W0638110004

ATTACHMENT 1
RADIONUCLIDE RELEASE INITIAL REPORT ELECTRONIC FORMAT
PAGE 1 of 4

STATE OF ILLINOIS

NUCLEAR POWER PLANT

RADIONUCLIDE RELEASE REPORT

INITIAL REPORT

The following information must be submitted to the Illinois Environmental Protection Agency and to the Illinois Emergency Management Agency to report a release of a radionuclide pursuant to 35 Ill. Adm. Code 1010.202. This initial report must be submitted to each agency via phone and electronically within 24 hours of the release. Please attach additional sheets as needed.

This form can also be used by a licensee that, pursuant to the last section of 35 Ill. Adm. Code 1010.104, reports a release of radionuclides that is not required to be reported under Section 13.6 of the Environmental Protection Act.

Report Date/Time 1830/June 9, 2014

Nuclear Generation Station Name Dresden Nuclear Power Station

Address 6500 North Dresden Road

City, State, Zip Morris, IL 60450

Name of Principal Executive Officer Shane M. Marik

Telephone Number 815-416-3600

Signature

Name of Licensee Exelon Generation Company, LLC

Address 4300 Winfield Rd.

City, State, Zip Warrenville, IL 60555-5701

ATTACHMENT 1
RADIONUCLIDE RELEASE INITIAL REPORT ELECTRONIC FORMAT
PAGE 2 of 4

Specific Location of Release 2/3 Sewage Treatment Plant

Time of Release Various times on the dates 04/02/2014 thru 06/07/2014

Duration of Release 04/02/2014 – 06/07/2014

Identify Radionuclide Release Tritium

Estimate the Quantity of Release (Curies) 0.1 Ci (Maximum based on bounding calculations)

Estimate of Volume Released 465,600 gallons

Estimate of Concentration (pCi/L) of
Release 50,000 pCi/L

Estimate of Flow-Rate, if on-going: The system is currently isolated

General Description of Release (including, but not limited to, whether release was to groundwater, surface water, or soil; a description of release area; and the size of affected area)

During sampling of the sewage treatment facility clearwell, it was discovered that the system contained approximately 50,000 pCi/L of tritium. At the time of discovery, no effluent was being discharged from the facility. However, upon investigation it was determined that between the time period of 04/02/2014 to 06/07/2014, elevated levels of tritium existed at the discharge of the plant. It has been determined that no greater than 0.1 Curies were discharged from the site. The majority of this discharge was to the Kankakee River via the sewage treatment plant effluent. A small amount, determined to be less than 2%, was discharged to the Morris, IL sewage treatment facility. This release has been determined to be related to the groundwater tritium which was identified and reported to the IEPA on June 8, 2014.
The system is currently isolated, and is not discharging to the Kankakee River.

Actions Taken in Response to Release

The station has initiated a number of Actions in response to the release including:
1. Isolation of the discharge to the Kankakee River
2. Sampling of on-site monitoring wells to identify source of tritium
3. Inspections of the on-site leak location
4. Development of a repair plan.

ATTACHMENT 1
RADIONUCLIDE RELEASE INITIAL REPORT ELECTRONIC FORMAT
PAGE 3 of 4

Known and Anticipated Impacts to Human Health and/or Environment

Based upon the small amount of Tritium (determined to be no greater than 0.1 Ci) that was discharged into the Kankakee River, there are no known or anticipated impacts to Human Health or to the Environment.

Additional Information
This report is being made based on additional information gathered following the voluntary report made to the IEPA and IEMA on June 8, 2014 due to the discovery of elevated levels of tritium in the site groundwater.

Number for reporting via telephone:

Illinois EPA – (217) 782-3637

IEMA – (800) 782-7860
(217) 782-7860 (if calling from outside Illinois)

Submit electronically to:

IEPA at "EPA.RadRelease@Illinois.gov"

IEMA at "ema.npprelease@illinois.gov"

Contacts for Further Information

Name Ron Novy

Address 6500 North Dresden Road

City, State, Zip Morris, IL 60450

Telephone Number 815-416-3211

ATTACHMENT 1
RADIONUCLIDE RELEASE INITIAL REPORT ELECTRONIC FORMAT
PAGE 4 of 4

Name Randy Schmidt

Address 6500 North Dresden Road

City, State, Zip Morris, IL 64050

Telephone Number 815-416-3200

Exelon Generation

Dresden Nuclear Power Station
6500 North Dresden Road
Morris, IL 60450
815-942-2920 Telephone
www.exeloncorp.com

35 Ill. Adm. Code 1010.204
35 Ill. Adm. Code 1010.104

June 13, 2014

SVPLTR# 14-0038

Illinois Environmental Protection Agency
Bureau of Water
Groundwater Section
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276

Illinois Emergency Management Agency
Division of Nuclear Safety
Bureau of Environmental Safety
1035 Outer Park Drive
Springfield, IL 62704

Subject: Nuclear Power Plant Follow-Up Report

The enclosed information is being submitted electronically, and by hard copy, to both the Illinois Environmental Protection Agency and to the Illinois Emergency Management Agency pursuant to 35 Ill. Adm. Code 1010.204 as a follow-up report to the reporting of a release of a radionuclide. In addition, the information is being provided pursuant to the last section of 35 Ill. Adm. Code 1010.104, releases of radionuclides that are not required to be reported under Section 13.6 of the Environmental Protection Act.

Should you have any questions concerning this letter, please contact Mr. Randy Schmidt at (815)-416-3200

Respectfully,

Shane Marik

Shane M. Marik
Site Vice President
Dresden Nuclear Power Station

Enclosure: State of Illinois Nuclear Power Plant Radionuclide Release Report Follow-Up Report

Exelon Generation

Dresden Nuclear Power Station
6500 North Dresden Road
Morris, IL 60450
815-942-2920 Telephone
www.exeloncorp.com

STATE OF ILLINOIS NUCLEAR POWER PLANT
RADIONUCLIDE RELEASE REPORT
FOLLOW-UP REPORT

Initial Report Date/Time 1830/June 9, 2014
Follow-up Report Date June 13, 2014

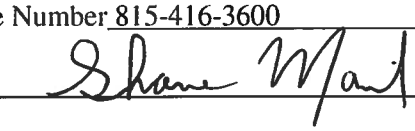
Nuclear Generation Station Name Dresden Nuclear Power Station

Address 6500 North Dresden Road

City, State, Zip Morris, IL 60450

Name of Principal Executive Officer Shane M. Marik

Telephone Number 815-416-3600

Signature 

If any of the information provided in the initial report for this release has changed, please provide an update of changed information.

The information provided in the initial report, related to the release has not changed.

Estimate of Quantity Released but not Recovered (Curies) 0.1 Ci (Maximum based on bounding calculations)

Estimate of Volume Released but not Recovered 465,600 gallons (Water)

Estimate of Concentration (pCi/L)
Released but not Recovered 50,000 pCi/L (Tritium)

STATE OF ILLINOIS NUCLEAR POWER PLANT

RADIONUCLIDE RELEASE REPORT

FOLLOW-UP REPORT

Updated Description of Activities Taken in Response to the Release

The Sewage Treatment Plant has been restored and a system restart is in progress. The on-site sampling and monitoring has identified the on-site location of the Tritium source. A storage tank, located well within the plant's boundaries, has been identified as the source, and a leakage path from the tank has been discovered. The tank has been drained and the leak is isolated. Further inspections of the tank will continue. Excavation of the source area is in progress, and actions to mitigate the transfer of Tritium into the STP are complete.

Additional Activities Planned in Response to the Release:

In parallel to the excavation activities, the station has been preparing the necessary work packages and repair plans to ensure that repairs can begin as quickly as possible on the isolated tank. Once repaired, testing of the system will commence. Monitoring of sampling well concentrations will continue, following the repair, to monitor potential migration pathways. An investigation of the release is planned, and further actions will be developed based upon the results of the investigation.

Attachments:

1. Copies of the laboratory analyses used to confirm the presence of, or conducted in response to, the release.

2. Map showing the locations of samples taken to confirm the release

3. Map showing the groundwater flow direction and groundwater contours

4. Map showing the boundary of the licensee controlled area, and structures, roads, and other surface features.

STATE OF ILLINOIS NUCLEAR POWER PLANT

RADIONUCLIDE RELEASE REPORT

FOLLOW-UP REPORT

Submitted electronically to:

IEPA at "EPA.RadRelease@illinois.gov"
IEMA at "ema.npprelease@illinois.gov"

Submitted hard copies to the addresses below:

Illinois Environmental Protection Agency
Bureau of Water
Groundwater Section
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276

Illinois Emergency Management Agency
Division of Nuclear Safety
Bureau of Environmental Safety
1035 Outer Park Drive
Springfield, IL 62704

Contacts for Further Information

Name Ron Novy
Address 6500 North Dresden Road
City, State, Zip Morris, IL 60450
Telephone Number 815-416-3211

Name Randy Schmidt
Address 6500 North Dresden Road
City, State, Zip Morris, IL 64050
Telephone Number 815-416-3200

Attachment 1

Copies of the laboratory analyses used to confirm the presence of, or conducted in response to, the release

CURRENT DATE: 8-JUN-2014 01:57:21.95
STATION NAME: DRESDEN

STP EFFLUENT

UNCONDITIONAL RELEASE 1600 ml

CONFIGURATION FILE.....: SYS$SYSDEVICE:[CRU.SAMP]36P407_SAMP_6989.CNF;1
BKGND SUBTRACTION FILE.: CECO_BLANK:BKG_36P407_MRLIQ1600_6914.CNF
DATE-TIME SAMPLE OBTAINED....: 8-JUN-2014 01:25:34.73
DATE-TIME SAMPLE ANALYZED....: 8-JUN-2014 01:26:52.37
COUNT LIVE TIME.....: 0 00:30:00.00
COUNT REAL TIME.....: 0 00:30:00.30
SAMPLE QUANTITY.....: 1.60140E+03 ML

COLLECTOR'S INITIALS...: JNB
DETECTOR SERIAL NUMBER..: 36P407
ANALYST'S INITIALS.....: EK
GEOMETRY TYPE.....: MRLIQ1600

DEADTIME.....: 0.0%
SAMPLE CODE.....: UNCONDTNLRELSSAMPLE POINT.....:
NUCLIDE LIBRARY.....: ENV_LLD
CALIBRATION DATE.....: 18-APR-2014 10:54:00.00
DEPARTMENT.....: CHEMISTRY
LabWare ID...:
REMARK...: SAMPLED 6/7/14 @2232

ENERGY CALIB GAIN.....: 4.99783E-01
ENERGY CALIB OFFSET.....: 6.76349E-02
FWHM CALIB GAIN.....: 4.05111E-02
FWHM CALIB OFFSET.....: 5.45299E-01

Summary of Nuclide Activity

Total number of lines in spectrum	1	
Number of unidentified lines	0	
Number of lines tentatively identified by NID	1	100.00%

Nuclide Type : NATURAL

Nuclide	Hlife	Decay	Wtd Mean Uncorrected UCI/ML	Wtd Mean Decay Corr UCI/ML	Decay Corr 1-Sigma Error	1-Sigma %Error	Flags
PB-214	9999.00Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
	Total Activity :		0.000E+00	0.000E+00			
	Grand Total Activity :		0.000E+00	0.000E+00			

Flags: "K" = Keyline not found
"M" = Manually accepted
"E" = Manually edited
"A" = Nuclide specific abn. limit

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides
0	352.14	41	25	1.35	704.45	698	11	28.1		PB-214

None

Flags: "T" = Tentatively associated

Nuclide Type: NATURAL

Nuclide	Energy	%Abn	%Eff	Uncorrected UCI/ML	Decay Corr UCI/ML	1-Sigma %Error	Status
PB-214	53.23	0.00	2.899E-01	-----	Line Not Found	-----	Absent
	241.91	0.00	4.639E+00	-----	Line Not Found	-----	Absent
	295.17	0.00	4.355E+00	-----	Line Not Found	-----	Absent
	351.90	0.00*	4.052E+00	0.000E+00	0.000E+00	0.00	OK
	785.91	0.00	2.585E+00	-----	Line Not Found	-----	Absent

Final Mean for 1 Valid Peaks = 0.000E+00+/- 0.000E+00 (0.00%)

Flag: "*" = Keyline

Minimum Detectable Activity Report
Sample ID : 6989

Acquisition date : 8-JUN-2014 01:26:52

Nuclide	Bckgnd Sum	Energy (keV)	MDA (UCI/ML)
MN-54*	9.	834.84	6.3004E-09
CO-58*	7.	810.77	5.5909E-09
FE-59*	9.	1099.25	1.3713E-08
CO-60*	5.	1173.24	6.2536E-09
ZN-65*	7.	1115.55	1.3895E-08
NB-95*	15.	765.83	7.3222E-09
ZR-95*	11.	756.74	1.1795E-08
I-131*	24.	364.48	7.3799E-09
CS-134*	14.	604.70	6.3555E-09
CS-137*	6.	661.66	5.5089E-09
BA-140*	17.	537.32	2.5859E-08
LA-140*	3.	1596.18	6.4802E-09

Analyst: EK Date: 6-8-14

Reviewed by: [illegible] Date: 6/9/14

CURRENT DATE: 6-JUN-2014 09:19:42.06
STATION NAME: DRESDEN

GENERAL LIQUID

2/3 CONDENSATE STORAGE TANKS

CONFIGURATION FILE.....: SYS$SYSDEVICE:[CRU.SAMP]8973824_SAMP_6935.CNF;1
BKGND SUBTRACTION FILE.: CECO_BLANK:BKG_8973824_MRLIQ500_6882.CNF
DATE-TIME SAMPLE OBTAINED....: 6-JUN-2014 08:05:00.00
DATE-TIME SAMPLE ANALYZED....: 6-JUN-2014 08:59:10.88
COUNT LIVE TIME.....: 0 00:20:00.00
COUNT REAL TIME.....: 0 00:20:00.07
SAMPLE QUANTITY.....: 5.00000E+02 G

COLLECTOR'S INITIALS...: EN
DETECTOR SERIAL NUMBER..: 8973824
ANALYST'S INITIALS.....: AA
GEOMETRY TYPE.....: MRLIQ500

DEADTIME.....: 0.0%
SAMPLE CODE.....: 2/3CONDSTOR SAMPLE POINT.....:
NUCLIDE LIBRARY.....: GENLIQ
CALIBRATION DATE.....: 16-MAY-2012 14:57:00.00
DEPARTMENT.....: CHEMISTRY
LabWare ID...: 5471528
REMARK...: ROUTINE

ENERGY CALIB GAIN.....: 5.00223E-01 FWHM CALIB GAIN.....: 3.45253E-02
ENERGY CALIB OFFSET.....: -3.30212E-02 FWHM CALIB OFFSET.....: 5.04285E-01

