E-02	-7.24E-03	2.52E-02	4.06E-02	7.00E-02	pCi/cu m
L74188-12	19ST	08/07/17	08/15/17	I-131	< 3.06E-02	-1.24E-02	1.96E-02	3.06E-02	7.00E-02	pCi/cu m
L74272-12	19ST	08/15/17	08/22/17	I-131	< 4.01E-02	-1.04E-02	2.51E-02	4.01E-02	7.00E-02	pCi/cu m
L74371-12	19ST	08/22/17	08/29/17	I-131	< 4.28E-02	3.95E-03	2.62E-02	4.28E-02	7.00E-02	pCi/cu m
L74392-12	19ST	08/29/17	09/05/17	I-131	< 3.64E-02	1.66E-02	2.07E-02	3.64E-02	7.00E-02	pCi/cu m
L74517-12	19ST	09/05/17	09/12/17	I-131	< 2.80E-02	9.96E-03	1.62E-02	2.80E-02	7.00E-02	pCi/cu m
L74585-12	19ST	09/12/17	09/18/17	I-131	< 2.05E-02	6.39E-03	1.20E-02	2.05E-02	7.00E-02	pCi/cu m
L74716-12	19ST	09/18/17	09/26/17	I-131	< 8.32E-03	-1.64E-03	5.10E-03	8.32E-03	7.00E-02	pCi/cu m
L74874-12	19ST	09/26/17	10/03/17	I-131	< 2.69E-02	1.33E-03	1.61E-02	2.69E-02	7.00E-02	pCi/cu m
L74938-12	19ST	10/03/17	10/10/17	I-131	< 2.10E-02	-6.04E-03	1.32E-02	2.10E-02	7.00E-02	pCi/cu m
L75063-12	19ST	10/10/17	10/16/17	I-131	< 2.31E-02	-1.36E-02	1.47E-02	2.31E-02	7.00E-02	pCi/cu m
L75153-12	19ST	10/16/17	10/24/17	I-131	< 2.15E-02	-8.96E-03	1.38E-02	2.15E-02	7.00E-02	pCi/cu m
L75175-12	19ST	10/24/17	10/30/17	I-131	< 1.40E-02	-8.58E-03	9.00E-03	1.40E-02	7.00E-02	pCi/cu m
L75300-12	19ST	10/30/17	11/06/17	I-131	< 3.10E-02	8.79E-03	1.79E-02	3.10E-02	7.00E-02	pCi/cu m
L75390-12	19ST	11/06/17	11/13/17	I-131	< 2.64E-02	8.99E-03	1.54E-02	2.64E-02	7.00E-02	pCi/cu m
L75435-12	19ST	11/13/17	11/20/17	I-131	< 3.33E-02	9.12E-03	1.91E-02	3.33E-02	7.00E-02	pCi/cu m
L75515-12	19ST	11/20/17	11/27/17	I-131	< 4.29E-02	5.98E-03	2.52E-02	4.29E-02	7.00E-02	pCi/cu m
L75580-12	19ST	11/27/17	12/04/17	I-131	< 3.82E-02	2.45E-04	2.30E-02	3.82E-02	7.00E-02	pCi/cu m
L75697-12	19ST	12/04/17	12/11/17	I-131	< 2.29E-02	-3.91E-03	1.48E-02	2.29E-02	7.00E-02	pCi/cu m
L75765-12	19ST	12/11/17	12/19/17	I-131	< 1.35E-02	-4.18E-03	8.95E-03	1.35E-02	7.00E-02	pCi/cu m
L75819-12	19ST	12/19/17	12/25/17	I-131	< 2.80E-02	-7.87E-03	1.86E-02	2.80E-02	7.00E-02	pCi/cu m
L75943-12	19ST	12/25/17	01/02/18	I-131	< 3.62E-02	1.32E-03	2.14E-02	3.62E-02	7.00E-02	pCi/cu m

APPLES

FRUIT

LAB ID	STATION	COLLECT START	COLLECT STOP	NUCLIDE	REPORTABLE	ACTIVITY	ERROR	MDC	LLD	UNITS
L74189-1	Fruit	08/15/17		CS-134	< 1.69E+01	-4.08E-01	1.01E+01	1.69E+01	6.00E+01	pCi/kg Wet
L74189-1	Fruit	08/15/17		CS-137	< 1.54E+01	-5.22E+00	1.03E+01	1.54E+01	8.00E+01	pCi/kg Wet
L74189-1	Fruit	08/15/17		I-131	< 3.40E+01	1.81E+00	2.02E+01	3.40E+01	6.00E+01	pCi/kg Wet
L74189-1	Fruit	08/15/17		K-40	7.90E+02	7.90E+02	2.38E+02	1.27E+02		pCi/kg Wet

BLUEBERRIES

FRUIT

LAB ID	STATION	COLLECT START	COLLECT STOP	NUCLIDE	REPORTABLE	ACTIVITY	ERROR	MDC	LLD	UNITS
L74189-2	Fruit	08/16/17		CS-134	< 2.79E+01	3.04E+00	1.55E+01	2.79E+01	6.00E+01	pCi/Kg Wet
L74189-2	Fruit	08/16/17		CS-137	< 2.17E+01	-1.19E+01	1.33E+01	2.17E+01	8.00E+01	pCi/Kg Wet

L74189-2	Fruit	08/16/17		I-131	< 4.64E+01	-1.99E+01	2.84E+01	4.64E+01	6.00E+01	pCi/Kg Wet
L74189-2	Fruit	08/16/17		K-40	1.11E+03	1.11E+03	2.97E+02	1.93E+02		pCi/Kg Wet

BVC

BROADLEAF VEGETATION

LAB ID	STATION	COLLECT START	COLLECT STOP	NUCLIDE	REPORTABLE	ACTIVITY	ERROR	MDC	LLD	UNITS
L73120-1	BVC	05/30/17		BE-7	7.99E+02	7.99E+02	2.61E+02	2.31E+02		pCi/kg Wet
L73359-1	BVC	06/20/17		BE-7	9.43E+02	9.43E+02	2.88E+02	2.36E+02		pCi/kg Wet
L74009-1	BVC	07/25/17		BE-7	7.74E+02	7.74E+02	1.61E+02	1.54E+02		pCi/kg Wet
L74279-1	BVC	08/25/17		BE-7	2.91E+03	2.91E+03	4.21E+02	2.27E+02		pCi/kg Wet
L74717-1	BVC	09/28/17		BE-7	1.79E+03	1.79E+03	2.65E+02	2.37E+02		pCi/Kg Wet
L73120-1	BVC	05/30/17		CS-134	< 2.57E+01	-1.25E+01	1.72E+01	2.57E+01	6.00E+01	pCi/kg Wet
L73359-1	BVC	06/20/17		CS-134	< 2.73E+01	-1.48E+01	1.92E+01	2.73E+01	6.00E+01	pCi/kg Wet
L74009-1	BVC	07/25/17		CS-134	< 1.78E+01	-5.85E+00	1.08E+01	1.78E+01	6.00E+01	pCi/kg Wet
L74279-1	BVC	08/25/17		CS-134	< 3.26E+01	6.08E-01	1.96E+01	3.26E+01	6.00E+01	pCi/kg Wet
L74717-1	BVC	09/28/17		CS-134	< 2.66E+01	-9.67E+00	1.69E+01	2.66E+01	6.00E+01	pCi/Kg Wet
L73120-1	BVC	05/30/17		CS-137	< 2.45E+01	-1.52E+00	1.48E+01	2.45E+01	8.00E+01	pCi/kg Wet
L73359-1	BVC	06/20/17		CS-137	< 2.77E+01	-2.48E+00	1.71E+01	2.77E+01	8.00E+01	pCi/kg Wet
L74009-1	BVC	07/25/17		CS-137	< 1.81E+01	5.11E+00	1.04E+01	1.81E+01	8.00E+01	pCi/kg Wet
L74279-1	BVC	08/25/17		CS-137	< 2.41E+01	7.55E-02	1.44E+01	2.41E+01	8.00E+01	pCi/kg Wet
L74717-1	BVC	09/28/17		CS-137	< 2.68E+01	-1.01E+00	1.62E+01	2.68E+01	8.00E+01	pCi/Kg Wet
L73120-1	BVC	05/30/17		I-131	< 5.93E+01	3.20E+01	3.30E+01	5.93E+01	6.00E+01	pCi/kg Wet
L73359-1	BVC	06/20/17		I-131	< 4.08E+01	-1.38E+01	2.68E+01	4.08E+01	6.00E+01	pCi/kg Wet
L74009-1	BVC	07/25/17		I-131	< 5.77E+01	-1.44E+01	3.47E+01	5.77E+01	6.00E+01	pCi/kg Wet
L74279-1	BVC	08/25/17		I-131	< 4.93E+01	-1.16E+00	3.05E+01	4.93E+01	6.00E+01	pCi/kg Wet
L74717-1	BVC	09/28/17		I-131	< 5.86E+01	4.90E+00	3.54E+01	5.86E+01	6.00E+01	pCi/Kg Wet
L73120-1	BVC	05/30/17		K-40	3.17E+03	3.17E+03	5.10E+02	2.83E+02		pCi/kg Wet
L73359-1	BVC	06/20/17		K-40	4.23E+03	4.23E+03	6.45E+02	2.31E+02		pCi/kg Wet
L74009-1	BVC	07/25/17		K-40	2.55E+03	2.55E+03	2.89E+02	1.49E+02		pCi/kg Wet
L74279-1	BVC	08/25/17		K-40	3.65E+03	3.65E+03	5.50E+02	1.96E+02		pCi/kg Wet
L74717-1	BVC	09/28/17		K-40	4.22E+03	4.22E+03	5.21E+02	2.25E+02		pCi/Kg Wet

BV1

BROADLEAF VEGETATION

LAB ID	STATION	COLLECT START	COLLECT STOP	NUCLIDE	REPORTABLE	ACTIVITY	ERROR	MDC	LLD	UNITS
L73120-2	BV1	05/30/17		BE-7	1.11E+03	1.11E+03	2.98E+02	2.38E+02		pCi/kg Wet
L73359-2	BV1	06/20/17		BE-7	1.22E+03	1.22E+03	4.05E+02	3.05E+02		pCi/kg Wet
L74009-2	BV1	07/25/17		BE-7	3.59E+03	3.59E+03	1.98E+02	1.26E+02		pCi/kg Wet
L74279-2	BV1	08/25/17		BE-7	4.41E+03	4.41E+03	4.46E+02	2.93E+02		pCi/kg Wet
L74717-2	BV1	09/28/17		BE-7	4.07E+03	4.07E+03	3.50E+02	2.00E+02		pCi/Kg Wet

L73120-2	BV1	05/30/17	CS-134	< 2.85E+01	-1.31E+01	1.95E+01	2.85E+01	6.00E+01	pCi/kg Wet
L73359-2	BV1	06/20/17	CS-134	< 3.47E+01	1.29E+01	1.85E+01	3.47E+01	6.00E+01	pCi/kg Wet
L74009-2	BV1	07/25/17	CS-134	< 1.37E+01	-9.20E-02	8.07E+00	1.37E+01	6.00E+01	pCi/kg Wet
L74279-2	BV1	08/25/17	CS-134	< 4.07E+01	2.19E+01	2.25E+01	4.07E+01	6.00E+01	pCi/kg Wet
L74717-2	BV1	09/28/17	CS-134	< 2.24E+01	-4.63E+00	1.39E+01	2.24E+01	6.00E+01	pCi/Kg Wet
L73120-2	BV1	05/30/17	CS-137	7.99E+01	7.99E+01	2.69E+01	2.18E+01	8.00E+01	pCi/kg Wet
L73359-2	BV1	06/20/17	CS-137	< 4.29E+01	2.60E+01	2.31E+01	4.29E+01	8.00E+01	pCi/kg Wet
L74009-2	BV1	07/25/17	CS-137	4.55E+01	4.55E+01	1.18E+01	1.32E+01	8.00E+01	pCi/kg Wet
L74279-2	BV1	08/25/17	CS-137	< 4.38E+01	3.07E+01	2.39E+01	4.38E+01	8.00E+01	pCi/Kg Wet
L74717-2	BV1	09/28/17	CS-137	5.50E+01	5.50E+01	2.59E+01	2.38E+01	8.00E+01	pCi/kg Wet
L73120-2	BV1	05/30/17	I-131	< 5.92E+01	2.25E+01	3.36E+01	5.92E+01	6.00E+01	pCi/kg Wet
L73359-2	BV1	06/20/17	I-131	< 4.65E+01	-3.17E+01	3.14E+01	4.65E+01	6.00E+01	pCi/kg Wet
L74009-2	BV1	07/25/17	I-131	< 4.98E+01	2.37E+01	2.90E+01	4.98E+01	6.00E+01	pCi/kg Wet
L74279-2	BV1	08/25/17	I-131	< 5.85E+01	-6.17E+00	3.57E+01	5.85E+01	6.00E+01	pCi/kg Wet
L74717-2	BV1	09/28/17	I-131	< 5.24E+01	-3.86E+01	3.39E+01	5.24E+01	6.00E+01	pCi/Kg Wet
L73120-2	BV1	05/30/17	K-40	1.68E+03	1.68E+03	4.64E+02	3.01E+02		pCi/kg Wet
L73359-2	BV1	06/20/17	K-40	2.18E+03	2.18E+03	6.18E+02	2.78E+02		pCi/kg Wet
L74009-2	BV1	07/25/17	K-40	1.60E+03	1.60E+03	1.70E+02	8.91E+01		pCi/kg Wet
L74279-2	BV1	08/25/17	K-40	1.98E+03	1.98E+03	4.54E+02	3.40E+02		pCi/kg Wet
L74717-2	BV1	09/28/17	K-40	2.18E+03	2.18E+03	3.99E+02	1.87E+02		pCi/Kg Wet

BV2

BROADLEAF VEGETATION

LAB ID	STATION	COLLECT START	COLLECT STOP	NUCLIDE	REPORTABLE	ACTIVITY	ERROR	MDC	LLD	UNITS
L73120-3	BV2	05/30/17		BE-7	8.43E+02	8.43E+02	2.97E+02	2.12E+02		pCi/kg Wet
L73359-3	BV2	06/20/17		BE-7	6.99E+02	6.99E+02	2.52E+02	2.41E+02		pCi/kg Wet
L74009-3	BV2	07/25/17		BE-7	1.15E+03	1.15E+03	2.15E+02	1.55E+02		pCi/kg Wet
L74279-3	BV2	08/25/17		BE-7	2.47E+03	2.47E+03	3.85E+02	2.71E+02		pCi/kg Wet
L74717-3	BV2	09/28/17		BE-7	2.04E+03	2.04E+03	3.13E+02	2.30E+02		pCi/Kg Wet
L73120-3	BV2	05/30/17		CS-134	< 3.16E+01	-1.40E+00	1.94E+01	3.16E+01	6.00E+01	pCi/kg Wet
L73359-3	BV2	06/20/17		CS-134	< 3.82E+01	1.65E+01	2.11E+01	3.82E+01	6.00E+01	pCi/kg Wet
L74009-3	BV2	07/25/17		CS-134	< 1.83E+01	-3.89E+00	1.17E+01	1.83E+01	6.00E+01	pCi/kg Wet
L74279-3	BV2	08/25/17		CS-134	< 3.23E+01	-1.57E+00	1.98E+01	3.23E+01	6.00E+01	pCi/kg Wet
L74717-3	BV2	09/28/17		CS-134	< 2.78E+01	1.01E+00	1.71E+01	2.78E+01	6.00E+01	pCi/Kg Wet
L73120-3	BV2	05/30/17		CS-137	< 3.18E+01	-8.03E+00	2.02E+01	3.18E+01	8.00E+01	pCi/kg Wet
L73359-3	BV2	06/20/17		CS-137	< 3.73E+01	2.56E+01	1.96E+01	3.73E+01	8.00E+01	pCi/kg Wet
L74009-3	BV2	07/25/17		CS-137	< 2.15E+01	1.49E+01	1.22E+01	2.15E+01	8.00E+01	pCi/kg Wet
L74279-3	BV2	08/25/17		CS-137	< 4.18E+01	2.48E+01	2.25E+01	4.18E+01	8.00E+01	pCi/kg Wet
L74717-3	BV2	09/28/17		CS-137	4.08E+01	4.08E+01	1.78E+01	2.57E+01	8.00E+01	pCi/Kg Wet
L73120-3	BV2	05/30/17		I-131	< 5.85E+01	1.24E+01	3.50E+01	5.85E+01	6.00E+01	pCi/kg Wet

L73359-3	BV2	06/20/17		I-131	< 4.36E+01	-2.21E+01	2.84E+01	4.36E+01	6.00E+01	pCi/kg Wet
L74009-3	BV2	07/25/17		I-131	< 5.62E+01	-1.57E+01	3.40E+01	5.62E+01	6.00E+01	pCi/kg Wet
L74279-3	BV2	08/25/17		I-131	< 5.70E+01	-8.37E+00	3.54E+01	5.70E+01	6.00E+01	pCi/kg Wet
L74717-3	BV2	09/28/17		I-131	< 5.64E+01	-1.84E+01	3.62E+01	5.64E+01	6.00E+01	pCi/kg Wet
L73120-3	BV2	05/30/17		K-40	3.15E+03	3.15E+03	6.28E+02	2.59E+02		pCi/kg Wet
L73359-3	BV2	06/20/17		K-40	3.31E+03	3.31E+03	5.85E+02	3.20E+02		pCi/kg Wet
L74009-3	BV2	07/25/17		K-40	3.01E+03	3.01E+03	3.46E+02	1.68E+02		pCi/kg Wet
L74279-3	BV2	08/25/17		K-40	3.10E+03	3.10E+03	6.32E+02	3.17E+02		pCi/kg Wet
L74717-3	BV2	09/28/17		K-40	3.53E+03	3.53E+03	4.88E+02	2.15E+02		pCi/kg Wet

BV3

BROADLEAF VEGETATION

LAB ID	STATION	COLLECT START	COLLECT STOP	NUCLIDE	REPORTABLE	ACTIVITY	ERROR	MDC	LLD	UNITS
NO SAMPLE	BV3	N/A		N/A	N/A	N/A	N/A	N/A		N/A

DOMESTIC WATER

DRINKING WATER

LAB ID	STATION	COLLECT START	COLLECT STOP	NUCLIDE	REPORTABLE	ACTIVITY	ERROR	MDC	LLD	UNITS
L71950-2	DOMESTIC WATER	02/01/17	03/01/17	AC-228	9.91E+00	9.91E+00	7.41E+00	7.37E+00		pCi/L
L71572-1	DOMESTIC WATER	01/01/17	01/31/17	BA-LA-140	< 1.34E+01	1.65E-01	8.02E+00	1.34E+01	1.50E+01	pCi/L
L71950-2	DOMESTIC WATER	02/01/17	03/01/17	BA-LA-140	< 1.09E+01	-3.72E+00	6.86E+00	1.09E+01	1.50E+01	pCi/L
L72335-1	DOMESTIC WATER	03/01/17	03/31/17	BA-LA-140	< 6.75E+00	2.93E+00	3.96E+00	6.75E+00	1.50E+01	pCi/L
L72691-1	DOMESTIC WATER	04/01/17	04/30/17	BA-LA-140	< 7.61E+00	-2.74E+00	4.82E+00	7.61E+00	1.50E+01	pCi/L
L73153-2	DOMESTIC WATER	05/01/17	06/01/17	BA-LA-140	< 8.25E+00	-2.40E+00	5.36E+00	8.25E+00	1.50E+01	pCi/L
L73681-2	DOMESTIC WATER	06/01/17	07/01/17	BA-LA-140	< 1.32E+01	-6.02E+00	8.48E+00	1.32E+01	1.50E+01	pCi/L
L74021-1	DOMESTIC WATER	07/01/17	08/01/17	BA-LA-140	< 8.86E+00	-4.64E+00	6.02E+00	8.86E+00	1.50E+01	pCi/L
L74390-1	DOMESTIC WATER	08/01/17	09/01/17	BA-LA-140	< 3.43E+00	-5.55E-01	2.19E+00	3.43E+00	1.50E+01	pCi/L
L74800-1	DOMESTIC WATER	09/01/17	10/01/17	BA-LA-140	< 1.25E+01	2.01E+00	7.36E+00	1.25E+01	1.50E+01	pCi/L
L75298-1	DOMESTIC WATER	10/01/17	11/01/17	BA-LA-140	< 1.17E+01	1.74E+00	6.84E+00	1.17E+01	1.50E+01	pCi/L
L75597-1	DOMESTIC WATER	11/01/17	12/01/17	BA-LA-140	< 1.05E+01	-3.54E+00	6.23E+00	1.05E+01	1.50E+01	pCi/L
L75890-1	DOMESTIC WATER	12/01/17	01/01/18	BA-LA-140	< 9.98E+00	-2.86E+00	6.42E+00	9.98E+00	1.50E+01	pCi/L
L71572-1	DOMESTIC WATER	01/01/17	01/31/17	CO-58	< 4.36E+00	-1.92E+00	2.84E+00	4.36E+00	1.50E+01	pCi/L
L71950-2	DOMESTIC WATER	02/01/17	03/01/17	CO-58	< 2.46E+00	-4.07E-01	1.51E+00	2.46E+00	1.50E+01	pCi/L
L72335-1	DOMESTIC WATER	03/01/17	03/31/17	CO-58	< 1.66E+00	8.44E-01	9.73E-01	1.66E+00	1.50E+01	pCi/L
L72691-1	DOMESTIC WATER	04/01/17	04/30/17	CO-58	< 2.15E+00	-5.62E-01	1.32E+00	2.15E+00	1.50E+01	pCi/L
L73153-2	DOMESTIC WATER	05/01/17	06/01/17	CO-58	< 2.20E+00	-2.54E-02	1.33E+00	2.20E+00	1.50E+01	pCi/L
L73681-2	DOMESTIC WATER	06/01/17	07/01/17	CO-58	< 2.99E+00	-8.41E-01	1.84E+00	2.99E+00	1.50E+01	pCi/L
L74021-1	DOMESTIC WATER	07/01/17	08/01/17	CO-58	< 3.18E+00	1.25E+00	1.85E+00	3.18E+00	1.50E+01	pCi/L
L74390-1	DOMESTIC WATER	08/01/17	09/01/17	CO-58	< 8.88E-01	4.80E-02	5.12E-01	8.88E-01	1.50E+01	pCi/L
L74800-1	DOMESTIC WATER	09/01/17	10/01/17	CO-58	< 2.68E+00	8.61E-01	1.59E+00	2.68E+00	1.50E+01	pCi/L

L75298-1	DOMESTIC WATER	10/01/17	11/01/17	CO-58	< 3.04E+00	1.72E+00	1.74E+00	3.04E+00	1.50E+01	pCi/L
L75597-1	DOMESTIC WATER	11/01/17	12/01/17	CO-58	< 3.27E+00	-7.22E-01	1.96E+00	3.27E+00	1.50E+01	pCi/L
L75890-1	DOMESTIC WATER	12/01/17	01/01/18	CO-58	< 2.88E+00	4.58E-01	1.73E+00	2.88E+00	1.50E+01	pCi/L
L71572-1	DOMESTIC WATER	01/01/17	01/31/17	CO-60	< 4.31E+00	-1.18E+00	2.83E+00	4.31E+00	1.50E+01	pCi/L
L71950-2	DOMESTIC WATER	02/01/17	03/01/17	CO-60	< 2.24E+00	7.48E-01	1.29E+00	2.24E+00	1.50E+01	pCi/L
L72335-1	DOMESTIC WATER	03/01/17	03/31/17	CO-60	< 1.35E+00	9.26E-02	8.12E-01	1.35E+00	1.50E+01	pCi/L
L72691-1	DOMESTIC WATER	04/01/17	04/30/17	CO-60	< 1.88E+00	-2.58E-01	1.14E+00	1.88E+00	1.50E+01	pCi/L
L73153-2	DOMESTIC WATER	05/01/17	06/01/17	CO-60	< 1.86E+00	3.21E-01	1.13E+00	1.86E+00	1.50E+01	pCi/L
L73681-2	DOMESTIC WATER	06/01/17	07/01/17	CO-60	< 2.64E+00	4.07E-01	1.61E+00	2.64E+00	1.50E+01	pCi/L
L74021-1	DOMESTIC WATER	07/01/17	08/01/17	CO-60	< 2.88E+00	1.41E-01	1.76E+00	2.88E+00	1.50E+01	pCi/L
L74390-1	DOMESTIC WATER	08/01/17	09/01/17	CO-60	< 7.29E-01	-5.68E-02	4.47E-01	7.29E-01	1.50E+01	pCi/L
L74800-1	DOMESTIC WATER	09/01/17	10/01/17	CO-60	< 2.22E+00	6.26E-01	1.31E+00	2.22E+00	1.50E+01	pCi/L
L75298-1	DOMESTIC WATER	10/01/17	11/01/17	CO-60	< 2.19E+00	7.66E-02	1.34E+00	2.19E+00	1.50E+01	pCi/L
L75597-1	DOMESTIC WATER	11/01/17	12/01/17	CO-60	< 2.64E+00	5.40E-01	1.50E+00	2.64E+00	1.50E+01	pCi/L
L75890-1	DOMESTIC WATER	12/01/17	01/01/18	CO-60	< 2.53E+00	4.56E-01	1.49E+00	2.53E+00	1.50E+01	pCi/L
L71572-1	DOMESTIC WATER	01/01/17	01/31/17	CS-134	< 4.37E+00	-6.84E+00	3.07E+00	4.37E+00	1.50E+01	pCi/L
L71950-2	DOMESTIC WATER	02/01/17	03/01/17	CS-134	< 2.42E+00	4.06E-01	1.45E+00	2.42E+00	1.50E+01	pCi/L
L72335-1	DOMESTIC WATER	03/01/17	03/31/17	CS-134	< 1.43E+00	3.53E-01	8.52E-01	1.43E+00	1.50E+01	pCi/L
L72691-1	DOMESTIC WATER	04/01/17	04/30/17	CS-134	< 1.92E+00	-7.35E-01	1.19E+00	1.92E+00	1.50E+01	pCi/L
L73153-2	DOMESTIC WATER	05/01/17	06/01/17	CS-134	< 1.91E+00	4.16E-01	1.13E+00	1.91E+00	1.50E+01	pCi/L
L73681-2	DOMESTIC WATER	06/01/17	07/01/17	CS-134	< 2.63E+00	1.03E+00	1.52E+00	2.63E+00	1.50E+01	pCi/L
L74021-1	DOMESTIC WATER	07/01/17	08/01/17	CS-134	< 3.05E+00	1.24E+00	1.78E+00	3.05E+00	1.50E+01	pCi/L
L74390-1	DOMESTIC WATER	08/01/17	09/01/17	CS-134	< 7.92E-01	-2.66E-01	4.87E-01	7.92E-01	1.50E+01	pCi/L
L74800-1	DOMESTIC WATER	09/01/17	10/01/17	CS-134	< 2.27E+00	-7.74E-01	1.54E+00	2.27E+00	1.50E+01	pCi/L
L75298-1	DOMESTIC WATER	10/01/17	11/01/17	CS-134	< 2.68E+00	1.31E+00	1.55E+00	2.68E+00	1.50E+01	pCi/L
L75597-1	DOMESTIC WATER	11/01/17	12/01/17	CS-134	< 2.93E+00	-2.27E+00	1.83E+00	2.93E+00	1.50E+01	pCi/L
L75890-1	DOMESTIC WATER	12/01/17	01/01/18	CS-134	< 2.80E+00	9.77E-01	1.65E+00	2.80E+00	1.50E+01	pCi/L
L71572-1	DOMESTIC WATER	01/01/17	01/31/17	CS-137	< 5.02E+00	1.80E+00	2.87E+00	5.02E+00	1.80E+01	pCi/L
L71950-2	DOMESTIC WATER	02/01/17	03/01/17	CS-137	< 2.34E+00	1.03E+00	1.36E+00	2.34E+00	1.80E+01	pCi/L
L72335-1	DOMESTIC WATER	03/01/17	03/31/17	CS-137	< 1.41E+00	6.70E-01	8.17E-01	1.41E+00	1.80E+01	pCi/L
L72691-1	DOMESTIC WATER	04/01/17	04/30/17	CS-137	< 1.91E+00	8.04E-01	1.10E+00	1.91E+00	1.80E+01	pCi/L
L73153-2	DOMESTIC WATER	05/01/17	06/01/17	CS-137	< 1.89E+00	8.04E-01	1.10E+00	1.89E+00	1.80E+01	pCi/L
L73681-2	DOMESTIC WATER	06/01/17	07/01/17	CS-137	< 2.59E+00	1.64E+00	1.53E+00	2.59E+00	1.80E+01	pCi/L
L74021-1	DOMESTIC WATER	07/01/17	08/01/17	CS-137	< 2.97E+00	1.17E+00	1.72E+00	2.97E+00	1.80E+01	pCi/L
L74390-1	DOMESTIC WATER	08/01/17	09/01/17	CS-137	< 7.82E-01	-1.60E-01	4.63E-01	7.82E-01	1.80E+01	pCi/L
L74800-1	DOMESTIC WATER	09/01/17	10/01/17	CS-137	< 2.22E+00	-4.72E-01	1.38E+00	2.22E+00	1.80E+01	pCi/L
L75298-1	DOMESTIC WATER	10/01/17	11/01/17	CS-137	< 2.41E+00	2.22E-01	1.44E+00	2.41E+00	1.80E+01	pCi/L
L75597-1	DOMESTIC WATER	11/01/17	12/01/17	CS-137	< 2.80E+00	-7.05E-01	1.69E+00	2.80E+00	1.80E+01	pCi/L
L75890-1	DOMESTIC WATER	12/01/17	01/01/18	CS-137	< 2.75E+00	1.37E+00	1.59E+00	2.75E+00	1.80E+01	pCi/L
L71572-1	DOMESTIC WATER	01/01/17	01/31/17	FE-59	< 1.15E+01	2.68E+00	6.75E+00	1.15E+01	3.00E+01	pCi/L

L71950-2	DOMESTIC WATER	02/01/17	03/01/17	FE-59	< 5.93E+00	3.69E-01	3.64E+00	5.93E+00	3.00E+01	pCi/L
L72335-1	DOMESTIC WATER	03/01/17	03/31/17	FE-59	< 3.75E+00	-7.38E-01	2.28E+00	3.75E+00	3.00E+01	pCi/L
L72691-1	DOMESTIC WATER	04/01/17	04/30/17	FE-59	< 5.38E+00	1.27E+00	3.23E+00	5.38E+00	3.00E+01	pCi/L
L73153-2	DOMESTIC WATER	05/01/17	06/01/17	FE-59	< 5.04E+00	4.29E-01	3.06E+00	5.04E+00	3.00E+01	pCi/L
L73681-2	DOMESTIC WATER	06/01/17	07/01/17	FE-59	< 6.85E+00	-8.43E-01	4.25E+00	6.85E+00	3.00E+01	pCi/L
L74021-1	DOMESTIC WATER	07/01/17	08/01/17	FE-59	< 7.97E+00	2.52E+00	4.60E+00	7.97E+00	3.00E+01	pCi/L
L74390-1	DOMESTIC WATER	08/01/17	09/01/17	FE-59	< 2.19E+00	4.13E-01	1.25E+00	2.19E+00	3.00E+01	pCi/L
L74800-1	DOMESTIC WATER	09/01/17	10/01/17	FE-59	< 6.61E+00	1.82E+00	3.87E+00	6.61E+00	3.00E+01	pCi/L
L75298-1	DOMESTIC WATER	10/01/17	11/01/17	FE-59	< 6.71E+00	3.16E+00	3.79E+00	6.71E+00	3.00E+01	pCi/L
L75597-1	DOMESTIC WATER	11/01/17	12/01/17	FE-59	< 7.04E+00	7.87E-01	4.08E+00	7.04E+00	3.00E+01	pCi/L
L75890-1	DOMESTIC WATER	12/01/17	01/01/18	FE-59	< 6.19E+00	8.60E-01	3.64E+00	6.19E+00	3.00E+01	pCi/L
L71572-1	DOMESTIC WATER	01/01/17	01/31/17	GR-B	< 2.53E+00	1.23E+00	1.63E+00	2.53E+00	4.00E+00	pCi/L
L71950-2	DOMESTIC WATER	02/01/17	03/01/17	GR-B	3.01E+00	3.01E+00	1.52E+00	2.10E+00	4.00E+00	pCi/L
L72335-1	DOMESTIC WATER	03/01/17	03/31/17	GR-B	< 2.40E+00	1.67E+00	1.50E+00	2.40E+00	4.00E+00	pCi/L
L72691-1	DOMESTIC WATER	04/01/17	04/30/17	GR-B	3.13E+00	3.13E+00	1.68E+00	2.52E+00	4.00E+00	pCi/L
L73153-2	DOMESTIC WATER	05/01/17	06/01/17	GR-B	2.38E+00	2.38E+00	1.44E+00	2.17E+00	4.00E+00	pCi/L
L73681-2	DOMESTIC WATER	06/01/17	07/01/17	GR-B	< 2.20E+00	2.08E+00	1.42E+00	2.20E+00	4.00E+00	pCi/L
L74021-1	DOMESTIC WATER	07/01/17	08/01/17	GR-B	< 2.31E+00	2.29E+00	1.51E+00	2.31E+00	4.00E+00	pCi/L
L74390-1	DOMESTIC WATER	08/01/17	09/01/17	GR-B	< 2.16E+00	1.86E+00	1.38E+00	2.16E+00	4.00E+00	pCi/L
L74800-1	DOMESTIC WATER	09/01/17	10/01/17	GR-B	2.42E+00	2.42E+00	1.35E+00	2.01E+00	4.00E+00	pCi/L
L75298-1	DOMESTIC WATER	10/01/17	11/01/17	GR-B	< 2.31E+00	2.28E+00	1.50E+00	2.31E+00	4.00E+00	pCi/L
L75597-1	DOMESTIC WATER	11/01/17	12/01/17	GR-B	< 2.03E+00	1.97E+00	1.33E+00	2.03E+00	4.00E+00	pCi/L
L75890-1	DOMESTIC WATER	12/01/17	01/01/18	GR-B	2.96E+00	2.96E+00	1.41E+00	2.03E+00	4.00E+00	pCi/L
L71572-1	DOMESTIC WATER	01/01/17	01/31/17	H-3 (DIST)	< 2.54E+02	1.06E+02	1.64E+02	2.54E+02	2.00E+03	pCi/L
L71950-2	DOMESTIC WATER	02/01/17	03/01/17	H-3 (DIST)	< 5.54E+02	7.27E+01	3.49E+02	5.54E+02	2.00E+03	pCi/L
L72335-1	DOMESTIC WATER	03/01/17	03/31/17	H-3 (DIST)	< 7.01E+02	-8.59E+01	3.65E+02	7.01E+02	2.00E+03	pCi/L
L72691-1	DOMESTIC WATER	04/01/17	04/30/17	H-3 (DIST)	< 7.10E+02	1.68E+02	4.06E+02	7.10E+02	2.00E+03	pCi/L
L73153-2	DOMESTIC WATER	05/01/17	06/01/17	H-3 (DIST)	< 5.88E+02	5.46E+01	3.21E+02	5.88E+02	2.00E+03	pCi/L
L73681-2	DOMESTIC WATER	06/01/17	07/01/17	H-3 (DIST)	< 5.50E+02	-5.92E+00	2.86E+02	5.50E+02	2.00E+03	pCi/L
L74021-1	DOMESTIC WATER	07/01/17	08/01/17	H-3 (DIST)	< 5.66E+02	1.59E+02	3.29E+02	5.66E+02	2.00E+03	pCi/L
L74390-1	DOMESTIC WATER	08/01/17	09/01/17	H-3 (DIST)	< 6.65E+02	-1.76E+02	3.20E+02	6.65E+02	2.00E+03	pCi/L
L74800-1	DOMESTIC WATER	09/01/17	10/01/17	H-3 (DIST)	< 6.52E+02	1.48E+02	3.70E+02	6.52E+02	2.00E+03	pCi/L
L75298-1	DOMESTIC WATER	10/01/17	11/01/17	H-3 (DIST)	< 6.66E+02	1.37E+02	3.73E+02	6.66E+02	2.00E+03	pCi/L
L75597-1	DOMESTIC WATER	11/01/17	12/01/17	H-3 (DIST)	< 6.69E+02	1.11E+01	3.48E+02	6.69E+02	2.00E+03	pCi/L
L75890-1	DOMESTIC WATER	12/01/17	01/01/18	H-3 (DIST)	< 6.73E+02	3.09E+01	3.62E+02	6.73E+02	2.00E+03	pCi/L
L71950-2	DOMESTIC WATER	02/01/17	03/01/17	K-40	4.79E+01	4.79E+01	3.55E+01	1.86E+01		pCi/L
L75597-1	DOMESTIC WATER	11/01/17	12/01/17	K-40	4.62E+01	4.62E+01	2.84E+01	2.32E+01		pCi/L
L71572-1	DOMESTIC WATER	01/01/17	01/31/17	MN-54	< 4.26E+00	-7.59E-01	2.65E+00	4.26E+00	1.50E+01	pCi/L
L71950-2	DOMESTIC WATER	02/01/17	03/01/17	MN-54	< 2.17E+00	3.78E-01	1.30E+00	2.17E+00	1.50E+01	pCi/L
L72335-1	DOMESTIC WATER	03/01/17	03/31/17	MN-54	< 1.40E+00	6.20E-02	8.51E-01	1.40E+00	1.50E+01	pCi/L

L72691-1	DOMESTIC WATER	04/01/17	04/30/17	MN-54	< 1.88E+00	-1.82E-02	1.14E+00	1.88E+00	1.50E+01	pCi/L
L73153-2	DOMESTIC WATER	05/01/17	06/01/17	MN-54	< 1.87E+00	1.06E+00	1.08E+00	1.87E+00	1.50E+01	pCi/L
L73681-2	DOMESTIC WATER	06/01/17	07/01/17	MN-54	< 2.28E+00	-4.04E-01	1.40E+00	2.28E+00	1.50E+01	pCi/L
L74021-1	DOMESTIC WATER	07/01/17	08/01/17	MN-54	< 2.49E+00	-1.31E+00	1.60E+00	2.49E+00	1.50E+01	pCi/L
L74390-1	DOMESTIC WATER	08/01/17	09/01/17	MN-54	< 7.88E-01	-1.48E-01	4.74E-01	7.88E-01	1.50E+01	pCi/L
L74800-1	DOMESTIC WATER	09/01/17	10/01/17	MN-54	< 2.16E+00	-6.35E-01	1.39E+00	2.16E+00	1.50E+01	pCi/L
L75298-1	DOMESTIC WATER	10/01/17	11/01/17	MN-54	< 2.40E+00	-1.05E+00	1.55E+00	2.40E+00	1.50E+01	pCi/L
L75597-1	DOMESTIC WATER	11/01/17	12/01/17	MN-54	< 2.84E+00	1.11E+00	1.63E+00	2.84E+00	1.50E+01	pCi/L
L75890-1	DOMESTIC WATER	12/01/17	01/01/18	MN-54	< 2.30E+00	-1.28E+00	1.49E+00	2.30E+00	1.50E+01	pCi/L
L71572-1	DOMESTIC WATER	01/01/17	01/31/17	NB-95	< 5.39E+00	1.03E+00	3.16E+00	5.39E+00	1.50E+01	pCi/L
L71950-2	DOMESTIC WATER	02/01/17	03/01/17	NB-95	< 2.58E+00	1.02E-01	1.56E+00	2.58E+00	1.50E+01	pCi/L
L72335-1	DOMESTIC WATER	03/01/17	03/31/17	NB-95	< 1.78E+00	1.20E+00	1.03E+00	1.78E+00	1.50E+01	pCi/L
L72691-1	DOMESTIC WATER	04/01/17	04/30/17	NB-95	< 2.28E+00	8.30E-01	1.32E+00	2.28E+00	1.50E+01	pCi/L
L73153-2	DOMESTIC WATER	05/01/17	06/01/17	NB-95	< 2.22E+00	9.05E-01	1.30E+00	2.22E+00	1.50E+01	pCi/L
L73681-2	DOMESTIC WATER	06/01/17	07/01/17	NB-95	< 3.20E+00	1.43E+00	1.83E+00	3.20E+00	1.50E+01	pCi/L
L74021-1	DOMESTIC WATER	07/01/17	08/01/17	NB-95	< 3.40E+00	-7.14E-02	2.11E+00	3.40E+00	1.50E+01	pCi/L
L74390-1	DOMESTIC WATER	08/01/17	09/01/17	NB-95	< 9.06E-01	-2.46E-01	5.49E-01	9.06E-01	1.50E+01	pCi/L
L74800-1	DOMESTIC WATER	09/01/17	10/01/17	NB-95	< 2.84E+00	3.28E-01	1.72E+00	2.84E+00	1.50E+01	pCi/L
L75298-1	DOMESTIC WATER	10/01/17	11/01/17	NB-95	< 3.05E+00	1.82E+00	1.74E+00	3.05E+00	1.50E+01	pCi/L
L75597-1	DOMESTIC WATER	11/01/17	12/01/17	NB-95	< 3.42E+00	1.76E+00	1.95E+00	3.42E+00	1.50E+01	pCi/L
L75890-1	DOMESTIC WATER	12/01/17	01/01/18	NB-95	< 3.19E+00	2.21E+00	1.82E+00	3.19E+00	1.50E+01	pCi/L
L73153-2	DOMESTIC WATER	05/01/17	06/01/17	RA-226	4.88E+01	4.88E+01	4.70E+01	4.10E+01		pCi/L
L72691-1	DOMESTIC WATER	04/01/17	04/30/17	TH-228	5.73E+00	5.73E+00	3.26E+00	3.31E+00		pCi/L
L71572-1	DOMESTIC WATER	01/01/17	01/31/17	ZN-65	< 9.70E+00	-3.31E+00	6.30E+00	9.70E+00	3.00E+01	pCi/L
L71950-2	DOMESTIC WATER	02/01/17	03/01/17	ZN-65	< 4.70E+00	-2.75E+00	3.06E+00	4.70E+00	3.00E+01	pCi/L
L72335-1	DOMESTIC WATER	03/01/17	03/31/17	ZN-65	< 2.73E+00	-2.71E+00	1.78E+00	2.73E+00	3.00E+01	pCi/L
L72691-1	DOMESTIC WATER	04/01/17	04/30/17	ZN-65	< 3.45E+00	-5.38E+00	2.51E+00	3.45E+00	3.00E+01	pCi/L
L73153-2	DOMESTIC WATER	05/01/17	06/01/17	ZN-65	< 3.98E+00	-5.31E-01	2.47E+00	3.98E+00	3.00E+01	pCi/L
L73681-2	DOMESTIC WATER	06/01/17	07/01/17	ZN-65	< 5.01E+00	8.52E-01	3.46E+00	5.01E+00	3.00E+01	pCi/L
L74021-1	DOMESTIC WATER	07/01/17	08/01/17	ZN-65	< 5.68E+00	-4.98E+00	3.94E+00	5.68E+00	3.00E+01	pCi/L
L74390-1	DOMESTIC WATER	08/01/17	09/01/17	ZN-65	< 1.52E+00	-3.17E-01	9.41E-01	1.52E+00	3.00E+01	pCi/L
L74800-1	DOMESTIC WATER	09/01/17	10/01/17	ZN-65	< 4.64E+00	-4.07E+00	3.16E+00	4.64E+00	3.00E+01	pCi/L
L75298-1	DOMESTIC WATER	10/01/17	11/01/17	ZN-65	< 5.04E+00	-8.09E-01	3.11E+00	5.04E+00	3.00E+01	pCi/L
L75597-1	DOMESTIC WATER	11/01/17	12/01/17	ZN-65	< 5.76E+00	1.70E+00	3.29E+00	5.76E+00	3.00E+01	pCi/L
L75890-1	DOMESTIC WATER	12/01/17	01/01/18	ZN-65	< 5.47E+00	-3.46E+00	3.49E+00	5.47E+00	3.00E+01	pCi/L
L71572-1	DOMESTIC WATER	01/01/17	01/31/17	ZR-95	< 9.21E+00	2.72E+00	5.29E+00	9.21E+00	3.00E+01	pCi/L
L71950-2	DOMESTIC WATER	02/01/17	03/01/17	ZR-95	< 4.63E+00	2.11E-01	2.79E+00	4.63E+00	3.00E+01	pCi/L
L72335-1	DOMESTIC WATER	03/01/17	03/31/17	ZR-95	< 2.98E+00	-3.45E-02	1.81E+00	2.98E+00	3.00E+01	pCi/L
L72691-1	DOMESTIC WATER	04/01/17	04/30/17	ZR-95	< 3.86E+00	9.31E-01	2.26E+00	3.86E+00	3.00E+01	pCi/L
L73153-2	DOMESTIC WATER	05/01/17	06/01/17	ZR-95	< 3.87E+00	-1.49E+00	2.41E+00	3.87E+00	3.00E+01	pCi/L

L73681-2	DOMESTIC WATER	06/01/17	07/01/17	ZR-95	< 5.70E+00	2.70E+00	3.26E+00	5.70E+00	3.00E+01	pCi/L
L74021-1	DOMESTIC WATER	07/01/17	08/01/17	ZR-95	< 5.78E+00	-2.33E+00	3.79E+00	5.78E+00	3.00E+01	pCi/L
L74390-1	DOMESTIC WATER	08/01/17	09/01/17	ZR-95	< 1.56E+00	-4.90E-01	9.54E-01	1.56E+00	3.00E+01	pCi/L
L74800-1	DOMESTIC WATER	09/01/17	10/01/17	ZR-95	< 4.97E+00	5.01E-01	3.01E+00	4.97E+00	3.00E+01	pCi/L
L75298-1	DOMESTIC WATER	10/01/17	11/01/17	ZR-95	< 4.83E+00	-2.45E+00	3.14E+00	4.83E+00	3.00E+01	pCi/L
L75597-1	DOMESTIC WATER	11/01/17	12/01/17	ZR-95	< 5.94E+00	-1.52E-01	3.52E+00	5.94E+00	3.00E+01	pCi/L
L75890-1	DOMESTIC WATER	12/01/17	01/01/18	ZR-95	< 5.16E+00	-1.39E+00	3.22E+00	5.16E+00	3.00E+01	pCi/L

LUDINGTON

CARP

LAB ID	STATION	COLLECT START	COLLECT STOP	NUCLIDE	REPORTABLE	ACTIVITY	ERROR	MDC	LLD	UNITS
L73306-4	LUDINGTON	06/07/17		CO-58	< 7.74E+01	1.46E+01	4.22E+01	7.74E+01	1.30E+02	pCi/kg Wet
L74614-2	LUDINGTON	09/22/17		CO-58	< 3.65E+01	-3.89E+00	2.27E+01	3.65E+01	1.30E+02	pCi/kg Wet
L73306-4	LUDINGTON	06/07/17		CO-60	< 5.80E+01	1.81E+01	2.73E+01	5.80E+01	1.30E+02	pCi/kg Wet
L74614-2	LUDINGTON	09/22/17		CO-60	< 3.57E+01	-9.51E+00	2.45E+01	3.57E+01	1.30E+02	pCi/kg Wet
L73306-4	LUDINGTON	06/07/17		CS-134	< 6.22E+01	-3.96E+01	3.94E+01	6.22E+01	1.30E+02	pCi/kg Wet
L74614-2	LUDINGTON	09/22/17		CS-134	< 5.06E+01	1.57E+01	2.83E+01	5.06E+01	1.30E+02	pCi/kg Wet
L73306-4	LUDINGTON	06/07/17		CS-137	< 7.36E+01	1.82E+01	4.02E+01	7.36E+01	1.50E+02	pCi/kg Wet
L74614-2	LUDINGTON	09/22/17		CS-137	< 4.14E+01	-1.37E+01	2.65E+01	4.14E+01	1.50E+02	pCi/kg Wet
L73306-4	LUDINGTON	06/07/17		FE-59	< 1.21E+02	-2.19E+01	6.93E+01	1.21E+02	2.60E+02	pCi/kg Wet
L74614-2	LUDINGTON	09/22/17		FE-59	< 7.80E+01	7.89E+00	4.61E+01	7.80E+01	2.60E+02	pCi/kg Wet
L73306-4	LUDINGTON	06/07/17		K-40	3.40E+03	3.40E+03	6.89E+02	5.22E+02		pCi/kg Wet
L74614-2	LUDINGTON	09/22/17		K-40	3.02E+03	3.02E+03	6.60E+02	3.60E+02		pCi/kg Wet
L73306-4	LUDINGTON	06/07/17		MN-54	< 5.27E+01	-1.66E+01	3.13E+01	5.27E+01	1.30E+02	pCi/kg Wet
L74614-2	LUDINGTON	09/22/17		MN-54	< 3.36E+01	-1.78E+00	2.06E+01	3.36E+01	1.30E+02	pCi/kg Wet
L73306-4	LUDINGTON	06/07/17		ZN-65	< 1.52E+02	4.94E+01	7.86E+01	1.52E+02	2.60E+02	pCi/kg Wet
L74614-2	LUDINGTON	09/22/17		ZN-65	< 8.03E+01	-4.96E+00	5.83E+01	8.03E+01	2.60E+02	pCi/kg Wet

LUDINGTON

CATFISH

LAB ID	STATION	COLLECT START	COLLECT STOP	NUCLIDE	REPORTABLE	ACTIVITY	ERROR	MDC	LLD	UNITS
L74614-1	LUDINGTON	09/20/17		CO-58	< 3.80E+01	-2.26E+00	2.35E+01	3.80E+01	1.30E+02	pCi/Kg Wet
L74614-1	LUDINGTON	09/20/17		CO-60	< 6.75E+01	3.17E+01	3.54E+01	6.75E+01	1.30E+02	pCi/Kg Wet
L74614-1	LUDINGTON	09/20/17		CS-134	< 5.46E+01	2.64E+00	3.27E+01	5.46E+01	1.30E+02	pCi/Kg Wet
L74614-1	LUDINGTON	09/20/17		CS-137	< 5.39E+01	-1.45E+00	3.24E+01	5.39E+01	1.50E+02	pCi/Kg Wet
L74614-1	LUDINGTON	09/20/17		FE-59	< 1.07E+02	4.35E+01	5.75E+01	1.07E+02	2.60E+02	pCi/Kg Wet
L74614-1	LUDINGTON	09/20/17		K-40	2.23E+03	2.23E+03	7.48E+02	3.79E+02		pCi/Kg Wet
L74614-1	LUDINGTON	09/20/17		MN-54	< 5.23E+01	3.62E+00	3.12E+01	5.23E+01	1.30E+02	pCi/Kg Wet
L74614-1	LUDINGTON	09/20/17		ZN-65	< 1.13E+02	2.92E+01	7.35E+01	1.13E+02	2.60E+02	pCi/Kg Wet

**LUDINGTON
FRESHWATER DRUM**

LAB ID	STATION	COLLECT START	COLLECT STOP	NUCLIDE	REPORTABLE	ACTIVITY	ERROR	MDC	LLD	UNITS
L73306-5	LUDINGTON	05/26/17		CO-58	< 9.04E+01	3.73E+01	4.65E+01	9.04E+01	1.30E+02	pCi/kg Wet
L73306-5	LUDINGTON	05/26/17		CO-60	< 8.02E+01	4.77E+01	3.69E+01	8.02E+01	1.30E+02	pCi/Kg Wet
L73306-5	LUDINGTON	05/26/17		CS-134	< 6.73E+01	-5.11E+00	3.80E+01	6.73E+01	1.30E+02	pCi/kg Wet
L73306-5	LUDINGTON	05/26/17		CS-137	< 7.39E+01	2.75E+01	3.91E+01	7.39E+01	1.50E+02	pCi/Kg Wet
L73306-5	LUDINGTON	05/26/17		FE-59	< 1.33E+02	-4.91E+01	7.95E+01	1.33E+02	2.60E+02	pCi/kg Wet
L73306-5	LUDINGTON	05/26/17		K-40	3.57E+03	3.57E+03	8.11E+02	4.55E+02		pCi/Kg Wet
L73306-5	LUDINGTON	05/26/17		MN-54	< 6.91E+01	1.70E+01	3.66E+01	6.91E+01	1.30E+02	pCi/kg Wet
L73306-5	LUDINGTON	05/26/17		ZN-65	< 1.92E+02	1.52E+02	9.08E+01	1.92E+02	2.60E+02	pCi/Kg Wet

**PALISADES
CARP**

LAB ID	STATION	COLLECT START	COLLECT STOP	NUCLIDE	REPORTABLE	ACTIVITY	ERROR	MDC	LLD	UNITS
L73306-1	PALISADES	05/10/16		CO-58	< 4.41E+01	-3.62E+00	2.76E+01	4.41E+01	1.30E+02	pCi/kg Wet
L74584-2	PALISADES	05/10/16		CO-58	< 7.55E+01	1.22E+01	4.42E+01	7.55E+01	1.30E+02	pCi/kg Wet
L73306-1	PALISADES	10/12/16		CO-60	< 5.90E+01	2.62E+01	3.05E+01	5.90E+01	1.30E+02	pCi/Kg Wet
L74584-2	PALISADES	10/12/16		CO-60	< 4.49E+01	-1.28E+01	3.07E+01	4.49E+01	1.30E+02	pCi/Kg Wet
L73306-1	PALISADES	05/10/16		CS-134	< 6.39E+01	2.10E+01	3.60E+01	6.39E+01	1.30E+02	pCi/kg Wet
L74584-2	PALISADES	05/10/16		CS-134	6.49E+01	-2.32E+01	4.31E+01	6.49E+01	1.30E+02	pCi/kg Wet
L73306-1	PALISADES	10/12/16		CS-137	< 6.19E+01	1.50E+01	3.56E+01	6.19E+01	1.50E+02	pCi/Kg Wet
L74584-2	PALISADES	10/12/16		CS-137	6.51E+01	-6.61E+00	4.00E+01	6.51E+01	1.50E+02	pCi/Kg Wet
L73306-1	PALISADES	05/10/16		FE-59	< 9.75E+01	1.45E+01	5.74E+01	9.75E+01	2.60E+02	pCi/kg Wet
L74584-2	PALISADES	05/10/16		FE-59	< 1.26E+02	-6.72E+01	8.69E+01	1.26E+02	2.60E+02	pCi/kg Wet
L73306-1	PALISADES	10/12/16		K-40	< 1.78E+03	1.78E+03	6.43E+02	2.02E+02		pCi/Kg Wet
L74584-2	PALISADES	10/12/16		K-40	< 2.65E+03	2.65E+03	8.90E+02	4.32E+02		pCi/Kg Wet
L73306-1	PALISADES	05/10/16		MN-54	< 4.71E+01	-1.66E+01	3.15E+01	4.71E+01	1.30E+02	pCi/kg Wet
L74584-2	PALISADES	05/10/16		MN-54	< 7.64E+01	7.97E+00	4.55E+01	7.64E+01	1.30E+02	pCi/kg Wet
L73306-1	PALISADES	10/12/16		ZN-65	< 9.90E+01	-8.01E+01	7.61E+01	9.90E+01	2.60E+02	pCi/Kg Wet
L74584-2	PALISADES	10/12/16		ZN-65	< 1.50E+02	-3.48E+00	9.01E+01	1.50E+02	2.60E+02	pCi/Kg Wet

**PALISADES
CATFISH**

LAB ID	STATION	COLLECT START	COLLECT STOP	NUCLIDE	REPORTABLE	ACTIVITY	ERROR	MDC	LLD	UNITS
L74584-1	PALISADES	09/15/17		CO-58	< 5.52E+01	-3.54E+01	4.14E+01	5.52E+01	1.30E+02	pCi/Kg Wet
L74584-1	PALISADES	09/15/17		CO-60	< 6.79E+01	1.13E+01	3.91E+01	6.79E+01	1.30E+02	pCi/Kg Wet
L74584-1	PALISADES	09/15/17		CS-134	< 7.66E+01	1.64E+01	4.44E+01	7.66E+01	1.30E+02	pCi/Kg Wet
L74584-1	PALISADES	09/15/17		CS-137	< 5.72E+01	-3.62E-02	3.47E+01	5.72E+01	1.50E+02	pCi/Kg Wet
L74584-1	PALISADES	09/15/17		FE-59	< 1.10E+02	7.26E-03	6.67E+01	1.10E+02	2.60E+02	pCi/Kg Wet

L74584-1	PALISADES	09/15/17		K-40	3.37E+03	3.37E+03	8.88E+02	3.20E+02		pCi/Kg Wet
L74584-1	PALISADES	09/15/17		MN-54	< 6.03E+01	-2.73E+01	4.24E+01	6.03E+01	1.30E+02	pCi/Kg Wet
L74584-1	PALISADES	09/15/17		ZN-65	< 1.53E+02	-2.16E+01	9.72E+01	1.53E+02	2.60E+02	pCi/Kg Wet

**PALISADES
COHO SALMON**

LAB ID	STATION	COLLECT START	COLLECT STOP	NUCLIDE	REPORTABLE	ACTIVITY	ERROR	MDC	LLD	UNITS
L73306-2	PALISADES	06/14/17		CO-58	< 7.26E+01	4.69E+00	4.36E+01	7.26E+01	1.30E+02	pCi/kg Wet
L73306-2	PALISADES	06/14/17		CO-60	< 6.61E+01	-1.44E+01	4.22E+01	6.61E+01	1.30E+02	pCi/kg Wet
L73306-2	PALISADES	06/14/17		CS-134	< 8.03E+01	6.01E-01	4.90E+01	8.03E+01	1.30E+02	pCi/kg Wet
L73306-2	PALISADES	06/14/17		CS-137	< 7.44E+01	-9.14E+00	4.66E+01	7.44E+01	1.50E+02	pCi/kg Wet
L73306-2	PALISADES	06/14/17		FE-59	< 1.05E+02	-5.29E+01	7.69E+01	1.05E+02	2.60E+02	pCi/kg Wet
L73306-2	PALISADES	06/14/17		K-40	2.57E+03	2.57E+03	1.07E+03	7.25E+02		pCi/kg Wet
L73306-2	PALISADES	06/14/17		MN-54	< 6.27E+01	-3.59E+01	4.57E+01	6.27E+01	1.30E+02	pCi/kg Wet
L73306-2	PALISADES	06/14/17		ZN-65	< 1.99E+02	4.46E+01	1.12E+02	1.99E+02	2.60E+02	pCi/kg Wet

**PALISADES
LONGNOSE SUCKER**

LAB ID	STATION	COLLECT START	COLLECT STOP	NUCLIDE	REPORTABLE	ACTIVITY	ERROR	MDC	LLD	UNITS
L73306-3	PALISADES LONGNOSE SUCKER	06/14/17		CO-58	< 7.17E+01	1.11E+01	4.17E+01	7.17E+01	1.30E+02	pCi/kg Wet
L73306-3	PALISADES LONGNOSE SUCKER	06/14/17		CO-60	< 6.38E+01	1.87E+01	3.39E+01	6.38E+01	1.30E+02	pCi/kg Wet
L73306-3	PALISADES LONGNOSE SUCKER	06/14/17		CS-134	< 9.37E+01	2.86E+01	5.30E+01	9.37E+01	1.30E+02	pCi/kg Wet
L73306-3	PALISADES LONGNOSE SUCKER	06/14/17		CS-137	< 4.94E+01	-5.10E+01	3.83E+01	4.94E+01	1.50E+02	pCi/kg Wet
L73306-3	PALISADES LONGNOSE SUCKER	06/14/17		FE-59	< 1.32E+02	-3.39E+01	8.82E+01	1.32E+02	2.60E+02	pCi/kg Wet
L73306-3	PALISADES LONGNOSE SUCKER	06/14/17		K-40	3.03E+03	3.03E+03	9.60E+02	6.05E+02		pCi/kg Wet
L73306-3	PALISADES LONGNOSE SUCKER	06/14/17		MN-54	< 6.57E+01	-1.78E+01	4.26E+01	6.57E+01	1.30E+02	pCi/kg Wet
L73306-3	PALISADES LONGNOSE SUCKER	06/14/17		ZN-65	< 1.59E+02	-1.22E+02	1.12E+02	1.59E+02	2.60E+02	pCi/kg Wet

**LAKE IN
SURFACE WATER**

LAB ID	STATION	COLLECT START	COLLECT STOP	NUCLIDE	REPORTABLE	ACTIVITY	ERROR	MDC	LLD	UNITS
L71572-2	LAKE IN	01/01/17	01/31/17	BA-LA-140	< 1.41E+01	1.74E-01	8.41E+00	1.41E+01	1.50E+01	pCi/L
L71950-3	LAKE IN	02/01/17	03/01/17	BA-LA-140	< 8.10E+00	-1.98E+00	5.20E+00	8.10E+00	1.50E+01	pCi/L
L72335-2	LAKE IN	03/01/17	03/31/17	BA-LA-140	< 7.83E+00	-8.20E-01	4.78E+00	7.83E+00	1.50E+01	pCi/L
L72691-2	LAKE IN	04/01/17	04/30/17	BA-LA-140	< 7.27E+00	-8.17E+00	4.89E+00	7.27E+00	1.50E+01	pCi/L
L73153-3	LAKE IN	05/01/17	06/01/17	BA-LA-140	< 9.10E+00	6.66E-01	5.49E+00	9.10E+00	1.50E+01	pCi/L
L73681-3	LAKE IN	06/01/17	07/01/17	BA-LA-140	< 1.41E+01	-9.10E+00	9.55E+00	1.41E+01	1.50E+01	pCi/L
L74021-2	LAKE IN	07/01/17	08/01/17	BA-LA-140	< 1.42E+01	1.03E+00	8.48E+00	1.42E+01	1.50E+01	pCi/L
L74390-2	LAKE IN	08/01/17	09/01/17	BA-LA-140	< 4.02E+00	-1.29E-01	2.59E+00	4.02E+00	1.50E+01	pCi/L
L74800-2	LAKE IN	09/01/17	10/01/17	BA-LA-140	< 1.12E+01	-4.33E+00	6.96E+00	1.12E+01	1.50E+01	pCi/L

L75298-2	LAKE IN	10/01/17	11/01/17	BA-LA-140	< 1.28E+01	9.03E-01	7.73E+00	1.28E+01	1.50E+01	pCi/L
L75597-2	LAKE IN	11/01/17	12/01/17	BA-LA-140	< 1.44E+01	-7.44E+00	9.44E+00	1.44E+01	1.50E+01	pCi/L
L75890-2	LAKE IN	12/01/17	01/01/18	BA-LA-140	< 9.00E+00	-2.24E+00	5.67E+00	9.00E+00	1.50E+01	pCi/L
L71572-2	LAKE IN	01/01/17	01/31/17	CO-58	< 4.02E+00	1.59E-01	2.39E+00	4.02E+00	1.50E+01	pCi/L
L71950-3	LAKE IN	02/01/17	03/01/17	CO-58	< 2.14E+00	1.12E+00	1.25E+00	2.14E+00	1.50E+01	pCi/L
L72335-2	LAKE IN	03/01/17	03/31/17	CO-58	< 2.02E+00	-1.28E-01	1.23E+00	2.02E+00	1.50E+01	pCi/L
L72691-2	LAKE IN	04/01/17	04/30/17	CO-58	< 2.42E+00	1.56E+00	1.43E+00	2.42E+00	1.50E+01	pCi/L
L73153-3	LAKE IN	05/01/17	06/01/17	CO-58	< 2.38E+00	8.99E-01	1.40E+00	2.38E+00	1.50E+01	pCi/L
L73681-3	LAKE IN	06/01/17	07/01/17	CO-58	< 2.77E+00	-1.10E+00	1.79E+00	2.77E+00	1.50E+01	pCi/L
L74021-2	LAKE IN	07/01/17	08/01/17	CO-58	< 3.96E+00	-2.00E+00	2.55E+00	3.96E+00	1.50E+01	pCi/L
L74390-2	LAKE IN	08/01/17	09/01/17	CO-58	< 8.80E-01	8.23E-02	5.22E-01	8.80E-01	1.50E+01	pCi/L
L74800-2	LAKE IN	09/01/17	10/01/17	CO-58	< 2.49E+00	1.38E+00	1.47E+00	2.49E+00	1.50E+01	pCi/L
L75298-2	LAKE IN	10/01/17	11/01/17	CO-58	< 2.61E+00	-8.30E-01	1.63E+00	2.61E+00	1.50E+01	pCi/L
L75597-2	LAKE IN	11/01/17	12/01/17	CO-58	< 3.55E+00	-2.13E+00	2.27E+00	3.55E+00	1.50E+01	pCi/L
L75890-2	LAKE IN	12/01/17	01/01/18	CO-58	< 2.97E+00	7.54E-01	1.74E+00	2.97E+00	1.50E+01	pCi/L
L71572-2	LAKE IN	01/01/17	01/31/17	CO-60	< 4.48E+00	1.74E+00	2.54E+00	4.48E+00	1.50E+01	pCi/L
L71950-3	LAKE IN	02/01/17	03/01/17	CO-60	< 1.91E+00	2.34E-01	1.16E+00	1.91E+00	1.50E+01	pCi/L
L72335-2	LAKE IN	03/01/17	03/31/17	CO-60	< 1.74E+00	7.30E-01	1.00E+00	1.74E+00	1.50E+01	pCi/L
L72691-2	LAKE IN	04/01/17	04/30/17	CO-60	< 2.11E+00	1.51E-01	1.29E+00	2.11E+00	1.50E+01	pCi/L
L73153-3	LAKE IN	05/01/17	06/01/17	CO-60	< 1.84E+00	-3.60E-01	1.12E+00	1.84E+00	1.50E+01	pCi/L
L73681-3	LAKE IN	06/01/17	07/01/17	CO-60	< 1.97E+00	-5.77E-01	1.25E+00	1.97E+00	1.50E+01	pCi/L
L74021-2	LAKE IN	07/01/17	08/01/17	CO-60	< 3.23E+00	1.03E+00	1.81E+00	3.23E+00	1.50E+01	pCi/L
L74390-2	LAKE IN	08/01/17	09/01/17	CO-60	< 7.47E-01	-2.45E-01	5.06E-01	7.47E-01	1.50E+01	pCi/L
L74800-2	LAKE IN	09/01/17	10/01/17	CO-60	< 2.02E+00	7.93E-01	1.19E+00	2.02E+00	1.50E+01	pCi/L
L75298-2	LAKE IN	10/01/17	11/01/17	CO-60	< 2.02E+00	-6.19E-01	1.26E+00	2.02E+00	1.50E+01	pCi/L
L75597-2	LAKE IN	11/01/17	12/01/17	CO-60	< 3.29E+00	1.09E+00	1.91E+00	3.29E+00	1.50E+01	pCi/L
L75890-2	LAKE IN	12/01/17	01/01/18	CO-60	< 2.59E+00	-8.32E-01	1.61E+00	2.59E+00	1.50E+01	pCi/L
L71572-2	LAKE IN	01/01/17	01/31/17	CS-134	< 3.43E+00	-1.48E+00	2.63E+00	3.43E+00	1.50E+01	pCi/L
L71950-3	LAKE IN	02/01/17	03/01/17	CS-134	< 1.95E+00	5.30E-01	1.17E+00	1.95E+00	1.50E+01	pCi/L
L72335-2	LAKE IN	03/01/17	03/31/17	CS-134	< 1.82E+00	1.77E-01	1.10E+00	1.82E+00	1.50E+01	pCi/L
L72691-2	LAKE IN	04/01/17	04/30/17	CS-134	< 2.29E+00	-1.41E-02	1.41E+00	2.29E+00	1.50E+01	pCi/L
L73153-3	LAKE IN	05/01/17	06/01/17	CS-134	< 2.09E+00	9.33E-02	1.26E+00	2.09E+00	1.50E+01	pCi/L
L73681-3	LAKE IN	06/01/17	07/01/17	CS-134	< 2.67E+00	1.31E+00	1.57E+00	2.67E+00	1.50E+01	pCi/L
L74021-2	LAKE IN	07/01/17	08/01/17	CS-134	< 3.97E+00	2.30E+00	2.21E+00	3.97E+00	1.50E+01	pCi/L
L74390-2	LAKE IN	08/01/17	09/01/17	CS-134	< 8.32E-01	-4.89E-01	5.50E-01	8.32E-01	1.50E+01	pCi/L
L74800-2	LAKE IN	09/01/17	10/01/17	CS-134	< 2.08E+00	-2.42E-01	1.28E+00	2.08E+00	1.50E+01	pCi/L
L75298-2	LAKE IN	10/01/17	11/01/17	CS-134	< 2.37E+00	-1.00E+00	1.49E+00	2.37E+00	1.50E+01	pCi/L
L75597-2	LAKE IN	11/01/17	12/01/17	CS-134	< 3.59E+00	1.25E+00	2.10E+00	3.59E+00	1.50E+01	pCi/L
L75890-2	LAKE IN	12/01/17	01/01/18	CS-134	< 3.02E+00	1.13E+00	1.83E+00	3.02E+00	1.50E+01	pCi/L
L71572-2	LAKE IN	01/01/17	01/31/17	CS-137	< 4.27E+00	-1.56E+00	2.81E+00	4.27E+00	1.80E+01	pCi/L