Summary of Nuclide Activity

Total number of lines in spectrum	2	
Number of unidentified lines	0	
Number of lines tentatively identified by NID	2	100.00%

Nuclide Type : FG

Nuclide	Hlife	Decay	Wtd Mean Uncorrected UCI/G	Wtd Mean Decay Corr UCI/G	Decay Corr 1-Sigma Error	1-Sigma %Error	Flags
XE-135*	9.09H	1.08	2.511E-08	2.725E-08	1.395E-08	51.18	
Total Activity :			2.511E-08	2.725E-08			
Grand Total Activity :			2.511E-08	2.725E-08			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides
0	241.61	12	6	0.98	483.08	480	6	41.8		
0	250.52	17	17	1.00	500.88	495	9	50.8		XE-135*

Sample ID : 6935
Acquisition date : 6-JUN-2014 08:59:10

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	241.61	12	6	0.98	483.08	480	6	1.04E-02	41.8	3.48E+00	T

Flags: "T" = Tentatively associated

Nuclide Type: FG

Nuclide	Energy	%Abn	%Eff	Uncorrected UCI/G	Decay Corr UCI/G	1-Sigma %Error	Status
XE-135*	249.79	90.13*	3.383E+00	2.511E-08	2.725E-08	51.18	OK
	358.39	0.22	2.472E+00	----- Line Not Found		-----	Absent
	608.18	2.90	1.503E+00	----- Line Not Found		-----	Absent

Final Mean for 1 Valid Peaks = 2.725E-08+/- 1.395E-08 (51.18%)

Flag: "*" = Keyline

Rejected Report
Sample ID : 6935

Acquisition date : 6-JUN-2014 08:59:10

Nuclide	Half-life	Half-Life Ratio	Energy	%Abund	Activity (UCI/G)	1-Sigma %Error	Rejected by
SR-92	2.71H	0.39	241.52	3.00	7.053E-07	44.30	Abun.
			430.56	3.30	--- Not Found ---		
			953.32	3.60	--- Not Found ---		
			1383.94*	90.00	--- Not Found ---		
		% Abundances	Found =	3.00	(Abn. Limit = 65.00%)		

Flag: "*" = Keyline

Minimum Detectable Activity Report
Sample ID : 6935

Acquisition date : 6-JUN-2014 08:59:10

Nuclide	Bckgnd Sum	Energy (keV)	MDA (UCI/G)
MN-54*	7.	834.84	5.0187E-08
CO-58*	1.	810.77	1.8272E-08
FE-59*	1.	1099.25	4.2265E-08
CO-60*	3.	1332.50	4.8593E-08
ZN-65*	2.	1115.55	7.4770E-08
KR-87*	4.	402.58	6.4840E-08
KR-88*	14.	196.32	9.8349E-08
NB-95	1.	765.83	1.8163E-08
ZR-95	3.	756.74	5.6062E-08
MO-99*	19.	140.51	2.1753E-08
CD-109	13.	88.00	4.6014E-07
I-131*	2.	364.48	1.5045E-08
XE-133*	16.	81.00	5.8041E-08
XE-133M*	9.	233.22	1.7354E-07
CS-134*	2.	604.70	1.9087E-08
CS-137*	9.	661.66	5.3001E-08
XE-138*	5.	258.41	1.0181E-06
BA-140	6.	537.32	1.1988E-07
LA-140	0.	1596.18	0.0000E+00
CE-141*	14.	145.44	3.5218E-08
CE-144*	12.	133.54	1.3922E-07

Analyst: N Date: 6-6-14

Reviewed by: [signature] Date: 6/9/14

CURRENT DATE: 10-JUN-2014 12:21:25.51
STATION NAME: DRESDEN

* RR SEPTIC RINSE

UNCONDITIONAL RELEASE 1600 ml

CONFIGURATION FILE.....: SYS$SYSDEVICE:[CRU.SAMP]36P407_SAMP_7079.CNF;2
BKGND SUBTRACTION FILE.: CECO_BLANK:BKG_36P407_MRLIQ1600_6914.CNF
DATE-TIME SAMPLE OBTAINED....: 10-JUN-2014 11:50:00.00
DATE-TIME SAMPLE ANALYZED....: 10-JUN-2014 11:50:56.19
COUNT LIVE TIME.....: 0 00:30:00.00
COUNT REAL TIME.....: 0 00:30:00.44
SAMPLE QUANTITY.....: 1.60000E+03 ML

COLLECTOR'S INITIALS...: FH
DETECTOR SERIAL NUMBER..: 36P407
ANALYST'S INITIALS.....: DC
GEOMETRY TYPE.....: MRLIQ1600

DEADTIME.....: 0.0%
SAMPLE CODE.....: UNCONDTNLRELSSAMPLE POINT.....:
NUCLIDE LIBRARY.....: ENV_LLD
CALIBRATION DATE.....: 18-APR-2014 10:54:00.00
DEPARTMENT.....: CHEMISTRY
LabWare ID...:
REMARK...: 6-10-14 11:30 * Sample of truck flush on 6/10/14.

ENERGY CALIB GAIN.....: 4.99773E-01 FWHM CALIB GAIN.....: 4.18904E-02
ENERGY CALIB OFFSET.....: 8.39556E-02 FWHM CALIB OFFSET.....: 5.27076E-01

Summary of Nuclide Activity

Total number of lines in spectrum	13
Number of unidentified lines	0
Number of lines tentatively identified by NID	13 100.00%

Nuclide Type : NATURAL

Nuclide	Hlife	Decay	Wtd Mean Uncorrected UCI/ML	Wtd Mean Decay Corr UCI/ML	Decay Corr 1-Sigma Error	1-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
TL-208	9999.00Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
PB-212	9999.00Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
BI-214	9999.00Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
PB-214	9999.00Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
RA-226	1600.00Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
AC-228	9999.00Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
			---------	---------			
	Total Activity :		0.000E+00	0.000E+00			

Nuclide Type : AP

Nuclide	Hlife	Decay	Wtd Mean Uncorrected UCI/ML	Wtd Mean Decay Corr UCI/ML	Decay Corr 1-Sigma Error	1-Sigma %Error	Flags
CO-60*	5.27Y	1.00	1.607E-08	1.607E-08	0.341E-08	21.25	
			---------	---------			

Total Activity :	1.607E-08	1.607E-08
Grand Total Activity :	1.607E-08	1.607E-08

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Sample ID : 7079 Acquisition date : 10-JUN-2014 11:50:56

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides
0	186.59	86	61	2.27	373.18	369	9	19.5		RA-226
0	238.50	147	82	1.03	477.06	471	11	14.5		PB-212
0	295.48	81	66	1.04	591.06	586	11	22.4		PB-214
0	352.24	118	83	1.19	704.62	698	14	18.9		PB-214
0	583.39	77	30	1.31	1167.14	1161	12	18.2		TL-208
0	609.25	169	34	1.60	1218.88	1210	17	11.0		BI-214
0	768.01	18	15	0.73	1536.54	1532	10	47.8		BI-214
0	911.23	60	19	1.13	1823.11	1818	12	19.3		AC-228
0	968.98	51	16	1.83	1938.67	1932	13	21.3		AC-228
0	1120.86	52	12	2.24	2242.57	2237	13	19.7		BI-214
0	1172.56*	33	3	2.28	2346.02	2338	15	30.7		CO-60*
0	1332.48	32	10	0.69	2666.00	2659	14	28.1		CO-60*
0	1460.74*	76	8	2.43	2922.64	2915	16	20.0		K-40

None

Flags: "T" = Tentatively associated

Nuclide Type: NATURAL

Nuclide	Energy	%Abn	%Eff	Uncorrected UCI/ML	Decay Corr UCI/ML	1-Sigma %Error	Status
K-40	1460.80	0.00*	1.712E+00	0.000E+00	0.000E+00	0.00	OK
	Final Mean for 1 Valid Peaks = 0.000E+00+/- 0.000E+00 (0.00%)						
TL-208	583.13	0.00*	3.117E+00	0.000E+00	0.000E+00	0.00	OK
	Final Mean for 1 Valid Peaks = 0.000E+00+/- 0.000E+00 (0.00%)						
PB-212	238.62	0.00*	4.655E+00	0.000E+00	0.000E+00	0.00	OK
	Final Mean for 1 Valid Peaks = 0.000E+00+/- 0.000E+00 (0.00%)						
BI-214	609.32	0.00*	3.038E+00	0.000E+00	0.000E+00	0.00	OK
	665.45	0.00	2.878E+00	----- Line Not Found		-----	Absent
	768.37	0.00	2.625E+00	0.000E+00	0.000E+00	0.00	OK
	806.19	0.00	2.542E+00	----- Line Not Found		-----	Absent
	934.05	0.00	2.300E+00	----- Line Not Found		-----	Absent
	1120.28	0.00	2.028E+00	0.000E+00	0.000E+00	0.00	OK
	1155.19	0.00	1.987E+00	----- Line Not Found		-----	Absent
	1238.11	0.00	1.897E+00	----- Line Not Found		-----	Absent
	1280.96	0.00	1.855E+00	----- Line Not Found		-----	Absent
	1377.65	0.00	1.772E+00	----- Line Not Found		-----	Absent
	1401.50	0.00	1.754E+00	----- Line Not Found		-----	Absent
	1408.01	0.00	1.749E+00	----- Line Not Found		-----	Absent
	1509.23	0.00	1.681E+00	----- Line Not Found		-----	Absent
	1661.32	0.00	1.602E+00	----- Line Not Found		-----	Absent
	1729.65	0.00	1.575E+00	----- Line Not Found		-----	Absent
	1764.54	0.00	1.563E+00	----- Line Not Found		-----	Absent
	1847.44	0.00	1.539E+00	----- Line Not Found		-----	Absent
	Final Mean for 3 Valid Peaks = 0.000E+00+/- 0.000E+00 (0.00%)						
PB-214	53.23	0.00	2.899E-01	----- Line Not Found		-----	Absent
	241.91	0.00	4.639E+00	----- Line Not Found		-----	Absent
	295.17	0.00	4.354E+00	0.000E+00	0.000E+00	0.00	OK
	351.90	0.00*	4.051E+00	0.000E+00	0.000E+00	0.00	OK
	785.91	0.00	2.585E+00	----- Line Not Found		-----	Absent
	Final Mean for 2 Valid Peaks = 0.000E+00+/- 0.000E+00 (0.00%)						
RA-226	185.99	0.00*	4.804E+00	0.000E+00	0.000E+00	0.00	OK
	Final Mean for 1 Valid Peaks = 0.000E+00+/- 0.000E+00 (0.00%)						
AC-228	338.30	0.00*	4.123E+00	----- Line Not Found		-----	Absent
	794.70	0.00	2.566E+00	----- Line Not Found		-----	Absent
	911.10	0.00	2.339E+00	0.000E+00	0.000E+00	0.00	OK
	964.60	0.00	2.249E+00	----- Line Not Found		-----	Absent
	969.10	0.00	2.242E+00	0.000E+00	0.000E+00	0.00	OK
	Final Mean for 2 Valid Peaks = 0.000E+00+/- 0.000E+00 (0.00%)						

Nuclide Type: AP

Nuclide	Energy	%Abn	%Eff	Uncorrected UCI/ML	Decay Corr UCI/ML	1-Sigma %Error	Status
CO-60*	1173.24	99.90*	1.967E+00	1.574E-08	1.574E-08	31.36	OK
	1332.50	99.98	1.809E+00	1.637E-08	1.637E-08	28.89	OK

Final Mean for 2 Valid Peaks = 1.607E-08+/- 3.414E-09 (21.25%)

Flag: "*" = Keyline

Sample ID : 7079 Acquisition date : 10-JUN-2014 11:50:56

Nuclide	Bckgnd Sum	Energy (keV)	MDA (UCI/ML)
MN-54*	25.	834.84	9.8254E-09
CO-58*	17.	810.77	8.1725E-09
FE-59*	10.	1099.25	1.4050E-08
ZN-65*	10.	1115.55	1.6004E-08
NB-95*	19.	765.83	8.1251E-09
ZR-95*	15.	756.74	1.3376E-08
I-131*	34.	364.48	8.6247E-09
CS-134*	22.	604.70	7.6795E-09
CS-137*	25.	661.66	9.9661E-09
BA-140*	22.	537.32	2.9153E-08
LA-140*	3.	1596.18	6.7694E-09

Analyst: _____ Date: 6-10-14

Reviewed by: _____ Date: 6/10/14

CURRENT DATE: 10-JUN-2014 11:28:51.11
STATION NAME: DRESDEN

★ RR SEPTIC

UNCONDITIONAL RELEASE 1600 ml

CONFIGURATION FILE.....: SYS$SYSDEVICE:[CRU.SAMP]36P407_SAMP_7076.CNF;1
BKGND SUBTRACTION FILE.: CECO_BLANK:BKG_36P407_MRLIQ1600_6914.CNF
DATE-TIME SAMPLE OBTAINED....: 10-JUN-2014 10:57:00.00
DATE-TIME SAMPLE ANALYZED....: 10-JUN-2014 10:58:21.51
COUNT LIVE TIME.....: 0 00:30:00.00
COUNT REAL TIME.....: 0 00:30:00.51
SAMPLE QUANTITY.....: 1.60200E+03 ML

COLLECTOR'S INITIALS...: FH ANALYST'S INITIALS.....: DC
DETECTOR SERIAL NUMBER..: 36P407 GEOMETRY TYPE.....: MRLIQ1600

DEADTIME.....: 0.0%
SAMPLE CODE.....: UNCONDTNLRELSSAMPLE POINT.....:
NUCLIDE LIBRARY.....: ENV_LLD
CALIBRATION DATE.....: 18-APR-2014 10:54:00.00
DEPARTMENT.....: CHEMISTRY
LabWare ID...:
REMARK...: 6-9-14 17:20 ★ Samples Left by driver e STP ON 6/9/14 before Leaving site. 6/10/14
ENERGY CALIB GAIN.....: 4.99773E-01 FWHM CALIB GAIN.....: 4.18904E-02
ENERGY CALIB OFFSET.....: 8.39556E-02 FWHM CALIB OFFSET.....: 5.27076E-01

Summary of Nuclide Activity

Total number of lines in spectrum	19
Number of unidentified lines	3
Number of lines tentatively identified by NID	16 84.21%

Nuclide Type : NATURAL

Nuclide	Hlife	Decay	Wtd Mean Uncorrected UCI/ML	Wtd Mean Decay Corr UCI/ML	Decay Corr 1-Sigma Error	1-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
TL-208	9999.00Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
PB-212	9999.00Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
BI-214	9999.00Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
PB-214	9999.00Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
RA-226	1600.00Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
AC-228	9999.00Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
			---------	---------			
	Total Activity :		0.000E+00	0.000E+00			