L71950-3	LAKE IN	02/01/17	03/01/17	CS-137	< 1.76E+00	-5.59E-01	1.10E+00	1.76E+00	1.80E+01	pCi/L
L72335-2	LAKE IN	03/01/17	03/31/17	CS-137	< 1.81E+00	7.33E-01	1.07E+00	1.81E+00	1.80E+01	pCi/L
L72691-2	LAKE IN	04/01/17	04/30/17	CS-137	< 2.15E+00	8.55E-01	1.27E+00	2.15E+00	1.80E+01	pCi/L
L73153-3	LAKE IN	05/01/17	06/01/17	CS-137	< 1.94E+00	2.05E-01	1.16E+00	1.94E+00	1.80E+01	pCi/L
L73681-3	LAKE IN	06/01/17	07/01/17	CS-137	< 2.21E+00	-1.18E-01	1.35E+00	2.21E+00	1.80E+01	pCi/L
L74021-2	LAKE IN	07/01/17	08/01/17	CS-137	< 3.34E+00	-2.05E-01	2.01E+00	3.34E+00	1.80E+01	pCi/L
L74390-2	LAKE IN	08/01/17	09/01/17	CS-137	< 8.51E-01	1.59E-01	4.94E-01	8.51E-01	1.80E+01	pCi/L
L74800-2	LAKE IN	09/01/17	10/01/17	CS-137	< 2.01E+00	6.41E-01	1.19E+00	2.01E+00	1.80E+01	pCi/L
L75298-2	LAKE IN	10/01/17	11/01/17	CS-137	< 2.54E+00	2.09E+00	1.42E+00	2.54E+00	1.80E+01	pCi/L
L75597-2	LAKE IN	11/01/17	12/01/17	CS-137	< 3.26E+00	-9.93E-02	1.95E+00	3.26E+00	1.80E+01	pCi/L
L75890-2	LAKE IN	12/01/17	01/01/18	CS-137	< 2.61E+00	-2.72E-01	1.61E+00	2.61E+00	1.80E+01	pCi/L
L71572-2	LAKE IN	01/01/17	01/31/17	FE-59	< 1.01E+01	-1.39E+00	6.35E+00	1.01E+01	3.00E+01	pCi/L
L71950-3	LAKE IN	02/01/17	03/01/17	FE-59	< 4.88E+00	1.14E-01	2.99E+00	4.88E+00	3.00E+01	pCi/L
L72335-2	LAKE IN	03/01/17	03/31/17	FE-59	< 4.49E+00	-1.30E-02	2.77E+00	4.49E+00	3.00E+01	pCi/L
L72691-2	LAKE IN	04/01/17	04/30/17	FE-59	< 5.69E+00	3.69E+00	3.29E+00	5.69E+00	3.00E+01	pCi/L
L73153-3	LAKE IN	05/01/17	06/01/17	FE-59	< 5.67E+00	9.36E-01	3.45E+00	5.67E+00	3.00E+01	pCi/L
L73681-3	LAKE IN	06/01/17	07/01/17	FE-59	< 6.25E+00	6.98E-01	3.69E+00	6.25E+00	3.00E+01	pCi/L
L74021-2	LAKE IN	07/01/17	08/01/17	FE-59	< 7.91E+00	-4.91E+00	5.39E+00	7.91E+00	3.00E+01	pCi/L
L74390-2	LAKE IN	08/01/17	09/01/17	FE-59	< 2.12E+00	-1.10E+00	1.44E+00	2.12E+00	3.00E+01	pCi/L
L74800-2	LAKE IN	09/01/17	10/01/17	FE-59	< 5.74E+00	3.55E+00	3.81E+00	5.74E+00	3.00E+01	pCi/L
L75298-2	LAKE IN	10/01/17	11/01/17	FE-59	< 5.97E+00	-1.84E+00	3.81E+00	5.97E+00	3.00E+01	pCi/L
L75597-2	LAKE IN	11/01/17	12/01/17	FE-59	< 8.51E+00	1.13E+00	5.19E+00	8.51E+00	3.00E+01	pCi/L
L75890-2	LAKE IN	12/01/17	01/01/18	FE-59	< 6.59E+00	3.40E+00	3.83E+00	6.59E+00	3.00E+01	pCi/L
L71572-2	LAKE IN	01/01/17	01/31/17	GR-B	< 2.46E+00	4.78E-01	1.53E+00	2.46E+00	4.00E+00	pCi/L
L71950-3	LAKE IN	02/01/17	03/01/17	GR-B	< 2.05E+00	1.99E+00	1.41E+00	2.05E+00	4.00E+00	pCi/L
L72335-2	LAKE IN	03/01/17	03/31/17	GR-B	< 2.37E+00	2.18E+00	1.52E+00	2.37E+00	4.00E+00	pCi/L
L72691-2	LAKE IN	04/01/17	04/30/17	GR-B	< 2.47E+00	2.07E+00	1.57E+00	2.47E+00	4.00E+00	pCi/L
L73153-3	LAKE IN	05/01/17	06/01/17	GR-B	2.75E+00	2.75E+00	1.47E+00	2.16E+00	4.00E+00	pCi/L
L73681-3	LAKE IN	06/01/17	07/01/17	GR-B	2.36E+00	2.36E+00	1.44E+00	2.20E+00	4.00E+00	pCi/L
L74021-2	LAKE IN	07/01/17	08/01/17	GR-B	2.77E+00	2.77E+00	1.50E+00	2.24E+00	4.00E+00	pCi/L
L74390-2	LAKE IN	08/01/17	09/01/17	GR-B	2.57E+00	2.57E+00	1.44E+00	2.15E+00	4.00E+00	pCi/L
L74800-2	LAKE IN	09/01/17	10/01/17	GR-B	2.78E+00	2.78E+00	1.36E+00	1.98E+00	4.00E+00	pCi/L
L75298-2	LAKE IN	10/01/17	11/01/17	GR-B	< 2.22E+00	1.89E+00	1.42E+00	2.22E+00	4.00E+00	pCi/L
L75597-2	LAKE IN	11/01/17	12/01/17	GR-B	2.71E+00	2.71E+00	1.37E+00	1.98E+00	4.00E+00	pCi/L
L75890-2	LAKE IN	12/01/17	01/01/18	GR-B	2.91E+00	2.91E+00	1.41E+00	2.04E+00	4.00E+00	pCi/L
L71572-2	LAKE IN	01/01/17	01/31/17	H-3 (DIST)	< 2.61E+02	2.50E+02	1.79E+02	2.61E+02	2.00E+03	pCi/L
L71950-3	LAKE IN	02/01/17	03/01/17	H-3 (DIST)	< 5.73E+02	1.23E+02	3.69E+02	5.73E+02	2.00E+03	pCi/L
L72335-2	LAKE IN	03/01/17	03/31/17	H-3 (DIST)	< 7.13E+02	-7.93E+01	3.73E+02	7.13E+02	2.00E+03	pCi/L
L72691-2	LAKE IN	04/01/17	04/30/17	H-3 (DIST)	< 7.14E+02	1.53E+01	3.84E+02	7.14E+02	2.00E+03	pCi/L
L73153-3	LAKE IN	05/01/17	06/01/17	H-3 (DIST)	< 5.97E+02	-3.56E+01	3.09E+02	5.97E+02	2.00E+03	pCi/L

L73681-3	LAKE IN	06/01/17	07/01/17	H-3 (DIST)	< 5.48E+02	7.67E+01	3.01E+02	5.48E+02	2.00E+03	pCi/L
L74021-2	LAKE IN	07/01/17	08/01/17	H-3 (DIST)	< 5.65E+02	3.07E+02	3.48E+02	5.65E+02	2.00E+03	pCi/L
L74390-2	LAKE IN	08/01/17	09/01/17	H-3 (DIST)	< 6.66E+02	-3.27E+01	3.47E+02	6.66E+02	2.00E+03	pCi/L
L74800-2	LAKE IN	09/01/17	10/01/17	H-3 (DIST)	< 6.50E+02	1.28E+02	3.66E+02	6.50E+02	2.00E+03	pCi/L
L75298-2	LAKE IN	10/01/17	11/01/17	H-3 (DIST)	< 6.72E+02	-4.26E+00	3.49E+02	6.72E+02	2.00E+03	pCi/L
L75597-2	LAKE IN	11/01/17	12/01/17	H-3 (DIST)	< 6.58E+02	1.13E+02	3.63E+02	6.58E+02	2.00E+03	pCi/L
L75890-2	LAKE IN	12/01/17	01/01/18	H-3 (DIST)	< 6.82E+02	3.80E+01	3.68E+02	6.82E+02	2.00E+03	pCi/L
L71572-2	LAKE IN	01/01/17	01/31/17	MN-54	< 3.92E+00	-9.70E-01	2.44E+00	3.92E+00	1.50E+01	pCi/L
L71950-3	LAKE IN	02/01/17	03/01/17	MN-54	< 1.66E+00	-1.17E+00	1.08E+00	1.66E+00	1.50E+01	pCi/L
L72335-2	LAKE IN	03/01/17	03/31/17	MN-54	< 1.77E+00	5.53E-01	1.05E+00	1.77E+00	1.50E+01	pCi/L
L72691-2	LAKE IN	04/01/17	04/30/17	MN-54	< 2.02E+00	1.81E-01	1.24E+00	2.02E+00	1.50E+01	pCi/L
L73153-3	LAKE IN	05/01/17	06/01/17	MN-54	< 1.93E+00	-1.79E-01	1.18E+00	1.93E+00	1.50E+01	pCi/L
L73681-3	LAKE IN	06/01/17	07/01/17	MN-54	< 2.22E+00	-2.09E-01	1.39E+00	2.22E+00	1.50E+01	pCi/L
L74021-2	LAKE IN	07/01/17	08/01/17	MN-54	< 3.31E+00	-7.09E-02	2.01E+00	3.31E+00	1.50E+01	pCi/L
L74390-2	LAKE IN	08/01/17	09/01/17	MN-54	< 7.05E-01	-2.47E-01	4.54E-01	7.05E-01	1.50E+01	pCi/L
L74800-2	LAKE IN	09/01/17	10/01/17	MN-54	< 1.91E+00	-2.48E-01	1.18E+00	1.91E+00	1.50E+01	pCi/L
L75298-2	LAKE IN	10/01/17	11/01/17	MN-54	< 2.23E+00	4.43E-01	1.33E+00	2.23E+00	1.50E+01	pCi/L
L75597-2	LAKE IN	11/01/17	12/01/17	MN-54	< 3.10E+00	-1.55E-01	1.89E+00	3.10E+00	1.50E+01	pCi/L
L75890-2	LAKE IN	12/01/17	01/01/18	MN-54	< 2.49E+00	6.11E-01	1.46E+00	2.49E+00	1.50E+01	pCi/L
L71572-2	LAKE IN	01/01/17	01/31/17	NB-95	< 5.07E+00	3.13E-01	2.99E+00	5.07E+00	1.50E+01	pCi/L
L71950-3	LAKE IN	02/01/17	03/01/17	NB-95	< 2.22E+00	6.40E-01	1.32E+00	2.22E+00	1.50E+01	pCi/L
L72335-2	LAKE IN	03/01/17	03/31/17	NB-95	< 2.16E+00	1.54E+00	1.25E+00	2.16E+00	1.50E+01	pCi/L
L72691-2	LAKE IN	04/01/17	04/30/17	NB-95	< 2.37E+00	-7.72E-01	1.49E+00	2.37E+00	1.50E+01	pCi/L
L73153-3	LAKE IN	05/01/17	06/01/17	NB-95	< 2.50E+00	1.32E+00	1.46E+00	2.50E+00	1.50E+01	pCi/L
L73681-3	LAKE IN	06/01/17	07/01/17	NB-95	< 2.89E+00	-7.20E-01	1.83E+00	2.89E+00	1.50E+01	pCi/L
L74021-2	LAKE IN	07/01/17	08/01/17	NB-95	< 4.48E+00	1.10E+00	2.62E+00	4.48E+00	1.50E+01	pCi/L
L74390-2	LAKE IN	08/01/17	09/01/17	NB-95	< 9.93E-01	-6.43E-02	6.04E-01	9.93E-01	1.50E+01	pCi/L
L74800-2	LAKE IN	09/01/17	10/01/17	NB-95	< 2.40E+00	1.90E-01	1.45E+00	2.40E+00	1.50E+01	pCi/L
L75298-2	LAKE IN	10/01/17	11/01/17	NB-95	< 2.87E+00	5.08E-01	1.70E+00	2.87E+00	1.50E+01	pCi/L
L75597-2	LAKE IN	11/01/17	12/01/17	NB-95	< 3.80E+00	-1.37E+00	2.37E+00	3.80E+00	1.50E+01	pCi/L
L75890-2	LAKE IN	12/01/17	01/01/18	NB-95	< 3.11E+00	1.07E+00	1.87E+00	3.11E+00	1.50E+01	pCi/L
L71950-3	LAKE IN	02/01/17	03/01/17	RA-226	5.69E+01	5.69E+01	4.11E+01	4.37E+01		pCi/L
L75890-2	LAKE IN	12/01/17	01/01/18	RA-226	5.68E+01	5.68E+01	4.18E+01	5.60E+01		pCi/L
L72691-2	LAKE IN	04/01/17	04/30/17	TH-228	5.80E+00	5.80E+00	3.18E+00	3.61E+00		pCi/L
L75597-2	LAKE IN	11/01/17	12/01/17	TH-228	4.86E+00	4.86E+00	4.43E+00	4.39E+00		pCi/L
L71572-2	LAKE IN	01/01/17	01/31/17	ZN-65	< 7.62E+00	-6.86E+00	5.47E+00	7.62E+00	3.00E+01	pCi/L
L71950-3	LAKE IN	02/01/17	03/01/17	ZN-65	< 3.69E+00	-1.17E+00	2.35E+00	3.69E+00	3.00E+01	pCi/L
L72335-2	LAKE IN	03/01/17	03/31/17	ZN-65	< 3.36E+00	-5.04E+00	2.32E+00	3.36E+00	3.00E+01	pCi/L
L72691-2	LAKE IN	04/01/17	04/30/17	ZN-65	< 4.46E+00	5.75E-01	3.14E+00	4.46E+00	3.00E+01	pCi/L
L73153-3	LAKE IN	05/01/17	06/01/17	ZN-65	< 3.83E+00	3.52E-01	2.74E+00	3.83E+00	3.00E+01	pCi/L

L73681-3	LAKE IN	06/01/17	07/01/17	ZN-65	< 4.69E+00	-2.82E+00	3.01E+00	4.69E+00	3.00E+01	pCi/L
L74021-2	LAKE IN	07/01/17	08/01/17	ZN-65	< 6.35E+00	-1.14E+00	4.72E+00	6.35E+00	3.00E+01	pCi/L
L74390-2	LAKE IN	08/01/17	09/01/17	ZN-65	< 1.75E+00	6.45E-01	9.97E-01	1.75E+00	3.00E+01	pCi/L
L74800-2	LAKE IN	09/01/17	10/01/17	ZN-65	< 4.16E+00	-8.15E-02	2.93E+00	4.16E+00	3.00E+01	pCi/L
L75298-2	LAKE IN	10/01/17	11/01/17	ZN-65	< 4.43E+00	1.16E+00	3.07E+00	4.43E+00	3.00E+01	pCi/L
L75597-2	LAKE IN	11/01/17	12/01/17	ZN-65	< 6.31E+00	-4.48E+00	4.04E+00	6.31E+00	3.00E+01	pCi/L
L75890-2	LAKE IN	12/01/17	01/01/18	ZN-65	< 5.53E+00	1.41E-01	3.38E+00	5.53E+00	3.00E+01	pCi/L
L71572-2	LAKE IN	01/01/17	01/31/17	ZR-95	< 8.64E+00	4.56E+00	4.74E+00	8.64E+00	3.00E+01	pCi/L
L71950-3	LAKE IN	02/01/17	03/01/17	ZR-95	< 3.79E+00	1.14E-01	2.31E+00	3.79E+00	3.00E+01	pCi/L
L72335-2	LAKE IN	03/01/17	03/31/17	ZR-95	< 3.67E+00	1.92E+00	2.15E+00	3.67E+00	3.00E+01	pCi/L
L72691-2	LAKE IN	04/01/17	04/30/17	ZR-95	< 4.24E+00	-3.15E-01	2.62E+00	4.24E+00	3.00E+01	pCi/L
L73153-3	LAKE IN	05/01/17	06/01/17	ZR-95	< 4.26E+00	-1.05E-01	2.57E+00	4.26E+00	3.00E+01	pCi/L
L73681-3	LAKE IN	06/01/17	07/01/17	ZR-95	< 4.98E+00	-5.44E-01	3.11E+00	4.98E+00	3.00E+01	pCi/L
L74021-2	LAKE IN	07/01/17	08/01/17	ZR-95	< 7.19E+00	7.49E-01	4.27E+00	7.19E+00	3.00E+01	pCi/L
L74390-2	LAKE IN	08/01/17	09/01/17	ZR-95	< 1.64E+00	-5.15E-01	1.04E+00	1.64E+00	3.00E+01	pCi/L
L74800-2	LAKE IN	09/01/17	10/01/17	ZR-95	< 4.35E+00	9.87E-01	2.60E+00	4.35E+00	3.00E+01	pCi/L
L75298-2	LAKE IN	10/01/17	11/01/17	ZR-95	< 4.68E+00	-6.04E-01	2.86E+00	4.68E+00	3.00E+01	pCi/L
L75597-2	LAKE IN	11/01/17	12/01/17	ZR-95	< 6.50E+00	-3.20E+00	4.09E+00	6.50E+00	3.00E+01	pCi/L
L75890-2	LAKE IN	12/01/17	01/01/18	ZR-95	< 5.27E+00	-1.20E+00	3.32E+00	5.27E+00	3.00E+01	pCi/L

**NORTH SEDIMENT
SEDIMENT**

LAB ID	STATION	COLLECT START	COLLECT STOP	NUCLIDE	REPORTABLE	ACTIVITY	ERROR	MDC	LLD	UNITS
L72518-2	NORTH SEDIMENT	04/17/17		CS-134	< 4.53E+01	-9.49E-03	2.72E+01	4.53E+01	1.50E+02	pCi/kg Dry
L75267-2	NORTH SEDIMENT	11/03/17		CS-134	< 6.09E+01	-1.64E+00	3.74E+01	6.09E+01	1.50E+02	pCi/kg Dry
L72518-2	NORTH SEDIMENT	04/17/17		CS-137	< 3.37E+01	-1.88E+01	2.48E+01	3.37E+01	1.80E+02	pCi/kg Dry
L75267-2	NORTH SEDIMENT	11/03/17		CS-137	< 6.70E+01	2.19E+01	3.77E+01	6.70E+01	1.80E+02	pCi/kg Dry
L72518-2	NORTH SEDIMENT	04/17/17		K-40	4.51E+03	4.51E+03	8.30E+02	3.17E+02		pCi/kg Dry
L75267-2	NORTH SEDIMENT	11/03/17		K-40	2.98E+03	2.98E+03	8.47E+02	4.69E+02		pCi/kg Dry
L72518-2	NORTH SEDIMENT	04/17/17		TH-228	1.31E+02	1.31E+02	6.22E+01	7.25E+01		pCi/kg Dry
L75267-2	NORTH SEDIMENT	11/03/17		TH-228	2.53E+02	2.53E+02	1.04E+02	9.33E+01		pCi/kg Dry
L75267-2	NORTH SEDIMENT	11/03/17		TH-232	3.94E+02	3.94E+02	1.12E+02	1.85E+02		pCi/kg Dry

**PALISADES PARK COMMERCIAL
DRINKING WATER**

LAB ID	STATION	COLLECT START	COLLECT STOP	NUCLIDE	REPORTABLE	ACTIVITY	ERROR	MDC	LLD	UNITS
L74280-2	PALISADES PARK COMMERCIAL	08/25/17		AC-228	3.20E+01	3.20E+01	2.04E+01	3.00E+01		pCi/L
L72519-2	PALISADES PARK COMMERCIAL	04/19/17		BA-LA-140	< 1.14E+01	2.92E+00	6.16E+00	1.14E+01	1.50E+01	pCi/L
L72988-2	PALISADES PARK COMMERCIAL	05/25/17		BA-LA-140	< 1.36E+01	8.48E-02	8.25E+00	1.36E+01	1.50E+01	pCi/L
L73358-2	PALISADES PARK COMMERCIAL	06/20/17		BA-LA-140	< 1.17E+01	1.06E+00	6.81E+00	1.17E+01	1.50E+01	pCi/L

L73934-2	PALISADES PARK COMMERCIAL	07/26/17	BA-LA-140	< 1.36E+01	1.44E+00	6.81E+00	1.36E+01	1.50E+01	pCi/L
L74280-2	PALISADES PARK COMMERCIAL	08/25/17	BA-LA-140	< 1.07E+01	-1.02E+01	9.43E+00	1.07E+01	1.50E+01	pCi/L
L74583-2	PALISADES PARK COMMERCIAL	09/18/17	BA-LA-140	< 1.43E+01	9.44E-01	8.61E+00	1.43E+01	1.50E+01	pCi/L
L74883-2	PALISADES PARK COMMERCIAL	10/10/17	BA-LA-140	< 1.31E+01	5.09E+00	6.60E+00	1.31E+01	1.50E+01	pCi/L
L72519-2	PALISADES PARK COMMERCIAL	04/19/17	CO-58	< 6.31E+00	-3.79E-01	3.81E+00	6.31E+00	1.50E+01	pCi/L
L72988-2	PALISADES PARK COMMERCIAL	05/25/17	CO-58	< 7.45E+00	-1.65E+00	4.78E+00	7.45E+00	1.50E+01	pCi/L
L73358-2	PALISADES PARK COMMERCIAL	06/20/17	CO-58	< 7.46E+00	-1.14E+00	4.65E+00	7.46E+00	1.50E+01	pCi/L
L73934-2	PALISADES PARK COMMERCIAL	07/26/17	CO-58	< 8.19E+00	-1.96E+00	4.80E+00	8.19E+00	1.50E+01	pCi/L
L74280-2	PALISADES PARK COMMERCIAL	08/25/17	CO-58	< 1.03E+01	5.76E+00	5.35E+00	1.03E+01	1.50E+01	pCi/L
L74583-2	PALISADES PARK COMMERCIAL	09/18/17	CO-58	< 6.98E+00	-1.81E+00	4.46E+00	6.98E+00	1.50E+01	pCi/L
L74883-2	PALISADES PARK COMMERCIAL	10/10/17	CO-58	< 9.40E+00	2.32E+00	5.36E+00	9.40E+00	1.50E+01	pCi/L
L72519-2	PALISADES PARK COMMERCIAL	04/19/17	CO-60	< 4.91E+00	1.83E-01	2.97E+00	4.91E+00	1.50E+01	pCi/L
L72988-2	PALISADES PARK COMMERCIAL	05/25/17	CO-60	< 8.41E+00	2.27E+00	4.58E+00	8.41E+00	1.50E+01	pCi/L
L73358-2	PALISADES PARK COMMERCIAL	06/20/17	CO-60	< 9.85E+00	4.64E+00	5.13E+00	9.85E+00	1.50E+01	pCi/L
L73934-2	PALISADES PARK COMMERCIAL	07/26/17	CO-60	< 9.01E+00	-5.08E+00	5.53E+00	9.01E+00	1.50E+01	pCi/L
L74280-2	PALISADES PARK COMMERCIAL	08/25/17	CO-60	< 7.57E+00	-8.48E-01	4.77E+00	7.57E+00	1.50E+01	pCi/L
L74583-2	PALISADES PARK COMMERCIAL	09/18/17	CO-60	< 7.67E+00	5.72E-01	4.55E+00	7.67E+00	1.50E+01	pCi/L
L74883-2	PALISADES PARK COMMERCIAL	10/10/17	CO-60	< 8.94E+00	-2.61E+00	5.90E+00	8.94E+00	1.50E+01	pCi/L
L72519-2	PALISADES PARK COMMERCIAL	04/19/17	CS-134	< 6.05E+00	-3.14E+00	4.40E+00	6.05E+00	1.50E+01	pCi/L
L72988-2	PALISADES PARK COMMERCIAL	05/25/17	CS-134	< 9.88E+00	2.78E+00	5.58E+00	9.88E+00	1.50E+01	pCi/L
L73358-2	PALISADES PARK COMMERCIAL	06/20/17	CS-134	< 8.28E+00	4.37E-01	4.87E+00	8.28E+00	1.50E+01	pCi/L
L73934-2	PALISADES PARK COMMERCIAL	07/26/17	CS-134	< 8.53E+00	1.36E+00	4.56E+00	8.53E+00	1.50E+01	pCi/L
L74280-2	PALISADES PARK COMMERCIAL	08/25/17	CS-134	< 8.64E+00	-1.84E+00	5.61E+00	8.64E+00	1.50E+01	pCi/L
L74583-2	PALISADES PARK COMMERCIAL	09/18/17	CS-134	< 8.22E+00	-2.97E-01	4.95E+00	8.22E+00	1.50E+01	pCi/L
L74883-2	PALISADES PARK COMMERCIAL	10/10/17	CS-134	< 1.09E+01	-1.42E+00	6.77E+00	1.09E+01	1.50E+01	pCi/L
L72519-2	PALISADES PARK COMMERCIAL	04/19/17	CS-137	< 7.37E+00	1.98E+00	4.26E+00	7.37E+00	1.80E+01	pCi/L
L72988-2	PALISADES PARK COMMERCIAL	05/25/17	CS-137	< 8.32E+00	1.76E+00	4.73E+00	8.32E+00	1.80E+01	pCi/L
L73358-2	PALISADES PARK COMMERCIAL	06/20/17	CS-137	< 8.34E+00	5.38E-01	5.06E+00	8.34E+00	1.80E+01	pCi/L
L73934-2	PALISADES PARK COMMERCIAL	07/26/17	CS-137	< 8.27E+00	-2.28E+00	4.87E+00	8.27E+00	1.80E+01	pCi/L
L74280-2	PALISADES PARK COMMERCIAL	08/25/17	CS-137	< 1.18E+01	6.85E+00	6.23E+00	1.18E+01	1.80E+01	pCi/L
L74583-2	PALISADES PARK COMMERCIAL	09/18/17	CS-137	< 7.80E+00	-1.40E+00	5.02E+00	7.80E+00	1.80E+01	pCi/L
L74883-2	PALISADES PARK COMMERCIAL	10/10/17	CS-137	< 8.91E+00	-1.09E-01	5.35E+00	8.91E+00	1.80E+01	pCi/L
L72519-2	PALISADES PARK COMMERCIAL	04/19/17	FE-59	< 1.46E+01	1.55E+00	8.60E+00	1.46E+01	3.00E+01	pCi/L
L72988-2	PALISADES PARK COMMERCIAL	05/25/17	FE-59	< 9.24E+00	-6.86E+00	7.64E+00	9.24E+00	3.00E+01	pCi/L
L73358-2	PALISADES PARK COMMERCIAL	06/20/17	FE-59	< 1.39E+01	-3.66E+00	9.28E+00	1.39E+01	3.00E+01	pCi/L
L73934-2	PALISADES PARK COMMERCIAL	07/26/17	FE-59	< 1.73E+01	1.83E+00	9.32E+00	1.73E+01	3.00E+01	pCi/L
L74280-2	PALISADES PARK COMMERCIAL	08/25/17	FE-59	< 2.09E+01	7.76E+00	1.15E+01	2.09E+01	3.00E+01	pCi/L
L74583-2	PALISADES PARK COMMERCIAL	09/18/17	FE-59	< 1.79E+01	2.34E+00	1.05E+01	1.79E+01	3.00E+01	pCi/L
L74883-2	PALISADES PARK COMMERCIAL	10/10/17	FE-59	< 1.90E+01	4.73E+00	1.09E+01	1.90E+01	3.00E+01	pCi/L
L72519-2	PALISADES PARK COMMERCIAL	04/19/17	GR-B	3.69E+00	3.69E+00	2.06E+00	3.12E+00	4.00E+00	pCi/L

L72988-2	PALISADES PARK COMMERCIAL	05/25/17	GR-B	< 2.82E+00	2.30E+00	1.80E+00	2.82E+00	4.00E+00	pCi/L
L73358-2	PALISADES PARK COMMERCIAL	06/20/17	GR-B	< 2.82E+00	2.75E+00	1.84E+00	2.82E+00	4.00E+00	pCi/L
L73934-2	PALISADES PARK COMMERCIAL	07/26/17	GR-B	< 3.36E+00	5.84E-01	1.95E+00	3.36E+00	4.00E+00	pCi/L
L74280-2	PALISADES PARK COMMERCIAL	08/25/17	GR-B	2.88E+00	2.88E+00	1.80E+00	2.73E+00	4.00E+00	pCi/L
L74583-2	PALISADES PARK COMMERCIAL	09/18/17	GR-B	< 3.24E+00	2.49E+00	2.04E+00	3.24E+00	4.00E+00	pCi/L
L74883-2	PALISADES PARK COMMERCIAL	10/10/17	GR-B	3.99E+00	3.99E+00	1.94E+00	2.82E+00	4.00E+00	pCi/L
L72519-2	PALISADES PARK COMMERCIAL	04/19/17	H-3 (DIST)	< 7.44E+02	-5.81E+01	3.71E+02	7.44E+02	2.00E+03	pCi/L
L72988-2	PALISADES PARK COMMERCIAL	05/25/17	H-3 (DIST)	< 2.68E+02	-1.55E+01	1.53E+02	2.68E+02	2.00E+03	pCi/L
L73358-2	PALISADES PARK COMMERCIAL	06/20/17	H-3 (DIST)	< 5.53E+02	-1.39E+02	2.80E+02	5.53E+02	2.00E+03	pCi/L
L73934-2	PALISADES PARK COMMERCIAL	07/26/17	H-3 (DIST)	< 7.15E+02	1.07E+02	4.00E+02	7.15E+02	2.00E+03	pCi/L
L74280-2	PALISADES PARK COMMERCIAL	08/25/17	H-3 (DIST)	< 7.08E+02	-8.35E+01	3.66E+02	7.08E+02	2.00E+03	pCi/L
L74583-2	PALISADES PARK COMMERCIAL	09/18/17	H-3 (DIST)	< 5.86E+02	1.82E+02	3.42E+02	5.86E+02	2.00E+03	pCi/L
L74883-2	PALISADES PARK COMMERCIAL	10/10/17	H-3 (DIST)	< 5.46E+02	-1.22E+01	2.61E+02	5.46E+02	2.00E+03	pCi/L
L72519-2	PALISADES PARK COMMERCIAL	04/19/17	MN-54	< 5.49E+00	3.90E-01	3.20E+00	5.49E+00	1.50E+01	pCi/L
L72988-2	PALISADES PARK COMMERCIAL	05/25/17	MN-54	< 7.75E+00	-1.88E-01	4.73E+00	7.75E+00	1.50E+01	pCi/L
L73358-2	PALISADES PARK COMMERCIAL	06/20/17	MN-54	< 6.94E+00	-4.86E+00	4.94E+00	6.94E+00	1.50E+01	pCi/L
L73934-2	PALISADES PARK COMMERCIAL	07/26/17	MN-54	< 8.12E+00	1.27E+00	4.38E+00	8.12E+00	1.50E+01	pCi/L
L74280-2	PALISADES PARK COMMERCIAL	08/25/17	MN-54	< 9.06E+00	2.39E+00	5.12E+00	9.06E+00	1.50E+01	pCi/L
L74583-2	PALISADES PARK COMMERCIAL	09/18/17	MN-54	< 8.49E+00	-6.79E-02	5.08E+00	8.49E+00	1.50E+01	pCi/L
L74883-2	PALISADES PARK COMMERCIAL	10/10/17	MN-54	< 7.99E+00	-7.07E-01	5.09E+00	7.99E+00	1.50E+01	pCi/L
L72519-2	PALISADES PARK COMMERCIAL	04/19/17	NB-95	< 6.23E+00	-3.53E-01	3.95E+00	6.23E+00	1.50E+01	pCi/L
L72988-2	PALISADES PARK COMMERCIAL	05/25/17	NB-95	< 8.31E+00	3.23E+00	4.52E+00	8.31E+00	1.50E+01	pCi/L
L73358-2	PALISADES PARK COMMERCIAL	06/20/17	NB-95	< 7.12E+00	-1.76E+00	4.53E+00	7.12E+00	1.50E+01	pCi/L
L73934-2	PALISADES PARK COMMERCIAL	07/26/17	NB-95	< 9.29E+00	2.88E+00	4.93E+00	9.29E+00	1.50E+01	pCi/L
L74280-2	PALISADES PARK COMMERCIAL	08/25/17	NB-95	< 9.64E+00	1.59E-01	5.83E+00	9.64E+00	1.50E+01	pCi/L
L74583-2	PALISADES PARK COMMERCIAL	09/18/17	NB-95	< 7.32E+00	1.40E-01	4.51E+00	7.32E+00	1.50E+01	pCi/L
L74883-2	PALISADES PARK COMMERCIAL	10/10/17	NB-95	< 8.13E+00	-1.36E+00	5.13E+00	8.13E+00	1.50E+01	pCi/L
L72519-2	PALISADES PARK COMMERCIAL	04/19/17	ZN-65	< 1.33E+01	4.11E-01	8.00E+00	1.33E+01	3.00E+01	pCi/L
L72988-2	PALISADES PARK COMMERCIAL	05/25/17	ZN-65	< 1.44E+01	-3.16E+00	9.53E+00	1.44E+01	3.00E+01	pCi/L
L73358-2	PALISADES PARK COMMERCIAL	06/20/17	ZN-65	< 1.12E+01	-5.76E+00	1.01E+01	1.12E+01	3.00E+01	pCi/L
L73934-2	PALISADES PARK COMMERCIAL	07/26/17	ZN-65	< 1.60E+01	-1.49E+01	1.09E+01	1.60E+01	3.00E+01	pCi/L
L74280-2	PALISADES PARK COMMERCIAL	08/25/17	ZN-65	< 1.79E+01	-3.26E+00	1.13E+01	1.79E+01	3.00E+01	pCi/L
L74583-2	PALISADES PARK COMMERCIAL	09/18/17	ZN-65	< 1.36E+01	-6.47E+00	9.52E+00	1.36E+01	3.00E+01	pCi/L
L74883-2	PALISADES PARK COMMERCIAL	10/10/17	ZN-65	< 1.54E+01	-4.31E+00	1.05E+01	1.54E+01	3.00E+01	pCi/L
L72519-2	PALISADES PARK COMMERCIAL	04/19/17	ZR-95	< 1.05E+01	-1.17E+00	6.75E+00	1.05E+01	3.00E+01	pCi/L
L72988-2	PALISADES PARK COMMERCIAL	05/25/17	ZR-95	< 1.61E+01	4.54E+00	9.05E+00	1.61E+01	3.00E+01	pCi/L
L73358-2	PALISADES PARK COMMERCIAL	06/20/17	ZR-95	< 1.37E+01	-4.62E-01	8.60E+00	1.37E+01	3.00E+01	pCi/L
L73934-2	PALISADES PARK COMMERCIAL	07/26/17	ZR-95	< 1.51E+01	-6.32E-01	8.51E+00	1.51E+01	3.00E+01	pCi/L
L74280-2	PALISADES PARK COMMERCIAL	08/25/17	ZR-95	< 1.42E+01	-5.94E+00	9.67E+00	1.42E+01	3.00E+01	pCi/L
L74583-2	PALISADES PARK COMMERCIAL	09/18/17	ZR-95	< 1.32E+01	-2.41E+00	8.54E+00	1.32E+01	3.00E+01	pCi/L

L74883-2 PALISADES PARK COMMERCIAL 10/10/17 ZR-95 < 1.56E+01 1.20E+00 9.27E+00 1.56E+01 3.00E+01 pCi/L

**PALISADES PARK COMMUNITY
DRINKING WATER**

LAB ID	STATION	COLLECT START	COLLECT STOP	NUCLIDE	REPORTABLE	ACTIVITY	ERROR	MDC	LLD	UNITS
L72519-1	PALISADES PARK COMMUNITY	04/19/17		BA-LA-140	< 1.49E+01	-1.65E+00	9.17E+00	1.49E+01	1.50E+01	pCi/L
L72988-1	PALISADES PARK COMMUNITY	05/25/17		BA-LA-140	< 1.12E+01	-2.48E+00	7.37E+00	1.12E+01	1.50E+01	pCi/L
L73358-1	PALISADES PARK COMMUNITY	06/20/17		BA-LA-140	< 7.19E+00	-6.71E+00	7.01E+00	7.19E+00	1.50E+01	pCi/L
L73934-1	PALISADES PARK COMMUNITY	07/26/17		BA-LA-140	< 1.35E+01	-5.74E+00	9.41E+00	1.35E+01	1.50E+01	pCi/L
L74280-1	PALISADES PARK COMMUNITY	08/25/17		BA-LA-140	< 8.62E+00	1.67E-01	5.15E+00	8.62E+00	1.50E+01	pCi/L
L74583-1	PALISADES PARK COMMUNITY	09/18/17		BA-LA-140	< 1.04E+01	-5.95E-01	6.38E+00	1.04E+01	1.50E+01	pCi/L
L74883-1	PALISADES PARK COMMUNITY	10/10/17		BA-LA-140	< 1.12E+01	-2.16E+00	7.47E+00	1.12E+01	1.50E+01	pCi/L
L72519-1	PALISADES PARK COMMUNITY	04/19/17		CO-58	< 8.62E+00	-2.66E+00	5.71E+00	8.62E+00	1.50E+01	pCi/L
L72988-1	PALISADES PARK COMMUNITY	05/25/17		CO-58	< 6.53E+00	-6.50E-01	4.13E+00	6.53E+00	1.50E+01	pCi/L
L73358-1	PALISADES PARK COMMUNITY	06/20/17		CO-58	< 7.04E+00	1.04E+00	4.03E+00	7.04E+00	1.50E+01	pCi/L
L73934-1	PALISADES PARK COMMUNITY	07/26/17		CO-58	< 9.86E+00	3.39E-01	6.05E+00	9.86E+00	1.50E+01	pCi/L
L74280-1	PALISADES PARK COMMUNITY	08/25/17		CO-58	< 5.15E+00	1.23E-01	3.15E+00	5.15E+00	1.50E+01	pCi/L
L74583-1	PALISADES PARK COMMUNITY	09/18/17		CO-58	< 8.32E+00	2.99E+00	4.48E+00	8.32E+00	1.50E+01	pCi/L
L74883-1	PALISADES PARK COMMUNITY	10/10/17		CO-58	< 8.03E+00	1.76E+00	4.45E+00	8.03E+00	1.50E+01	pCi/L
L72519-1	PALISADES PARK COMMUNITY	04/19/17		CO-60	< 8.18E+00	-4.14E-01	5.09E+00	8.18E+00	1.50E+01	pCi/L
L72988-1	PALISADES PARK COMMUNITY	05/25/17		CO-60	< 5.34E+00	3.20E-01	3.08E+00	5.34E+00	1.50E+01	pCi/L
L73358-1	PALISADES PARK COMMUNITY	06/20/17		CO-60	< 9.76E+00	3.46E+00	5.12E+00	9.76E+00	1.50E+01	pCi/L
L73934-1	PALISADES PARK COMMUNITY	07/26/17		CO-60	< 9.05E+00	-2.18E-01	5.59E+00	9.05E+00	1.50E+01	pCi/L
L74280-1	PALISADES PARK COMMUNITY	08/25/17		CO-60	< 5.26E+00	-1.47E+00	3.57E+00	5.26E+00	1.50E+01	pCi/L
L74583-1	PALISADES PARK COMMUNITY	09/18/17		CO-60	< 5.03E+00	-2.74E+00	4.11E+00	5.03E+00	1.50E+01	pCi/L
L74883-1	PALISADES PARK COMMUNITY	10/10/17		CO-60	< 8.77E+00	2.30E+00	4.61E+00	8.77E+00	1.50E+01	pCi/L
L72519-1	PALISADES PARK COMMUNITY	04/19/17		CS-134	< 8.52E+00	1.73E+00	5.00E+00	8.52E+00	1.50E+01	pCi/L
L72988-1	PALISADES PARK COMMUNITY	05/25/17		CS-134	< 8.67E+00	1.11E+00	5.11E+00	8.67E+00	1.50E+01	pCi/L
L73358-1	PALISADES PARK COMMUNITY	06/20/17		CS-134	< 8.25E+00	3.55E+00	4.24E+00	8.25E+00	1.50E+01	pCi/L
L73934-1	PALISADES PARK COMMUNITY	07/26/17		CS-134	< 1.05E+01	8.79E-01	6.37E+00	1.05E+01	1.50E+01	pCi/L
L74280-1	PALISADES PARK COMMUNITY	08/25/17		CS-134	< 5.34E+00	1.97E+00	2.89E+00	5.34E+00	1.50E+01	pCi/L
L74583-1	PALISADES PARK COMMUNITY	09/18/17		CS-134	< 8.38E+00	2.26E+00	4.61E+00	8.38E+00	1.50E+01	pCi/L
L74883-1	PALISADES PARK COMMUNITY	10/10/17		CS-134	< 6.51E+00	-3.52E+00	4.78E+00	6.51E+00	1.50E+01	pCi/L
L72519-1	PALISADES PARK COMMUNITY	04/19/17		CS-137	< 8.79E+00	2.65E+00	5.05E+00	8.79E+00	1.80E+01	pCi/L
L72988-1	PALISADES PARK COMMUNITY	05/25/17		CS-137	< 7.41E+00	-1.00E+00	4.67E+00	7.41E+00	1.80E+01	pCi/L
L73358-1	PALISADES PARK COMMUNITY	06/20/17		CS-137	< 7.45E+00	2.17E+00	4.03E+00	7.45E+00	1.80E+01	pCi/L
L73934-1	PALISADES PARK COMMUNITY	07/26/17		CS-137	< 8.22E+00	8.26E-01	4.89E+00	8.22E+00	1.80E+01	pCi/L
L74280-1	PALISADES PARK COMMUNITY	08/25/17		CS-137	< 4.86E+00	-4.76E+00	3.68E+00	4.86E+00	1.80E+01	pCi/L
L74583-1	PALISADES PARK COMMUNITY	09/18/17		CS-137	< 4.07E+00	-3.06E+00	3.25E+00	4.07E+00	1.80E+01	pCi/L
L74883-1	PALISADES PARK COMMUNITY	10/10/17		CS-137	< 8.39E+00	-2.63E+00	5.42E+00	8.39E+00	1.80E+01	pCi/L

L72519-1	PALISADES PARK COMMUNITY	04/19/17	FE-59	< 1.47E+01	-2.92E+00	9.42E+00	1.47E+01	3.00E+01	pCi/L
L72988-1	PALISADES PARK COMMUNITY	05/25/17	FE-59	< 1.64E+01	7.93E+00	8.37E+00	1.64E+01	3.00E+01	pCi/L
L73358-1	PALISADES PARK COMMUNITY	06/20/17	FE-59	< 1.52E+01	-3.56E+00	1.02E+01	1.52E+01	3.00E+01	pCi/L
L73934-1	PALISADES PARK COMMUNITY	07/26/17	FE-59	< 2.04E+01	1.22E+01	1.02E+01	2.04E+01	3.00E+01	pCi/L
L74280-1	PALISADES PARK COMMUNITY	08/25/17	FE-59	< 1.15E+01	4.22E+00	6.14E+00	1.15E+01	3.00E+01	pCi/L
L74583-1	PALISADES PARK COMMUNITY	09/18/17	FE-59	< 1.88E+01	4.92E+00	1.05E+01	1.88E+01	3.00E+01	pCi/L
L74883-1	PALISADES PARK COMMUNITY	10/10/17	FE-59	< 1.37E+01	-1.16E+01	1.14E+01	1.37E+01	3.00E+01	pCi/L
L72519-1	PALISADES PARK COMMUNITY	04/19/17	GR-B	< 2.89E+00	2.19E+00	1.82E+00	2.89E+00	4.00E+00	pCi/L
L72988-1	PALISADES PARK COMMUNITY	05/25/17	GR-B	< 3.46E+00	2.70E+00	2.25E+00	3.46E+00	4.00E+00	pCi/L
L73358-1	PALISADES PARK COMMUNITY	06/20/17	GR-B	< 2.49E+00	2.40E+00	1.61E+00	2.49E+00	4.00E+00	pCi/L
L73934-1	PALISADES PARK COMMUNITY	07/26/17	GR-B	< 2.98E+00	1.11E+00	1.78E+00	2.98E+00	4.00E+00	pCi/L
L74280-1	PALISADES PARK COMMUNITY	08/25/17	GR-B	< 2.37E+00	2.11E+00	1.53E+00	2.37E+00	4.00E+00	pCi/L
L74583-1	PALISADES PARK COMMUNITY	09/18/17	GR-B	< 2.73E+00	1.17E+00	1.64E+00	2.73E+00	4.00E+00	pCi/L
L74883-1	PALISADES PARK COMMUNITY	10/10/17	GR-B	< 2.64E+00	1.57E+00	1.62E+00	2.64E+00	4.00E+00	pCi/L
L72519-1	PALISADES PARK COMMUNITY	04/19/17	H-3 (DIST)	< 7.35E+02	6.56E+01	3.92E+02	7.35E+02	2.00E+03	pCi/L
L72988-1	PALISADES PARK COMMUNITY	05/25/17	H-3 (DIST)	< 2.66E+02	1.32E+01	1.53E+02	2.66E+02	2.00E+03	pCi/L
L73358-1	PALISADES PARK COMMUNITY	06/20/17	H-3 (DIST)	< 5.54E+02	-4.30E+00	3.00E+02	5.54E+02	2.00E+03	pCi/L
L73934-1	PALISADES PARK COMMUNITY	07/26/17	H-3 (DIST)	< 7.30E+02	-2.24E+00	3.90E+02	7.30E+02	2.00E+03	pCi/L
L74280-1	PALISADES PARK COMMUNITY	08/25/17	H-3 (DIST)	< 7.05E+02	-6.18E+01	3.68E+02	7.05E+02	2.00E+03	pCi/L
L74583-1	PALISADES PARK COMMUNITY	09/18/17	H-3 (DIST)	< 5.95E+02	-7.74E+01	3.03E+02	5.95E+02	2.00E+03	pCi/L
L74883-1	PALISADES PARK COMMUNITY	10/10/17	H-3 (DIST)	< 5.56E+02	2.36E+02	3.34E+02	5.56E+02	2.00E+03	pCi/L
L72519-1	PALISADES PARK COMMUNITY	04/19/17	MN-54	< 7.84E+00	6.50E-02	4.86E+00	7.84E+00	1.50E+01	pCi/L
L72988-1	PALISADES PARK COMMUNITY	05/25/17	MN-54	< 8.18E+00	2.57E+00	4.58E+00	8.18E+00	1.50E+01	pCi/L
L73358-1	PALISADES PARK COMMUNITY	06/20/17	MN-54	< 5.77E+00	-8.10E-01	3.69E+00	5.77E+00	1.50E+01	pCi/L
L73934-1	PALISADES PARK COMMUNITY	07/26/17	MN-54	< 1.02E+01	4.96E-01	6.24E+00	1.02E+01	1.50E+01	pCi/L
L74280-1	PALISADES PARK COMMUNITY	08/25/17	MN-54	< 3.69E+00	-2.69E+00	2.87E+00	3.69E+00	1.50E+01	pCi/L
L74583-1	PALISADES PARK COMMUNITY	09/18/17	MN-54	< 7.33E+00	1.29E+00	4.17E+00	7.33E+00	1.50E+01	pCi/L
L74883-1	PALISADES PARK COMMUNITY	10/10/17	MN-54	< 4.89E+00	-3.65E+00	3.97E+00	4.89E+00	1.50E+01	pCi/L
L72519-1	PALISADES PARK COMMUNITY	04/19/17	NB-95	< 6.78E+00	-8.45E-02	4.20E+00	6.78E+00	1.50E+01	pCi/L
L72988-1	PALISADES PARK COMMUNITY	05/25/17	NB-95	< 7.81E+00	1.95E+00	4.43E+00	7.81E+00	1.50E+01	pCi/L
L73358-1	PALISADES PARK COMMUNITY	06/20/17	NB-95	< 9.48E+00	1.99E+00	5.40E+00	9.48E+00	1.50E+01	pCi/L
L73934-1	PALISADES PARK COMMUNITY	07/26/17	NB-95	< 1.04E+01	4.39E+00	5.80E+00	1.04E+01	1.50E+01	pCi/L
L74280-1	PALISADES PARK COMMUNITY	08/25/17	NB-95	< 4.56E+00	-1.02E+00	2.99E+00	4.56E+00	1.50E+01	pCi/L
L74583-1	PALISADES PARK COMMUNITY	09/18/17	NB-95	< 7.22E+00	2.47E+00	3.85E+00	7.22E+00	1.50E+01	pCi/L
L74883-1	PALISADES PARK COMMUNITY	10/10/17	NB-95	< 8.15E+00	1.00E+00	4.69E+00	8.15E+00	1.50E+01	pCi/L
L72519-1	PALISADES PARK COMMUNITY	04/19/17	ZN-65	< 1.69E+01	-7.84E+00	1.14E+01	1.69E+01	3.00E+01	pCi/L
L72988-1	PALISADES PARK COMMUNITY	05/25/17	ZN-65	< 1.26E+01	-1.03E+01	1.02E+01	1.26E+01	3.00E+01	pCi/L
L73358-1	PALISADES PARK COMMUNITY	06/20/17	ZN-65	< 1.52E+01	-7.86E-01	9.64E+00	1.52E+01	3.00E+01	pCi/L
L73934-1	PALISADES PARK COMMUNITY	07/26/17	ZN-65	< 1.94E+01	8.36E+00	1.13E+01	1.94E+01	3.00E+01	pCi/L
L74280-1	PALISADES PARK COMMUNITY	08/25/17	ZN-65	< 1.01E+01	-1.53E+00	6.44E+00	1.01E+01	3.00E+01	pCi/L

L74583-1	PALISADES PARK COMMUNITY	09/18/17			ZN-65	< 1.25E+01	2.30E+00	6.94E+00	1.25E+01	3.00E+01	pCi/L
L74883-1	PALISADES PARK COMMUNITY	10/10/17			ZN-65	< 2.17E+01	5.61E+00	1.22E+01	2.17E+01	3.00E+01	pCi/L
L72519-1	PALISADES PARK COMMUNITY	04/19/17			ZR-95	< 1.55E+01	7.68E+00	8.47E+00	1.55E+01	3.00E+01	pCi/L
L72988-1	PALISADES PARK COMMUNITY	05/25/17			ZR-95	< 1.24E+01	-1.40E+00	7.81E+00	1.24E+01	3.00E+01	pCi/L
L73358-1	PALISADES PARK COMMUNITY	06/20/17			ZR-95	< 1.03E+01	-2.65E+00	6.79E+00	1.03E+01	3.00E+01	pCi/L
L73934-1	PALISADES PARK COMMUNITY	07/26/17			ZR-95	< 1.83E+01	9.51E-01	1.11E+01	1.83E+01	3.00E+01	pCi/L
L74280-1	PALISADES PARK COMMUNITY	08/25/17			ZR-95	< 8.70E+00	-8.87E-01	5.49E+00	8.70E+00	3.00E+01	pCi/L
L74583-1	PALISADES PARK COMMUNITY	09/18/17			ZR-95	< 1.03E+01	-2.91E+00	6.81E+00	1.03E+01	3.00E+01	pCi/L
L74883-1	PALISADES PARK COMMUNITY	10/10/17			ZR-95	< 1.35E+01	2.77E+00	7.49E+00	1.35E+01	3.00E+01	pCi/L

**SEPTIC SYSTEM
SEWAGE**

LAB ID	STATION	COLLECT START	COLLECT STOP	NUCLIDE	REPORTABLE	ACTIVITY	ERROR	MDC	LLD	UNITS
L71670-1	SEPTIC SYSTEM	02/09/17		BA-LA-140	< 1.15E+01	8.66E-01	6.80E+00	1.15E+01	1.50E+01	pCi/L
L72895-1	SEPTIC SYSTEM	05/09/17		BA-LA-140	< 1.32E+01	4.88E+00	7.38E+00	1.32E+01	1.50E+01	pCi/L
L73070-1	SEPTIC SYSTEM	06/02/17		BA-LA-140	< 1.49E+01	3.71E-02	9.06E+00	1.49E+01	1.50E+01	pCi/L
L74243-1	SEPTIC SYSTEM	08/09/17		BA-LA-140	< 1.33E+01	-7.88E-01	8.06E+00	1.33E+01	1.50E+01	pCi/L
L75338-1	SEPTIC SYSTEM	11/08/17		BA-LA-140	< 1.22E+01	-4.20E+00	8.10E+00	1.22E+01	1.50E+01	pCi/L
L71670-1	SEPTIC SYSTEM	02/09/17		CO-58	< 6.53E+00	1.72E-01	4.01E+00	6.53E+00	1.50E+01	pCi/L
L72895-1	SEPTIC SYSTEM	05/09/17		CO-58	< 6.00E+00	-2.18E+00	3.87E+00	6.00E+00	1.50E+01	pCi/L
L73070-1	SEPTIC SYSTEM	06/02/17		CO-58	< 1.38E+01	5.60E+00	7.87E+00	1.38E+01	1.50E+01	pCi/L
L74243-1	SEPTIC SYSTEM	08/09/17		CO-58	< 4.38E+00	-1.18E+00	2.78E+00	4.38E+00	1.50E+01	pCi/L
L75338-1	SEPTIC SYSTEM	11/08/17		CO-58	< 6.83E+00	-3.63E+00	4.49E+00	6.83E+00	1.50E+01	pCi/L
L71670-1	SEPTIC SYSTEM	02/09/17		CO-60	< 7.29E+00	-2.29E+00	4.78E+00	7.29E+00	1.50E+01	pCi/L
L72895-1	SEPTIC SYSTEM	05/09/17		CO-60	< 5.03E+00	-9.73E-01	3.20E+00	5.03E+00	1.50E+01	pCi/L
L73070-1	SEPTIC SYSTEM	06/02/17		CO-60	< 1.15E+01	-2.95E+00	7.32E+00	1.15E+01	1.50E+01	pCi/L
L74243-1	SEPTIC SYSTEM	08/09/17		CO-60	< 4.45E+00	6.71E-01	2.69E+00	4.45E+00	1.50E+01	pCi/L
L75338-1	SEPTIC SYSTEM	11/08/17		CO-60	< 7.91E+00	5.59E-01	4.65E+00	7.91E+00	1.50E+01	pCi/L
L71670-1	SEPTIC SYSTEM	02/09/17		CS-134	< 6.65E+00	-9.69E-01	4.73E+00	6.65E+00	1.50E+01	pCi/L
L72895-1	SEPTIC SYSTEM	05/09/17		CS-134	< 5.83E+00	9.96E-01	3.51E+00	5.83E+00	1.50E+01	pCi/L
L73070-1	SEPTIC SYSTEM	06/02/17		CS-134	< 1.28E+01	-4.42E-01	7.75E+00	1.28E+01	1.50E+01	pCi/L
L74243-1	SEPTIC SYSTEM	08/09/17		CS-134	< 4.40E+00	5.21E-02	2.70E+00	4.40E+00	1.50E+01	pCi/L
L75338-1	SEPTIC SYSTEM	11/08/17		CS-134	< 7.11E+00	-7.66E+00	5.08E+00	7.11E+00	1.50E+01	pCi/L
L71670-1	SEPTIC SYSTEM	02/09/17		CS-137	< 7.19E+00	1.34E-01	4.35E+00	7.19E+00	1.80E+01	pCi/L
L72895-1	SEPTIC SYSTEM	05/09/17		CS-137	< 6.29E+00	1.78E+00	3.71E+00	6.29E+00	1.80E+01	pCi/L
L73070-1	SEPTIC SYSTEM	06/02/17		CS-137	< 1.20E+01	-9.52E+00	7.98E+00	1.20E+01	1.80E+01	pCi/L
L74243-1	SEPTIC SYSTEM	08/09/17		CS-137	< 4.31E+00	-1.94E+00	2.71E+00	4.31E+00	1.80E+01	pCi/L
L75338-1	SEPTIC SYSTEM	11/08/17		CS-137	< 7.48E+00	-1.52E+00	4.76E+00	7.48E+00	1.80E+01	pCi/L
L71670-1	SEPTIC SYSTEM	02/09/17		FE-59	< 1.42E+01	7.20E-01	8.49E+00	1.42E+01	3.00E+01	pCi/L
L72895-1	SEPTIC SYSTEM	05/09/17		FE-59	< 1.35E+01	3.34E+00	7.90E+00	1.35E+01	3.00E+01	pCi/L

L73070-1	SEPTIC SYSTEM	06/02/17		FE-59	< 2.15E+01	3.08E+00	1.28E+01	2.15E+01	3.00E+01	pCi/L
L74243-1	SEPTIC SYSTEM	08/09/17		FE-59	< 1.03E+01	-1.24E+00	6.33E+00	1.03E+01	3.00E+01	pCi/L
L75338-1	SEPTIC SYSTEM	11/08/17		FE-59	< 1.49E+01	-1.98E+00	9.35E+00	1.49E+01	3.00E+01	pCi/L
L71670-1	SEPTIC SYSTEM	02/09/17		H-3 (DIST)	< 7.21E+02	-6.40E+00	4.36E+02	7.21E+02	2.00E+03	pCi/L
L72895-1	SEPTIC SYSTEM	05/09/17		H-3 (DIST)	6.27E+02	6.27E+02	4.15E+02	6.23E+02	2.00E+03	pCi/L
L72895-1R1	SEPTIC SYSTEM	05/09/17		H-3 (DIST)	1.01E+03	1.01E+03	5.83E+02	7.93E+02	2.00E+03	pCi/L
L73070-1	SEPTIC SYSTEM	06/02/17		H-3 (DIST)	< 2.63E+02	1.20E+02	1.59E+02	2.63E+02	2.00E+03	pCi/L
L74243-1	SEPTIC SYSTEM	08/09/17		H-3 (DIST)	< 6.66E+02	3.16E+02	4.05E+02	6.66E+02	2.00E+03	pCi/L
L75338-1	SEPTIC SYSTEM	11/08/17		H-3 (DIST)	< 6.47E+02	1.94E+01	3.45E+02	6.47E+02	2.00E+03	pCi/L
L71670-1	SEPTIC SYSTEM	02/09/17		MN-54	< 6.41E+00	-2.01E+00	4.18E+00	6.41E+00	1.50E+01	pCi/L
L72895-1	SEPTIC SYSTEM	05/09/17		MN-54	< 5.13E+00	-2.10E+00	3.35E+00	5.13E+00	1.50E+01	pCi/L
L73070-1	SEPTIC SYSTEM	06/02/17		MN-54	< 1.28E+01	4.85E+00	7.28E+00	1.28E+01	1.50E+01	pCi/L
L74243-1	SEPTIC SYSTEM	08/09/17		MN-54	< 4.30E+00	-8.92E-02	2.66E+00	4.30E+00	1.50E+01	pCi/L
L75338-1	SEPTIC SYSTEM	11/08/17		MN-54	< 8.15E+00	1.15E+00	4.76E+00	8.15E+00	1.50E+01	pCi/L
L71670-1	SEPTIC SYSTEM	02/09/17		NB-95	< 7.66E+00	1.96E+00	4.53E+00	7.66E+00	1.50E+01	pCi/L
L72895-1	SEPTIC SYSTEM	05/09/17		NB-95	< 6.74E+00	-4.29E-01	4.17E+00	6.74E+00	1.50E+01	pCi/L
L73070-1	SEPTIC SYSTEM	06/02/17		NB-95	< 1.15E+01	-1.06E+00	7.05E+00	1.15E+01	1.50E+01	pCi/L
L74243-1	SEPTIC SYSTEM	08/09/17		NB-95	< 5.25E+00	4.69E+00	2.97E+00	5.25E+00	1.50E+01	pCi/L
L75338-1	SEPTIC SYSTEM	11/08/17		NB-95	< 9.03E+00	5.49E+00	4.88E+00	9.03E+00	1.50E+01	pCi/L
L71670-1	SEPTIC SYSTEM	02/09/17		ZN-65	< 1.44E+01	-1.39E+00	8.88E+00	1.44E+01	3.00E+01	pCi/L
L72895-1	SEPTIC SYSTEM	05/09/17		ZN-65	< 1.20E+01	1.84E+00	8.21E+00	1.20E+01	3.00E+01	pCi/L
L73070-1	SEPTIC SYSTEM	06/02/17		ZN-65	< 2.54E+01	1.44E+00	1.55E+01	2.54E+01	3.00E+01	pCi/L
L74243-1	SEPTIC SYSTEM	08/09/17		ZN-65	< 7.65E+00	-1.76E+01	5.84E+00	7.65E+00	3.00E+01	pCi/L
L75338-1	SEPTIC SYSTEM	11/08/17		ZN-65	< 1.28E+01	-1.17E+00	9.39E+00	1.28E+01	3.00E+01	pCi/L
L71670-1	SEPTIC SYSTEM	02/09/17		ZR-95	< 1.21E+01	-4.46E+00	7.83E+00	1.21E+01	3.00E+01	pCi/L
L72895-1	SEPTIC SYSTEM	05/09/17		ZR-95	< 1.09E+01	2.51E+00	6.53E+00	1.09E+01	3.00E+01	pCi/L
L73070-1	SEPTIC SYSTEM	06/02/17		ZR-95	< 2.01E+01	-6.90E+00	1.28E+01	2.01E+01	3.00E+01	pCi/L
L74243-1	SEPTIC SYSTEM	08/09/17		ZR-95	< 7.89E+00	-2.01E+00	4.96E+00	7.89E+00	3.00E+01	pCi/L
L75338-1	SEPTIC SYSTEM	11/08/17		ZR-95	< 1.33E+01	-1.74E+00	8.47E+00	1.33E+01	3.00E+01	pCi/L

**SOUTH HAVEN
DRINKING WATER**

LAB ID	STATION	COLLECT START	COLLECT STOP	NUCLIDE	REPORTABLE	ACTIVITY	ERROR	MDC	LLD	UNITS
L71635-2	SOUTH HAVEN	01/01/17	02/01/17	BA-LA-140	< 1.43E+01	-2.80E+00	8.88E+00	1.43E+01	1.50E+01	pCi/L
L71950-1	SOUTH HAVEN	02/01/17	03/01/17	BA-LA-140	< 1.39E+01	3.19E+00	8.22E+00	1.39E+01	1.50E+01	pCi/L
L72335-3	SOUTH HAVEN	03/01/17	03/31/17	BA-LA-140	< 1.22E+01	4.76E+00	7.04E+00	1.22E+01	1.50E+01	pCi/L
L72715-2	SOUTH HAVEN	04/01/17	04/30/17	BA-LA-140	< 8.89E+00	-2.00E+00	5.59E+00	8.89E+00	1.50E+01	pCi/L
L73267-1	SOUTH HAVEN	05/01/17	06/01/17	BA-LA-140	< 1.12E+01	-1.03E+00	6.72E+00	1.12E+01	1.50E+01	pCi/L
L73681-1	SOUTH HAVEN	06/01/17	07/01/17	BA-LA-140	< 1.41E+01	-2.37E+00	8.63E+00	1.41E+01	1.50E+01	pCi/L
L74077-2	SOUTH HAVEN	07/01/17	08/01/17	BA-LA-140	< 1.42E+01	-3.51E+00	9.33E+00	1.42E+01	1.50E+01	pCi/L

L74389-1	SOUTH HAVEN	08/01/17	09/01/17	BA-LA-140	< 9.93E+00	-9.45E+00	6.77E+00	9.93E+00	1.50E+01	pCi/L
L74883-4	SOUTH HAVEN	09/01/17	10/01/17	BA-LA-140	< 1.10E+01	-1.05E+00	6.73E+00	1.10E+01	1.50E+01	pCi/L
L75298-4	SOUTH HAVEN	10/01/17	11/01/17	BA-LA-140	< 1.31E+01	3.06E+00	7.65E+00	1.31E+01	1.50E+01	pCi/L
L75597-4	SOUTH HAVEN	11/01/17	12/01/17	BA-LA-140	< 1.22E+01	-1.11E+00	7.63E+00	1.22E+01	1.50E+01	pCi/L
L76030-2	SOUTH HAVEN	12/01/17	01/01/18	BA-LA-140	< 1.11E+01	-1.07E+01	7.62E+00	1.11E+01	1.50E+01	pCi/L
L71635-2	SOUTH HAVEN	01/01/17	02/01/17	CO-58	< 3.27E+00	6.61E-01	1.97E+00	3.27E+00	1.50E+01	pCi/L
L71950-1	SOUTH HAVEN	02/01/17	03/01/17	CO-58	< 3.36E+00	-1.71E+00	2.11E+00	3.36E+00	1.50E+01	pCi/L
L72335-3	SOUTH HAVEN	03/01/17	03/31/17	CO-58	< 3.11E+00	-2.85E-02	1.91E+00	3.11E+00	1.50E+01	pCi/L
L72715-2	SOUTH HAVEN	04/01/17	04/30/17	CO-58	< 2.48E+00	-6.76E-01	1.56E+00	2.48E+00	1.50E+01	pCi/L
L73267-1	SOUTH HAVEN	05/01/17	06/01/17	CO-58	< 2.21E+00	6.13E-01	1.31E+00	2.21E+00	1.50E+01	pCi/L
L73681-1	SOUTH HAVEN	06/01/17	07/01/17	CO-58	< 2.72E+00	-9.70E-01	1.68E+00	2.72E+00	1.50E+01	pCi/L
L74077-2	SOUTH HAVEN	07/01/17	08/01/17	CO-58	< 3.11E+00	-2.29E+00	2.04E+00	3.11E+00	1.50E+01	pCi/L
L74389-1	SOUTH HAVEN	08/01/17	09/01/17	CO-58	< 2.66E+00	6.79E-01	1.57E+00	2.66E+00	1.50E+01	pCi/L
L74883-4	SOUTH HAVEN	09/01/17	10/01/17	CO-58	< 2.49E+00	3.91E-01	1.50E+00	2.49E+00	1.50E+01	pCi/L
L75298-4	SOUTH HAVEN	10/01/17	11/01/17	CO-58	< 3.17E+00	2.00E+00	1.81E+00	3.17E+00	1.50E+01	pCi/L
L75597-4	SOUTH HAVEN	11/01/17	12/01/17	CO-58	< 3.16E+00	1.03E+00	1.87E+00	3.16E+00	1.50E+01	pCi/L
L76030-2	SOUTH HAVEN	12/01/17	01/01/18	CO-58	< 2.48E+00	-3.16E-01	1.53E+00	2.48E+00	1.50E+01	pCi/L
L71635-2	SOUTH HAVEN	01/01/17	02/01/17	CO-60	< 2.35E+00	2.73E-01	1.38E+00	2.35E+00	1.50E+01	pCi/L
L71950-1	SOUTH HAVEN	02/01/17	03/01/17	CO-60	< 3.02E+00	1.93E+00	1.71E+00	3.02E+00	1.50E+01	pCi/L
L72335-3	SOUTH HAVEN	03/01/17	03/31/17	CO-60	< 2.62E+00	7.11E-01	1.53E+00	2.62E+00	1.50E+01	pCi/L
L72715-2	SOUTH HAVEN	04/01/17	04/30/17	CO-60	< 2.11E+00	-6.71E-01	1.32E+00	2.11E+00	1.50E+01	pCi/L
L73267-1	SOUTH HAVEN	05/01/17	06/01/17	CO-60	< 1.71E+00	1.57E-01	1.05E+00	1.71E+00	1.50E+01	pCi/L
L73681-1	SOUTH HAVEN	06/01/17	07/01/17	CO-60	< 2.53E+00	1.64E-01	1.54E+00	2.53E+00	1.50E+01	pCi/L
L74077-2	SOUTH HAVEN	07/01/17	08/01/17	CO-60	< 3.03E+00	1.99E+00	1.66E+00	3.03E+00	1.50E+01	pCi/L
L74389-1	SOUTH HAVEN	08/01/17	09/01/17	CO-60	< 2.43E+00	1.31E+00	1.41E+00	2.43E+00	1.50E+01	pCi/L
L74883-4	SOUTH HAVEN	09/01/17	10/01/17	CO-60	< 2.07E+00	6.17E-01	1.20E+00	2.07E+00	1.50E+01	pCi/L
L75298-4	SOUTH HAVEN	10/01/17	11/01/17	CO-60	< 2.46E+00	6.57E-01	1.42E+00	2.46E+00	1.50E+01	pCi/L
L75597-4	SOUTH HAVEN	11/01/17	12/01/17	CO-60	< 2.65E+00	6.72E-01	1.55E+00	2.65E+00	1.50E+01	pCi/L
L76030-2	SOUTH HAVEN	12/01/17	01/01/18	CO-60	< 2.37E+00	2.00E+00	1.34E+00	2.37E+00	1.50E+01	pCi/L
L71635-2	SOUTH HAVEN	01/01/17	02/01/17	CS-134	< 2.51E+00	-8.13E-01	1.82E+00	2.51E+00	1.50E+01	pCi/L
L71950-1	SOUTH HAVEN	02/01/17	03/01/17	CS-134	< 3.26E+00	7.62E-01	1.95E+00	3.26E+00	1.50E+01	pCi/L
L72335-3	SOUTH HAVEN	03/01/17	03/31/17	CS-134	< 3.06E+00	2.00E+00	1.79E+00	3.06E+00	1.50E+01	pCi/L
L72715-2	SOUTH HAVEN	04/01/17	04/30/17	CS-134	< 2.37E+00	-8.79E-02	1.47E+00	2.37E+00	1.50E+01	pCi/L
L73267-1	SOUTH HAVEN	05/01/17	06/01/17	CS-134	< 1.88E+00	4.79E-01	1.11E+00	1.88E+00	1.50E+01	pCi/L
L73681-1	SOUTH HAVEN	06/01/17	07/01/17	CS-134	< 2.61E+00	5.49E-01	1.52E+00	2.61E+00	1.50E+01	pCi/L
L74077-2	SOUTH HAVEN	07/01/17	08/01/17	CS-134	< 3.22E+00	1.67E+00	1.80E+00	3.22E+00	1.50E+01	pCi/L
L74389-1	SOUTH HAVEN	08/01/17	09/01/17	CS-134	< 2.34E+00	7.58E-01	1.37E+00	2.34E+00	1.50E+01	pCi/L
L74883-4	SOUTH HAVEN	09/01/17	10/01/17	CS-134	< 2.03E+00	9.72E-01	1.19E+00	2.03E+00	1.50E+01	pCi/L
L75298-4	SOUTH HAVEN	10/01/17	11/01/17	CS-134	< 2.56E+00	1.50E-01	1.54E+00	2.56E+00	1.50E+01	pCi/L
L75597-4	SOUTH HAVEN	11/01/17	12/01/17	CS-134	< 2.94E+00	4.47E-01	1.77E+00	2.94E+00	1.50E+01	pCi/L