Nuclide Type : AP

Nuclide	Hlife	Decay	Wtd Mean Uncorrected UCI/ML	Wtd Mean Decay Corr UCI/ML	Decay Corr 1-Sigma Error	1-Sigma %Error	Flags
CO-60*	5.27Y	1.00	1.386E-08	1.386E-08	0.364E-08	26.25	
			---------	---------			

Total Activity :	1.386E-08	1.386E-08
Grand Total Activity :	1.386E-08	1.386E-08

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides
0	185.95	151	56	1.61	371.91	367	9	12.1		RA-226
0	209.37	65	65	1.42	418.77	415	7	24.0		
3	238.70	213	70	1.22	477.46	473	16	9.2	1.33E+00	PB-212
3	241.89	68	67	1.57	483.83	473	16	28.1		PB-214
0	295.18	132	75	1.35	590.45	584	13	16.1		PB-214
0	338.74	69	76	1.17	677.61	673	12	27.7		AC-228
0	352.00	240	64	1.11	704.16	699	10	9.0		PB-214
0	463.06	38	25	1.45	926.38	921	10	29.3		
0	583.26	92	25	1.15	1166.88	1162	9	14.2		TL-208
0	609.31	186	29	1.55	1219.00	1214	11	9.3		BI-214
0	860.92	33	18	1.73	1722.46	1717	14	32.2		
0	911.30	109	19	1.70	1823.25	1815	15	12.9		AC-228
0	969.15	69	23	1.01	1939.02	1933	12	18.5		AC-228
0	1120.55	57	24	1.02	2241.95	2234	12	21.7		BI-214
0	1173.18*	30	4	1.57	2347.25	2339	16	33.2		CO-60*
0	1238.47	16	11	1.37	2477.90	2474	9	42.3		BI-214
0	1333.66	25	18	1.62	2668.36	2661	13	41.0		CO-60*
0	1461.01*	120	12	2.01	2923.19	2915	15	14.1		K-40
0	1764.81	56	0	1.85	3531.05	3523	14	13.4		BI-214

NO PEAK DC 6/10/14

NO PEAK DC 6/10/14

NO PEAK DC 6/10/14

Sample ID : 7076 Acquisition date : 10-JUN-2014 10:58:21

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	209.37	65	65	1.42	418.77	415	7	3.60E-02	24.0	4.77E+00	
0	463.06	38	25	1.45	926.38	921	10	2.13E-02	29.3	3.55E+00	
0	860.92	33	18	1.73	1722.46	1717	14	1.83E-02	32.2	2.43E+00	

Flags: "T" = Tentatively associated

Nuclide Type: NATURAL

Nuclide	Energy	%Abn	%Eff	Uncorrected UCI/ML	Decay Corr UCI/ML	1-Sigma %Error	Status
K-40	1460.80	0.00*	1.711E+00	0.000E+00	0.000E+00	0.00	OK
	Final Mean for 1 Valid Peaks = 0.000E+00+/- 0.000E+00 (0.00%)						
TL-208	583.13	0.00*	3.118E+00	0.000E+00	0.000E+00	0.00	OK
	Final Mean for 1 Valid Peaks = 0.000E+00+/- 0.000E+00 (0.00%)						
PB-212	238.62	0.00*	4.654E+00	0.000E+00	0.000E+00	0.00	OK
	Final Mean for 1 Valid Peaks = 0.000E+00+/- 0.000E+00 (0.00%)						
BI-214	609.32	0.00*	3.038E+00	0.000E+00	0.000E+00	0.00	OK
	665.45	0.00	2.878E+00	----- Line Not Found		-----	Absent
	768.37	0.00	2.624E+00	----- Line Not Found		-----	Absent
	806.19	0.00	2.542E+00	----- Line Not Found		-----	Absent
	934.05	0.00	2.300E+00	----- Line Not Found		-----	Absent
	1120.28	0.00	2.028E+00	0.000E+00	0.000E+00	0.00	OK
	1155.19	0.00	1.987E+00	----- Line Not Found		-----	Absent
	1238.11	0.00	1.896E+00	0.000E+00	0.000E+00	0.00	OK
	1280.96	0.00	1.855E+00	----- Line Not Found		-----	Absent
	1377.65	0.00	1.772E+00	----- Line Not Found		-----	Absent
	1401.50	0.00	1.754E+00	----- Line Not Found		-----	Absent
	1408.01	0.00	1.749E+00	----- Line Not Found		-----	Absent
	1509.23	0.00	1.681E+00	----- Line Not Found		-----	Absent
	1661.32	0.00	1.602E+00	----- Line Not Found		-----	Absent
	1729.65	0.00	1.575E+00	----- Line Not Found		-----	Absent
	1764.54	0.00	1.563E+00	0.000E+00	0.000E+00	0.00	OK
	1847.44	0.00	1.539E+00	----- Line Not Found		-----	Absent
	Final Mean for 4 Valid Peaks = 0.000E+00+/- 0.000E+00 (0.00%)						
PB-214	53.23	0.00	2.899E-01	----- Line Not Found		-----	Absent
	241.91	0.00	4.639E+00	0.000E+00	0.000E+00	0.00	OK
	295.17	0.00	4.355E+00	0.000E+00	0.000E+00	0.00	OK
	351.90	0.00*	4.053E+00	0.000E+00	0.000E+00	0.00	OK
	785.91	0.00	2.585E+00	----- Line Not Found		-----	Absent
	Final Mean for 3 Valid Peaks = 0.000E+00+/- 0.000E+00 (0.00%)						
RA-226	185.99	0.00*	4.804E+00	0.000E+00	0.000E+00	0.00	OK
	Final Mean for 1 Valid Peaks = 0.000E+00+/- 0.000E+00 (0.00%)						
AC-228	338.30	0.00*	4.121E+00	0.000E+00	0.000E+00	0.00	OK
	794.70	0.00	2.566E+00	----- Line Not Found		-----	Absent
	911.10	0.00	2.339E+00	0.000E+00	0.000E+00	0.00	OK
	964.60	0.00	2.249E+00	----- Line Not Found		-----	Absent
	969.10	0.00	2.242E+00	0.000E+00	0.000E+00	0.00	OK
	Final Mean for 3 Valid Peaks = 0.000E+00+/- 0.000E+00 (0.00%)						

Sample ID : 7076 Acquisition date : 10-JUN-2014 10:58:21

Nuclide Type: AP

Nuclide	Energy	%Abn	%Eff	Uncorrected UCI/ML	Decay Corr UCI/ML	1-Sigma %Error	Status
CO-60*	1173.24	99.90*	1.966E+00	1.454E-08	1.454E-08	33.79	OK
	1332.50	99.98	1.808E+00	1.304E-08	1.304E-08	41.53	OK

Final Mean for 2 Valid Peaks = 1.386E-08+/- 3.639E-09 (26.25%)

Flag: "*" = Keyline

Minimum Detectable Activity Report
Sample ID : 7076

Acquisition date : 10-JUN-2014 10:58:21

Nuclide	Bckgnd Sum	Energy (keV)	MDA (UCI/ML)
MN-54*	28.	834.84	1.0301E-08
CO-58*	15.	810.77	7.7953E-09
FE-59*	15.	1099.25	1.6998E-08
ZN-65*	12.	1115.55	1.6867E-08
NB-95*	23.	765.83	8.9468E-09
ZR-95*	25.	756.74	1.6721E-08
I-131*	39.	364.48	9.1952E-09
CS-134*	27.	604.70	8.4578E-09
CS-137*	30.	661.66	1.0758E-08
BA-140*	23.	537.32	2.9564E-08
LA-140*	3.	1596.18	6.4778E-09

Analyst: DC Date: 6/10/14

Reviewed by: [signature] Date: 6/10/14

CURRENT DATE: 9-JUN-2014 08:51:45.76
STATION NAME: DRESDEN

GENERAL LIQUID

2/3 CONDENSATE STORAGE TANKS

CONFIGURATION FILE.....: SYS$SYSDEVICE:[CRU.SAMP]8973824_SAMP_7014.CNF;1
BKGND SUBTRACTION FILE.: CECO_BLANK:BKG_8973824_MRLIQ500_6882.CNF
DATE-TIME SAMPLE OBTAINED....: 9-JUN-2014 07:55:00.00
DATE-TIME SAMPLE ANALYZED....: 9-JUN-2014 08:31:15.18
COUNT LIVE TIME.....: 0 00:20:00.00
COUNT REAL TIME.....: 0 00:20:00.09
SAMPLE QUANTITY.....: 5.04000E+02 G

COLLECTOR'S INITIALS...: CT ANALYST'S INITIALS.....: MW
DETECTOR SERIAL NUMBER..: 8973824 GEOMETRY TYPE.....: MRLIQ500

DEADTIME.....: 0.0%
SAMPLE CODE.....: 2/3CONDSTOR SAMPLE POINT.....:
NUCLIDE LIBRARY.....: GENLIQ
CALIBRATION DATE.....: 16-MAY-2012 14:57:00.00
DEPARTMENT.....: CHEMISTRY
LabWare ID...: 5474530
REMARK...: ROUTINE

ENERGY CALIB GAIN.....: 5.00258E-01 FWHM CALIB GAIN.....: 3.52553E-02
ENERGY CALIB OFFSET.....: -4.60065E-03 FWHM CALIB OFFSET.....: 4.88894E-01

Summary of Nuclide Activity

Total number of lines in spectrum	3	
Number of unidentified lines	0	
Number of lines tentatively identified by NID	3	100.00%

Nuclide Type : AP

Nuclide	Hlife	Decay	Wtd Mean Uncorrected UCI/G	Wtd Mean Decay Corr UCI/G	Decay Corr 1-Sigma Error	1-Sigma %Error	Flags
CO-60*	5.27Y	1.00	2.902E-07	2.902E-07	0.327E-07	11.27	
Total Activity :			2.902E-07	2.902E-07			

Nuclide Type : FG

Nuclide	Hlife	Decay	Wtd Mean Uncorrected UCI/G	Wtd Mean Decay Corr UCI/G	Decay Corr 1-Sigma Error	1-Sigma %Error	Flags
XE-135*	9.09H	1.06	3.622E-08	3.841E-08	1.238E-08	32.23	
Total Activity :			3.622E-08	3.841E-08			

Grand Total Activity :	3.264E-07	3.286E-07

Flags: "K" = Keyline not found "M" = Manually accepted

"E" = Manually edited

"A" = Nuclide specific abn. limit

Sample ID : 7014 Acquisition date : 9-JUN-2014 08:31:15

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides
0	249.55	25	11	0.93	498.84	494	9	31.6		XE-135*
0	1173.05	53	3	1.87	2344.90	2339	11	14.9		CO-60*
0	1332.31	49	0	1.81	2663.24	2657	12	14.3		CO-60*

Unidentified Energy Lines
Sample ID : 7014

Acquisition date : 9-JUN-2014 08:31:15

None

Flags: "T" = Tentatively associated

Nuclide Type: AP

Nuclide	Energy	%Abn	%Eff	Uncorrected UCI/G	Decay Corr UCI/G	1-Sigma %Error	Status
CO-60*	310.00	-- Double Escape--		----- Line Not Found		-----	Absent
	821.00	-- Single Escape--		----- Line Not Found		-----	Absent
	1173.24	99.90	8.327E-01	2.871E-07	2.871E-07	16.23	OK
	1332.50	99.98*	7.469E-01	2.932E-07	2.932E-07	15.65	OK

Final Mean for 2 Valid Peaks = 2.902E-07+/- 3.270E-08 (11.27%)

Nuclide Type: FG

Nuclide	Energy	%Abn	%Eff	Uncorrected UCI/G	Decay Corr UCI/G	1-Sigma %Error	Status
XE-135*	249.79	90.13*	3.394E+00	3.622E-08	3.841E-08	32.23	OK
	358.39	0.22	2.472E+00	----- Line Not Found		-----	Absent
	608.18	2.90	1.503E+00	----- Line Not Found		-----	Absent

Final Mean for 1 Valid Peaks = 3.841E-08+/- 1.238E-08 (32.23%)

Flag: "*" = Keyline

Flag: "*" = Keyline

Sample ID : 7014 Acquisition date : 9-JUN-2014 08:31:15

Nuclide	Bckgnd Sum	Energy (keV)	MDA (UCI/G)
MN-54*	15.	834.84	7.1879E-08
CO-58*	5.	810.77	4.0291E-08
FE-59*	3.	1099.25	7.2611E-08
ZN-65*	14.	1115.55	1.7454E-07
KR-87*	5.	402.58	6.2468E-08
KR-88*	16.	196.32	9.6158E-08
NB-95	1.	765.83	1.9409E-08
ZR-95	1.	756.74	3.0767E-08
MO-99*	21.	140.51	2.2720E-08
CD-109	17.	88.00	5.3152E-07
I-131*	7.	364.48	2.7120E-08
XE-133*	22.	81.00	6.6503E-08
XE-133M*	9.	233.22	1.7338E-07
CS-134*	3.	604.70	2.4821E-08
CS-137*	5.	661.66	3.9183E-08
XE-138*	9.	258.41	5.7487E-07
BA-140	4.	537.32	9.6793E-08
LA-140	1.	1596.18	2.4719E-08
CE-141*	17.	145.44	3.8219E-08
CE-144*	21.	133.54	1.8141E-07

Analyst: _____ Date: 6.9.14

Reviewed by: _____ Date: 6-10-14

CURRENT DATE: 11-JUN-2014 00:52:47.68
STATION NAME: DRESDEN

2/3 CST O/S FENCE 1' DEPTH

DIRT OR POURABLE SOLIDS

CONFIGURATION FILE.....: SYS$SYSDEVICE:[CRU.SAMP]2997068_SAMP_7100.CNF;1
BKGND SUBTRACTION FILE.: CECO_BLANK:BKG_2997068_MRDIRT1000_7000.CNF
DATE-TIME SAMPLE OBTAINED....: 11-JUN-2014 00:38:55.14
DATE-TIME SAMPLE ANALYZED....: 11-JUN-2014 00:42:18.81
COUNT LIVE TIME.....: 0 00:10:00.00
COUNT REAL TIME.....: 0 00:10:00.32
SAMPLE QUANTITY.....: 2.54890E+03 G

COLLECTOR'S INITIALS...: RP
DETECTOR SERIAL NUMBER..: 2997068
ANALYST'S INITIALS.....: DC
GEOMETRY TYPE.....: MRDIRT1000

DEADTIME.....: 0.1%
SAMPLE CODE.....: DIRT
SAMPLE POINT.....:
NUCLIDE LIBRARY.....: DIRT
CALIBRATION DATE.....: 15-JAN-2013 10:56:30.22
DEPARTMENT.....: CHEMISTRY
LabWare ID...:
REMARK...:

ENERGY CALIB GAIN.....: 4.99810E-01 FWHM CALIB GAIN.....: 3.60145E-02
ENERGY CALIB OFFSET.....: -1.49471E-02 FWHM CALIB OFFSET.....: 5.91511E-01

Summary of Nuclide Activity

Total number of lines in spectrum	17	
Number of unidentified lines	0	
Number of lines tentatively identified by NID	17	100.00%

Nuclide Type : NATURAL

Nuclide	Hlife	Decay	Wtd Mean Uncorrected UCI/G	Wtd Mean Decay Corr UCI/G	Decay Corr 1-Sigma Error	1-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	9.773E-07	9.773E-07	4.889E-07	50.03	
TL-208	9999.00Y	1.00	4.463E-08	4.463E-08	1.750E-08	39.22	
BI-212	9999.00Y	1.00	2.183E-07	2.183E-07	0.735E-07	33.66	
PB-212	9999.00Y	1.00	1.719E-07	1.719E-07	0.292E-07	17.00	
BI-214	9999.00Y	1.00	5.408E-07	5.408E-07	0.429E-07	7.94	
PB-214	9999.00Y	1.00	2.612E-07	2.612E-07	0.345E-07	13.22	
AC-228	9999.00Y	1.00	3.470E-07	3.470E-07	0.471E-07	13.58	
			---	---			
Total Activity :			2.561E-06	2.561E-06			

Nuclide Type : AP

Nuclide	Hlife	Decay	Wtd Mean Uncorrected UCI/G	Wtd Mean Decay Corr UCI/G	Decay Corr 1-Sigma Error	1-Sigma %Error	Flags
CO-60	5.27Y	1.00	6.508E-08	6.508E-08	1.433E-08	22.02	
			---	---			

Total Activity :	6.508E-08	6.508E-08
Grand Total Activity :	2.626E-06	2.626E-06

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides
3	75.15	85	104	1.06	150.38	147	13	21.5	5.46E-01	PB-212
3	77.33	115	101	0.95	154.74	147	13	16.8		PB-212
0	238.72*	90	83	1.02	477.65	474	8	29.5		PB-212
0	242.14	42	56	0.99	484.49	482	7	34.6		PB-214
0	295.55*	103	49	1.72	591.36	585	14	20.2		PB-214
0	352.06*	122	51	1.37	704.41	700	10	17.5		PB-214
0	464.16	49	19	5.16	928.69	920	19	25.7		AC-228
0	583.02*	36	18	1.74	1166.51	1161	12	38.6		TL-208
0	609.21*	199	11	1.05	1218.92	1213	11	9.3		BI-214
0	727.17	21	7	1.72	1454.91	1450	10	32.9		BI-212
0	768.07	20	11	1.45	1536.75	1532	11	39.1		BI-214
0	910.86	60	0	2.10	1822.45	1817	11	12.9		AC-228
0	1120.41	53	5	1.58	2241.71	2237	10	15.9		BI-214
0	1174.24	35	3	0.75	2349.40	2343	16	21.0		CO-60
0	1238.25	27	6	1.86	2477.48	2470	12	26.4		BI-214
0	1460.90*	47	10	2.06	2922.95	2917	15	49.6		K-40
0	1764.78	48	0	1.64	3530.94	3524	14	14.4		BI-214

None

Flags: "T" = Tentatively associated

Nuclide Type: NATURAL

Nuclide	Energy	%Abn	%Eff	Uncorrected UCI/G	Decay Corr UCI/G	1-Sigma %Error	Status
K-40	1460.80	10.67*	7.969E-01	9.773E-07	9.773E-07	50.03	OK
	Final Mean for 1 Valid Peaks = 9.773E-07+/- 4.889E-07 (50.03%)						
TL-208	84.90	1.52	3.074E+00	----- Line Not Found		-----	Absent
	277.14	6.79	3.015E+00	----- Line Not Found		-----	Absent
	583.14	84.23*	1.707E+00	4.463E-08	4.463E-08	39.22	OK
	860.26	12.46	1.235E+00	----- Line Not Found		-----	Absent
	Final Mean for 1 Valid Peaks = 4.463E-08+/- 1.750E-08 (39.22%)						
BI-212	727.18	11.83*	1.422E+00	2.183E-07	2.183E-07	33.66	OK
	Final Mean for 1 Valid Peaks = 2.183E-07+/- 7.348E-08 (33.66%)						
PB-212	74.82	10.69*	2.493E+00	5.652E-07	5.652E-07	23.21	OK
	77.11	18.00	2.636E+00	4.294E-07	4.294E-07	18.74	OK
	87.30	8.04	3.194E+00	----- Line Not Found		-----	Absent
	238.63	44.65	3.327E+00	1.066E-07	1.066E-07	30.29	OK
	300.09	3.41	2.851E+00	----- Line Not Found		-----	Absent
	Final Mean for 3 Valid Peaks = 1.719E-07+/- 2.922E-08 (17.00%)						
BI-214	609.32	46.28*	1.647E+00	4.610E-07	4.610E-07	11.64	OK
	665.45	1.57	1.531E+00	----- Line Not Found		-----	Absent
	768.37	5.04	1.359E+00	5.162E-07	5.162E-07	39.76	OK
	806.19	1.23	1.304E+00	----- Line Not Found		-----	Absent
	934.05	3.21	1.151E+00	----- Line Not Found		-----	Absent
	1120.28	15.15	9.872E-01	6.230E-07	6.230E-07	17.26	OK
	1155.19	1.70	9.623E-01	----- Line Not Found		-----	Absent
	1238.11	5.94	9.086E-01	8.841E-07	8.841E-07	27.25	OK
	1280.96	1.48	8.838E-01	----- Line Not Found		-----	Absent
	1377.65	4.11	8.339E-01	----- Line Not Found		-----	Absent
	1401.50	1.39	8.228E-01	----- Line Not Found		-----	Absent
	1408.01	2.49	8.198E-01	----- Line Not Found		-----	Absent
	1509.23	2.22	7.777E-01	----- Line Not Found		-----	Absent
	1661.32	1.15	7.263E-01	----- Line Not Found		-----	Absent
	1729.64	2.97	7.072E-01	----- Line Not Found		-----	Absent
	1764.54	15.84	6.982E-01	7.670E-07	7.670E-07	15.87	OK
	1847.44	2.09	6.790E-01	----- Line Not Found		-----	Absent
	Final Mean for 5 Valid Peaks = 5.408E-07+/- 4.295E-08 (7.94%)						
PB-214	53.23	1.11	8.576E-01	----- Line Not Found		-----	Absent
	241.91	7.49	3.297E+00	3.025E-07	3.025E-07	35.34	OK
	295.17	19.25	2.882E+00	3.289E-07	3.289E-07	21.25	OK
	351.90	37.21*	2.536E+00	2.292E-07	2.292E-07	18.65	OK
	785.91	1.10	1.333E+00	----- Line Not Found		-----	Absent
	Final Mean for 3 Valid Peaks = 2.612E-07+/- 3.452E-08 (13.22%)						
AC-228	90.05	2.13	3.320E+00	----- Line Not Found		-----	Absent

93.35	3.48	3.456E+00	-----	Line Not Found	-----	Absent
129.10	2.77	4.105E+00	-----	Line Not Found	-----	Absent
209.40	4.43	3.593E+00	-----	Line Not Found	-----	Absent

Nuclide Type: NATURAL

Nuclide	Energy	%Abn	%Eff	Uncorrected UCI/G	Decay Corr UCI/G	1-Sigma %Error	Status
	270.30	3.60	3.067E+00	----- Line Not Found		-----	Absent
	328.00	3.21	2.673E+00	----- Line Not Found		-----	Absent
	338.40	11.36	2.612E+00	----- Line Not Found		-----	Absent
	409.40	2.13	2.261E+00	----- Line Not Found		-----	Absent
	463.00	4.43	2.050E+00	9.537E-07	9.537E-07	26.66	OK
	478.20	0.23	2.002E+00	----- Line Not Found		-----	Absent
	755.20	1.05	1.378E+00	----- Line Not Found		-----	Absent
	772.10	1.55	1.353E+00	----- Line Not Found		-----	Absent
	794.80	4.63	1.320E+00	----- Line Not Found		-----	Absent
	835.60	1.75	1.265E+00	----- Line Not Found		-----	Absent
	911.07	27.70*	1.176E+00	3.255E-07	3.255E-07	14.73	OK
	964.60	5.21	1.120E+00	----- Line Not Found		-----	Absent
	968.90	16.62	1.116E+00	----- Line Not Found		-----	Absent
	1495.45	1.00	7.830E-01	----- Line Not Found		-----	Absent
	1587.90	3.55	7.495E-01	----- Line Not Found		-----	Absent
	1630.63	1.86	7.357E-01	----- Line Not Found		-----	Absent

Final Mean for 2 Valid Peaks = 3.470E-07+/- 4.711E-08 (13.58%)

Nuclide Type: AP

Nuclide	Energy	%Abn	%Eff	Uncorrected UCI/G	Decay Corr UCI/G	1-Sigma %Error	Status
CO-60	1173.24	99.90	9.493E-01	6.508E-08	6.508E-08	22.02	OK
	1332.50	99.98*	8.562E-01	----- Line Not Found		-----	Absent

Final Mean for 1 Valid Peaks = 6.508E-08+/- 1.433E-08 (22.02%)

Flag: "*" = Keyline

Flag: "*" = Keyline

Minimum Detectable Activity Report
Sample ID : 7100

Acquisition date : 11-JUN-2014 00:42:18

Nuclide	Bckgnd Sum	Energy (keV)	MDA (UCI/G)
CS-134*	14.	604.70	2.2174E-08
CS-137*	28.	661.66	3.7140E-08

Analyst: _____ Date: 6-11-14

Reviewed by: _____ Date: 6-11-14

CURRENT DATE: 11-JUN-2014 05:40:52.96
STATION NAME: DRESDEN

2/3 CST 0/S N FENCE 4' DEPTH

DIRT OR POURABLE SOLIDS

CONFIGURATION FILE.....: SYS$SYSDEVICE:[CRU.SAMP]2997068_SAMP_7102.CNF;1
BKGND SUBTRACTION FILE.: CECO_BLANK:BKG_2997068_MRDIRT1000_7000.CNF
DATE-TIME SAMPLE OBTAINED....: 11-JUN-2014 05:28:04.90
DATE-TIME SAMPLE ANALYZED....: 11-JUN-2014 05:30:24.79
COUNT LIVE TIME.....: 0 00:10:00.00
COUNT REAL TIME.....: 0 00:10:00.26
SAMPLE QUANTITY.....: 2.24820E+03 G

COLLECTOR'S INITIALS...: RP
DETECTOR SERIAL NUMBER..: 2997068
ANALYST'S INITIALS.....: DC
GEOMETRY TYPE.....: MRDIRT1000

DEADTIME.....: 0.0%
SAMPLE CODE.....: DIRT
SAMPLE POINT.....:
NUCLIDE LIBRARY.....: DIRT
CALIBRATION DATE.....: 15-JAN-2013 10:56:30.22
DEPARTMENT.....: CHEMISTRY
LabWare ID....
REMARK...: WO#1745402-01

ENERGY CALIB GAIN.....: 4.99810E-01
ENERGY CALIB OFFSET.....: -1.49471E-02
FWHM CALIB GAIN.....: 3.60145E-02
FWHM CALIB OFFSET.....: 5.91511E-01

Summary of Nuclide Activity

Total number of lines in spectrum	15	
Number of unidentified lines	0	
Number of lines tentatively identified by NID	15	100.00%

Nuclide Type : NATURAL

Nuclide	Hlife	Decay	Wtd Mean Uncorrected UCI/G	Wtd Mean Decay Corr UCI/G	Decay Corr 1-Sigma Error	1-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.649E-06	2.649E-06	0.588E-06	22.18	
TL-208	9999.00Y	1.00	1.026E-07	1.026E-07	0.204E-07	19.83	
BI-212	9999.00Y	1.00	3.098E-07	3.098E-07	0.924E-07	29.81	
PB-212	9999.00Y	1.00	2.070E-07	2.070E-07	0.326E-07	15.76	
BI-214	9999.00Y	1.00	1.112E-07	1.112E-07	0.325E-07	29.26	
PB-214	9999.00Y	1.00	1.023E-07	1.023E-07	0.339E-07	33.14	
RA-226	1600.00Y	1.00	7.329E-07	7.329E-07	2.723E-07	37.15	
AC-228	9999.00Y	1.00	3.491E-07	3.491E-07	0.524E-07	15.01	
			---	---			
	Total Activity :		4.564E-06	4.564E-06			

Nuclide Type : ANNIH

Nuclide	Hlife	Decay	Wtd Mean Uncorrected UCI/G	Wtd Mean Decay Corr UCI/G	Decay Corr 1-Sigma Error	1-Sigma %Error	Flags
ANN-511	9999.00Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	

Total Activity :	0.000E+00	0.000E+00
Grand Total Activity :	4.564E-06	4.564E-06

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides
0	77.53	71	129	1.06	155.15	152	7	29.6		PB-212
0	87.39	58	151	1.38	174.88	170	9	40.5		PB-212
0	186.36	46	70	1.44	372.89	367	9	36.5		RA-226
1	238.78*	137	32	1.26	477.77	472	28	18.1	1.69E+00	PB-212
1	241.51	31	42	1.27	483.23	472	28	44.5		PB-214
0	352.17*	41	22	0.87	704.63	700	9	40.1		PB-214
0	462.67	36	3	1.39	925.73	919	12	19.4		AC-228
0	510.74	38	5	1.52	1021.89	1017	10	19.7		ANN-511
0	583.35*	64	11	1.38	1167.18	1161	13	22.3		TL-208
0	609.19*	33	9	1.42	1218.88	1215	9	38.9		BI-214
0	727.34	26	8	1.82	1455.27	1449	11	28.9		BI-212
0	860.87	25	4	0.87	1722.42	1717	14	25.9		TL-208
0	911.05	49	6	2.08	1822.81	1816	11	17.1		AC-228
0	1120.99	27	7	4.29	2242.87	2235	15	29.2		BI-214
0	1460.89*	112	3	1.57	2922.93	2917	12	21.2		K-40