L76030-2	SOUTH HAVEN	12/01/17	01/01/18	CS-134	< 2.17E+00	-1.10E+00	1.52E+00	2.17E+00	1.50E+01	pCi/L
L71635-2	SOUTH HAVEN	01/01/17	02/01/17	CS-137	< 2.81E+00	8.25E-01	1.67E+00	2.81E+00	1.80E+01	pCi/L
L71950-1	SOUTH HAVEN	02/01/17	03/01/17	CS-137	< 2.88E+00	-1.44E+00	1.78E+00	2.88E+00	1.80E+01	pCi/L
L72335-3	SOUTH HAVEN	03/01/17	03/31/17	CS-137	< 2.62E+00	6.98E-01	1.57E+00	2.62E+00	1.80E+01	pCi/L
L72715-2	SOUTH HAVEN	04/01/17	04/30/17	CS-137	< 2.18E+00	-4.74E-01	1.35E+00	2.18E+00	1.80E+01	pCi/L
L73267-1	SOUTH HAVEN	05/01/17	06/01/17	CS-137	< 1.77E+00	7.60E-01	1.03E+00	1.77E+00	1.80E+01	pCi/L
L73681-1	SOUTH HAVEN	06/01/17	07/01/17	CS-137	< 2.46E+00	-1.79E-02	1.53E+00	2.46E+00	1.80E+01	pCi/L
L74077-2	SOUTH HAVEN	07/01/17	08/01/17	CS-137	< 2.76E+00	2.67E-02	1.63E+00	2.76E+00	1.80E+01	pCi/L
L74389-1	SOUTH HAVEN	08/01/17	09/01/17	CS-137	< 1.97E+00	-6.36E-01	1.21E+00	1.97E+00	1.80E+01	pCi/L
L74883-4	SOUTH HAVEN	09/01/17	10/01/17	CS-137	< 1.96E+00	7.03E-02	1.18E+00	1.96E+00	1.80E+01	pCi/L
L75298-4	SOUTH HAVEN	10/01/17	11/01/17	CS-137	< 2.39E+00	-1.12E+00	1.60E+00	2.39E+00	1.80E+01	pCi/L
L75597-4	SOUTH HAVEN	11/01/17	12/01/17	CS-137	< 2.69E+00	1.27E-01	1.62E+00	2.69E+00	1.80E+01	pCi/L
L76030-2	SOUTH HAVEN	12/01/17	01/01/18	CS-137	< 2.06E+00	8.87E-02	1.24E+00	2.06E+00	1.80E+01	pCi/L
L71635-2	SOUTH HAVEN	01/01/17	02/01/17	FE-59	< 7.62E+00	3.88E+00	4.45E+00	7.62E+00	3.00E+01	pCi/L
L71950-1	SOUTH HAVEN	02/01/17	03/01/17	FE-59	< 8.08E+00	9.21E-01	4.95E+00	8.08E+00	3.00E+01	pCi/L
L72335-3	SOUTH HAVEN	03/01/17	03/31/17	FE-59	< 6.95E+00	1.39E+00	4.25E+00	6.95E+00	3.00E+01	pCi/L
L72715-2	SOUTH HAVEN	04/01/17	04/30/17	FE-59	< 6.31E+00	1.42E+00	3.71E+00	6.31E+00	3.00E+01	pCi/L
L73267-1	SOUTH HAVEN	05/01/17	06/01/17	FE-59	< 4.93E+00	-1.97E+00	3.11E+00	4.93E+00	3.00E+01	pCi/L
L73681-1	SOUTH HAVEN	06/01/17	07/01/17	FE-59	< 7.08E+00	-4.45E-02	4.31E+00	7.08E+00	3.00E+01	pCi/L
L74077-2	SOUTH HAVEN	07/01/17	08/01/17	FE-59	< 7.45E+00	-3.14E+00	4.83E+00	7.45E+00	3.00E+01	pCi/L
L74389-1	SOUTH HAVEN	08/01/17	09/01/17	FE-59	< 6.03E+00	1.61E+00	3.59E+00	6.03E+00	3.00E+01	pCi/L
L74883-4	SOUTH HAVEN	09/01/17	10/01/17	FE-59	< 5.47E+00	1.09E+00	3.33E+00	5.47E+00	3.00E+01	pCi/L
L75298-4	SOUTH HAVEN	10/01/17	11/01/17	FE-59	< 6.66E+00	-1.68E+00	4.22E+00	6.66E+00	3.00E+01	pCi/L
L75597-4	SOUTH HAVEN	11/01/17	12/01/17	FE-59	< 6.81E+00	-1.25E+00	4.15E+00	6.81E+00	3.00E+01	pCi/L
L76030-2	SOUTH HAVEN	12/01/17	01/01/18	FE-59	< 5.96E+00	1.45E+00	3.50E+00	5.96E+00	3.00E+01	pCi/L
L71635-2	SOUTH HAVEN	01/01/17	02/01/17	GR-B	2.37E+00	2.37E+00	1.27E+00	1.70E+00	4.00E+00	pCi/L
L71950-1	SOUTH HAVEN	02/01/17	03/01/17	GR-B	2.68E+00	2.68E+00	1.47E+00	2.06E+00	4.00E+00	pCi/L
L72335-3	SOUTH HAVEN	03/01/17	03/31/17	GR-B	< 2.43E+00	1.93E+00	1.54E+00	2.43E+00	4.00E+00	pCi/L
L72715-2	SOUTH HAVEN	04/01/17	04/30/17	GR-B	< 2.42E+00	1.72E+00	1.52E+00	2.42E+00	4.00E+00	pCi/L
L73267-1	SOUTH HAVEN	05/01/17	06/01/17	GR-B	< 2.30E+00	1.31E+00	1.41E+00	2.30E+00	4.00E+00	pCi/L
L73681-1	SOUTH HAVEN	06/01/17	07/01/17	GR-B	3.43E+00	3.43E+00	1.52E+00	2.19E+00	4.00E+00	pCi/L
L74077-2	SOUTH HAVEN	07/01/17	08/01/17	GR-B	3.12E+00	3.12E+00	1.46E+00	2.12E+00	4.00E+00	pCi/L
L74389-1	SOUTH HAVEN	08/01/17	09/01/17	GR-B	< 2.34E+00	2.23E+00	1.51E+00	2.34E+00	4.00E+00	pCi/L
L74883-4	SOUTH HAVEN	09/01/17	10/01/17	GR-B	2.23E+00	2.23E+00	1.31E+00	1.97E+00	4.00E+00	pCi/L
L75298-4	SOUTH HAVEN	10/01/17	11/01/17	GR-B	< 2.28E+00	1.82E+00	1.44E+00	2.28E+00	4.00E+00	pCi/L
L75597-4	SOUTH HAVEN	11/01/17	12/01/17	GR-B	2.66E+00	2.66E+00	1.37E+00	1.99E+00	4.00E+00	pCi/L
L76030-2	SOUTH HAVEN	12/01/17	01/01/18	GR-B	2.81E+00	2.81E+00	1.31E+00	1.87E+00	4.00E+00	pCi/L
L71635-2	SOUTH HAVEN	01/01/17	02/01/17	H-3 (DIST)	< 7.20E+02	-1.26E+02	4.11E+02	7.20E+02	2.00E+03	pCi/L
L71950-1	SOUTH HAVEN	02/01/17	03/01/17	H-3 (DIST)	< 5.53E+02	3.30E+02	3.89E+02	5.53E+02	2.00E+03	pCi/L
L72335-3	SOUTH HAVEN	03/01/17	03/31/17	H-3 (DIST)	< 7.07E+02	1.73E+02	4.07E+02	7.07E+02	2.00E+03	pCi/L

L72715-2	SOUTH HAVEN	04/01/17	04/30/17	H-3 (DIST)	< 6.75E+02	-1.86E+01	3.58E+02	6.75E+02	2.00E+03	pCi/L
L73267-1	SOUTH HAVEN	05/01/17	06/01/17	H-3 (DIST)	< 7.47E+02	1.54E+02	4.18E+02	7.47E+02	2.00E+03	pCi/L
L73681-1	SOUTH HAVEN	06/01/17	07/01/17	H-3 (DIST)	< 5.61E+02	1.43E+02	3.20E+02	5.61E+02	2.00E+03	pCi/L
L74077-2	SOUTH HAVEN	07/01/17	08/01/17	H-3 (DIST)	< 5.66E+02	-1.19E+02	2.89E+02	5.66E+02	2.00E+03	pCi/L
L74389-1	SOUTH HAVEN	08/01/17	09/01/17	H-3 (DIST)	< 6.62E+02	1.63E+02	3.78E+02	6.62E+02	2.00E+03	pCi/L
L74883-4	SOUTH HAVEN	09/01/17	10/01/17	H-3 (DIST)	< 5.43E+02	2.40E+02	3.29E+02	5.43E+02	2.00E+03	pCi/L
L75298-4	SOUTH HAVEN	10/01/17	11/01/17	H-3 (DIST)	< 6.59E+02	2.73E+02	3.94E+02	6.59E+02	2.00E+03	pCi/L
L75597-4	SOUTH HAVEN	11/01/17	12/01/17	H-3 (DIST)	< 6.52E+02	1.08E+02	3.59E+02	6.52E+02	2.00E+03	pCi/L
L76030-2	SOUTH HAVEN	12/01/17	01/01/18	H-3 (DIST)	< 6.37E+02	-1.20E+02	3.16E+02	6.37E+02	2.00E+03	pCi/L
L76030-2	SOUTH HAVEN	12/01/17	01/01/18	K-40	4.40E+01	4.40E+01	2.84E+01	1.66E+01		pCi/L
L71635-2	SOUTH HAVEN	01/01/17	02/01/17	MN-54	< 2.66E+00	-4.46E-01	1.66E+00	2.66E+00	1.50E+01	pCi/L
L71950-1	SOUTH HAVEN	02/01/17	03/01/17	MN-54	< 2.97E+00	4.73E-01	1.79E+00	2.97E+00	1.50E+01	pCi/L
L72335-3	SOUTH HAVEN	03/01/17	03/31/17	MN-54	< 2.40E+00	-9.05E-01	1.52E+00	2.40E+00	1.50E+01	pCi/L
L72715-2	SOUTH HAVEN	04/01/17	04/30/17	MN-54	< 2.25E+00	-4.36E-01	1.41E+00	2.25E+00	1.50E+01	pCi/L
L73267-1	SOUTH HAVEN	05/01/17	06/01/17	MN-54	< 1.73E+00	1.68E-02	1.04E+00	1.73E+00	1.50E+01	pCi/L
L73681-1	SOUTH HAVEN	06/01/17	07/01/17	MN-54	< 2.40E+00	2.80E-01	1.42E+00	2.40E+00	1.50E+01	pCi/L
L74077-2	SOUTH HAVEN	07/01/17	08/01/17	MN-54	< 2.81E+00	5.15E-01	1.65E+00	2.81E+00	1.50E+01	pCi/L
L74389-1	SOUTH HAVEN	08/01/17	09/01/17	MN-54	< 2.13E+00	3.12E-01	1.27E+00	2.13E+00	1.50E+01	pCi/L
L74883-4	SOUTH HAVEN	09/01/17	10/01/17	MN-54	< 1.98E+00	-1.08E-01	1.22E+00	1.98E+00	1.50E+01	pCi/L
L75298-4	SOUTH HAVEN	10/01/17	11/01/17	MN-54	< 2.69E+00	5.67E-01	1.60E+00	2.69E+00	1.50E+01	pCi/L
L75597-4	SOUTH HAVEN	11/01/17	12/01/17	MN-54	< 2.65E+00	-7.93E-01	1.67E+00	2.65E+00	1.50E+01	pCi/L
L76030-2	SOUTH HAVEN	12/01/17	01/01/18	MN-54	< 2.03E+00	7.17E-02	1.24E+00	2.03E+00	1.50E+01	pCi/L
L71635-2	SOUTH HAVEN	01/01/17	02/01/17	NB-95	< 3.40E+00	2.96E-01	2.07E+00	3.40E+00	1.50E+01	pCi/L
L71950-1	SOUTH HAVEN	02/01/17	03/01/17	NB-95	< 3.65E+00	-4.15E-02	2.21E+00	3.65E+00	1.50E+01	pCi/L
L72335-3	SOUTH HAVEN	03/01/17	03/31/17	NB-95	< 3.41E+00	1.99E+00	2.00E+00	3.41E+00	1.50E+01	pCi/L
L72715-2	SOUTH HAVEN	04/01/17	04/30/17	NB-95	< 2.77E+00	6.72E-01	1.67E+00	2.77E+00	1.50E+01	pCi/L
L73267-1	SOUTH HAVEN	05/01/17	06/01/17	NB-95	< 2.35E+00	1.09E+00	1.38E+00	2.35E+00	1.50E+01	pCi/L
L73681-1	SOUTH HAVEN	06/01/17	07/01/17	NB-95	< 3.06E+00	2.32E-01	1.80E+00	3.06E+00	1.50E+01	pCi/L
L74077-2	SOUTH HAVEN	07/01/17	08/01/17	NB-95	< 3.53E+00	-2.07E-01	2.12E+00	3.53E+00	1.50E+01	pCi/L
L74389-1	SOUTH HAVEN	08/01/17	09/01/17	NB-95	< 2.60E+00	-7.88E-01	1.60E+00	2.60E+00	1.50E+01	pCi/L
L74883-4	SOUTH HAVEN	09/01/17	10/01/17	NB-95	< 2.39E+00	-5.79E-01	1.49E+00	2.39E+00	1.50E+01	pCi/L
L75298-4	SOUTH HAVEN	10/01/17	11/01/17	NB-95	< 2.95E+00	-3.64E-01	1.80E+00	2.95E+00	1.50E+01	pCi/L
L75597-4	SOUTH HAVEN	11/01/17	12/01/17	NB-95	< 3.24E+00	-9.38E-01	2.03E+00	3.24E+00	1.50E+01	pCi/L
L76030-2	SOUTH HAVEN	12/01/17	01/01/18	NB-95	< 2.71E+00	1.95E+00	1.57E+00	2.71E+00	1.50E+01	pCi/L
L72335-3	SOUTH HAVEN	03/01/17	03/31/17	TH-228	6.75E+00	6.75E+00	4.67E+00	4.82E+00		pCi/L
L73267-1	SOUTH HAVEN	05/01/17	06/01/17	TH-228	3.85E+00	3.85E+00	2.88E+00	3.20E+00		pCi/L
L76030-2	SOUTH HAVEN	12/01/17	01/01/18	TH-228	3.87E+00	3.87E+00	3.55E+00	3.48E+00		pCi/L
L71635-2	SOUTH HAVEN	01/01/17	02/01/17	ZN-65	< 5.39E+00	-2.18E+00	3.52E+00	5.39E+00	3.00E+01	pCi/L
L71950-1	SOUTH HAVEN	02/01/17	03/01/17	ZN-65	< 6.19E+00	-5.36E+00	4.09E+00	6.19E+00	3.00E+01	pCi/L
L72335-3	SOUTH HAVEN	03/01/17	03/31/17	ZN-65	< 5.47E+00	3.19E+00	3.51E+00	5.47E+00	3.00E+01	pCi/L

L72715-2	SOUTH HAVEN	04/01/17	04/30/17	ZN-65	< 4.13E+00	-5.68E-01	2.92E+00	4.13E+00	3.00E+01	pCi/L
L73267-1	SOUTH HAVEN	05/01/17	06/01/17	ZN-65	< 3.56E+00	1.14E+00	2.44E+00	3.56E+00	3.00E+01	pCi/L
L73681-1	SOUTH HAVEN	06/01/17	07/01/17	ZN-65	< 5.53E+00	-1.46E+00	3.46E+00	5.53E+00	3.00E+01	pCi/L
L74077-2	SOUTH HAVEN	07/01/17	08/01/17	ZN-65	< 5.68E+00	-1.61E+00	3.62E+00	5.68E+00	3.00E+01	pCi/L
L74389-1	SOUTH HAVEN	08/01/17	09/01/17	ZN-65	< 4.53E+00	-1.65E+00	2.89E+00	4.53E+00	3.00E+01	pCi/L
L74883-4	SOUTH HAVEN	09/01/17	10/01/17	ZN-65	< 4.05E+00	-2.09E+00	2.66E+00	4.05E+00	3.00E+01	pCi/L
L75298-4	SOUTH HAVEN	10/01/17	11/01/17	ZN-65	< 4.56E+00	-3.08E+00	3.60E+00	4.56E+00	3.00E+01	pCi/L
L75597-4	SOUTH HAVEN	11/01/17	12/01/17	ZN-65	< 5.73E+00	-4.94E+00	3.74E+00	5.73E+00	3.00E+01	pCi/L
L76030-2	SOUTH HAVEN	12/01/17	01/01/18	ZN-65	< 4.48E+00	1.94E+00	2.98E+00	4.48E+00	3.00E+01	pCi/L
L71635-2	SOUTH HAVEN	01/01/17	02/01/17	ZR-95	< 6.03E+00	-1.07E+00	3.76E+00	6.03E+00	3.00E+01	pCi/L
L71950-1	SOUTH HAVEN	02/01/17	03/01/17	ZR-95	< 6.30E+00	3.36E-01	3.80E+00	6.30E+00	3.00E+01	pCi/L
L72335-3	SOUTH HAVEN	03/01/17	03/31/17	ZR-95	< 5.35E+00	-9.08E-01	3.33E+00	5.35E+00	3.00E+01	pCi/L
L72715-2	SOUTH HAVEN	04/01/17	04/30/17	ZR-95	< 4.76E+00	4.68E-01	2.90E+00	4.76E+00	3.00E+01	pCi/L
L73267-1	SOUTH HAVEN	05/01/17	06/01/17	ZR-95	< 3.94E+00	1.55E+00	2.31E+00	3.94E+00	3.00E+01	pCi/L
L73681-1	SOUTH HAVEN	06/01/17	07/01/17	ZR-95	< 5.53E+00	1.26E+00	3.21E+00	5.53E+00	3.00E+01	pCi/L
L74077-2	SOUTH HAVEN	07/01/17	08/01/17	ZR-95	< 6.55E+00	1.57E+00	3.80E+00	6.55E+00	3.00E+01	pCi/L
L74389-1	SOUTH HAVEN	08/01/17	09/01/17	ZR-95	< 4.59E+00	-4.45E-01	2.78E+00	4.59E+00	3.00E+01	pCi/L
L74883-4	SOUTH HAVEN	09/01/17	10/01/17	ZR-95	< 4.30E+00	8.43E-01	2.58E+00	4.30E+00	3.00E+01	pCi/L
L75298-4	SOUTH HAVEN	10/01/17	11/01/17	ZR-95	< 5.18E+00	-8.42E-01	3.17E+00	5.18E+00	3.00E+01	pCi/L
L75597-4	SOUTH HAVEN	11/01/17	12/01/17	ZR-95	< 6.03E+00	2.06E+00	3.55E+00	6.03E+00	3.00E+01	pCi/L
L76030-2	SOUTH HAVEN	12/01/17	01/01/18	ZR-95	< 4.38E+00	-2.35E+00	2.76E+00	4.38E+00	3.00E+01	pCi/L
L74883-4	SOUTH HAVEN	09/01/17	10/01/17	ZR-95	< 4.30E+00	8.43E-01	2.58E+00	4.30E+00	3.00E+01	pCi/L
L75298-4	SOUTH HAVEN	10/01/17	11/01/17	ZR-95	< 5.18E+00	-8.42E-01	3.17E+00	5.18E+00	3.00E+01	pCi/L
L75597-4	SOUTH HAVEN	11/01/17	12/01/17	ZR-95	< 6.03E+00	2.06E+00	3.55E+00	6.03E+00	3.00E+01	pCi/L
L76030-2	SOUTH HAVEN	12/01/17	01/01/18	ZR-95	< 4.38E+00	-2.35E+00	2.76E+00	4.38E+00	3.00E+01	pCi/L

**SOUTH SEDIMENT
SEDIMENT**

LAB ID	STATION	COLLECT START	COLLECT STOP	NUCLIDE	REPORTABLE	ACTIVITY	ERROR	MDC	LLD	UNITS
L72518-1	SOUTH SEDIMENT	04/15/17		CS-134	< 3.27E+01	-3.01E+00	2.03E+01	3.27E+01	1.50E+02	pCi/kg Dry
L75267-1	SOUTH SEDIMENT	11/03/17		CS-134	< 4.62E+01	1.30E+01	2.61E+01	4.62E+01	1.50E+02	pCi/kg Dry
L72518-1	SOUTH SEDIMENT	04/15/17		CS-137	< 2.97E+01	-1.53E+01	2.03E+01	2.97E+01	1.80E+02	pCi/kg Dry
L75267-1	SOUTH SEDIMENT	11/03/17		CS-137	< 3.56E+01	-5.08E+00	2.19E+01	3.56E+01	1.80E+02	pCi/kg Dry
L72518-1	SOUTH SEDIMENT	04/15/17		K-40	4.18E+03	4.18E+03	7.40E+02	2.36E+02		pCi/kg Dry
L75267-1	SOUTH SEDIMENT	11/03/17		K-40	4.18E+03	4.18E+03	7.90E+02	2.76E+02		pCi/kg Dry
L72518-1	SOUTH SEDIMENT	04/15/17		TH-228	1.47E+02	1.47E+02	6.33E+01	5.25E+01		pCi/kg Dry
L75267-1	SOUTH SEDIMENT	11/03/17		TH-228	2.60E+02	2.60E+02	8.12E+01	5.89E+01		pCi/kg Dry
L72518-1	SOUTH SEDIMENT	04/15/17		TH-232	1.69E+02	1.69E+02	5.32E+01	9.35E+01		pCi/kg Dry
L75267-1	SOUTH SEDIMENT	11/03/17		TH-232	3.05E+02	3.05E+02	1.03E+02	2.72E+02		pCi/kg Dry

**LUDINGTON CONTROL
SURFACE WATER**

LAB ID	STATION	COLLECT START	COLLECT STOP	NUCLIDE	REPORTABLE	ACTIVITY	ERROR	MDC	LLD	UNITS
L75597-3	LUDINGTON CONTROL	11/01/17	12/01/17	AC-228		4.12E+01	4.12E+01	8.71E+00	8.40E+00	pCi/L
L71635-1	LUDINGTON CONTROL	01/01/17	02/01/17	BA-LA-140	< 1.44E+01	-3.20E-01	8.68E+00	1.44E+01	1.50E+01	pCi/L
L71950-4	LUDINGTON CONTROL	02/01/17	03/01/17	BA-LA-140	< 7.53E+00	-2.22E+00	4.65E+00	7.53E+00	1.50E+01	pCi/L
L72420-1	LUDINGTON CONTROL	03/01/17	04/01/17	BA-LA-140	< 1.01E+01	-9.54E+00	7.23E+00	1.01E+01	1.50E+01	pCi/L
L72715-1	LUDINGTON CONTROL	04/01/17	04/30/17	BA-LA-140	< 6.80E+00	1.87E+00	3.95E+00	6.80E+00	1.50E+01	pCi/L
L73153-1	LUDINGTON CONTROL	05/01/17	06/01/17	BA-LA-140	< 1.20E+01	3.89E+00	7.05E+00	1.20E+01	1.50E+01	pCi/L
L73681-4	LUDINGTON CONTROL	06/01/17	07/01/17	BA-LA-140	< 1.46E+01	-3.48E+00	9.27E+00	1.46E+01	1.50E+01	pCi/L
L74077-1	LUDINGTON CONTROL	07/01/17	08/01/17	BA-LA-140	< 1.38E+01	3.44E+00	8.01E+00	1.38E+01	1.50E+01	pCi/L
L74594-1	LUDINGTON CONTROL	08/01/17	09/01/17	BA-LA-140	< 1.47E+01	6.77E+00	8.47E+00	1.47E+01	1.50E+01	pCi/L
L74883-3	LUDINGTON CONTROL	09/01/17	10/01/17	BA-LA-140	< 1.30E+01	-5.48E+00	8.33E+00	1.30E+01	1.50E+01	pCi/L
L75298-3	LUDINGTON CONTROL	10/01/17	11/01/17	BA-LA-140	< 1.42E+01	-1.14E+00	8.69E+00	1.42E+01	1.50E+01	pCi/L
L75597-3	LUDINGTON CONTROL	11/01/17	12/01/17	BA-LA-140	< 1.24E+01	4.41E+00	7.07E+00	1.24E+01	1.50E+01	pCi/L
L76030-1	LUDINGTON CONTROL	12/01/17	01/01/18	BA-LA-140	< 1.22E+01	8.97E-02	7.36E+00	1.22E+01	1.50E+01	pCi/L
L71635-1	LUDINGTON CONTROL	01/01/17	02/01/17	CO-58	< 2.96E+00	-1.48E-01	1.78E+00	2.96E+00	1.50E+01	pCi/L
L71950-4	LUDINGTON CONTROL	02/01/17	03/01/17	CO-58	< 1.92E+00	-6.44E-02	1.15E+00	1.92E+00	1.50E+01	pCi/L
L72420-1	LUDINGTON CONTROL	03/01/17	04/01/17	CO-58	< 2.55E+00	1.37E+00	1.47E+00	2.55E+00	1.50E+01	pCi/L
L72715-1	LUDINGTON CONTROL	04/01/17	04/30/17	CO-58	< 1.88E+00	-5.77E-01	1.15E+00	1.88E+00	1.50E+01	pCi/L
L73153-1	LUDINGTON CONTROL	05/01/17	06/01/17	CO-58	< 2.84E+00	6.74E-01	1.70E+00	2.84E+00	1.50E+01	pCi/L
L73681-4	LUDINGTON CONTROL	06/01/17	07/01/17	CO-58	< 2.91E+00	-5.79E-01	1.80E+00	2.91E+00	1.50E+01	pCi/L
L74077-1	LUDINGTON CONTROL	07/01/17	08/01/17	CO-58	< 2.91E+00	-5.36E-01	1.85E+00	2.91E+00	1.50E+01	pCi/L
L74594-1	LUDINGTON CONTROL	08/01/17	09/01/17	CO-58	< 1.90E+00	-3.82E-01	1.19E+00	1.90E+00	1.50E+01	pCi/L
L74883-3	LUDINGTON CONTROL	09/01/17	10/01/17	CO-58	< 3.00E+00	-1.11E+00	1.87E+00	3.00E+00	1.50E+01	pCi/L
L75298-3	LUDINGTON CONTROL	10/01/17	11/01/17	CO-58	< 2.75E+00	2.57E-02	1.66E+00	2.75E+00	1.50E+01	pCi/L
L75597-3	LUDINGTON CONTROL	11/01/17	12/01/17	CO-58	< 2.78E+00	-8.01E-01	1.78E+00	2.78E+00	1.50E+01	pCi/L
L76030-1	LUDINGTON CONTROL	12/01/17	01/01/18	CO-58	< 2.46E+00	-1.36E+00	1.55E+00	2.46E+00	1.50E+01	pCi/L
L71635-1	LUDINGTON CONTROL	01/01/17	02/01/17	CO-60	< 2.49E+00	1.88E-01	1.52E+00	2.49E+00	1.50E+01	pCi/L
L71950-4	LUDINGTON CONTROL	02/01/17	03/01/17	CO-60	< 1.66E+00	-3.08E-01	1.04E+00	1.66E+00	1.50E+01	pCi/L
L72420-1	LUDINGTON CONTROL	03/01/17	04/01/17	CO-60	< 1.95E+00	-8.61E-01	1.26E+00	1.95E+00	1.50E+01	pCi/L
L72715-1	LUDINGTON CONTROL	04/01/17	04/30/17	CO-60	< 1.68E+00	5.42E-01	1.01E+00	1.68E+00	1.50E+01	pCi/L
L73153-1	LUDINGTON CONTROL	05/01/17	06/01/17	CO-60	< 2.30E+00	-5.76E-01	1.58E+00	2.30E+00	1.50E+01	pCi/L
L73681-4	LUDINGTON CONTROL	06/01/17	07/01/17	CO-60	< 2.70E+00	1.41E+00	1.51E+00	2.70E+00	1.50E+01	pCi/L
L74077-1	LUDINGTON CONTROL	07/01/17	08/01/17	CO-60	< 2.23E+00	2.51E-01	1.35E+00	2.23E+00	1.50E+01	pCi/L
L74594-1	LUDINGTON CONTROL	08/01/17	09/01/17	CO-60	< 1.40E+00	-5.93E-01	8.67E-01	1.40E+00	1.50E+01	pCi/L
L74883-3	LUDINGTON CONTROL	09/01/17	10/01/17	CO-60	< 2.41E+00	-5.48E-03	1.45E+00	2.41E+00	1.50E+01	pCi/L
L75298-3	LUDINGTON CONTROL	10/01/17	11/01/17	CO-60	< 2.46E+00	2.52E-01	1.44E+00	2.46E+00	1.50E+01	pCi/L
L75597-3	LUDINGTON CONTROL	11/01/17	12/01/17	CO-60	< 2.65E+00	7.00E-01	1.54E+00	2.65E+00	1.50E+01	pCi/L
L76030-1	LUDINGTON CONTROL	12/01/17	01/01/18	CO-60	< 2.06E+00	3.79E-02	1.28E+00	2.06E+00	1.50E+01	pCi/L