Unidentified Energy Lines
Sample ID : 7102

Acquisition date : 11-JUN-2014 05:30:24

None

Flags: "T" = Tentatively associated

Nuclide Type: NATURAL

Nuclide	Energy	%Abn	%Eff	Uncorrected UCI/G	Decay Corr UCI/G	1-Sigma %Error	Status
K-40	1460.80	10.67*	7.969E-01	2.649E-06	2.649E-06	22.18	OK
	Final Mean for 1 Valid Peaks = 2.649E-06+/- 5.877E-07 (22.18%)						
TL-208	84.90	1.52	3.074E+00	----- Line Not Found		-----	Absent
	277.14	6.79	3.015E+00	----- Line Not Found		-----	Absent
	583.14	84.23*	1.706E+00	8.964E-08	8.964E-08	23.36	OK
	860.26	12.46	1.234E+00	3.238E-07	3.238E-07	26.71	OK
	Final Mean for 2 Valid Peaks = 1.026E-07+/- 2.035E-08 (19.83%)						
BI-212	727.18	11.83*	1.422E+00	3.098E-07	3.098E-07	29.81	OK
	Final Mean for 1 Valid Peaks = 3.098E-07+/- 9.236E-08 (29.81%)						
PB-212	74.82	10.69*	2.471E+00	----- Line Not Found		-----	Absent
	77.11	18.00	2.648E+00	2.981E-07	2.981E-07	30.80	OK
	87.30	8.04	3.198E+00	4.503E-07	4.503E-07	41.28	OK
	238.63	44.65	3.326E+00	1.845E-07	1.845E-07	19.26	OK
	300.09	3.41	2.851E+00	----- Line Not Found		-----	Absent
	Final Mean for 3 Valid Peaks = 2.070E-07+/- 3.262E-08 (15.76%)						
BI-214	609.32	46.28*	1.647E+00	8.632E-08	8.632E-08	39.50	OK
	665.45	1.57	1.531E+00	----- Line Not Found		-----	Absent
	768.37	5.04	1.358E+00	----- Line Not Found		-----	Absent
	806.19	1.23	1.304E+00	----- Line Not Found		-----	Absent
	934.05	3.21	1.151E+00	----- Line Not Found		-----	Absent
	1120.28	15.15	9.867E-01	3.619E-07	3.619E-07	29.94	OK
	1155.19	1.70	9.623E-01	----- Line Not Found		-----	Absent
	1238.11	5.94	9.086E-01	----- Line Not Found		-----	Absent
	1280.96	1.48	8.838E-01	----- Line Not Found		-----	Absent
	1377.65	4.11	8.339E-01	----- Line Not Found		-----	Absent
	1401.50	1.39	8.228E-01	----- Line Not Found		-----	Absent
	1408.01	2.49	8.198E-01	----- Line Not Found		-----	Absent
	1509.23	2.22	7.777E-01	----- Line Not Found		-----	Absent
	1661.32	1.15	7.263E-01	----- Line Not Found		-----	Absent
	1729.64	2.97	7.072E-01	----- Line Not Found		-----	Absent
	1764.54	15.84	6.982E-01	----- Line Not Found		-----	Absent
	1847.44	2.09	6.790E-01	----- Line Not Found		-----	Absent
	Final Mean for 2 Valid Peaks = 1.112E-07+/- 3.253E-08 (29.26%)						
PB-214	53.23	1.11	8.576E-01	----- Line Not Found		-----	Absent
	241.91	7.49	3.303E+00	2.482E-07	2.482E-07	45.06	OK
	295.17	19.25	2.885E+00	----- Line Not Found		-----	Absent
	351.90	37.21*	2.536E+00	8.755E-08	8.755E-08	40.65	OK
	785.91	1.10	1.333E+00	----- Line Not Found		-----	Absent
	Final Mean for 2 Valid Peaks = 1.023E-07+/- 3.391E-08 (33.14%)						
RA-226	185.99	3.28*	3.807E+00	7.329E-07	7.329E-07	37.15	OK

Final Mean for 1 Valid Peaks = 7.329E-07+/- 2.723E-07 (37.15%)

Nuclide Type: NATURAL

Nuclide	Energy	%Abn	%Eff	Uncorrected UCI/G	Decay Corr UCI/G	1-Sigma %Error	Status
AC-228	90.05	2.13	3.320E+00	----- Line Not Found		-----	Absent
	93.35	3.48	3.456E+00	----- Line Not Found		-----	Absent
	129.10	2.77	4.105E+00	----- Line Not Found		-----	Absent
	209.40	4.43	3.593E+00	----- Line Not Found		-----	Absent
	270.30	3.60	3.067E+00	----- Line Not Found		-----	Absent
	328.00	3.21	2.673E+00	----- Line Not Found		-----	Absent
	338.40	11.36	2.612E+00	----- Line Not Found		-----	Absent
	409.40	2.13	2.261E+00	----- Line Not Found		-----	Absent
	463.00	4.43	2.055E+00	7.876E-07	7.876E-07	20.65	OK
	478.20	0.23	2.002E+00	----- Line Not Found		-----	Absent
	755.20	1.05	1.378E+00	----- Line Not Found		-----	Absent
	772.10	1.55	1.353E+00	----- Line Not Found		-----	Absent
	794.80	4.63	1.320E+00	----- Line Not Found		-----	Absent
	835.60	1.75	1.265E+00	----- Line Not Found		-----	Absent
	911.07	27.70*	1.176E+00	2.983E-07	2.983E-07	18.55	OK
	964.60	5.21	1.120E+00	----- Line Not Found		-----	Absent
	968.90	16.62	1.116E+00	----- Line Not Found		-----	Absent
	1495.45	1.00	7.830E-01	----- Line Not Found		-----	Absent
	1587.90	3.55	7.495E-01	----- Line Not Found		-----	Absent
	1630.63	1.86	7.357E-01	----- Line Not Found		-----	Absent

Final Mean for 2 Valid Peaks = 3.491E-07+/- 5.239E-08 (15.01%)

Nuclide Type: ANNIH

Nuclide	Energy	%Abn	%Eff	Uncorrected UCI/G	Decay Corr UCI/G	1-Sigma %Error	Status
ANN-511	511.00	0.00*	1.900E+00	0.000E+00	0.000E+00	0.00	OK

Final Mean for 1 Valid Peaks = 0.000E+00+/- 0.000E+00 (0.00%)

Flag: "*" = Keyline

Flag: "*" = Keyline

Minimum Detectable Activity Report
Sample ID : 7102

Acquisition date : 11-JUN-2014 05:30:24

Nuclide	Bckgnd Sum	Energy (keV)	MDA (UCI/G)
CS-134*	16.	604.70	2.6173E-08
CS-137*	15.	661.66	3.1726E-08

Analyst: DC Date: 6/11/14

Reviewed by: PS Date: 6-11-14

CURRENT DATE: 3-JUN-2014 09:28:38.89
STATION NAME: DRESDEN

GENERAL LIQUID

WASTEWATER TREATMENT GRAB

CONFIGURATION FILE.....: SYS$SYSDEVICE:[CRU.SAMP]36P407_SAMP_6821.CNF;1
BKGND SUBTRACTION FILE.: CECO_BLANK:BKG_36P407_MRLIQ1600_6692.CNF
DATE-TIME SAMPLE OBTAINED....: 3-JUN-2014 08:55:00.00
DATE-TIME SAMPLE ANALYZED....: 3-JUN-2014 08:58:00.99
COUNT LIVE TIME.....: 0 00:30:00.00
COUNT REAL TIME.....: 0 00:30:00.31
SAMPLE QUANTITY.....: 1.61000E+03 G

COLLECTOR'S INITIALS...: DM ANALYST'S INITIALS.....: AA
DETECTOR SERIAL NUMBER..: 36P407 GEOMETRY TYPE.....: MRLIQ1600

DEADTIME.....: 0.0%
SAMPLE CODE.....: WWTFGRAB SAMPLE POINT.....:
NUCLIDE LIBRARY.....: ENV_LLD
CALIBRATION DATE.....: 18-APR-2014 10:54:00.00
DEPARTMENT.....: CHEMISTRY
LabWare ID...: 5467831
REMARK...: CONTAMINATION CHECK

ENERGY CALIB GAIN.....: 4.99816E-01 FWHM CALIB GAIN.....: 3.95339E-02
ENERGY CALIB OFFSET.....: 6.08794E-02 FWHM CALIB OFFSET.....: 5.57076E-01

Summary of Nuclide Activity

Total number of lines in spectrum	2	
Number of unidentified lines	0	
Number of lines tentatively identified by NID	2	100.00%

Nuclide Type : COSMIC INTERFER

Nuclide	Hlife	Decay	Wtd Mean Uncorrected UCI/G	Wtd Mean Decay Corr UCI/G	Decay Corr 1-Sigma Error	1-Sigma %Error	Flags
GE-75M	9999.00S	1.08	0.000E+00	0.000E+00	0.000E+00	0.00	
	Total Activity :		0.000E+00	0.000E+00			
Grand Total Activity :			0.000E+00	0.000E+00			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : 6821 Acquisition date : 3-JUN-2014 08:58:00

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides
0	67.10	29	38	3.20	134.13	129	11	44.9		GE-75M
0	198.72	24	24	1.35	397.47	394	7	39.8		GE-75M

Unidentified Energy Lines
Sample ID : 6821

Acquisition date : 3-JUN-2014 08:58:00

None

Flags: "T" = Tentatively associated

Nuclide Line Activity Report
Sample ID : 6821

Acquisition date : 3-JUN-2014 08:58:00

Nuclide Type: COSMIC INTERFER

Nuclide	Energy	%Abn	%Eff	Uncorrected UCI/G	Decay Corr UCI/G	1-Sigma %Error	Status
GE-75M	66.00	0.00	9.998E-01	0.000E+00	0.000E+00	0.00	OK
	139.70	0.00*	4.464E+00	----- Line Not Found		-----	Absent
	198.40	0.00	4.795E+00	0.000E+00	0.000E+00	0.00	OK
	596.00	0.00	3.078E+00	----- Line Not Found		-----	Absent

Final Mean for 2 Valid Peaks = 0.000E+00+/- 0.000E+00 (0.00%)

Flag: "*" = Keyline

Rejected Report
Sample ID : 6821

Acquisition date : 3-JUN-2014 08:58:00

Flag: "*" = Keyline

Minimum Detectable Activity Report
Sample ID : 6821

Acquisition date : 3-JUN-2014 08:58:00

Nuclide	Bckgnd Sum	Energy (keV)	MDA (UCI/G)
MN-54*	9.	834.84	5.0939E-09
CO-58*	12.	810.77	5.9857E-09
FE-59*	5.	1099.25	8.3817E-09
CO-60*	9.	1173.24	6.4594E-09
ZN-65*	9.	1115.55	1.2466E-08
NB-95*	11.	765.83	5.4285E-09
ZR-95*	12.	756.74	1.0299E-08
I-131*	18.	364.48	5.6515E-09
CS-134*	26.	604.70	7.4106E-09
CS-137*	6.	661.66	4.2296E-09
BA-140*	15.	537.32	2.0944E-08
LA-140*	2.	1596.18	3.9407E-09

Analyst: _____ Date: 6-3-14

Reviewed by: _____ Date: 6/4/2014

CURRENT DATE: 8-JUN-2014 01:24:26.60
STATION NAME: DRESDEN

STP SAND FILTER EFFLUENT

UNCONDITIONAL RELEASE 1600 ml

CONFIGURATION FILE.....: SYS$SYSDEVICE:[CRU.SAMP]36P407_SAMP_6988.CNF;1
BKGND SUBTRACTION FILE.: CECO_BLANK:BKG_36P407_MRLIQ1600_6914.CNF
DATE-TIME SAMPLE OBTAINED....: 8-JUN-2014 00:52:34.17
DATE-TIME SAMPLE ANALYZED....: 8-JUN-2014 00:53:56.99
COUNT LIVE TIME.....: 0 00:30:00.00
COUNT REAL TIME.....: 0 00:30:00.32
SAMPLE QUANTITY.....: 1.61020E+03 ML

COLLECTOR'S INITIALS...: JNB
DETECTOR SERIAL NUMBER..: 36P407
ANALYST'S INITIALS.....: EK
GEOMETRY TYPE.....: MRLIQ1600

DEADTIME.....: 0.0%
SAMPLE CODE.....: UNCONDTNLRELSSAMPLE POINT.....:
NUCLIDE LIBRARY.....: ENV_LLD
CALIBRATION DATE.....: 18-APR-2014 10:54:00.00
DEPARTMENT.....: CHEMISTRY
LabWare ID...:
REMARK...: SAMPLED 6/7/14 @2230

ENERGY CALIB GAIN.....: 4.99783E-01
ENERGY CALIB OFFSET.....: 6.76349E-02
FWHM CALIB GAIN.....: 4.05111E-02
FWHM CALIB OFFSET.....: 5.45299E-01

Summary of Nuclide Activity

Total number of lines in spectrum	3	
Number of unidentified lines	0	
Number of lines tentatively identified by NID	3	100.00%

Nuclide Type : COSMIC INTERFER

Nuclide	Hlife	Decay	Wtd Mean Uncorrected UCI/ML	Wtd Mean Decay Corr UCI/ML	Decay Corr 1-Sigma Error	1-Sigma %Error	Flags
GE-75M	9999.00S	1.07	0.000E+00	0.000E+00	0.000E+00	0.00	
	Total Activity :		0.000E+00	0.000E+00			

Nuclide Type : NATURAL

Nuclide	Hlife	Decay	Wtd Mean Uncorrected UCI/ML	Wtd Mean Decay Corr UCI/ML	Decay Corr 1-Sigma Error	1-Sigma %Error	Flags
BI-214	9999.00Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
PB-214	9999.00Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
	Total Activity :		0.000E+00	0.000E+00			

Grand Total Activity : 0.000E+00 0.000E+00

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Post-NID Peak Search Report
Sample ID : 6988

Acquisition date : 8-JUN-2014 00:53:56

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides
0	67.19	18	34	0.55	134.31	131	7	60.8		GE-75M
0	352.20	26	35	1.54	704.58	699	11	49.3		PB-214
0	609.43	34	7	1.23	1219.26	1214	10	23.0		BI-214

None

Flags: "T" = Tentatively associated

Nuclide Line Activity Report
Sample ID : 6988

Acquisition date : 8-JUN-2014 00:53:56

Nuclide Type: COSMIC INTERFER

Nuclide	Energy	%Abn	%Eff	Uncorrected UCI/ML	Decay Corr UCI/ML	1-Sigma %Error	Status
GE-75M	66.00	0.00	1.006E+00	0.000E+00	0.000E+00	0.00	OK
	139.70	0.00*	4.464E+00	-----	Line Not Found	-----	Absent
	198.40	0.00	4.795E+00	-----	Line Not Found	-----	Absent
	596.00	0.00	3.078E+00	-----	Line Not Found	-----	Absent