L71635-1	LUDINGTON CONTROL	01/01/17	02/01/17	CS-134	< 2.52E+00	-2.81E+00	1.74E+00	2.52E+00	1.50E+01	pCi/L
L71950-4	LUDINGTON CONTROL	02/01/17	03/01/17	CS-134	< 1.72E+00	-1.20E+00	1.08E+00	1.72E+00	1.50E+01	pCi/L
L72420-1	LUDINGTON CONTROL	03/01/17	04/01/17	CS-134	< 2.04E+00	3.96E-01	1.22E+00	2.04E+00	1.50E+01	pCi/L
L72715-1	LUDINGTON CONTROL	04/01/17	04/30/17	CS-134	< 1.72E+00	2.14E-01	1.02E+00	1.72E+00	1.50E+01	pCi/L
L73153-1	LUDINGTON CONTROL	05/01/17	06/01/17	CS-134	< 2.41E+00	-4.95E-01	1.50E+00	2.41E+00	1.50E+01	pCi/L
L73681-4	LUDINGTON CONTROL	06/01/17	07/01/17	CS-134	< 2.65E+00	8.33E-01	1.54E+00	2.65E+00	1.50E+01	pCi/L
L74077-1	LUDINGTON CONTROL	07/01/17	08/01/17	CS-134	< 2.44E+00	-5.45E-01	1.56E+00	2.44E+00	1.50E+01	pCi/L
L74594-1	LUDINGTON CONTROL	08/01/17	09/01/17	CS-134	< 1.57E+00	3.39E-01	9.53E-01	1.57E+00	1.50E+01	pCi/L
L74883-3	LUDINGTON CONTROL	09/01/17	10/01/17	CS-134	< 2.71E+00	1.80E-01	1.64E+00	2.71E+00	1.50E+01	pCi/L
L75298-3	LUDINGTON CONTROL	10/01/17	11/01/17	CS-134	< 2.47E+00	4.44E-01	1.45E+00	2.47E+00	1.50E+01	pCi/L
L75597-3	LUDINGTON CONTROL	11/01/17	12/01/17	CS-134	< 2.51E+00	-7.72E-01	1.61E+00	2.51E+00	1.50E+01	pCi/L
L76030-1	LUDINGTON CONTROL	12/01/17	01/01/18	CS-134	< 2.14E+00	-2.63E-01	1.31E+00	2.14E+00	1.50E+01	pCi/L
L71635-1	LUDINGTON CONTROL	01/01/17	02/01/17	CS-137	< 2.87E+00	2.21E-01	1.78E+00	2.87E+00	1.80E+01	pCi/L
L71950-4	LUDINGTON CONTROL	02/01/17	03/01/17	CS-137	< 1.68E+00	-3.87E-01	1.06E+00	1.68E+00	1.80E+01	pCi/L
L72420-1	LUDINGTON CONTROL	03/01/17	04/01/17	CS-137	< 1.95E+00	4.00E-01	1.15E+00	1.95E+00	1.80E+01	pCi/L
L72715-1	LUDINGTON CONTROL	04/01/17	04/30/17	CS-137	< 1.80E+00	3.56E-01	1.25E+00	1.80E+00	1.80E+01	pCi/L
L73153-1	LUDINGTON CONTROL	05/01/17	06/01/17	CS-137	< 2.37E+00	4.18E-01	1.42E+00	2.37E+00	1.80E+01	pCi/L
L73681-4	LUDINGTON CONTROL	06/01/17	07/01/17	CS-137	< 2.39E+00	9.31E-03	1.42E+00	2.39E+00	1.80E+01	pCi/L
L74077-1	LUDINGTON CONTROL	07/01/17	08/01/17	CS-137	< 2.33E+00	-4.06E-02	1.43E+00	2.33E+00	1.80E+01	pCi/L
L74594-1	LUDINGTON CONTROL	08/01/17	09/01/17	CS-137	< 1.44E+00	-3.20E-01	8.83E-01	1.44E+00	1.80E+01	pCi/L
L74883-3	LUDINGTON CONTROL	09/01/17	10/01/17	CS-137	< 2.42E+00	2.27E-01	1.44E+00	2.42E+00	1.80E+01	pCi/L
L75298-3	LUDINGTON CONTROL	10/01/17	11/01/17	CS-137	< 2.15E+00	-1.07E+00	1.36E+00	2.15E+00	1.80E+01	pCi/L
L75597-3	LUDINGTON CONTROL	11/01/17	12/01/17	CS-137	< 2.51E+00	1.37E+00	1.46E+00	2.51E+00	1.80E+01	pCi/L
L76030-1	LUDINGTON CONTROL	12/01/17	01/01/18	CS-137	< 2.18E+00	2.96E-01	1.29E+00	2.18E+00	1.80E+01	pCi/L
L71635-1	LUDINGTON CONTROL	01/01/17	02/01/17	FE-59	< 7.37E+00	-1.36E-01	4.51E+00	7.37E+00	3.00E+01	pCi/L
L71950-4	LUDINGTON CONTROL	02/01/17	03/01/17	FE-59	< 4.75E+00	-1.42E+00	2.97E+00	4.75E+00	3.00E+01	pCi/L
L72420-1	LUDINGTON CONTROL	03/01/17	04/01/17	FE-59	< 5.60E+00	1.58E+00	3.24E+00	5.60E+00	3.00E+01	pCi/L
L72715-1	LUDINGTON CONTROL	04/01/17	04/30/17	FE-59	< 4.31E+00	-2.59E-01	2.64E+00	4.31E+00	3.00E+01	pCi/L
L73153-1	LUDINGTON CONTROL	05/01/17	06/01/17	FE-59	< 6.36E+00	1.09E+00	3.73E+00	6.36E+00	3.00E+01	pCi/L
L73681-4	LUDINGTON CONTROL	06/01/17	07/01/17	FE-59	< 7.88E+00	4.70E+00	4.52E+00	7.88E+00	3.00E+01	pCi/L
L74077-1	LUDINGTON CONTROL	07/01/17	08/01/17	FE-59	< 6.63E+00	1.74E+00	3.88E+00	6.63E+00	3.00E+01	pCi/L
L74594-1	LUDINGTON CONTROL	08/01/17	09/01/17	FE-59	< 5.08E+00	2.95E+00	2.94E+00	5.08E+00	3.00E+01	pCi/L
L74883-3	LUDINGTON CONTROL	09/01/17	10/01/17	FE-59	< 7.65E+00	4.80E+00	4.49E+00	7.65E+00	3.00E+01	pCi/L
L75298-3	LUDINGTON CONTROL	10/01/17	11/01/17	FE-59	< 6.14E+00	-1.92E+00	4.00E+00	6.14E+00	3.00E+01	pCi/L
L75597-3	LUDINGTON CONTROL	11/01/17	12/01/17	FE-59	< 6.55E+00	1.46E-01	3.89E+00	6.55E+00	3.00E+01	pCi/L
L76030-1	LUDINGTON CONTROL	12/01/17	01/01/18	FE-59	< 6.03E+00	-3.18E-01	3.73E+00	6.03E+00	3.00E+01	pCi/L
L71635-1	LUDINGTON CONTROL	01/01/17	02/01/17	GR-B	2.19E+00	2.19E+00	1.23E+00	1.66E+00	4.00E+00	pCi/L
L71950-4	LUDINGTON CONTROL	02/01/17	03/01/17	GR-B	< 2.04E+00	1.82E+00	1.39E+00	2.04E+00	4.00E+00	pCi/L
L72420-1	LUDINGTON CONTROL	03/01/17	04/01/17	GR-B	< 2.35E+00	2.07E+00	1.50E+00	2.35E+00	4.00E+00	pCi/L
L72715-1	LUDINGTON CONTROL	04/01/17	04/30/17	GR-B	2.98E+00	2.98E+00	1.57E+00	2.35E+00	4.00E+00	pCi/L

L73153-1	LUDINGTON CONTROL	05/01/17	06/01/17	GR-B	2.93E+00	2.93E+00	1.51E+00	2.21E+00	4.00E+00	pCi/L
L73681-4	LUDINGTON CONTROL	06/01/17	07/01/17	GR-B	3.75E+00	3.75E+00	1.51E+00	2.14E+00	4.00E+00	pCi/L
L74077-1	LUDINGTON CONTROL	07/01/17	08/01/17	GR-B	2.34E+00	2.34E+00	1.39E+00	2.10E+00	4.00E+00	pCi/L
L74594-1	LUDINGTON CONTROL	08/01/17	09/01/17	GR-B	3.63E+00	3.63E+00	1.51E+00	2.15E+00	4.00E+00	pCi/L
L74883-3	LUDINGTON CONTROL	09/01/17	10/01/17	GR-B	3.45E+00	3.45E+00	1.41E+00	1.97E+00	4.00E+00	pCi/L
L75298-3	LUDINGTON CONTROL	10/01/17	11/01/17	GR-B	< 2.22E+00	2.18E+00	1.44E+00	2.22E+00	4.00E+00	pCi/L
L75597-3	LUDINGTON CONTROL	11/01/17	12/01/17	GR-B	< 1.95E+00	1.89E+00	1.27E+00	1.95E+00	4.00E+00	pCi/L
L76030-1	LUDINGTON CONTROL	12/01/17	01/01/18	GR-B	3.45E+00	3.45E+00	1.39E+00	1.91E+00	4.00E+00	pCi/L
L71635-1	LUDINGTON CONTROL	01/01/17	02/01/17	H-3 (DIST)	< 7.17E+02	-6.37E+00	4.34E+02	7.17E+02	2.00E+03	pCi/L
L71950-4	LUDINGTON CONTROL	02/01/17	03/01/17	H-3 (DIST)	< 5.69E+02	-1.24E+02	3.23E+02	5.69E+02	2.00E+03	pCi/L
L72420-1	LUDINGTON CONTROL	03/01/17	04/01/17	H-3 (DIST)	< 6.89E+02	4.61E+01	3.76E+02	6.89E+02	2.00E+03	pCi/L
L72715-1	LUDINGTON CONTROL	04/01/17	04/30/17	H-3 (DIST)	< 6.91E+02	1.33E+02	3.91E+02	6.91E+02	2.00E+03	pCi/L
L73153-1	LUDINGTON CONTROL	05/01/17	06/01/17	H-3 (DIST)	< 6.02E+02	2.53E+02	3.61E+02	6.02E+02	2.00E+03	pCi/L
L73681-4	LUDINGTON CONTROL	06/01/17	07/01/17	H-3 (DIST)	< 5.50E+02	2.25E+02	3.28E+02	5.50E+02	2.00E+03	pCi/L
L74077-1	LUDINGTON CONTROL	07/01/17	08/01/17	H-3 (DIST)	< 5.57E+02	-2.21E+01	2.99E+02	5.57E+02	2.00E+03	pCi/L
L74594-1	LUDINGTON CONTROL	08/01/17	09/01/17	H-3 (DIST)	< 6.06E+02	-1.66E+02	2.93E+02	6.06E+02	2.00E+03	pCi/L
L74883-3	LUDINGTON CONTROL	09/01/17	10/01/17	H-3 (DIST)	< 5.48E+02	4.36E+02	3.76E+02	5.48E+02	2.00E+03	pCi/L
L75298-3	LUDINGTON CONTROL	10/01/17	11/01/17	H-3 (DIST)	< 6.70E+02	1.83E+02	3.84E+02	6.70E+02	2.00E+03	pCi/L
L75597-3	LUDINGTON CONTROL	11/01/17	12/01/17	H-3 (DIST)	< 6.74E+02	1.96E+02	3.88E+02	6.74E+02	2.00E+03	pCi/L
L76030-1	LUDINGTON CONTROL	12/01/17	01/01/18	H-3 (DIST)	< 6.42E+02	-1.25E+02	3.18E+02	6.42E+02	2.00E+03	pCi/L
L74077-1	LUDINGTON CONTROL	07/01/17	08/01/17	K-40	2.89E+01	2.89E+01	2.80E+01	2.17E+01		pCi/L
L71635-1	LUDINGTON CONTROL	01/01/17	02/01/17	MN-54	< 2.68E+00	-6.63E-01	1.65E+00	2.68E+00	1.50E+01	pCi/L
L71950-4	LUDINGTON CONTROL	02/01/17	03/01/17	MN-54	< 1.57E+00	-2.95E-01	9.54E-01	1.57E+00	1.50E+01	pCi/L
L72420-1	LUDINGTON CONTROL	03/01/17	04/01/17	MN-54	< 1.97E+00	-7.96E-01	1.26E+00	1.97E+00	1.50E+01	pCi/L
L72715-1	LUDINGTON CONTROL	04/01/17	04/30/17	MN-54	< 1.75E+00	1.07E+00	1.00E+00	1.75E+00	1.50E+01	pCi/L
L73153-1	LUDINGTON CONTROL	05/01/17	06/01/17	MN-54	< 2.26E+00	-2.46E-01	1.40E+00	2.26E+00	1.50E+01	pCi/L
L73681-4	LUDINGTON CONTROL	06/01/17	07/01/17	MN-54	< 2.40E+00	9.06E-01	1.39E+00	2.40E+00	1.50E+01	pCi/L
L74077-1	LUDINGTON CONTROL	07/01/17	08/01/17	MN-54	< 2.11E+00	-1.77E+00	1.38E+00	2.11E+00	1.50E+01	pCi/L
L74594-1	LUDINGTON CONTROL	08/01/17	09/01/17	MN-54	< 1.46E+00	2.94E-01	8.88E-01	1.46E+00	1.50E+01	pCi/L
L74883-3	LUDINGTON CONTROL	09/01/17	10/01/17	MN-54	< 2.38E+00	-3.07E-01	1.46E+00	2.38E+00	1.50E+01	pCi/L
L75298-3	LUDINGTON CONTROL	10/01/17	11/01/17	MN-54	< 2.09E+00	-4.16E-01	1.30E+00	2.09E+00	1.50E+01	pCi/L
L75597-3	LUDINGTON CONTROL	11/01/17	12/01/17	MN-54	< 2.43E+00	-2.71E-01	1.52E+00	2.43E+00	1.50E+01	pCi/L
L76030-1	LUDINGTON CONTROL	12/01/17	01/01/18	MN-54	< 2.05E+00	1.41E-01	1.24E+00	2.05E+00	1.50E+01	pCi/L
L71635-1	LUDINGTON CONTROL	01/01/17	02/01/17	NB-95	< 3.51E+00	1.23E-01	2.09E+00	3.51E+00	1.50E+01	pCi/L
L71950-4	LUDINGTON CONTROL	02/01/17	03/01/17	NB-95	< 2.18E+00	1.84E+00	1.23E+00	2.18E+00	1.50E+01	pCi/L
L72420-1	LUDINGTON CONTROL	03/01/17	04/01/17	NB-95	< 2.43E+00	1.29E-01	1.47E+00	2.43E+00	1.50E+01	pCi/L
L72715-1	LUDINGTON CONTROL	04/01/17	04/30/17	NB-95	< 2.09E+00	6.51E-01	1.22E+00	2.09E+00	1.50E+01	pCi/L
L73153-1	LUDINGTON CONTROL	05/01/17	06/01/17	NB-95	< 2.94E+00	9.83E-01	1.75E+00	2.94E+00	1.50E+01	pCi/L
L73681-4	LUDINGTON CONTROL	06/01/17	07/01/17	NB-95	< 3.13E+00	1.21E-02	1.88E+00	3.13E+00	1.50E+01	pCi/L
L74077-1	LUDINGTON CONTROL	07/01/17	08/01/17	NB-95	< 3.07E+00	1.38E+00	1.80E+00	3.07E+00	1.50E+01	pCi/L

L74594-1	LUDINGTON CONTROL	08/01/17	09/01/17	NB-95	< 2.14E+00	9.18E-01	1.28E+00	2.14E+00	1.50E+01	pCi/L
L74883-3	LUDINGTON CONTROL	09/01/17	10/01/17	NB-95	< 3.13E+00	9.46E-01	1.85E+00	3.13E+00	1.50E+01	pCi/L
L75298-3	LUDINGTON CONTROL	10/01/17	11/01/17	NB-95	< 2.58E+00	-1.41E+00	1.67E+00	2.58E+00	1.50E+01	pCi/L
L75597-3	LUDINGTON CONTROL	11/01/17	12/01/17	NB-95	< 3.36E+00	2.19E+00	1.95E+00	3.36E+00	1.50E+01	pCi/L
L76030-1	LUDINGTON CONTROL	12/01/17	01/01/18	NB-95	< 2.73E+00	-1.85E-01	1.65E+00	2.73E+00	1.50E+01	pCi/L
L73681-4	LUDINGTON CONTROL	06/01/17	07/01/17	RA-226	8.08E+01	8.08E+01	6.34E+01	5.20E+01		pCi/L
L71635-1	LUDINGTON CONTROL	01/01/17	02/01/17	ZN-65	< 5.89E+00	-1.57E+00	3.73E+00	5.89E+00	3.00E+01	pCi/L
L71950-4	LUDINGTON CONTROL	02/01/17	03/01/17	ZN-65	< 3.67E+00	-9.47E-01	2.29E+00	3.67E+00	3.00E+01	pCi/L
L72420-1	LUDINGTON CONTROL	03/01/17	04/01/17	ZN-65	< 3.59E+00	-3.53E+00	2.43E+00	3.59E+00	3.00E+01	pCi/L
L72715-1	LUDINGTON CONTROL	04/01/17	04/30/17	ZN-65	< 3.33E+00	6.24E-01	2.30E+00	3.33E+00	3.00E+01	pCi/L
L73153-1	LUDINGTON CONTROL	05/01/17	06/01/17	ZN-65	< 4.85E+00	-4.61E+00	3.12E+00	4.85E+00	3.00E+01	pCi/L
L73681-4	LUDINGTON CONTROL	06/01/17	07/01/17	ZN-65	< 4.90E+00	-4.01E+00	3.38E+00	4.90E+00	3.00E+01	pCi/L
L74077-1	LUDINGTON CONTROL	07/01/17	08/01/17	ZN-65	< 4.82E+00	-4.01E+00	3.24E+00	4.82E+00	3.00E+01	pCi/L
L74594-1	LUDINGTON CONTROL	08/01/17	09/01/17	ZN-65	< 3.02E+00	-8.31E-01	2.21E+00	3.02E+00	3.00E+01	pCi/L
L74883-3	LUDINGTON CONTROL	09/01/17	10/01/17	ZN-65	< 5.21E+00	3.13E+00	3.51E+00	5.21E+00	3.00E+01	pCi/L
L75298-3	LUDINGTON CONTROL	10/01/17	11/01/17	ZN-65	< 4.50E+00	-2.01E+00	3.01E+00	4.50E+00	3.00E+01	pCi/L
L75597-3	LUDINGTON CONTROL	11/01/17	12/01/17	ZN-65	< 4.70E+00	-1.83E+00	3.45E+00	4.70E+00	3.00E+01	pCi/L
L76030-1	LUDINGTON CONTROL	12/01/17	01/01/18	ZN-65	< 4.45E+00	-4.18E+00	2.98E+00	4.45E+00	3.00E+01	pCi/L
L71635-1	LUDINGTON CONTROL	01/01/17	02/01/17	ZR-95	< 6.01E+00	1.57E+00	3.48E+00	6.01E+00	3.00E+01	pCi/L
L71950-4	LUDINGTON CONTROL	02/01/17	03/01/17	ZR-95	< 3.56E+00	-8.97E-01	2.16E+00	3.56E+00	3.00E+01	pCi/L
L72420-1	LUDINGTON CONTROL	03/01/17	04/01/17	ZR-95	< 4.19E+00	-1.96E+00	2.68E+00	4.19E+00	3.00E+01	pCi/L
L72715-1	LUDINGTON CONTROL	04/01/17	04/30/17	ZR-95	< 3.35E+00	-8.84E-01	2.02E+00	3.35E+00	3.00E+01	pCi/L
L73153-1	LUDINGTON CONTROL	05/01/17	06/01/17	ZR-95	< 5.19E+00	9.10E-01	3.12E+00	5.19E+00	3.00E+01	pCi/L
L73681-4	LUDINGTON CONTROL	06/01/17	07/01/17	ZR-95	< 5.73E+00	4.17E+00	3.18E+00	5.73E+00	3.00E+01	pCi/L
L74077-1	LUDINGTON CONTROL	07/01/17	08/01/17	ZR-95	< 5.31E+00	2.71E+00	3.08E+00	5.31E+00	3.00E+01	pCi/L
L74594-1	LUDINGTON CONTROL	08/01/17	09/01/17	ZR-95	< 3.49E+00	-3.35E-01	2.15E+00	3.49E+00	3.00E+01	pCi/L
L74883-3	LUDINGTON CONTROL	09/01/17	10/01/17	ZR-95	< 5.57E+00	4.48E-01	3.35E+00	5.57E+00	3.00E+01	pCi/L
L75298-3	LUDINGTON CONTROL	10/01/17	11/01/17	ZR-95	< 4.91E+00	-5.97E-01	3.00E+00	4.91E+00	3.00E+01	pCi/L
L75597-3	LUDINGTON CONTROL	11/01/17	12/01/17	ZR-95	< 4.74E+00	-1.35E+00	3.02E+00	4.74E+00	3.00E+01	pCi/L
L76030-1	LUDINGTON CONTROL	12/01/17	01/01/18	ZR-95	< 4.64E+00	-8.69E-01	2.83E+00	4.64E+00	3.00E+01	pCi/L

ATTACHMENT E
Teledyne Brown Engineering Environmental Services
Summary of Annual 2017 Interlaboratory Comparison Program

8 Pages Follow

ATTACHMENT E

INTERLABORATORY COMPARISON PROGRAM

This section presents the results of the interlaboratory comparison program for the Teledyne Brown Engineering Environmental Services and Environmental Dosimetry Company.

Program Description – Teledyne Brown Engineering Environmental Services Comparison Programs

The Teledyne Brown Engineering Environmental Services participates in several interlaboratory comparison programs. These programs include sample media for which samples are routinely collected and for which comparison samples are commercially available. Participation in these interlaboratory comparison programs ensure that independent checks on the precision and accuracy of the measurement of radioactive material in the environmental samples are performed as part of the Quality Assurance Program for environmental monitoring. To fulfill the requirement for an Interlaboratory Comparison Program, Teledyne Brown Engineering Environmental Services has engaged the following programs:

- Eckert & Ziegler Analytics Environmental Radioactivity Cross Check Program
- Department of Energy (DOE) Mixed Analyte Performance Evaluation Program (MAPEP)
- Environmental Resource Associates (ERA) Cross Check Program

These programs supply sample media as blind samples (typically spikes), which contain certified levels of radioactivity unknown to the analysis laboratory. These samples are prepared and analyzed by the Teledyne Brown Engineering Environmental Services using standard laboratory procedures. Each program issues a statistical summary report of the results. Teledyne Brown Engineering Environmental Services uses predetermined acceptance criteria methodology for evaluating its laboratory performance.

Teledyne Brown Engineering Environmental Services also analyzes laboratory blanks. The analysis of laboratory blanks provides a means to detect and measure radioactive contamination of analytical samples. The analysis of analytical blanks also provides information on the adequacy of background subtraction. Laboratory blank results are analyzed using control charts.

Acceptance Criteria

Each sample result is evaluated to determine the accuracy and precision of the laboratory's analysis result. The sample evaluation method is discussed below.

Analytics Sample Results Evaluation

Samples provided by Analytics are evaluated using what is specified as the NRC method. This method is based on the calculation of the ratio of results reported by the participating laboratory (QC result) to the Vendor Laboratory Known value (reference result).

An Environmental Laboratory analytical result is evaluated using the following calculation:

The value for the error resolution is calculated.

$$\text{Error Resolution} = \frac{\text{Reference Result}}{\text{Reference Results Error (1 sigma)}}$$

Using the appropriate row under the Error Resolution column in Tables D-3.1, D-3.2, and D-3.3, a corresponding Ratio of Agreement interval is given.

The value for the ratio is then calculated.

$$\text{Ratio of agreement} = \frac{\text{QC Result}}{\text{Reference Result}}$$

If the value falls within the agreement interval, the result is acceptable.

TABLE D-2.1 Ratio of Agreement

ERROR RESOLUTION	RATIO OF AGREEMENT
< 4	No Comparison
4 to 7	0.5-2.0
8 to 15	0.6-1.66
16 to 50	0.75-1.33
51 to 200	0.8-1.25
>200	0.85-1.18

This acceptance test is generally referred to as the "NRC" method. The acceptance criteria are contained in Procedure EN-CY-102. The NRC method generally results in an acceptance range of approximately $\pm 25\%$ of the Known value when applied to sample results from the Eckert & Ziegler Analytics Interlaboratory Comparison Program. This method is used as the procedurally required assessment method and requires the generation of a deviation from QA/QC program report when results are unacceptable.

ERA and MAPEP Sample Result Evaluation

Both these programs supply an acceptance range for evaluating the results.

Program Results Summary

The Interlaboratory Comparison Program numerical results are summarized in the following tables.

**A.1 Analytics Environmental Radioactivity Cross Check Program
Teledyne Brown Engineering Environmental Services**

Month/Year	Identification Number	Matrix	Nuclide	Units	TBE Reported Value	Known Value ^(a)	Ratio of TBE to Analytics Result	Evaluation ^(b)
March 2017	E11811	Milk	Sr-89	pCi/L	87	97.7	0.89	A
			Sr-90	pCi/L	12.4	16.2	0.77	A
March 2017	E11812	Milk	Ce-141	pCi/L	135	145	0.93	A
			Co-58	pCi/L	153	150	1.02	A
			Co-60	pCi/L	182	183	1.00	A
			Cr-51	pCi/L	258	290	0.89	A
			Cs-134	pCi/L	104	120	0.87	A
			Cs-137	pCi/L	142	140	1.02	A
			Fe-59	pCi/L	135	129	1.05	A
			I-131	pCi/L	92.6	97.9	0.95	A
			Mn-54	pCi/L	173	164	1.05	A
			Zn-65	pCi/L	208	199	1.04	A
			March 2017	E11813	Charcoal	I-131	pCi	92
March 2017	E11814	AP	Ce-141	pCi	99.9	101	0.99	A
			Co-58	pCi	95.4	104	0.92	A
			Co-60	pCi	140	127	1.10	A
			Cr-51	pCi	211	201	1.05	A
			Cs-134	pCi	82.1	83.2	0.99	A
			Cs-137	pCi	92.8	97.0	0.96	A
			Fe-59	pCi	107	89.3	1.20	A
			Mn-54	pCi	106	114	0.93	A
March 2017	E11816	Soil	Ce-141	pCi/g	0.258	0.250	1.03	A
Co-58			pCi/g	0.241	0.258	0.93	A	
Co-60			pCi/g	0.312	0.315	0.99	A	
Cr-51			pCi/g	0.439	0.500	0.88	A	
Cs-134			pCi/g	0.176	0.207	0.85	A	
Cs-137			pCi/g	0.304	0.317	0.96	A	
Fe-59			pCi/g	0.210	0.222	0.95	A	
Mn-54			pCi/g	0.292	0.283	1.03	A	
March 2017	E11815	Water	Fe-55	pCi/L	1600	1890	0.85	A

(a) The Analytics known value is equal to 100% of the parameter present in the standard as determined by gravimetric and/or volumetric measurements made during standard preparation

(b) Analytics evaluation based on TBE internal QC limits:

A = Acceptable - reported result falls within ratio limits of 0.80-1.20

W = Acceptable with warning - reported result falls within 0.70-0.80 or 1.20-1.30

N = Not Acceptable - reported result falls outside the ratio limits of < 0.70 and > 1.30

**A.1 Analytics Environmental Radioactivity Cross Check Program
Teledyne Brown Engineering Environmental Services**

Month/Year	Identification Number	Matrix	Nuclide	Units	TBE Reported Value	Known Value ^(a)	Ratio of TBE to Analytics Result	Evaluation ^(b)
June 2017	E11844	Milk	Sr-89	pCi/L	81.3	92.6	0.88	A
			Sr-90	pCi/L	12.1	13.5	0.90	A
June 2017	E11846	Milk	Ce-141	pCi/L	142	151	0.94	A
			Co-58	pCi/L	147	155	0.95	A
			Co-60	pCi/L	185	191	0.97	A
			Cr-51	pCi/L	321	315	1.02	A
			Cs-134	pCi/L	168	188	0.89	A
			Cs-137	pCi/L	148	150	0.99	A
			Fe-59	pCi/L	116	115	1.01	A
			I-131	pCi/L	102	93.6	1.09	A
			Mn-54	pCi/L	168	172	0.98	A
			Zn-65	pCi/L	195	204	0.96	A
			June 2017	E11847	Charcoal	I-131	pCi	87.9
June 2017	E11845	AP	Sr-89	pCi	70.8	79.1	0.90	A
			Sr-90	pCi	9.10	11.5	0.79	W
June 2017	E11848	AP	Ce-141	pCi	112	116	0.96	A
			Co-58	pCi	119	119	1.00	A
			Co-60	pCi	171	146	1.17	A
			Cr-51	pCi	270	241	1.12	A
			Cs-134	pCi	152	144	1.05	A
			Cs-137	pCi	114	115	0.99	A
			Fe-59	pCi	94.1	88.3	1.07	A
			Mn-54	pCi	139	132	1.06	A
June 2017	E11849	Water	Fe-55	pCi/L	1840	1890	0.97	A
July 2017	E11901	AP	GR-A	pCi	50.1	44.2	1.13	A
			GR-B	pCi	218	233	0.93	A

(a) The Analytics known value is equal to 100% of the parameter present in the standard as determined by gravimetric and/or volumetric measurements made during standard preparation

(b) Analytics evaluation based on TBE internal QC limits:

A = Acceptable - reported result falls within ratio limits of 0.80-1.20

W = Acceptable with warning - reported result falls within 0.70-0.80 or 1.20-1.30

N = Not Acceptable - reported result falls outside the ratio limits of < 0.70 and > 1.30

**A.1 Analytics Environmental Radioactivity Cross Check Program
Teledyne Brown Engineering Environmental Services**

Month/Year	Identification Number	Matrix	Nuclide	Units	TBE Reported Value	Known Value ^(a)	Ratio of TBE to Analytics Result	Evaluation ^(b)
September 2017	E11914	Milk	Sr-89	pCi/L	84.3	82.7	1.02	A
			Sr-90	pCi/L	12.6	12.1	1.04	A
September 2017	E11915	Milk	Ce-141	pCi/L	93.9	87.0	1.08	A
			Co-58	pCi/L	115	117	0.98	A
			Co-60	pCi/L	265	262	1.01	A
			Cr-51	pCi/L	273	217	1.26	W
			Cs-134	pCi/L	186	201	0.93	A
			Cs-137	pCi/L	175	172	1.02	A
			Fe-59	pCi/L	137	125	1.09	A
			I-131	pCi/L	78.0	71.0	1.10	A
			Mn-54	pCi/L	128	123	1.04	A
			Zn-65	pCi/L	206	184	1.12	A
			September 2017	E11916	Charcoal	I-131	pCi	71.9
September 2017	E11917	AP	Ce-141	pCi	80.1	86.3	0.93	A
			Co-58	pCi	110	116	0.95	A
			Co-60	pCi	277	260	1.07	A
			Cr-51	pCi	275	215	1.28	W
			Cs-134	pCi	192	199	0.96	A
			Cs-137	pCi	165	170	0.97	A
			Fe-59	pCi	122	124	0.98	A
			Mn-54	pCi	120	122	0.99	A
September 2017	E11918	Water	Fe-55	pCi/L	1630	1630	1.00	A
September 2017	E11919	Soil	Ce-141	pCi/g	0.136	0.142	0.96	A
			Co-58	pCi/g	0.179	0.191	0.94	A
			Co-60	pCi/g	0.405	0.429	0.94	A
			Cr-51	pCi/g	0.230	0.355	0.65	N ⁽¹⁾
			Cs-134	pCi/g	0.272	0.328	0.83	A
			Cs-137	pCi/g	0.336	0.356	0.94	A
			Fe-59	pCi/g	0.210	0.205	1.02	A
			Mn-54	pCi/g	0.210	0.201	1.05	A
September 2017	E11919	Soil	Zn-65	pCi/g	0.301	0.301	1.00	A

(a) The Analytics known value is equal to 100% of the parameter present in the standard as determined by gravimetric and/or volumetric measurements made during standard preparation

(b) Analytics evaluation based on TBE internal QC limits:

A = Acceptable - reported result falls within ratio limits of 0.80-1.20

W = Acceptable with warning - reported result falls within 0.70-0.80 or 1.20-1.30

N = Not Acceptable - reported result falls outside the ratio limits of < 0.70 and > 1.30

(1) See NCR 17-16

**A.1 Analytics Environmental Radioactivity Cross Check Program
Teledyne Brown Engineering Environmental Services**

Month/Year	Identification Number	Matrix	Nuclide	Units	TBE Reported Value	Known Value ^(a)	Ratio of TBE to Analytics Result	Evaluation ^(b)
December 2017	E12054	Milk	Sr-89	pCi/L	92.1	92.3	1.00	A
			Sr-90	pCi/L	18.3	16.9	1.09	A
	E12055	Milk	Ce-141	pCi/L	97.8	98.3	0.99	A
			Co-58	pCi/L	92.3	89.9	1.03	A
			Co-60	pCi/L	176	173	1.02	A
			Cr-51	pCi/L	226	242	0.93	A
			Cs-134	pCi/L	118	125	0.95	A
			Cs-137	pCi/L	148	141	1.05	A
			Fe-59	pCi/L	123	113	1.08	A
			I-131	pCi/L	66.0	57.8	1.14	A
			Mn-54	pCi/L	173	161	1.08	A
			Zn-65	pCi/L	233	211	1.10	A
	E12056	Charcoal	I-131	pCi	48.1	47.5	1.01	A
	E12057A	AP	Ce-141	pCi	108	111	0.97	A
			Co-58	pCi	89.5	102	0.88	A
			Co-60	pCi	223	196	1.14	A
			Cr-51	pCi	311	274	1.13	A
			Cs-134	pCi	141	142	1.00	A
			Cs-137	pCi	162	160	1.01	A
			Fe-59	pCi	121	129	0.94	A
			Mn-54	pCi	177	182	0.97	A
	E12058	Water	Fe-55	pCi/L	1970	1740	1.13	A
	E12059	AP	Sr-89	pCi	71.2	87.4	0.81	A
			Sr-90	pCi	12.9	16.0	0.81	A

(a) The Analytics known value is equal to 100% of the parameter present in the standard as determined by gravimetric and/or volumetric measurements made during standard preparation

(b) Analytics evaluation based on TBE internal QC limits:

A = Acceptable - reported result falls within ratio limits of 0.80-1.20

W = Acceptable with warning - reported result falls within 0.70-0.80 or 1.20-1.30

N = Not Acceptable - reported result falls outside the ratio limits of < 0.70 and > 1.30

**A.2 DOE's Mixed Analyte Performance Evaluation Program (MAPEP)
Teledyne Brown Engineering Environmental Services**

Month/Year	Identification Number	Matrix	Nuclide	Units	TBE Reported Value	Known Value ^(a)	Acceptance Range	Evaluation ^(b)
February 2017	17-MaS36	Soil	Ni-63	Bq/kg	-5.512		(1)	A
			Sr-90	Bq/kg	571	624	437 - 811	A
	17-MaW36	Water	Am-241	Bq/L	0.693	0.846	0.592 - 1.100	A
			Ni-63	Bq/L	13.4	12.2	8.5 - 15.9	A
			Pu-238	Bq/L	0.7217	0.703	0.492 - 0.914	A
			Pu-239/240	Bq/L	0.9277	0.934	0.654 - 1.214	A
	17-RdF36	AP	U-234/233	Bq/sample	0.0911	0.104	0.073 - 0.135	A
			U-238	Bq/sample	0.0967	0.107	0.075 - 0.139	A
	17-RdV36	Vegetation	Cs-134	Bq/sample	6.44	6.95	4.87 - 9.04	A
			Cs-137	Bq/sample	4.61	4.60	3.22 - 5.98	A
			Co-57	Bq/sample	-0.0229		(1)	A
			Co-60	Bq/sample	8.52	8.75	6.13 - 11.38	A
			Mn-54	Bq/sample	3.30	3.28	2.30 - 4.26	A
			Sr-90	Bq/sample	1.30	1.75	1.23 - 2.28	W
Zn-65			Bq/sample	5.45	5.39	3.77 - 7.01	A	
August 2017	17-MaS37	Soil	Ni-63	Bq/kg	1130	1220	854 - 1586	A
			Sr-90	Bq/kg	296	289	202 - 376	A
	17-MaW37	Water	Am-241	Bq/L	0.838	0.892	0.624 - 1.160	A
			Ni-63	Bq/L	-0.096		(1)	A
			Pu-238	Bq/L	0.572	0.603	0.422 - 0.784	A
			Pu-239/240	Bq/L	0.863	0.781	0.547 - 1.015	A
	17-RdF37	AP	U-234/233	Bq/sample	0.103	0.084	0.059 - 0.109	W
			U-238	Bq/sample	0.115	0.087	0.061 - 0.113	N ⁽²⁾
	17-RdV37	Vegetation	Cs-134	Bq/sample	2.34	2.32	1.62 - 3.02	A
			Cs-137	Bq/sample	0.05		(1)	A
			Co-57	Bq/sample	3.32	2.8	2.0 - 3.6	A
			Co-60	Bq/sample	2.09	2.07	1.45 - 2.69	A
			Mn-54	Bq/sample	2.90	2.62	1.83 - 3.41	A
			Sr-90	Bq/sample	1.17	1.23	0.86 - 1.60	A
Zn-65			Bq/sample	6.07	5.37	3.76 - 6.98	A	

(a) The MAPEP known value is equal to 100% of the parameter present in the standard as determined by gravimetric and/or volumetric measurements made during standard preparation

(b) DOE/MAPEP evaluation:

A = Acceptable - reported result falls within ratio limits of 0.80-1.20

W = Acceptable with warning - reported result falls within 0.70-0.80 or 1.20-1.30

N = Not Acceptable - reported result falls outside the ratio limits of < 0.70 and > 1.30

(1) False positive test

(2) See NCR 17-15

**A.3 ERA Environmental Radioactivity Cross Check Program
Teledyne Brown Engineering Environmental Services**

Month/Year	Identification Number	Matrix	Nuclide	Units	TBE Reported Value	Known Value ^(a)	Acceptance Limits	Evaluation ^(b)
March 2017	MRAD-26	AP	GR-A	pCi/sample	76.3	85.5	28.6 - 133	A
April 2017	RAD-109	Water	Ba-133	pCi/L	49.2	49.7	40.8 - 55.1	A
			Cs-134	pCi/L	83.2	90.1	74.0 - 99.1	A
			Cs-137	pCi/L	202	206	185 - 228	A
			Co-60	pCi/L	51.2	54.7	49.2 - 62.7	A
			Zn-65	pCi/L	39.3	53.8	47.2 - 65.9	N ⁽¹⁾
			GR-A	pCi/L	53.6	75.0	39.5 - 92.3	A
			GR-B	pCi/L	42.7	38.5	25.5 - 46.0	A
			U-Nat	pCi/L	50.1	55.6	45.2 - 61.7	A
			H-3	pCi/L	7080	6850	5920 - 7540	A
			Sr-89	pCi/L	40.7	66.2	53.8 - 74.3	N ⁽¹⁾
			Sr-90	pCi/L	26.9	26.7	19.3 - 31.1	A
			I-131	pCi/L	26.7	29.9	24.9 - 34.9	A
September 2017	MRAD-27	AP	GR-A	pCi/sample	40.9	50.1	16.8 - 77.8	A
			GR-B	pCi/sample	58.0	61.8	39.1 - 90.1	A
October 2017	RAD-111	Water	Ba-133	pCi/L	71.3	73.7	61.7 - 81.1	A
			Cs-134	pCi/L	43.0	53.0	42.8 - 58.3	A
			Cs-137	pCi/L	48.2	52.9	47.6 - 61.1	A
			Co-60	pCi/L	69.0	69.5	62.6 - 78.9	A
			Zn-65	pCi/L	335	348	313 - 406	A
			GR-A	pCi/L	32.5	35.6	18.3 - 45.8	A
			GR-B	pCi/L	24.3	25.6	16.0 - 33.6	A
			U-Nat	pCi/L	36.6	37.0	30.0 - 40.9	A
			H-3	pCi/L	6270	6250	5390 - 6880	A
November 2017	111317O	Water	Sr-89	pCi/L	57.1	50.0	39.4 - 57.5	A
			Sr-90	pCi/L	27.1	41.8	30.8 - 48.0	N ⁽²⁾

(a) The ERA known value is equal to 100% of the parameter present in the standard as determined by gravimetric and/or volumetric measurements made during standard preparation.