Final Mean for 1 Valid Peaks = 0.000E+00+/- 0.000E+00 (0.00%)

Nuclide Type: NATURAL

Nuclide	Energy	%Abn	%Eff	Uncorrected UCI/ML	Decay Corr UCI/ML	1-Sigma %Error	Status
BI-214	609.32	0.00*	3.037E+00	0.000E+00	0.000E+00	0.00	OK
	665.45	0.00	2.878E+00	-----	Line Not Found	-----	Absent
	768.37	0.00	2.624E+00	-----	Line Not Found	-----	Absent
	806.19	0.00	2.542E+00	-----	Line Not Found	-----	Absent
	934.05	0.00	2.300E+00	-----	Line Not Found	-----	Absent
	1120.28	0.00	2.029E+00	-----	Line Not Found	-----	Absent
	1155.19	0.00	1.987E+00	-----	Line Not Found	-----	Absent
	1238.11	0.00	1.897E+00	-----	Line Not Found	-----	Absent
	1280.96	0.00	1.855E+00	-----	Line Not Found	-----	Absent
	1377.65	0.00	1.772E+00	-----	Line Not Found	-----	Absent
	1401.50	0.00	1.754E+00	-----	Line Not Found	-----	Absent
	1408.01	0.00	1.749E+00	-----	Line Not Found	-----	Absent
	1509.23	0.00	1.681E+00	-----	Line Not Found	-----	Absent
	1661.32	0.00	1.602E+00	-----	Line Not Found	-----	Absent
	1729.65	0.00	1.575E+00	-----	Line Not Found	-----	Absent
	1764.54	0.00	1.563E+00	-----	Line Not Found	-----	Absent
	1847.44	0.00	1.539E+00	-----	Line Not Found	-----	Absent

Final Mean for 1 Valid Peaks = 0.000E+00+/- 0.000E+00 (0.00%)

PB-214	53.23	0.00	2.899E-01	-----	Line Not Found	-----	Absent
	241.91	0.00	4.639E+00	-----	Line Not Found	-----	Absent
	295.17	0.00	4.355E+00	-----	Line Not Found	-----	Absent
	351.90	0.00*	4.052E+00	0.000E+00	0.000E+00	0.00	OK
	785.91	0.00	2.585E+00	-----	Line Not Found	-----	Absent

Final Mean for 1 Valid Peaks = 0.000E+00+/- 0.000E+00 (0.00%)

Flag: "*" = Keyline

Minimum Detectable Activity Report
Sample ID : 6988

Acquisition date : 8-JUN-2014 00:53:56

Nuclide	Bckgnd Sum	Energy (keV)	MDA (UCI/ML)
MN-54*	6.	834.84	5.1676E-09
CO-58*	12.	810.77	6.9356E-09
FE-59*	8.	1099.25	1.3071E-08
CO-60*	5.	1173.24	6.0532E-09
ZN-65*	6.	1115.55	1.2739E-08
NB-95*	6.	765.83	4.9112E-09
ZR-95*	11.	756.74	1.1438E-08
I-131*	24.	364.48	7.2744E-09
CS-134*	14.	604.70	6.3479E-09
CS-137*	13.	661.66	7.3510E-09
BA-140*	15.	537.32	2.4172E-08
LA-140*	2.	1596.18	5.8435E-09

Analyst: _____ Date: 6-8-14

Reviewed by: _____ Date: 6/8/14

CURRENT DATE: 8-JUN-2014 00:52:33.68
STATION NAME: DRESDEN

MD-11

UNCONDITIONAL RELEASE 1600 ml

CONFIGURATION FILE.....: SYS$SYSDEVICE:[CRU.SAMP]36P407_SAMP_6987.CNF;2
BKGND SUBTRACTION FILE.: CECO_BLANK:BKG_36P407_MRLIQ1600_6914.CNF
DATE-TIME SAMPLE OBTAINED....: 8-JUN-2014 00:21:10.60
DATE-TIME SAMPLE ANALYZED....: 8-JUN-2014 00:22:03.62
COUNT LIVE TIME.....: 0 00:30:00.00
COUNT REAL TIME.....: 0 00:30:00.31
SAMPLE QUANTITY.....: 1.61340E+03 ML

COLLECTOR'S INITIALS...: JNB
DETECTOR SERIAL NUMBER..: 36P407
ANALYST'S INITIALS.....: JNB
GEOMETRY TYPE.....: MRLIQ1600

DEADTIME.....: 0.0%
SAMPLE CODE.....: UNCONDTNLRELSSAMPLE POINT.....:
NUCLIDE LIBRARY.....: ENV_LLD
CALIBRATION DATE.....: 18-APR-2014 10:54:00.00
DEPARTMENT.....: CHEMISTRY
LabWare ID...:
REMARK...: 6/7/14@2155

ENERGY CALIB GAIN.....: 4.99783E-01
ENERGY CALIB OFFSET.....: 6.76349E-02
FWHM CALIB GAIN.....: 4.05111E-02
FWHM CALIB OFFSET.....: 5.45299E-01

Summary of Nuclide Activity

Total number of lines in spectrum	3	
Number of unidentified lines	0	
Number of lines tentatively identified by NID	3	100.00%

Nuclide Type : NATURAL

Nuclide	Hlife	Decay	Wtd Mean Uncorrected UCI/ML	Wtd Mean Decay Corr UCI/ML	Decay Corr 1-Sigma Error	1-Sigma %Error	Flags
BI-214	9999.00Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
PB-214	9999.00Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
	Total Activity :		0.000E+00	0.000E+00			

Grand Total Activity : 0.000E+00 0.000E+00

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Post-NID Peak Search Report
Sample ID : 6987

Acquisition date : 8-JUN-2014 00:22:03

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides
0	295.05	27	21	0.98	590.23	588	6	32.3		PB-214
0	352.73	27	42	1.23	705.64	701	10	48.9		PB-214
0	609.11	58	10	1.64	1218.62	1214	10	16.6		BI-214

Unidentified Energy Lines
Sample ID : 6987

Acquisition date : 8-JUN-2014 00:22:03

None

Flags: "T" = Tentatively associated

Nuclide Line Activity Report
Sample ID : 6987

Acquisition date : 8-JUN-2014 00:22:03

Nuclide Type: NATURAL

Nuclide	Energy	%Abn	%Eff	Uncorrected UCI/ML	Decay Corr UCI/ML	1-Sigma %Error	Status
BI-214	609.32	0.00*	3.038E+00	0.000E+00	0.000E+00	0.00	OK
	665.45	0.00	2.878E+00	----- Line Not Found		-----	Absent
	768.37	0.00	2.624E+00	----- Line Not Found		-----	Absent
	806.19	0.00	2.542E+00	----- Line Not Found		-----	Absent
	934.05	0.00	2.300E+00	----- Line Not Found		-----	Absent
	1120.28	0.00	2.029E+00	----- Line Not Found		-----	Absent
	1155.19	0.00	1.987E+00	----- Line Not Found		-----	Absent
	1238.11	0.00	1.897E+00	----- Line Not Found		-----	Absent
	1280.96	0.00	1.855E+00	----- Line Not Found		-----	Absent
	1377.65	0.00	1.772E+00	----- Line Not Found		-----	Absent
	1401.50	0.00	1.754E+00	----- Line Not Found		-----	Absent
	1408.01	0.00	1.749E+00	----- Line Not Found		-----	Absent
	1509.23	0.00	1.681E+00	----- Line Not Found		-----	Absent
	1661.32	0.00	1.602E+00	----- Line Not Found		-----	Absent
	1729.65	0.00	1.575E+00	----- Line Not Found		-----	Absent
	1764.54	0.00	1.563E+00	----- Line Not Found		-----	Absent
	1847.44	0.00	1.539E+00	----- Line Not Found		-----	Absent
Final Mean for 1 Valid Peaks = 0.000E+00+/- 0.000E+00 (0.00%)							
PB-214	53.23	0.00	2.899E-01	----- Line Not Found		-----	Absent
	241.91	0.00	4.639E+00	----- Line Not Found		-----	Absent
	295.17	0.00	4.356E+00	0.000E+00	0.000E+00	0.00	OK
	351.90	0.00*	4.049E+00	0.000E+00	0.000E+00	0.00	OK
	785.91	0.00	2.585E+00	----- Line Not Found		-----	Absent
Final Mean for 2 Valid Peaks = 0.000E+00+/- 0.000E+00 (0.00%)							

Flag: "*" = Keyline

Minimum Detectable Activity Report
Sample ID : 6987

Acquisition date : 8-JUN-2014 00:22:03

Nuclide	Bckgnd Sum	Energy (keV)	MDA (UCI/ML)
MN-54*	9.	834.84	6.2727E-09
CO-58*	7.	810.77	5.6643E-09
FE-59*	6.	1099.25	1.1336E-08
CO-60*	7.	1173.24	6.9803E-09
ZN-65*	14.	1115.55	1.8327E-08
NB-95*	16.	765.83	7.6355E-09
ZR-95*	7.	756.74	9.5813E-09
I-131*	17.	364.48	6.3211E-09
CS-134*	16.	604.70	6.6040E-09
CS-137*	8.	661.66	5.9769E-09
BA-140*	11.	537.32	2.1363E-08
LA-140*	4.	1596.18	7.3809E-09

Analyst: EK Date: 6-8-14

Reviewed by: [signature] Date: 6/8/14

CURRENT DATE: 8-JUN-2014 00:06:38.29
STATION NAME: DRESDEN

DOMESTIC WATER (MUDS)

UNCONDITIONAL RELEASE 1600 ml

CONFIGURATION FILE.....: SYS$SYSDEVICE:[CRU.SAMP]36P407_SAMP_6983.CNF;1
BKGND SUBTRACTION FILE.: CECO_BLANK:BKG_36P407_MRLIQ1600_6914.CNF
DATE-TIME SAMPLE OBTAINED....: 7-JUN-2014 23:34:10.04
DATE-TIME SAMPLE ANALYZED....: 7-JUN-2014 23:36:02.97
COUNT LIVE TIME.....: 0 00:30:00.00
COUNT REAL TIME.....: 0 00:30:00.44
SAMPLE QUANTITY.....: 1.60600E+03 ML

COLLECTOR'S INITIALS...: RT
ANALYST'S INITIALS.....: EK
DETECTOR SERIAL NUMBER..: 36P407
GEOMETRY TYPE.....: MRLIQ1600

DEADTIME.....: 0.0%
SAMPLE CODE.....: UNCONDTNLRELSSAMPLE POINT.....:
NUCLIDE LIBRARY.....: ENV_LLD
CALIBRATION DATE.....: 18-APR-2014 10:54:00.00
DEPARTMENT.....: CHEMISTRY
LabWare ID...:
REMARK...: SAMPLED 6/7/14 @2205

ENERGY CALIB GAIN.....: 4.99783E-01
FWHM CALIB GAIN.....: 4.05111E-02
ENERGY CALIB OFFSET.....: 6.76349E-02
FWHM CALIB OFFSET.....: 5.45299E-01

Summary of Nuclide Activity

Total number of lines in spectrum	11	
Number of unidentified lines	1	
Number of lines tentatively identified by NID	10	90.91%

Nuclide Type : NATURAL

Nuclide	Hlife	Decay	Wtd Mean Uncorrected UCI/ML	Wtd Mean Decay Corr UCI/ML	Decay Corr 1-Sigma Error	1-Sigma %Error	Flags
BI-214	9999.00Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
PB-214	9999.00Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
	Total Activity :		0.000E+00	0.000E+00			
	Grand Total Activity :		0.000E+00	0.000E+00			

Flags: "K" = Keyline not found
"M" = Manually accepted
"E" = Manually edited
"A" = Nuclide specific abn. limit

Post-NID Peak Search Report
Sample ID : 6983

Acquisition date : 7-JUN-2014 23:36:02

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides
										X-RAY GK 6-8-14
0	77.20	38	86	1.73	154.33	152	8	45.8		
0	241.95	82	68	0.85	483.97	480	8	20.6		PB-214
0	295.37	200	61	1.20	590.86	584	12	10.5		PB-214
0	351.90	355	47	1.20	703.98	698	12	6.6		PB-214
0	609.23	327	44	1.43	1218.86	1213	14	7.0		BI-214
0	768.43	43	21	1.20	1537.40	1530	14	27.0		BI-214
0	933.90	30	3	2.14	1868.47	1863	11	21.1		BI-214
0	1120.63	54	28	1.38	2242.10	2234	14	24.8		BI-214
0	1238.31	38	3	1.69	2477.57	2471	11	18.4		BI-214
0	1377.28	48	0	2.38	2755.63	2747	15	14.4		BI-214
0	1764.69	81	0	2.12	3530.77	3523	14	11.1		BI-214

Unidentified Energy Lines
Sample ID : 6983

Acquisition date : 7-JUN-2014 23:36:02

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	77.20	38	86	1.73	154.33	152	8	2.09E-02	45.8	1.68E+00	

Flags: "T" = Tentatively associated

Nuclide Type: NATURAL

Nuclide	Energy	%Abn	%Eff	Uncorrected UCI/ML	Decay Corr UCI/ML	1-Sigma %Error	Status
BI-214	609.32	0.00*	3.038E+00	0.000E+00	0.000E+00	0.00	OK
	665.45	0.00	2.878E+00	----- Line Not Found		-----	Absent
	768.37	0.00	2.624E+00	0.000E+00	0.000E+00	0.00	OK
	806.19	0.00	2.542E+00	----- Line Not Found		-----	Absent
	934.05	0.00	2.300E+00	0.000E+00	0.000E+00	0.00	OK
	1120.28	0.00	2.028E+00	0.000E+00	0.000E+00	0.00	OK
	1155.19	0.00	1.987E+00	----- Line Not Found		-----	Absent
	1238.11	0.00	1.897E+00	0.000E+00	0.000E+00	0.00	OK
	1280.96	0.00	1.855E+00	----- Line Not Found		-----	Absent
	1377.65	0.00	1.772E+00	0.000E+00	0.000E+00	0.00	OK
	1401.50	0.00	1.754E+00	----- Line Not Found		-----	Absent
	1408.01	0.00	1.749E+00	----- Line Not Found		-----	Absent
	1509.23	0.00	1.681E+00	----- Line Not Found		-----	Absent
	1661.32	0.00	1.602E+00	----- Line Not Found		-----	Absent
	1729.65	0.00	1.575E+00	----- Line Not Found		-----	Absent
	1764.54	0.00	1.563E+00	0.000E+00	0.000E+00	0.00	OK
	1847.44	0.00	1.539E+00	----- Line Not Found		-----	Absent
Final Mean for 7 Valid Peaks = 0.000E+00+/- 0.000E+00 (0.00%)							
PB-214	53.23	0.00	2.899E-01	----- Line Not Found		-----	Absent
	241.91	0.00	4.639E+00	0.000E+00	0.000E+00	0.00	OK
	295.17	0.00	4.354E+00	0.000E+00	0.000E+00	0.00	OK
	351.90	0.00*	4.053E+00	0.000E+00	0.000E+00	0.00	OK
	785.91	0.00	2.585E+00	----- Line Not Found		-----	Absent
Final Mean for 3 Valid Peaks = 0.000E+00+/- 0.000E+00 (0.00%)							