(b) ERA evaluation:

A = Acceptable - Reported value falls within the Acceptance Limits

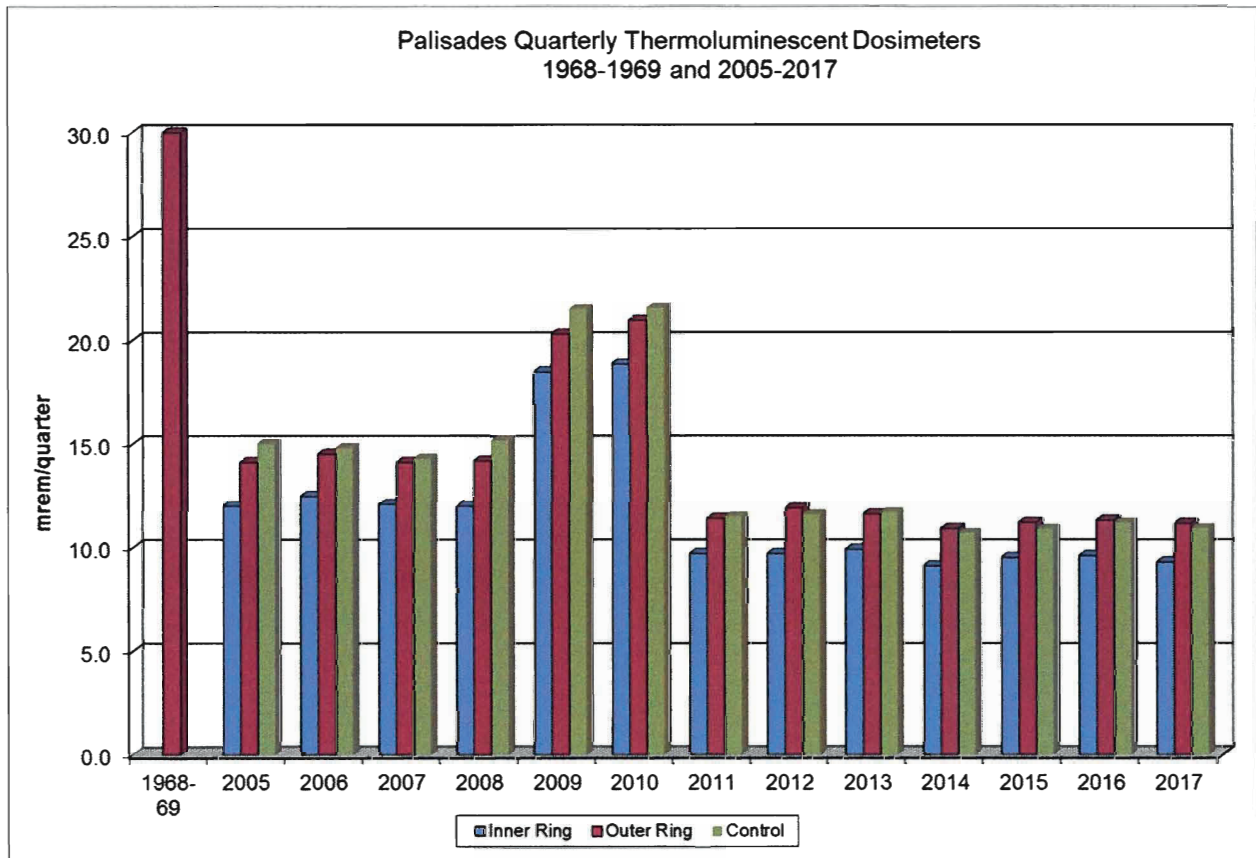
N = Not Acceptable - Reported value falls outside of the Acceptance Limits

(1) See NCR 17-09

(2) See NCR 17-19

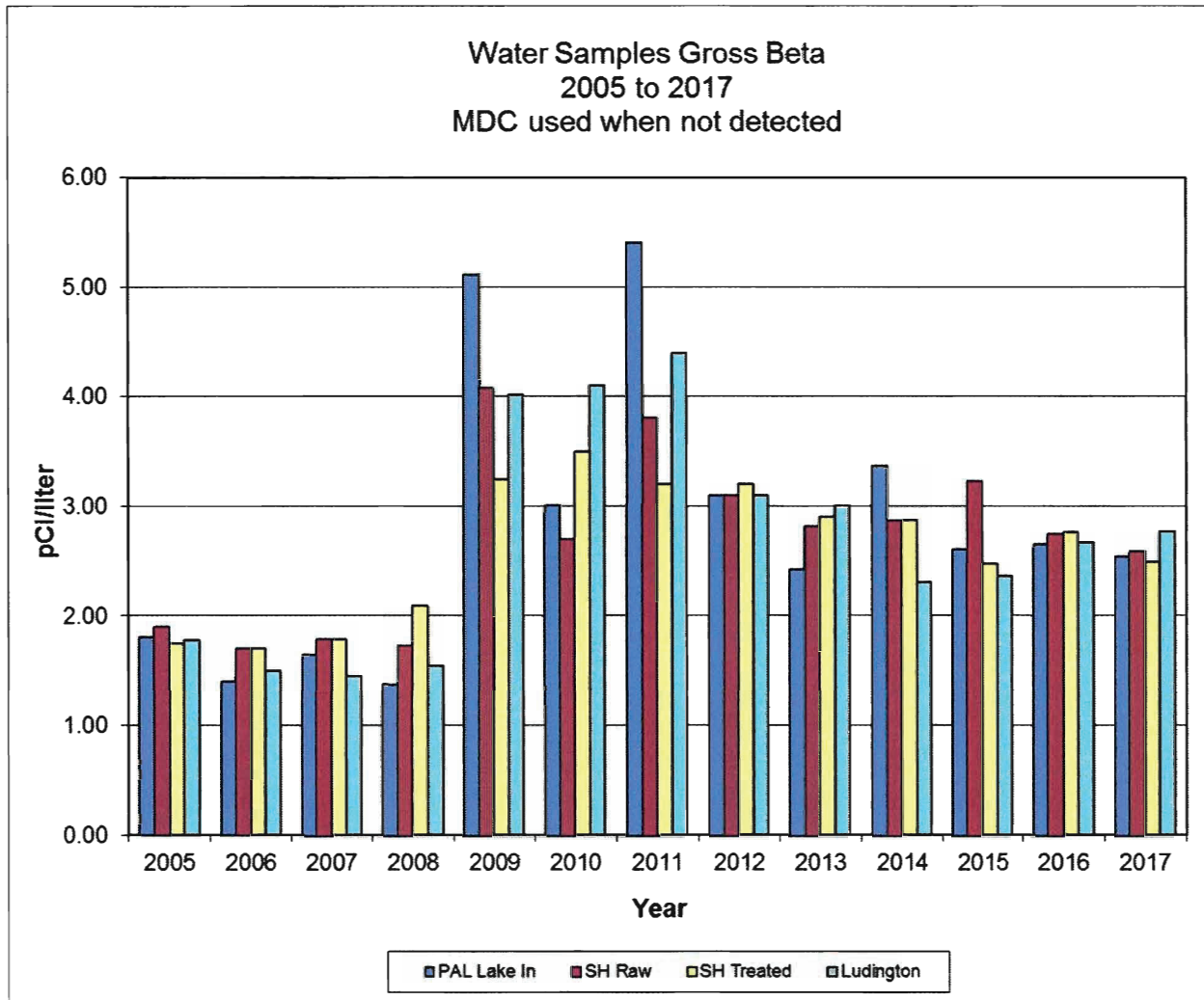
ATTACHMENT F DATA GRAPHS

1. Palisades TLD Quarterly Palisades Operational Comparison Graph, 1968-1969 and 2005-2017.



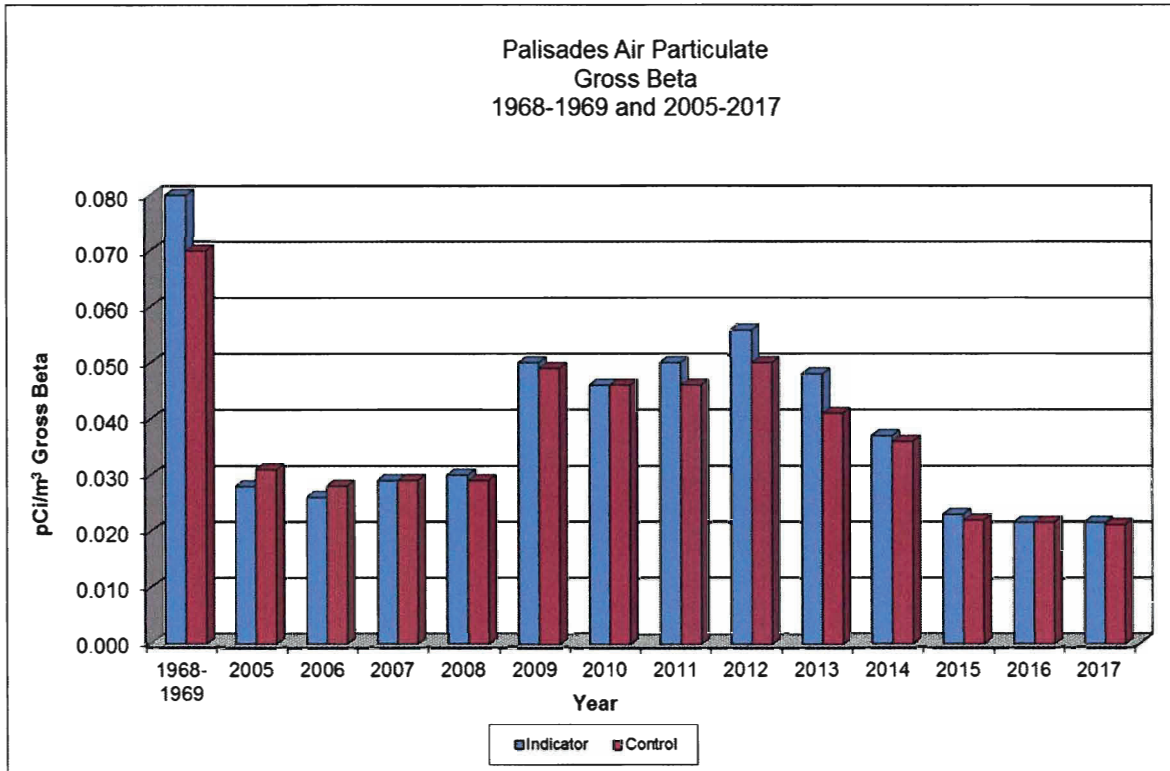
ATTACHMENT F DATA GRAPHS

2. Palisades Lake Water (Ludington Control vs. Intake, South Haven Treated and Raw), 2005-2017 in gross beta trending.



ATTACHMENT F DATA GRAPHS

3. Palisades Air Particulate (gross beta), Operational Comparison Graphs, 1968-1969 (pre-op) and 2005-2017.



ATTACHMENT G

2017 Quality Assurance Status Report for Environmental Dosimetry Company

ENVIRONMENTAL DOSIMETRY COMPANY

ANNUAL QUALITY ASSURANCE STATUS REPORT

January - December 2017

Prepared By: Jim Smith Date: 3/7/18
Approved By: Neil Stumpf Date: 3/7/18

**Environmental Dosimetry Company
10 Ashton Lane
Sterling, MA 01564**

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EXECUTIVE SUMMARY

Routine quality control (QC) testing was performed for dosimeters issued by the Environmental Dosimetry Company (EDC) .

During this annual period 100% (72/72) of the individual dosimeters, evaluated against the EDC internal performance acceptance criteria (high-energy photons only), met the criterion for accuracy and 100% (72/72) met the criterion for precision (Table 1). In addition, 100% (12/12) of the dosimeter sets evaluated against the internal tolerance limits met EDC acceptance criteria (Table 2) and 100% (6/6) of independent testing passed the performance criteria (Table 3). Trending graphs, which evaluate performance statistic for high-energy photon irradiations and co-located stations are given in Appendix A.

One internal assessment and one external audit were performed in 2017. There were no findings identified.

I. INTRODUCTION

The TLD systems at the Environmental Dosimetry Company (EDC) are calibrated and operated to ensure consistent and accurate evaluation of TLDs. The quality of the dosimetric results reported to EDC clients is ensured by in-house performance testing and independent performance testing by EDC clients, and both internal and client directed program assessments.

The purpose of the dosimetry quality assurance program is to provide performance documentation of the routine processing of EDC dosimeters. Performance testing provides a statistical measure of the bias and precision of dosimetry processing against a reliable standard, which in turn points out any trends or performance changes. Two programs are used:

A. QC Program

Dosimetry quality control tests are performed on EDC Panasonic 814 Environmental dosimeters. These tests include: (1) the in-house testing program coordinated by the EDC QA Officer and (2) independent test perform by EDC clients. In-house test are performed using six pairs of 814 dosimeters, a pair is reported as an individual result and six pairs are reported as the mean result. Results of these tests are described in this report.

Excluded from this report are instrumentation checks. Although instrumentation checks represent an important aspect of the quality assurance program, they are not included as process checks in this report. Instrumentation checks represent between 5-10% of the TLDs processed.

B. QA Program

An internal assessment of dosimetry activities is conducted annually by the Quality Assurance Officer (Reference 1). The purpose of the assessment is to review procedures, results, materials or components to identify opportunities to improve or enhance processes and/or services.

II. PERFORMANCE EVALUATION CRITERIA

A. Acceptance Criteria for Internal Evaluations

1. Bias

For each dosimeter tested, the measure of bias is the percent deviation of the reported result relative to the delivered exposure. The percent deviation relative to the delivered exposure is calculated as follows:

$$\frac{(H'_i - H_i)}{H_i} 100$$

where:

H'_i = the corresponding reported exposure for the i^{th} dosimeter (i.e., the reported exposure)

H_i = the exposure delivered to the i^{th} irradiated dosimeter (i.e., the delivered exposure)

2. Mean Bias

For each group of test dosimeters, the mean bias is the average percent deviation of the reported result relative to the delivered exposure. The mean percent deviation relative to the delivered exposure is calculated as follows:

$$\sum \left(\frac{(H'_i - H_i)}{H_i} \right) 100 \left(\frac{1}{n} \right)$$

where:

H'_i = the corresponding reported exposure for the i^{th} dosimeter (i.e., the reported exposure)

H_i = the exposure delivered to the i^{th} irradiated test dosimeter (i.e., the delivered exposure)

n = the number of dosimeters in the test group

3. Precision

For a group of test dosimeters irradiated to a given exposure, the measure of precision is the percent deviation of individual results relative to the mean reported exposure. At least two values are required for the determination of precision. The measure of precision for the i^{th} dosimeter is:

$$\left(\frac{(H'_i - \bar{H})}{\bar{H}} \right) 100$$

where:

H'_i = the reported exposure for the i^{th} dosimeter (i.e., the reported exposure)

\bar{H} = the mean reported exposure; i.e., $\bar{H} = \sum H'_i \left(\frac{1}{n} \right)$

n = the number of dosimeters in the test group

4. EDC Internal Tolerance Limits

All evaluation criteria are taken from the "EDC Quality System Manual," (Reference 2). These criteria are only applied to individual test dosimeters irradiated with high-energy photons (Cs-137) and are as follows for Panasonic Environmental dosimeters: $\pm 15\%$ for bias and $\pm 12.8\%$ for precision.

B. QC Investigation Criteria and Result Reporting

EDC Quality System Manual (Reference 2) specifies when an investigation is required due to a QC analysis that has failed the EDC bias criteria. The criteria are as follows:

1. No investigation is necessary when an individual QC result falls outside the QC performance criteria for accuracy.
2. Investigations are initiated when the mean of a QC processing batch is outside the performance criterion for bias.

C. Reporting of Environmental Dosimetry Results to EDC Customers

1. All results are to be reported in a timely fashion.
2. If the QA Officer determines that an investigation is required for a process, the results shall be issued as normal. If the QC results prompting the investigation have a mean bias from the known of greater than $\pm 20\%$, the results shall be issued with a note indicating that they may be updated in the future, pending resolution of a QA issue.
3. Environmental dosimetry results do not require updating if the investigation has shown that the mean bias between the original results and the corrected results, based on applicable correction factors from the investigation, does not exceed $\pm 20\%$.

III. DATA SUMMARY FOR ISSUANCE PERIOD JANUARY-DECEMBER 2017

A. General Discussion

Results of performance tests conducted are summarized and discussed in the following sections. Summaries of the performance tests for the reporting period are given in Tables 1 through 3 and Figures 1 through 4.

Table 1 provides a summary of individual dosimeter results evaluated against the EDC internal acceptance criteria for high-energy photons only. During this period 100% (72/72) of the individual dosimeters, evaluated against these criteria, met the tolerance limits for accuracy and 100% (72/72) met the criterion for precision. A graphical interpretation is provided in Figures 1 and 2.

Table 2 provides the bias and standard deviation results for each group (N=6) of dosimeters evaluated against the internal tolerance criteria. Overall, 100% (12/12) of the dosimeter sets, evaluated against the internal tolerance performance criteria, met these criteria. A graphical interpretation is provided in Figure 3.

Table 3 presents the independent blind spike results for dosimeters processed during this annual period. All results passed the performance acceptance criterion. Figure 4 is a graphical interpretation of Seabrook Station blind co-located station results.

B. Result Trending

One of the main benefits of performing quality control tests on a routine basis is to identify trends or performance changes. The results of the Panasonic environmental dosimeter performance tests are presented in Appendix A. The results are evaluated against each of the performance criteria listed in Section II, namely: individual dosimeter accuracy, individual dosimeter precision, and mean bias.

All of the results presented in Appendix A are plotted sequentially by processing date.

IV. STATUS OF EDC CONDITION REPORTS (CR)

No condition reports were issued during this annual period.

V. STATUS OF AUDITS/ASSESSMENTS

1. Internal

EDC Internal Quality Assurance Assessment was conducted during the fourth quarter 2017. There were no findings identified.

2. External

The DTE Energy and NextEra Energy Audit 17-007 was conducted on August 8-9, 2017. There were no findings identified.

VI. PROCEDURES AND MANUALS REVISED DURING JANUARY - DECEMBER 2017

Two procedures and the Quality System Manual were reissued with no changes as part of the 5 year review cycle.

VII. CONCLUSION AND RECOMMENDATIONS

The quality control evaluations continue to indicate the dosimetry processing programs at the EDC satisfy the criteria specified in the Quality System Manual. The EDC demonstrated the ability to meet all applicable acceptance criteria.

VIII. REFERENCES

1. EDC Quality Control and Audit Assessment Schedule, 2017.
2. EDC Manual 1, Quality System Manual, Rev. 3, August 1, 2017.

TABLE 1

**PERCENTAGE OF INDIVIDUAL DOSIMETERS THAT PASSED EDC INTERNAL CRITERIA
JANUARY – DECEMBER 2017^{(1), (2)}**

Dosimeter Type	Number Tested	% Passed Bias Criteria	% Passed Precision Criteria
Panasonic Environmental	72	100	100

⁽¹⁾This table summarizes results of tests conducted by EDC.

⁽²⁾Environmental dosimeter results are free in air.

TABLE 2

**MEAN DOSIMETER ANALYSES (N=6)
JANUARY – DECEMBER 2017^{(1), (2)}**

Process Date	Exposure Level	Mean Bias %	Standard Deviation %	Tolerance Limit +/- 15%
5/01/2017	31	1.0	0.9	Pass
5/08/2017	57	-0.4	1.0	Pass
5/08/2017	85	0.8	2.4	Pass
7/25/2017	36	-2.5	1.7	Pass
07/29/2017	67	5.5	1.0	Pass
8/8/2017	123	-3.8	0.9	Pass
10/23/2017	44	3.8	2.8	Pass
10/31/2017	74	1.7	1.2	Pass
11/12/2017	94	0.5	1.0	Pass
2/01/2018	27	2.6	1.4	Pass
2/06/2018	50	3.0	0.6	Pass
2/08/2018	105	0.5	2.0	Pass

⁽¹⁾This table summarizes results of tests conducted by EDC for TLDs issued in 2017.

⁽²⁾Environmental dosimeter results are free in air.

**TABLE 3
SUMMARY OF INDEPENDENT DOSIMETER TESTING
JANUARY – DECEMBER 2017^{(1), (2)}**

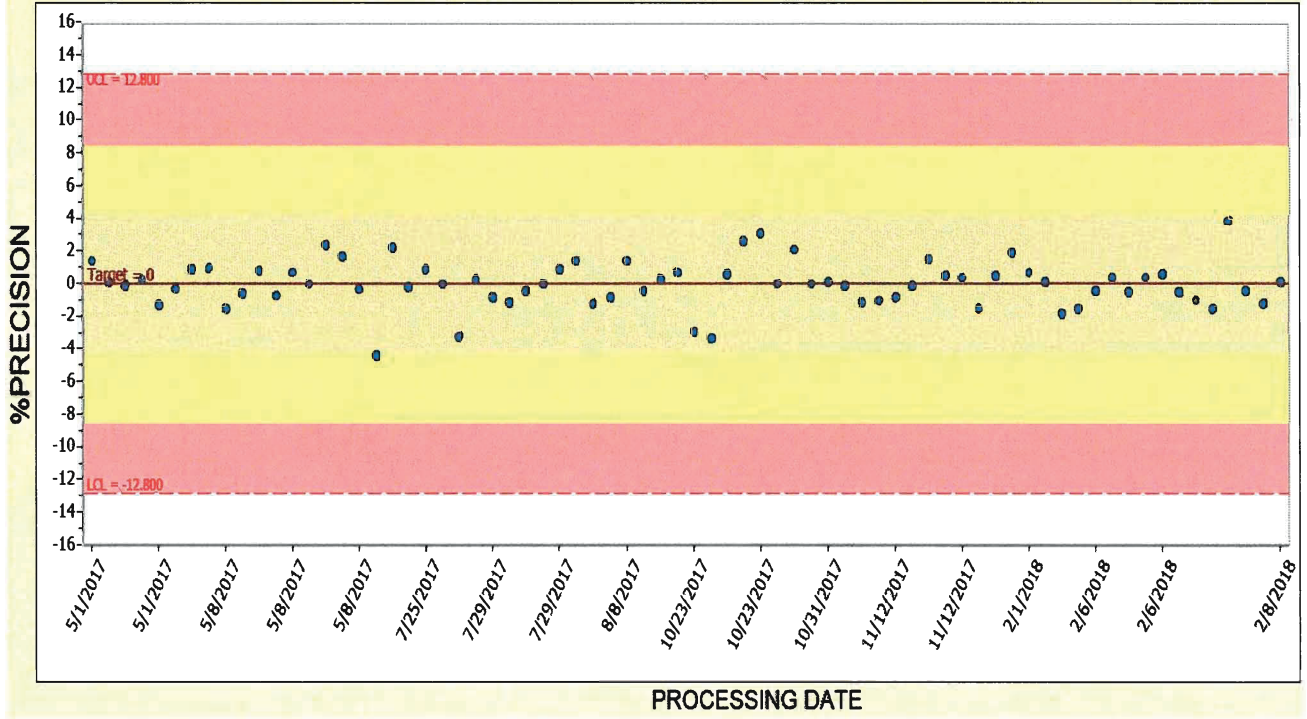
Issuance Period	Client	Mean Bias %	Standard Deviation %	Pass / Fail
1 st Qtr. 2017	Millstone	2.9	1.5	Pass
2 nd Qtr. 2017	Millstone	2.8	1.2	Pass
3 rd Qtr. 2017	Millstone	1.1	2.7	Pass
4 th Qtr. 2017	Millstone	-3.5	2.4	Pass
4 th Qtr. 2017	Seabrook	8.6	1.6	Pass

⁽¹⁾Performance criteria are +/- 30%.

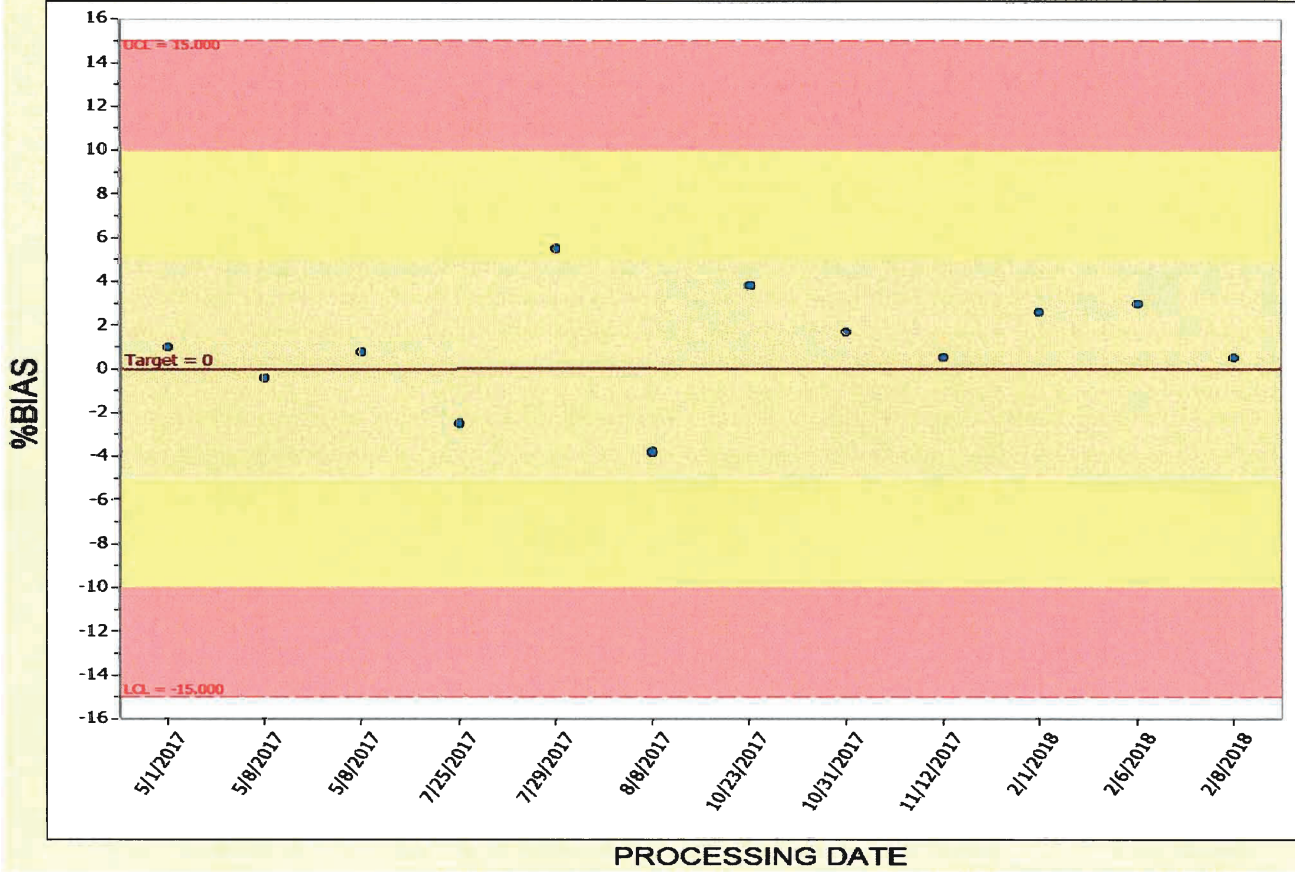
⁽²⁾Blind spike irradiations using Cs-137

APPENDIX A
DOSIMETRY QUALITY CONTROL TRENDING GRAPHS
ISSUE PERIOD JANUARY - DECEMBER 2017

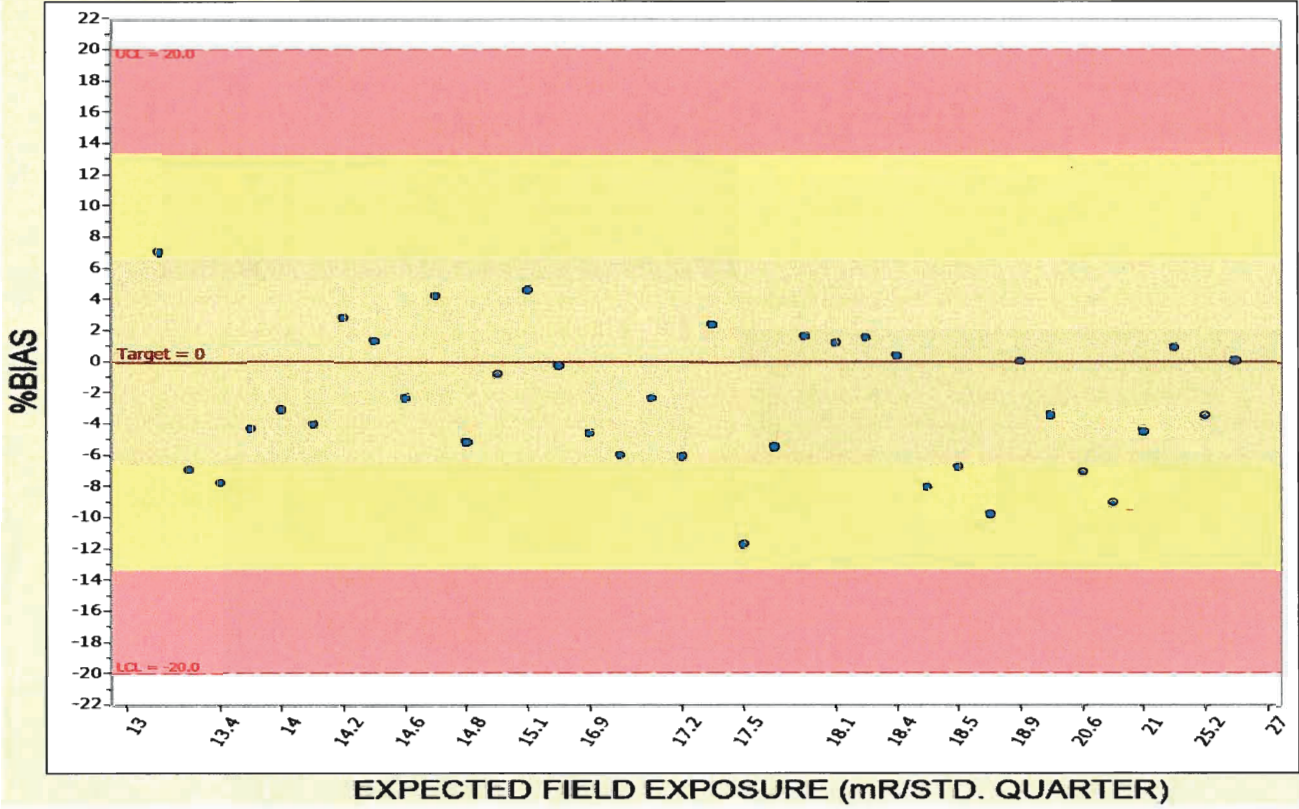
INDIVIDUAL PRECISION ENVIRONMENTAL
FIGURE 2



MEAN ACCURACY ENVIRONMENTAL
FIGURE 3



SEABROOK CO-LOCATE ACCURACY
FIGURE 4



ATTACHMENT H

ERRATA, Corrections to the 2016 Annual Radiological Environmental Operating Report

During the preparation of the 2017 Annual Radiological Environmental Operating Report four "small errors" (per the definition provide per Regulatory Guide 1.21 Revision 2) were identified for the 2016 Annual Radiological Environmental Operating Report. Those errors include the following:

- Section III. A. Air Samples, the average concentration of gross beta activity should be $2.16 \text{ E-}02 \text{ pCi/m}^3$ instead of 2.16 pCi/m^3 .
- The last sentence in Section III. A. Air Samples, paragraph 3 (which states "three of these five sample collection anomalies...") is applicable for I-131 only and should state that.
- Location 3 was incorrectly listed as being in the SE sector in Tables 10.4-2 and 10.4-3 when it is actually in the SSE sector.
- The raw data for Attachment D, "Year-end Report for Palisades Radiological Environmental Monitoring Program (REMP) as provided by Teledyne Brown Engineering Environmental Services" for the 2016 report did not include Ludington Control Data.

The corrected pages of the 2016 report are included in this report.