Flag: "*" = Keyline

Minimum Detectable Activity Report
Sample ID : 6983

Acquisition date : 7-JUN-2014 23:36:02

Nuclide	Bckgnd Sum	Energy (keV)	MDA (UCI/ML)
MN-54*	23.	834.84	9.4604E-09
CO-58*	16.	810.77	7.8540E-09
FE-59*	13.	1099.25	1.5682E-08
CO-60*	12.	1173.24	8.9386E-09
ZN-65*	16.	1115.55	1.9128E-08
NB-95*	26.	765.83	9.4580E-09
ZR-95*	14.	756.74	1.2996E-08
I-131*	27.	364.48	7.8104E-09
CS-134*	23.	604.70	7.8479E-09
CS-137*	22.	661.66	9.3025E-09
BA-140*	19.	537.32	2.7008E-08
LA-140*	9.	1596.18	1.0004E-08

Analyst: EK Date: 6-8-14

Reviewed by: [signature] Date: 6/8/14

CURRENT DATE: 7-JUN-2014 22:00:22.24
STATION NAME: DRESDEN

SEWAGE EJ PIT AKA RAW SEWAGE

UNCONDITIONAL RELEASE 1600 ml

CONFIGURATION FILE.....: SYS$SYSDEVICE:[CRU.SAMP]36P407_SAMP_6974.CNF;1
BKGND SUBTRACTION FILE.: CECO_BLANK:BKG_36P407_MRLIQ1600_6914.CNF
DATE-TIME SAMPLE OBTAINED....: 7-JUN-2014 21:00:00.00
DATE-TIME SAMPLE ANALYZED....: 7-JUN-2014 21:29:52.70
COUNT LIVE TIME.....: 0 00:30:00.00
COUNT REAL TIME.....: 0 00:30:00.40
SAMPLE QUANTITY.....: 1.60000E+03 ML

COLLECTOR'S INITIALS...:
ANALYST'S INITIALS.....: JG
DETECTOR SERIAL NUMBER..: 36P407
GEOMETRY TYPE.....: MRLIQ1600

DEADTIME.....: 0.0%
SAMPLE CODE.....: UNCONDTNLRELSSAMPLE POINT.....:
NUCLIDE LIBRARY.....: ENV_LLD
CALIBRATION DATE.....: 18-APR-2014 10:54:00.00
DEPARTMENT.....: CHEMISTRY
LabWare ID...:
REMARK...: OIL LOG# AND/OR REAL SAMPLE TIME

ENERGY CALIB GAIN.....: 4.99740E-01 FWHM CALIB GAIN.....: 3.99021E-02
ENERGY CALIB OFFSET.....: 7.00696E-02 FWHM CALIB OFFSET.....: 5.55232E-01

Summary of Nuclide Activity

Total number of lines in spectrum	13	
Number of unidentified lines	2	
Number of lines tentatively identified by NID	11	84.62%

Nuclide Type : NATURAL

Nuclide	Hlife	Decay	Wtd Mean Uncorrected UCI/ML	Wtd Mean Decay Corr UCI/ML	Decay Corr 1-Sigma Error	1-Sigma %Error	Flags
BI-214	9999.00Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
PB-214	9999.00Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
	Total Activity :		0.000E+00	0.000E+00			
	Grand Total Activity :		0.000E+00	0.000E+00			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Post-NID Peak Search Report
Sample ID : 6974

Acquisition date : 7-JUN-2014 21:29:52

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides
0	242.56	62	92	1.48	485.24	479	11	32.9		PB-214
0	295.23	138	31	1.21	590.63	587	8	11.0		PB-214
0	351.85	253	48	0.94	703.93	699	11	8.2		PB-214
0	474.95	21	13	0.82	950.25	946	8	38.3		Bi-214 EK 6-8-14
3	609.19	216	21	1.42	1218.88	1214	16	7.9	1.59E+00	BI-214
~~3~~	~~612.24~~	~~23~~	~~3~~	~~2.05~~	~~1224.98~~	~~1214~~	~~16~~	55.5		no peak EK 6-8-14
0	768.40	24	21	1.54	1537.45	1530	12	43.2		BI-214
0	934.33	14	14	1.60	1869.50	1864	14	62.7		BI-214
0	1120.12	59	9	2.18	2241.26	2235	12	16.5		BI-214
0	1238.21	37	0	1.48	2477.57	2471	13	16.4		BI-214
0	1377.48	20	7	0.74	2756.25	2749	15	38.0		BI-214
0	1729.88	17	0	1.46	3461.41	3456	10	24.3		BI-214
0	1764.58	50	0	1.66	3530.86	3524	13	14.1		BI-214

Unidentified Energy Lines
Sample ID : 6974

Acquisition date : 7-JUN-2014 21:29:52

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	474.95	21	13	0.82	950.25	946	8	1.14E-02	38.3	3.50E+00	
3	612.24	23	3	2.05	1224.98	1214	16	1.27E-02	55.5	3.03E+00	

Flags: "T" = Tentatively associated

Nuclide Line Activity Report
Sample ID : 6974

Acquisition date : 7-JUN-2014 21:29:52

Nuclide Type: NATURAL

Nuclide	Energy	%Abn	%Eff	Uncorrected UCI/ML	Decay Corr UCI/ML	1-Sigma %Error	Status
BI-214	609.32	0.00*	3.038E+00	0.000E+00	0.000E+00	0.00	OK
	665.45	0.00	2.878E+00	----- Line Not Found		-----	Absent
	768.37	0.00	2.624E+00	0.000E+00	0.000E+00	0.00	OK
	806.19	0.00	2.542E+00	----- Line Not Found		-----	Absent
	934.05	0.00	2.299E+00	0.000E+00	0.000E+00	0.00	OK
	1120.28	0.00	2.029E+00	0.000E+00	0.000E+00	0.00	OK
	1155.19	0.00	1.987E+00	----- Line Not Found		-----	Absent
	1238.11	0.00	1.897E+00	0.000E+00	0.000E+00	0.00	OK
	1280.96	0.00	1.855E+00	----- Line Not Found		-----	Absent
	1377.65	0.00	1.772E+00	0.000E+00	0.000E+00	0.00	OK
	1401.50	0.00	1.754E+00	----- Line Not Found		-----	Absent
	1408.01	0.00	1.749E+00	----- Line Not Found		-----	Absent
	1509.23	0.00	1.681E+00	----- Line Not Found		-----	Absent
	1661.32	0.00	1.602E+00	----- Line Not Found		-----	Absent
	1729.65	0.00	1.575E+00	0.000E+00	0.000E+00	0.00	OK
	1764.54	0.00	1.563E+00	0.000E+00	0.000E+00	0.00	OK
	1847.44	0.00	1.539E+00	----- Line Not Found		-----	Absent
	Final Mean for 8 Valid Peaks = 0.000E+00+/- 0.000E+00 (0.00%)						
PB-214	53.23	0.00	2.899E-01	----- Line Not Found		-----	Absent
	241.91	0.00	4.636E+00	0.000E+00	0.000E+00	0.00	OK
	295.17	0.00	4.355E+00	0.000E+00	0.000E+00	0.00	OK
	351.90	0.00*	4.053E+00	0.000E+00	0.000E+00	0.00	OK
	785.91	0.00	2.585E+00	----- Line Not Found		-----	Absent
	Final Mean for 3 Valid Peaks = 0.000E+00+/- 0.000E+00 (0.00%)						

Flag: "*" = Keyline

Minimum Detectable Activity Report
Sample ID : 6974

Acquisition date : 7-JUN-2014 21:29:52

Nuclide	Bckgnd Sum	Energy (keV)	MDA (UCI/ML)
MN-54*	15.	834.84	7.8519E-09
CO-58*	12.	810.77	7.1306E-09
FE-59*	8.	1099.25	1.3132E-08
CO-60*	8.	1173.24	7.5214E-09
ZN-65*	8.	1115.55	1.4087E-08
NB-95*	24.	765.83	9.0806E-09
ZR-95*	13.	756.74	1.2550E-08
I-131*	32.	364.48	8.4418E-09
CS-134*	25.	604.70	8.2323E-09
CS-137*	11.	661.66	6.8021E-09
BA-140*	11.	537.32	2.0968E-08
LA-140*	9.	1596.18	9.9351E-09

Analyst: EK Date: 6-8-14

Reviewed by: [signature] Date: 6/8/14

CURRENT DATE: 4-JUN-2014 11:55:17.24
STATION NAME: DRESDEN

GENERAL LIQUID

SEWAGE TREATMENT PLANT EFFLUENT

CONFIGURATION FILE.....: SYS$SYSDEVICE:[CRU.SAMP]36P407_SAMP_6872.CNF;1
BKGND SUBTRACTION FILE.: CECO_BLANK:BKG_36P407_MRLIQ1600_6692.CNF
DATE-TIME SAMPLE OBTAINED....: 4-JUN-2014 11:21:01.17
DATE-TIME SAMPLE ANALYZED....: 4-JUN-2014 11:24:48.06
COUNT LIVE TIME.....: 0 00:30:00.00
COUNT REAL TIME.....: 0 00:30:00.31
SAMPLE QUANTITY.....: 1.61480E+03 G

COLLECTOR'S INITIALS...: DM
DETECTOR SERIAL NUMBER..: 36P407
ANALYST'S INITIALS.....: AA
GEOMETRY TYPE.....: MRLIQ1600

DEADTIME.....: 0.0%
SAMPLE CODE.....: STPEFF
SAMPLE POINT.....:
NUCLIDE LIBRARY.....: ENV_LLD
CALIBRATION DATE.....: 18-APR-2014 10:54:00.00
DEPARTMENT.....: CHEMISTRY
LabWare ID...: 5469240
REMARK...: CONTAMINATION CHECK

ENERGY CALIB GAIN.....: 4.99800E-01
ENERGY CALIB OFFSET.....: 7.71762E-02
FWHM CALIB GAIN.....: 3.89050E-02
FWHM CALIB OFFSET.....: 5.72995E-01

Summary of Nuclide Activity

Total number of lines in spectrum	3	
Number of unidentified lines	0	
Number of lines tentatively identified by NID	3	100.00%

Nuclide Type : NATURAL

Nuclide	Hlife	Decay	Uncorrected UCI/G	Decay Corr UCI/G	Decay Corr 1-Sigma Error	1-Sigma %Error	Flags
BI-214	9999.00Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
PB-214	9999.00Y	1.00	0.000E+00	0.000E+00	0.000E+00	0.00	
	Total Activity :		0.000E+00	0.000E+00			
	Grand Total Activity :		0.000E+00	0.000E+00			

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Post-NID Peak Search Report
Sample ID : 6872

Acquisition date : 4-JUN-2014 11:24:48

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides
0	352.28	32	68	3.31	704.69	696	17	61.6		PB-214
0	609.38	46	17	1.08	1219.10	1214	11	22.8		BI-214
0	1119.97	19	0	1.75	2240.68	2236	9	22.9		BI-214

Unidentified Energy Lines
Sample ID : 6872

Acquisition date : 4-JUN-2014 11:24:48

None

Flags: "T" = Tentatively associated

Nuclide Line Activity Report
Sample ID : 6872

Acquisition date : 4-JUN-2014 11:24:48

Nuclide Type: NATURAL

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected UCI/G	Decay Corr UCI/G	1-Sigma %Error
BI-214	609.32	46	0.00*	3.037E+00	0.000E+00	0.000E+00	0.00
	665.45	------	0.00	2.878E+00	------	Line Not Found	------
	768.37	------	0.00	2.624E+00	------	Line Not Found	------
	806.19	------	0.00	2.542E+00	------	Line Not Found	------
	934.05	------	0.00	2.300E+00	------	Line Not Found	------
	1120.28	19	0.00	2.029E+00	0.000E+00	0.000E+00	0.00
	1155.19	------	0.00	1.987E+00	------	Line Not Found	------
	1238.11	------	0.00	1.897E+00	------	Line Not Found	------
	1280.96	------	0.00	1.855E+00	------	Line Not Found	------
	1377.65	------	0.00	1.772E+00	------	Line Not Found	------
	1401.50	------	0.00	1.754E+00	------	Line Not Found	------
	1408.01	------	0.00	1.749E+00	------	Line Not Found	------
	1509.23	------	0.00	1.681E+00	------	Line Not Found	------
	1661.32	------	0.00	1.602E+00	------	Line Not Found	------
	1729.65	------	0.00	1.575E+00	------	Line Not Found	------
	1764.54	------	0.00	1.563E+00	------	Line Not Found	------
	1847.44	------	0.00	1.539E+00	------	Line Not Found	------
PB-214	53.23	------	0.00	2.899E-01	------	Line Not Found	------
	241.91	------	0.00	4.639E+00	------	Line Not Found	------
	295.17	------	0.00	4.355E+00	------	Line Not Found	------
	351.90	32	0.00*	4.051E+00	0.000E+00	0.000E+00	0.00
	785.91	------	0.00	2.585E+00	------	Line Not Found	------

Flag: "*" = Keyline

Rejected Report
Sample ID : 6872

Acquisition date : 4-JUN-2014 11:24:48

Flag: "*" = Keyline

Minimum Detectable Activity Report
Sample ID : 6872

Acquisition date : 4-JUN-2014 11:24:48

Nuclide	Bckgnd Sum	Energy (keV)	MDA (UCI/G)
MN-54*	8.	834.84	6.0880E-09
CO-58*	17.	810.77	8.1067E-09
FE-59*	7.	1099.25	1.1849E-08
CO-60*	9.	1173.24	7.8856E-09
ZN-65*	7.	1115.55	1.3536E-08
NB-95*	9.	765.83	5.9710E-09
ZR-95*	8.	756.74	1.0230E-08
I-131*	26.	364.48	7.6280E-09
CS-134*	22.	604.70	7.7002E-09
CS-137*	11.	661.66	6.7890E-09
BA-140*	15.	537.32	2.4432E-08
LA-140*	4.	1596.18	7.1715E-09

Analyst: ND Date: 6-4-14

Reviewed by: [signature] Date: 6/5/2014

DATA SHEET 2

TRITIUM SAMPLING AND CALCULATIONS FOR WATER SAMPLES

1. Sample Information:
   Sample Point: STP
   Collection Date/Time: 6-4-14 0930
   Sample by: DM

2. Analysis Data: 6 EK 6-7-14
   Sample Analysis Date: 6-4-14
   Days of Sample Decay: 0
   Circle Instrument Used (2550TR #1) 2900TR #2
   Protocol Used: 3 LLD: 1825 pCi/L

3. Count Data:
   Sample #1 cpm 132 dpm: 508 µCi/g: $5.72E^{-5}$
   Sample #2 cpm 137 dpm: 528 µCi/g: $5.95E^{-5}$
   Sample #3 cpm 128 dpm: 496 µCi/g: $5.58E^{-5}$

4. Sample Activity:

NOTE:	$\frac{1\mu Ci}{g}$	=	$\frac{10^9\ pCi}{L}$

4.1 Average Sample Activity (uncorrected), µCi/g: $5.75E^{-5}$ x 1.0E9= 57,500 pCi/L ✓

4.2 **If** sample is not analyzed within 7 days of collection, **then DECAY** correct activity as follows:

Uncorrected Average Sample Activity * $e^{(\ln 2/12.35)*(\text{days since sampling}/365.25)}$

4.3 Decay corrected ^3H activity = N/A µCi/g x 1.0E9= N/A pCi/L
(**If** samples are analyzed within 7 days of collection, **then ENTER** N/A.)