Table 10.4-3
Greatest Mean Sampling Location
 January 1, 2016 to December 31, 2016

Medium or Pathway Sampled (unit of measurement)	Type of Analysis	Location	High	Low	Mean
Air (pCi/m ³)	I-131	NA	< MDC	< MDC	< MDC
	Gross Beta	8SP	0.023	0.013	0.042
Lake Water (pCi/L)	Gross Beta	Palisades	3.41	3.41	3.41
	Tritium	NA	< MDC	< MDC	< MDC
Drinking Water (pCi/L)	Gross Beta	South Haven Raw/Domestic	3.17	2.15	2.76
	Tritium	NA	< MDC	< MDC	< MDC
Inner Ring TLD (gamma mR)	Quarterly	#1 (Palisades)	10.90	10.32	10.74
Outer Ring TLD (gamma mR)	Quarterly	# 2 5.6 miles S	14.61	13.05	13.90
Crops (pCi/kg wet)	I-131	NA	< MDC	< MDC	< MDC
	Other Gamma	NA	< MDC	< MDC	< MDC
Sediment (pCi/kg dry)	Gamma Emitters	NA	< MDC	< MDC	< MDC
Fish (pCi/gm wet)	Gamma Emitters	Palisades	< MDC	< MDC	< MDC
Broad leaf vegetation (pCi/kg wet)	Gamma Emitters	Site boundary SSE	231	124	168

**Table 10.4-2
Sample Data Summary**

Medium or Pathway Sampled (Unit of Measure)	Type/Total Number of Analyses Performed	Lower Limit of Detection	All Indicator Locations Mean (f, b) Range (b)	Greatest Mean Name Distance & Direction	Greatest Mean (f, b) Range (b)	Control Locations Mean (f, b) Range (b)	Number of Reportable Occurrences
Food Crops (pCi/kg wet)	I-131 / 2	60	< MDC (0/2)	NA	< MDC (0/2)	Control sample not required	0
	Cs-134 / 2	60	< MDC (0/2)	NA	< MDC (0/2)	Control sample not required	0
	Cs-137 / 2	80	< MDC (0/2)	NA	< MDC (0/2)	Control sample not required	0
Sediment (pCi/kg dry)	Cs-134 / 4	150	< MDC (0/4)	NA	< MDC (0/4)	Control sample not required	0
	Cs-137 / 4	180	< MDC (0/4)	NA	< MDC (0/4)	Control sample not required	0
Fish (pCi/kg wet)	Mn-54 / 13	130	< MDC (0/6)	NA	< MDC (0/6)	< MDC (0/7)	0
	Fe-59 / 13	260	< MDC (0/6)	NA	< MDC (0/6)	< MDC (0/7)	0
	Co-58 / 13	130	< MDC (0/6)	NA	< MDC (0/6)	< MDC (0/7)	0
	Co-60 / 13	130	< MDC (0/6)	NA	< MDC (0/6)	< MDC (0/7)	0
	Zn-65 / 13	260	< MDC (0/6)	NA	< MDC (0/6)	< MDC (0/7)	0
	Cs-134 / 13	130	< MDC (0/6)	NA	< MDC (0/6)	< MDC (0/7)	0
	Cs-137 / 13	150	< MDC (0/6)	NA	< MDC (0/6)	< MDC (0/7)	0
Broad Leaf Vegetation (pCi/kg wet)	I-131 / 18	60	< MDC (0/13)	NA	< MDC (0/8)	< MDC (0/5)	0
	Cs-134 / 18	60	< MDC (0/13)	NA	< MDC (0/8)	< MDC (0/5)	0
	Cs-137 / 18	80	115 (6/13) 44.9-231	Location 3 0.5 miles SSE	168 (3/3) 124-231	< MDC (0/5)	0

a Nominal Lower Limit of Detection (LLD) as defined in table notation c of ODCM Table 1-9.

b Mean and range based on detectable measurements only.

c The Lake Water and the Drinking Water totals in column 2 both account for the use of the same samples from Ludington Control.

d The Inner and Outer TLD totals in column 2 account for the use of the same control TLDs in both areas.

f Fraction of detectable measurements at specific locations is indicated in parenthesis.

**ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT
JANUARY 1, 2016 THROUGH DECEMBER 31, 2016**

I. INTRODUCTION

The Annual Radiological Environmental Operating Report provides a summary and data interpretation of the Palisades Nuclear Plant (PNP) Radiological Environmental Monitoring Program as conducted during the 2016 reporting period. This report was prepared in accordance with the requirements of 10 CFR 50, Appendix I, Sections IV.B.2, IV.B.3, IV.C, and Technical Specification 5.6.2.

II. NON-ROUTINE REPORTS

No reportable events occurred during this reporting period.

III. DISCUSSION AND INTERPRETATION OF RESULTS

A. Air Samples

There were 312 air samples collected and analyzed for gross beta and I-131. Air iodine/particulate samples are collected weekly from six air-sampling locations. Air is metered into the sampling unit at an approximate one cubic foot per minute flow rate through a 47-mm air filter (air particulate) and an air iodine cartridge. Both filters are in-line with each other and housed within the same filter holder. Weekly samples were sent to Teledyne Brown Engineering Environmental Services for analysis.

Analysis of the airborne particulate sample data, between the five near-site indicator locations and the control location, demonstrated no statistical difference. The average concentration of gross beta activity for both indicator and control locations was $2.16 \text{ E-}02 \text{ pCi/m}^3$. All I-131 activity results, for both indicator and control locations, were below the MDC levels.

Five out of the seven sample collection anomalies involved air samples. All sample collection anomalies are described in Section VI Table A. Two of the anomalies involved an electrical trip at the air sample station. Two of the anomalies involved a seized pump. The other sample anomaly involved a delay in shipping. Three of these five sample collection anomalies resulted in a minimum detectable concentration (MDC) greater than the required lower limit of detection (LLD) for I-131.

One of the control samples collected in 2016 did not contain sufficient volume for the I-131 MDC to be achieved. As such, a control sample from Donald Cook Nuclear Power Plant was reviewed for this data point. This is elaborated upon on in Section IV Table A.

**LUDINGTON CONTROL
SURFACE WATER**

LAB ID	STATION	COLLECT START	COLLECT STOP	NUCLIDE	REPORTABLE	ACTIVITY	ERROR	MDC	LLD	UNITS
L66877-2	LUDINGTON CONTROL	01/01/16	01/31/16	BA-LA-140	< 4.71E+00	-8.54E-01	3.06E+00	4.71E+00	1.50E+01	pCi/L
L67129-1	LUDINGTON CONTROL	02/01/16	03/01/16	BA-LA-140	< 1.37E+01	-3.06E+00	8.77E+00	1.37E+01	1.50E+01	pCi/L
L67505-3	LUDINGTON CONTROL	03/01/16	03/31/16	BA-LA-140	< 4.86E+00	-4.40E+00	3.13E+00	4.86E+00	1.50E+01	pCi/L
L68064-1	LUDINGTON CONTROL	04/01/16	05/01/16	BA-LA-140	< 1.02E+01	-2.32E+00	6.30E+00	1.02E+01	1.50E+01	pCi/L
L68447-1	LUDINGTON CONTROL	05/01/16	06/01/16	BA-LA-140	< 9.82E+00	-1.35E+00	5.96E+00	9.82E+00	1.50E+01	pCi/L
L68883-1	LUDINGTON CONTROL	06/01/16	07/05/16	BA-LA-140	< 8.49E+00	-1.30E+00	5.25E+00	8.49E+00	1.50E+01	pCi/L
L69248-1	LUDINGTON CONTROL	07/01/16	07/31/16	BA-LA-140	< 6.06E+00	-2.67E+00	3.86E+00	6.06E+00	1.50E+01	pCi/L
L69666-2	LUDINGTON CONTROL	08/01/16	09/01/16	BA-LA-140	< 5.84E+00	-7.40E-01	3.56E+00	5.84E+00	1.50E+01	pCi/L
L70218-2	LUDINGTON CONTROL	09/01/16	10/01/16	BA-LA-140	< 1.16E+01	-2.11E+00	7.22E+00	1.16E+01	1.50E+01	pCi/L
L70610-3	LUDINGTON CONTROL	10/01/16	10/31/16	BA-LA-140	< 9.19E+00	-1.62E+00	5.77E+00	9.19E+00	1.50E+01	pCi/L
L70888-1	LUDINGTON CONTROL	11/01/16	12/01/16	BA-LA-140	< 7.35E+00	-2.69E+00	4.58E+00	7.35E+00	1.50E+01	pCi/L
L71260-1	LUDINGTON CONTROL	12/01/16	01/01/17	BA-LA-140	< 1.42E+01	3.76E+00	8.21E+00	1.42E+01	1.50E+01	pCi/L
L66877-2	LUDINGTON CONTROL	01/01/16	01/31/16	CO-58	< 7.94E-01	-4.10E-01	5.16E-01	7.94E-01	1.50E+01	pCi/L
L67129-1	LUDINGTON CONTROL	02/01/16	03/01/16	CO-58	< 3.58E+00	-1.46E+00	2.33E+00	3.58E+00	1.50E+01	pCi/L
L67505-3	LUDINGTON CONTROL	03/01/16	03/31/16	CO-58	< 1.72E+00	2.48E-01	1.04E+00	1.72E+00	1.50E+01	pCi/L
L68064-1	LUDINGTON CONTROL	04/01/16	05/01/16	CO-58	< 2.33E+00	-1.11E-01	1.42E+00	2.33E+00	1.50E+01	pCi/L
L68447-1	LUDINGTON CONTROL	05/01/16	06/01/16	CO-58	< 2.16E+00	1.57E-01	1.29E+00	2.16E+00	1.50E+01	pCi/L
L68883-1	LUDINGTON CONTROL	06/01/16	07/05/16	CO-58	< 1.70E+00	-3.86E-01	1.06E+00	1.70E+00	1.50E+01	pCi/L
L69248-1	LUDINGTON CONTROL	07/01/16	07/31/16	CO-58	< 1.84E+00	-7.98E-01	1.14E+00	1.84E+00	1.50E+01	pCi/L
L69666-2	LUDINGTON CONTROL	08/01/16	09/01/16	CO-58	< 1.33E+00	-9.41E-02	7.63E-01	1.33E+00	1.50E+01	pCi/L
L70218-2	LUDINGTON CONTROL	09/01/16	10/01/16	CO-58	< 2.15E+00	-9.46E-01	1.35E+00	2.15E+00	1.50E+01	pCi/L
L70610-3	LUDINGTON CONTROL	10/01/16	10/31/16	CO-58	< 2.18E+00	-1.35E-01	1.34E+00	2.18E+00	1.50E+01	pCi/L
L70888-1	LUDINGTON CONTROL	11/01/16	12/01/16	CO-58	< 2.24E+00	-3.86E-01	1.35E+00	2.24E+00	1.50E+01	pCi/L
L71260-1	LUDINGTON CONTROL	12/01/16	01/01/17	CO-58	< 2.73E+00	2.20E-01	1.68E+00	2.73E+00	1.50E+01	pCi/L
L66877-2	LUDINGTON CONTROL	01/01/16	01/31/16	CO-60	< 6.29E-01	1.89E-01	3.62E-01	6.29E-01	1.50E+01	pCi/L
L67129-1	LUDINGTON CONTROL	02/01/16	03/01/16	CO-60	< 3.59E+00	2.03E+00	1.85E+00	3.59E+00	1.50E+01	pCi/L
L67505-3	LUDINGTON CONTROL	03/01/16	03/31/16	CO-60	< 1.15E+00	-7.57E-01	7.40E-01	1.15E+00	1.50E+01	pCi/L
L68064-1	LUDINGTON CONTROL	04/01/16	05/01/16	CO-60	< 1.80E+00	3.21E-01	1.09E+00	1.80E+00	1.50E+01	pCi/L
L68447-1	LUDINGTON CONTROL	05/01/16	06/01/16	CO-60	< 1.68E+00	-1.25E-01	1.04E+00	1.68E+00	1.50E+01	pCi/L
L68883-1	LUDINGTON CONTROL	06/01/16	07/05/16	CO-60	< 1.49E+00	9.33E-01	8.37E-01	1.49E+00	1.50E+01	pCi/L
L69248-1	LUDINGTON CONTROL	07/01/16	07/31/16	CO-60	< 1.71E+00	6.97E-01	9.83E-01	1.71E+00	1.50E+01	pCi/L
L69666-2	LUDINGTON CONTROL	08/01/16	09/01/16	CO-60	< 1.07E+00	-4.30E-02	6.32E-01	1.07E+00	1.50E+01	pCi/L
L70218-2	LUDINGTON CONTROL	09/01/16	10/01/16	CO-60	< 1.82E+00	2.27E-01	1.08E+00	1.82E+00	1.50E+01	pCi/L

L70610-3	LUDINGTON CONTROL	10/01/16	10/31/16	CO-60	< 1.74E+00	5.91E-01	1.03E+00	1.74E+00	1.50E+01	pCi/L
L70888-1	LUDINGTON CONTROL	11/01/16	12/01/16	CO-60	< 1.95E+00	6.64E-01	1.16E+00	1.95E+00	1.50E+01	pCi/L
L71260-1	LUDINGTON CONTROL	12/01/16	01/01/17	CO-60	< 2.29E+00	6.96E-01	1.31E+00	2.29E+00	1.50E+01	pCi/L
L66877-2	LUDINGTON CONTROL	01/01/16	01/31/16	CS-134	< 6.37E-01	2.26E-01	3.63E-01	6.37E-01	1.50E+01	pCi/L
L67129-1	LUDINGTON CONTROL	02/01/16	03/01/16	CS-134	< 3.41E+00	1.67E+00	2.20E+00	3.41E+00	1.50E+01	pCi/L
L67505-3	LUDINGTON CONTROL	03/01/16	03/31/16	CS-134	< 1.51E+00	-4.08E+00	1.06E+00	1.51E+00	1.50E+01	pCi/L
L68064-1	LUDINGTON CONTROL	04/01/16	05/01/16	CS-134	< 1.87E+00	3.80E-01	1.27E+00	1.87E+00	1.50E+01	pCi/L
L68447-1	LUDINGTON CONTROL	05/01/16	06/01/16	CS-134	< 1.73E+00	-4.58E+00	1.24E+00	1.73E+00	1.50E+01	pCi/L
L68883-1	LUDINGTON CONTROL	06/01/16	07/05/16	CS-134	< 1.33E+00	-7.70E-01	8.31E-01	1.33E+00	1.50E+01	pCi/L
L69248-1	LUDINGTON CONTROL	07/01/16	07/31/16	CS-134	< 1.55E+00	-1.06E-01	1.11E+00	1.55E+00	1.50E+01	pCi/L
L69666-2	LUDINGTON CONTROL	08/01/16	09/01/16	CS-134	< 9.73E-01	9.91E-02	6.44E-01	9.73E-01	1.50E+01	pCi/L
L70218-2	LUDINGTON CONTROL	09/01/16	10/01/16	CS-134	< 1.79E+00	-7.75E-01	1.33E+00	1.79E+00	1.50E+01	pCi/L
L70610-3	LUDINGTON CONTROL	10/01/16	10/31/16	CS-134	< 1.72E+00	-6.05E-01	1.38E+00	1.72E+00	1.50E+01	pCi/L
L70888-1	LUDINGTON CONTROL	11/01/16	12/01/16	CS-134	< 1.86E+00	-6.31E+00	1.36E+00	1.86E+00	1.50E+01	pCi/L
L71260-1	LUDINGTON CONTROL	12/01/16	01/01/17	CS-134	< 1.94E+00	3.93E-01	1.30E+00	1.94E+00	1.50E+01	pCi/L
L66877-2	LUDINGTON CONTROL	01/01/16	01/31/16	CS-137	< 6.74E-01	1.05E-02	4.02E-01	6.74E-01	1.80E+01	pCi/L
L67129-1	LUDINGTON CONTROL	02/01/16	03/01/16	CS-137	< 3.20E+00	-1.80E-01	1.91E+00	3.20E+00	1.80E+01	pCi/L
L67505-3	LUDINGTON CONTROL	03/01/16	03/31/16	CS-137	< 1.60E+00	-7.99E-01	1.17E+00	1.60E+00	1.80E+01	pCi/L
L68064-1	LUDINGTON CONTROL	04/01/16	05/01/16	CS-137	< 1.97E+00	-1.08E-01	1.19E+00	1.97E+00	1.80E+01	pCi/L
L68447-1	LUDINGTON CONTROL	05/01/16	06/01/16	CS-137	< 1.82E+00	1.38E-01	1.08E+00	1.82E+00	1.80E+01	pCi/L
L68883-1	LUDINGTON CONTROL	06/01/16	07/05/16	CS-137	< 1.40E+00	-2.54E-01	8.63E-01	1.40E+00	1.80E+01	pCi/L
L69248-1	LUDINGTON CONTROL	07/01/16	07/31/16	CS-137	< 1.74E+00	3.35E-01	1.02E+00	1.74E+00	1.80E+01	pCi/L
L69666-2	LUDINGTON CONTROL	08/01/16	09/01/16	CS-137	< 9.73E-01	-1.92E-01	6.73E-01	9.73E-01	1.80E+01	pCi/L
L70218-2	LUDINGTON CONTROL	09/01/16	10/01/16	CS-137	< 1.82E+00	-4.64E-01	1.10E+00	1.82E+00	1.80E+01	pCi/L
L70610-3	LUDINGTON CONTROL	10/01/16	10/31/16	CS-137	< 1.81E+00	-6.60E-01	1.12E+00	1.81E+00	1.80E+01	pCi/L
L70888-1	LUDINGTON CONTROL	11/01/16	12/01/16	CS-137	< 1.98E+00	-4.46E-01	1.24E+00	1.98E+00	1.80E+01	pCi/L
L71260-1	LUDINGTON CONTROL	12/01/16	01/01/17	CS-137	< 2.12E+00	8.63E-02	1.29E+00	2.12E+00	1.80E+01	pCi/L
L66877-2	LUDINGTON CONTROL	01/01/16	01/31/16	FE-59	< 1.74E+00	-1.04E+00	1.18E+00	1.74E+00	3.00E+01	pCi/L
L67129-1	LUDINGTON CONTROL	02/01/16	03/01/16	FE-59	< 7.80E+00	-2.98E+00	5.24E+00	7.80E+00	3.00E+01	pCi/L
L67505-3	LUDINGTON CONTROL	03/01/16	03/31/16	FE-59	< 3.72E+00	1.03E+00	2.27E+00	3.72E+00	3.00E+01	pCi/L
L68064-1	LUDINGTON CONTROL	04/01/16	05/01/16	FE-59	< 5.22E+00	-5.34E-01	3.24E+00	5.22E+00	3.00E+01	pCi/L
L68447-1	LUDINGTON CONTROL	05/01/16	06/01/16	FE-59	< 4.95E+00	-2.30E+00	3.14E+00	4.95E+00	3.00E+01	pCi/L
L68883-1	LUDINGTON CONTROL	06/01/16	07/05/16	FE-59	< 4.16E+00	-2.93E+00	2.77E+00	4.16E+00	3.00E+01	pCi/L
L69248-1	LUDINGTON CONTROL	07/01/16	07/31/16	FE-59	< 4.58E+00	-2.24E-02	2.82E+00	4.58E+00	3.00E+01	pCi/L
L69666-2	LUDINGTON CONTROL	08/01/16	09/01/16	FE-59	< 3.35E+00	6.96E-02	1.94E+00	3.35E+00	3.00E+01	pCi/L
L70218-2	LUDINGTON CONTROL	09/01/16	10/01/16	FE-59	< 5.71E+00	-7.04E-01	3.57E+00	5.71E+00	3.00E+01	pCi/L
L70610-3	LUDINGTON CONTROL	10/01/16	10/31/16	FE-59	< 5.15E+00	2.00E+00	3.02E+00	5.15E+00	3.00E+01	pCi/L
L70888-1	LUDINGTON CONTROL	11/01/16	12/01/16	FE-59	< 4.84E+00	1.02E+00	2.89E+00	4.84E+00	3.00E+01	pCi/L
L71260-1	LUDINGTON CONTROL	12/01/16	01/01/17	FE-59	< 6.39E+00	-8.99E-01	3.82E+00	6.39E+00	3.00E+01	pCi/L
L66877-2	LUDINGTON CONTROL	01/01/16	01/31/16	GR-B	< 1.98E+00	1.91E+00	1.37E+00	1.98E+00	4.00E+00	pCi/L

L67129-1	LUDINGTON CONTROL	02/01/16	03/01/16	GR-B	< 2.99E+00	1.85E+00	2.05E+00	2.99E+00	4.00E+00	pCi/L
L67505-3	LUDINGTON CONTROL	03/01/16	03/31/16	GR-B	< 2.20E+00	1.33E+00	1.45E+00	2.20E+00	4.00E+00	pCi/L
L68064-1	LUDINGTON CONTROL	04/01/16	05/01/16	GR-B	< 2.61E+00	1.95E+00	1.86E+00	2.61E+00	4.00E+00	pCi/L
L68447-1	LUDINGTON CONTROL	05/01/16	06/01/16	GR-B	< 3.91E+00	7.58E-01	2.45E+00	3.91E+00	4.00E+00	pCi/L
L68883-1	LUDINGTON CONTROL	06/01/16	07/05/16	GR-B	< 2.34E+00	1.93E+00	1.58E+00	2.34E+00	4.00E+00	pCi/L
L69248-1	LUDINGTON CONTROL	07/01/16	07/31/16	GR-B	< 2.17E+00	1.83E+00	1.47E+00	2.17E+00	4.00E+00	pCi/L
L69666-2	LUDINGTON CONTROL	08/01/16	09/01/16	GR-B	< 1.88E+00	9.43E-01	1.24E+00	1.88E+00	4.00E+00	pCi/L
L70218-2	LUDINGTON CONTROL	09/01/16	10/01/16	GR-B	2.24E+00	2.24E+00	1.37E+00	1.92E+00	4.00E+00	pCi/L
L70610-3	LUDINGTON CONTROL	10/01/16	10/31/16	GR-B	2.93E+00	2.93E+00	1.51E+00	2.10E+00	4.00E+00	pCi/L
L70888-1	LUDINGTON CONTROL	11/01/16	12/01/16	GR-B	2.84E+00	2.84E+00	1.55E+00	2.17E+00	4.00E+00	pCi/L
L71260-1	LUDINGTON CONTROL	12/01/16	01/01/17	GR-B	< 2.24E+00	4.96E-01	1.40E+00	2.24E+00	4.00E+00	pCi/L
L66877-2	LUDINGTON CONTROL	01/01/16	01/31/16	H-3 (DIST)	< 4.00E+02	1.71E+02	2.63E+02	4.00E+02	2.00E+03	pCi/L
L67129-1	LUDINGTON CONTROL	02/01/16	03/01/16	H-3 (DIST)	< 5.59E+02	-1.88E+01	3.37E+02	5.59E+02	2.00E+03	pCi/L
L67505-3	LUDINGTON CONTROL	03/01/16	03/31/16	H-3 (DIST)	< 4.70E+02	1.01E+01	2.86E+02	4.70E+02	2.00E+03	pCi/L
L68064-1	LUDINGTON CONTROL	04/01/16	05/01/16	H-3 (DIST)	< 3.36E+02	-9.03E+01	1.97E+02	3.36E+02	2.00E+03	pCi/L
L68447-1	LUDINGTON CONTROL	05/01/16	06/01/16	H-3 (DIST)	< 5.24E+02	-1.02E+02	3.04E+02	5.24E+02	2.00E+03	pCi/L
L68883-1	LUDINGTON CONTROL	06/01/16	07/05/16	H-3 (DIST)	< 2.64E+02	7.23E+01	1.66E+02	2.64E+02	2.00E+03	pCi/L
L69248-1	LUDINGTON CONTROL	07/01/16	07/31/16	H-3 (DIST)	< 6.43E+02	-4.73E+01	3.80E+02	6.43E+02	2.00E+03	pCi/L
L69666-2	LUDINGTON CONTROL	08/01/16	09/01/16	H-3 (DIST)	< 6.32E+02	4.14E+01	3.92E+02	6.32E+02	2.00E+03	pCi/L
L70218-2	LUDINGTON CONTROL	09/01/16	10/01/16	H-3 (DIST)	< 4.19E+02	-1.79E+01	2.52E+02	4.19E+02	2.00E+03	pCi/L
L70610-3	LUDINGTON CONTROL	10/01/16	10/31/16	H-3 (DIST)	< 5.91E+02	2.11E+02	3.98E+02	5.91E+02	2.00E+03	pCi/L
L70888-1	LUDINGTON CONTROL	11/01/16	12/01/16	H-3 (DIST)	< 6.17E+02	7.52E+01	3.89E+02	6.17E+02	2.00E+03	pCi/L
L71260-1	LUDINGTON CONTROL	12/01/16	01/01/17	H-3 (DIST)	< 4.77E+02	-1.20E+02	2.72E+02	4.77E+02	2.00E+03	pCi/L
L70218-2	LUDINGTON CONTROL	09/01/16	10/01/16	K-40	3.09E+01	3.09E+01	2.71E+01	1.62E+01		pCi/L
L66877-2	LUDINGTON CONTROL	01/01/16	01/31/16	MN-54	< 6.17E-01	-2.00E-01	3.90E-01	6.17E-01	1.50E+01	pCi/L
L67129-1	LUDINGTON CONTROL	02/01/16	03/01/16	MN-54	< 3.38E+00	2.87E-01	2.01E+00	3.38E+00	1.50E+01	pCi/L
L67505-3	LUDINGTON CONTROL	03/01/16	03/31/16	MN-54	< 1.43E+00	-3.36E-01	8.78E-01	1.43E+00	1.50E+01	pCi/L
L68064-1	LUDINGTON CONTROL	04/01/16	05/01/16	MN-54	< 1.86E+00	-8.87E-01	1.17E+00	1.86E+00	1.50E+01	pCi/L
L68447-1	LUDINGTON CONTROL	05/01/16	06/01/16	MN-54	< 1.76E+00	-2.02E-01	1.07E+00	1.76E+00	1.50E+01	pCi/L
L68883-1	LUDINGTON CONTROL	06/01/16	07/05/16	MN-54	< 1.39E+00	-6.69E-01	8.90E-01	1.39E+00	1.50E+01	pCi/L
L69248-1	LUDINGTON CONTROL	07/01/16	07/31/16	MN-54	< 1.68E+00	-2.28E-01	1.02E+00	1.68E+00	1.50E+01	pCi/L
L69666-2	LUDINGTON CONTROL	08/01/16	09/01/16	MN-54	< 1.09E+00	-1.51E-01	6.29E-01	1.09E+00	1.50E+01	pCi/L
L70218-2	LUDINGTON CONTROL	09/01/16	10/01/16	MN-54	< 1.90E+00	-8.41E-01	1.19E+00	1.90E+00	1.50E+01	pCi/L
L70610-3	LUDINGTON CONTROL	10/01/16	10/31/16	MN-54	< 1.73E+00	-1.65E-01	1.07E+00	1.73E+00	1.50E+01	pCi/L
L70888-1	LUDINGTON CONTROL	11/01/16	12/01/16	MN-54	< 1.92E+00	-3.63E-01	1.16E+00	1.92E+00	1.50E+01	pCi/L
L71260-1	LUDINGTON CONTROL	12/01/16	01/01/17	MN-54	< 2.16E+00	-3.79E-01	1.37E+00	2.16E+00	1.50E+01	pCi/L
L66877-2	LUDINGTON CONTROL	01/01/16	01/31/16	NB-95	< 8.49E-01	-8.75E-02	5.17E-01	8.49E-01	1.50E+01	pCi/L
L67129-1	LUDINGTON CONTROL	02/01/16	03/01/16	NB-95	< 3.95E+00	-1.37E+00	2.51E+00	3.95E+00	1.50E+01	pCi/L
L67505-3	LUDINGTON CONTROL	03/01/16	03/31/16	NB-95	< 1.82E+00	1.13E+00	1.08E+00	1.82E+00	1.50E+01	pCi/L
L68064-1	LUDINGTON CONTROL	04/01/16	05/01/16	NB-95	< 2.41E+00	-4.68E-01	1.48E+00	2.41E+00	1.50E+01	pCi/L

L68447-1	LUDINGTON CONTROL	05/01/16	06/01/16	NB-95	< 2.22E+00	-3.84E-01	1.35E+00	2.22E+00	1.50E+01	pCi/L
L68883-1	LUDINGTON CONTROL	06/01/16	07/05/16	NB-95	< 1.78E+00	-6.64E-01	1.12E+00	1.78E+00	1.50E+01	pCi/L
L69248-1	LUDINGTON CONTROL	07/01/16	07/31/16	NB-95	< 2.08E+00	1.16E+00	1.20E+00	2.08E+00	1.50E+01	pCi/L
L69666-2	LUDINGTON CONTROL	08/01/16	09/01/16	NB-95	< 1.27E+00	-4.05E-01	7.46E-01	1.27E+00	1.50E+01	pCi/L
L70218-2	LUDINGTON CONTROL	09/01/16	10/01/16	NB-95	< 2.44E+00	-1.46E-01	1.47E+00	2.44E+00	1.50E+01	pCi/L
L70610-3	LUDINGTON CONTROL	10/01/16	10/31/16	NB-95	< 2.40E+00	-6.10E-01	1.84E+00	2.40E+00	1.50E+01	pCi/L
L70888-1	LUDINGTON CONTROL	11/01/16	12/01/16	NB-95	< 2.27E+00	1.81E-02	1.41E+00	2.27E+00	1.50E+01	pCi/L
L71260-1	LUDINGTON CONTROL	12/01/16	01/01/17	NB-95	< 2.85E+00	-5.66E-01	1.80E+00	2.85E+00	1.50E+01	pCi/L
L69666-2	LUDINGTON CONTROL	08/01/16	09/01/16	RA-226	7.11E+01	7.11E+01	2.80E+01	1.92E+01		pCi/L
L69248-1	LUDINGTON CONTROL	07/01/16	07/31/16	TH-228	3.20E+00	3.20E+00	2.97E+00	2.87E+00		pCi/L
L70610-3	LUDINGTON CONTROL	10/01/16	10/31/16	TH-228	5.10E+00	5.10E+00	2.92E+00	3.32E+00		pCi/L
L70888-1	LUDINGTON CONTROL	11/01/16	12/01/16	TH-228	3.54E+00	3.54E+00	3.43E+00	3.43E+00		pCi/L
L66877-2	LUDINGTON CONTROL	01/01/16	01/31/16	ZN-65	< 1.28E+00	1.54E-01	7.62E-01	1.28E+00	3.00E+01	pCi/L
L67129-1	LUDINGTON CONTROL	02/01/16	03/01/16	ZN-65	< 6.88E+00	-1.35E+00	4.43E+00	6.88E+00	3.00E+01	pCi/L
L67505-3	LUDINGTON CONTROL	03/01/16	03/31/16	ZN-65	< 2.68E+00	-5.10E+00	1.87E+00	2.68E+00	3.00E+01	pCi/L
L68064-1	LUDINGTON CONTROL	04/01/16	05/01/16	ZN-65	< 3.42E+00	-2.22E+00	2.66E+00	3.42E+00	3.00E+01	pCi/L
L68447-1	LUDINGTON CONTROL	05/01/16	06/01/16	ZN-65	< 3.61E+00	-4.40E+00	2.44E+00	3.61E+00	3.00E+01	pCi/L
L68883-1	LUDINGTON CONTROL	06/01/16	07/05/16	ZN-65	< 3.00E+00	8.11E-01	1.83E+00	3.00E+00	3.00E+01	pCi/L
L69248-1	LUDINGTON CONTROL	07/01/16	07/31/16	ZN-65	< 3.56E+00	-3.48E+00	2.37E+00	3.56E+00	3.00E+01	pCi/L
L69666-2	LUDINGTON CONTROL	08/01/16	09/01/16	ZN-65	< 2.24E+00	1.53E-01	1.29E+00	2.24E+00	3.00E+01	pCi/L
L70218-2	LUDINGTON CONTROL	09/01/16	10/01/16	ZN-65	< 4.12E+00	5.91E-01	2.91E+00	4.12E+00	3.00E+01	pCi/L
L70610-3	LUDINGTON CONTROL	10/01/16	10/31/16	ZN-65	< 3.93E+00	-4.88E+00	2.57E+00	3.93E+00	3.00E+01	pCi/L
L70888-1	LUDINGTON CONTROL	11/01/16	12/01/16	ZN-65	< 4.03E+00	-4.77E+00	2.70E+00	4.03E+00	3.00E+01	pCi/L
L71260-1	LUDINGTON CONTROL	12/01/16	01/01/17	ZN-65	< 4.55E+00	-1.81E+00	2.81E+00	4.55E+00	3.00E+01	pCi/L
L66877-2	LUDINGTON CONTROL	01/01/16	01/31/16	ZR-95	< 1.47E+00	-7.07E-01	9.45E-01	1.47E+00	3.00E+01	pCi/L
L67129-1	LUDINGTON CONTROL	02/01/16	03/01/16	ZR-95	< 6.84E+00	1.78E+00	3.89E+00	6.84E+00	3.00E+01	pCi/L
L67505-3	LUDINGTON CONTROL	03/01/16	03/31/16	ZR-95	< 3.01E+00	-2.08E+00	1.91E+00	3.01E+00	3.00E+01	pCi/L
L68064-1	LUDINGTON CONTROL	04/01/16	05/01/16	ZR-95	< 4.44E+00	5.44E-01	2.66E+00	4.44E+00	3.00E+01	pCi/L
L68447-1	LUDINGTON CONTROL	05/01/16	06/01/16	ZR-95	< 3.89E+00	-4.34E-02	2.33E+00	3.89E+00	3.00E+01	pCi/L
L68883-1	LUDINGTON CONTROL	06/01/16	07/05/16	ZR-95	< 3.14E+00	-1.19E-01	1.93E+00	3.14E+00	3.00E+01	pCi/L
L69248-1	LUDINGTON CONTROL	07/01/16	07/31/16	ZR-95	< 3.30E+00	-2.24E+00	2.07E+00	3.30E+00	3.00E+01	pCi/L
L69666-2	LUDINGTON CONTROL	08/01/16	09/01/16	ZR-95	< 2.44E+00	3.30E-01	1.37E+00	2.44E+00	3.00E+01	pCi/L
L70218-2	LUDINGTON CONTROL	09/01/16	10/01/16	ZR-95	< 4.22E+00	-5.23E-01	2.56E+00	4.22E+00	3.00E+01	pCi/L
L70610-3	LUDINGTON CONTROL	10/01/16	10/31/16	ZR-95	< 3.75E+00	-1.64E+00	2.36E+00	3.75E+00	3.00E+01	pCi/L
L70888-1	LUDINGTON CONTROL	11/01/16	12/01/16	ZR-95	< 4.39E+00	2.22E+00	2.63E+00	4.39E+00	3.00E+01	pCi/L
L71260-1	LUDINGTON CONTROL	12/01/16	01/01/17	ZR-95	< 5.21E+00	2.01E+00	3.08E+00	5.21E+00	3.00E+01	pCi/L