Performed by: EK Date: 6-7-14

Data Entry (µCi/g)by: EK Date: 6-7-14

Reviewed by: [signature] 6/8/14
SRRS# 2K.100

DATA SHEET 2

TRITIUM SAMPLING AND CALCULATIONS FOR WATER SAMPLES

1. Sample Information:

   Sample Point: R+R Septic

   Collection Date/Time: 6-9-14 / 1720

   Sample by: FH

2. Analysis Data:

   Sample Analysis Date: 6-10-14

   Days of Sample Decay: 1

   Circle Instrument Used 2550TR #1 (2900TR #2)

   Protocol Used: 3 LLD: 1965 pCi/L

3. Count Data:

   Sample #1 cpm 153.18 dpm: N/A µCi/g: 8.135E-5

   Sample #2 cpm 157.51 dpm: / µCi/g: 8.481E-5

   Sample #3 cpm 148.53 dpm: / µCi/g: 7.999E-5

4. Sample Activity:

NOTE:	$\frac{1\mu Ci}{g}$	=	$\frac{10^9\ pCi}{L}$

4.1 Average Sample Activity (uncorrected), µCi/g: 8.205E-5 x 1.0E9= 82050 pCi/L

4.2 **If** sample is not analyzed within 7 days of collection, **then DECAY** correct activity as follows:

Uncorrected Average Sample Activity * $e^{(\ln 2/12.35)*(\text{days since sampling}/365.25)}$

4.3 Decay corrected ^3H activity = N/A µCi/g x 1.0E9= N/A pCi/L
(**If** samples are analyzed within 7 days of collection, **then ENTER** N/A.)

Performed by: FH Date: 6-10-14

Data Entry (µCi/g)by: NA Date: NA

Reviewed by: [signature] 6/10/14

SRRS# 2K.100

DATA SHEET 2

TRITIUM SAMPLING AND CALCULATIONS FOR WATER SAMPLES

1. Sample Information:

   Sample Point: R&R Septic Truck Rinse

   Collection Date/Time: 6-10-14 / 1130

   Sample by: FH

2. Analysis Data:

   Sample Analysis Date: 6-10-14

   Days of Sample Decay: <1

   Circle Instrument Used 2550TR #1 (2900TR #2)

   Protocol Used: 3 LLD: 1965 pCi/L

3. Count Data:

   Sample #1 cpm 148.73 dpm: N/A µCi/g: 1.032E-4

   Sample #2 cpm 146.04 dpm: N/A µCi/g: 1.019E-4

   Sample #3 cpm 146.84 dpm: N/A µCi/g: 1.036E-4

4. Sample Activity:

NOTE:	$\frac{1\mu Ci}{g}$	=	$\frac{10^9\ pCi}{L}$

4.1 Average Sample Activity (uncorrected), µCi/g: 1.029E-4 x 1.0E9= 102915 pCi/L

4.2 **If** sample is not analyzed within 7 days of collection, **then DECAY** correct activity as follows:

Uncorrected Average Sample Activity * $e^{(\ln 2/12.35)*(\text{days since sampling}/365.25)}$

4.3 Decay corrected ^3H activity = N/A µCi/g x 1.0E9= N/A pCi/L
(**If** samples are analyzed within 7 days of collection, **then ENTER** N/A.)

Performed by: FH Date: 6-10-14

Data Entry (µCi/g)by: NA Date: NA

Reviewed by: [signature] 6/10/14

SRRS# 2K.100

DATA SHEET 2

TRITIUM SAMPLING AND CALCULATIONS FOR WATER SAMPLES

1. Sample Information:

   Sample Point: R+R Septic Truck Rinse (Filtered)

   Collection Date/Time: 6-10-14 / 1130

   Sample by: FH

2. Analysis Data:

   Sample Analysis Date: 6-10-14

   Days of Sample Decay: 21

   Circle Instrument Used 2550TR #1 (2900TR #2)

   Protocol Used: 3 LLD: 1965 pCi/L

3. Count Data:

   Sample #1 cpm 132.09 dpm: N/A µCi/g: 5.4145-5

   Sample #2 cpm 129.01 dpm: N/A µCi/g: 5.3455-5

   Sample #3 cpm 125.8 dpm: N/A µCi/g: 5.2185-5

4. Sample Activity:

NOTE:	$\frac{1\mu Ci}{g}$	=	$\frac{10^9\ pCi}{L}$

4.1 Average Sample Activity (uncorrected), µCi/g: 5.3255-5 x 1.0E9= 53253 pCi/L

4.2 **If** sample is not analyzed within 7 days of collection, **then DECAY** correct activity as follows:

Uncorrected Average Sample Activity * $e^{(\ln 2/12.35)*(\text{days since sampling}/365.25)}$

4.3 Decay corrected ^3H activity = N/A µCi/g x 1.0E9= N/A pCi/L
(**If** samples are analyzed within 7 days of collection, **then ENTER** N/A.)

Performed by: FH Date: 6-10-14

Data Entry (µCi/g)by: N/A Date: 6/10/14 N/A

Reviewed by: 6/10/14

SRRS# 2K.100

DATA SHEET 2

TRITIUM SAMPLING AND CALCULATIONS FOR WATER SAMPLES

1. Sample Information:
   Sample Point: WWTF
   Collection Date/Time: 6-3-14 0810
   Sample by: DM

2. Analysis Data:
   Sample Analysis Date: 6-6-14
   Days of Sample Decay: 3
   Circle Instrument Used (2550TR #1) 2900TR #2
   Protocol Used: 3 LLD: 1825 pCi/L

3. Count Data:
   Sample #1 cpm 3 dpm: 11 µCi/g: $1.2E^{-6}$
   Sample #2 cpm 3 dpm: 12 µCi/g: $1.3E^{-6}$
   Sample #3 cpm 1 dpm: 6 µCi/g: $6.0E^{-7}$

4. Sample Activity:

NOTE:	$\frac{1\mu Ci}{g}$	=	$\frac{10^9\ pCi}{L}$

4.1 Average Sample Activity (uncorrected), µCi/g: $1.1E^{-6}$ x 1.0E9= 1100 pCi/L

4.2 **If** sample is not analyzed within 7 days of collection, **then DECAY** correct activity as follows:

Uncorrected Average Sample Activity * $e^{(\ln 2/12.35)*(\text{days since sampling}/365.25)}$

4.3 Decay corrected ^3H activity = N/A µCi/g x 1.0E9= N/A pCi/L
(**If** samples are analyzed within 7 days of collection, **then ENTER** N/A.)

Performed by: EK Date: 6-7-14

Data Entry (µCi/g)by: EK Date: 6-7-14

Reviewed by: 6/8/14

SRRS# 2K.100

DATA SHEET 2

TRITIUM SAMPLING AND CALCULATIONS FOR WATER SAMPLES

1. Sample Information:
   Sample Point: 2SW
   Collection Date/Time: 6/2/14 / 1240
   Sample by: B

2. Analysis Data:
   Sample Analysis Date: 6-6-14
   Days of Sample Decay: 4
   Circle Instrument Used (2550TR #1) 2900TR #2
   Protocol Used: 3 LLD: 1825 pCi/L

3. Count Data:
   Sample #1 cpm 1 dpm: 5 µCi/g: $5.0E^{-7}$
   Sample #2 cpm 2 dpm: 9 µCi/g: $1.0E^{-6}$
   Sample #3 cpm 0 dpm: 1 µCi/g: $2.0E^{-7}$

4. Sample Activity:

NOTE:	$\frac{1\mu Ci}{g}$	=	$\frac{10^9\ pCi}{L}$

4.1 Average Sample Activity (uncorrected), µCi/g: $6.0E^{-7}$ x 1.0E9= 600 pCi/L

4.2 **If** sample is not analyzed within 7 days of collection, **then DECAY** correct activity as follows:

Uncorrected Average Sample Activity * $e^{(\ln 2/12.35)*(\text{days since sampling}/365.25)}$

4.3 Decay corrected ^3H activity = N/A µCi/g x 1.0E9= N/A pCi/L
(**If** samples are analyzed within 7 days of collection, **then ENTER** N/A.)

Performed by: EK Date: 6-7-14

Data Entry (µCi/g)by: EK Date: 6-7-14

Reviewed by: [signature] 6/8/14

SRRS# 2K.100

DATA SHEET 2

TRITIUM SAMPLING AND CALCULATIONS FOR WATER SAMPLES

1. Sample Information:
   Sample Point: 3SCW
   Collection Date/Time: 6/2/14/1250
   Sample by: EB

2. Analysis Data:
   Sample Analysis Date: 6-6-14
   Days of Sample Decay: 4
   Circle Instrument Used (2550TR #1) 2900TR #2
   Protocol Used: 3 LLD: 1825 pCi/L

3. Count Data:
   Sample #1 cpm 1 dpm: 5 µCi/g: $6.0E^{-7}$
   Sample #2 cpm 3 dpm: 13 µCi/g: $1.4E^{-6}$
   Sample #3 cpm 4 dpm: 15 µCi/g: $1.7E^{-6}$

4. Sample Activity:

NOTE:	$\frac{1\mu Ci}{g}$	=	$\frac{10^9\ pCi}{L}$

4.1 Average Sample Activity (uncorrected), µCi/g: $1.3E^{-6}$ x 1.0E9= 1300 pCi/L

4.2 **If** sample is not analyzed within 7 days of collection, **then DECAY** correct activity as follows:

Uncorrected Average Sample Activity * $e^{(\ln 2/12.35)*(\text{days since sampling}/365.25)}$

4.3 Decay corrected ^3H activity = N/A µCi/g x 1.0E9= N/A pCi/L
(**If** samples are analyzed within 7 days of collection, **then ENTER** N/A.)

Performed by: EK Date: 6-7-14

Data Entry (µCi/g)by: EK Date: 6-7-14

Reviewed by: [signature] 6/8/14

SRRS# 2K.100

DATA SHEET 2

TRITIUM SAMPLING AND CALCULATIONS FOR WATER SAMPLES

1. Sample Information:
   Sample Point: MW DN-1145
   Collection Date/Time: 6.8.14 1700
   Sample by: JR

2. Analysis Data:
   Sample Analysis Date: 6.8.14
   Days of Sample Decay: 0
   Circle Instrument Used 3 2550TR #1 2900TR #2
   Protocol Used: 3 LLD: 957 pCi/L

3. Count Data:
   Sample #1 cpm 1.40 dpm: N/A µCi/g: 5.879E-7
   Sample #2 cpm 2.00 dpm: N/A µCi/g: 8.506E-7
   Sample #3 cpm 1.40 dpm: N/A µCi/g: ~~5.935~~ 5.938E-7

4. Sample Activity:

NOTE:	$\frac{1\mu Ci}{g}$	=	$\frac{10^9\ pCi}{L}$

(LLD <957)

4.1 Average Sample Activity (uncorrected), µCi/g: 6.775E-7 x 1.0E9= 677 pCi/L

4.2 **If** sample is not analyzed within 7 days of collection, **then DECAY** correct activity as follows:

Uncorrected Average Sample Activity * $e^{(\ln 2/12.35)*(\text{days since sampling}/365.25)}$

4.3 Decay corrected ^3H activity = N/A µCi/g x 1.0E9= N/A pCi/L
(**If** samples are analyzed within 7 days of collection, **then ENTER** N/A.)

Performed by: JR Date: 6.8.14 (previously)

Data Entry (µCi/g)by: JR Date: 6.8.14

Reviewed by: BS

SRRS# 2K.100

DATA SHEET 2

TRITIUM SAMPLING AND CALCULATIONS FOR WATER SAMPLES

1. Sample Information:
   Sample Point: MW DN 126 S
   Collection Date/Time: 6-8-14 1400
   Sample by: AA

2. Analysis Data:
   Sample Analysis Date: 6-8-14
   Days of Sample Decay: 0
   Circle Instrument Used 2550TR #1 (2900TR #2)
   Protocol Used: 3 LLD: 957 pCi/L

3. Count Data:
   Sample #1 cpm 434.43 dpm: N/A µCi/g: 1.820E-4
   Sample #2 cpm 421.94 dpm: N/A µCi/g: 1.788E-4
   Sample #3 cpm 429.06 dpm: N/A µCi/g: 1.816E-4

4. Sample Activity:

NOTE:	$\frac{1\mu Ci}{g}$	=	$\frac{10^9\ pCi}{L}$

4.1 Average Sample Activity (uncorrected), µCi/g: 1.808E-4 x 1.0E9= 180783 pCi/L

4.2 **If** sample is not analyzed within 7 days of collection, **then DECAY** correct activity as follows:

Uncorrected Average Sample Activity * $e^{(\ln 2/12.35)*(\text{days since sampling}/365.25)}$

4.3 Decay corrected ^3H activity = NA µCi/g x 1.0E9= NA pCi/L
(**If** samples are analyzed within 7 days of collection, **then ENTER** N/A.)

Performed by: JR Date: 6-8-14

Data Entry (µCi/g)by: JR Date: 6-8-14

Reviewed by: RS

DATA SHEET 2

TRITIUM SAMPLING AND CALCULATIONS FOR WATER SAMPLES

1. Sample Information:

   Sample Point: MW-DN-1275

   Collection Date/Time: 6-8-14 / 1335

   Sample by: FH

2. Analysis Data:

   Sample Analysis Date: 6.8.14

   Days of Sample Decay: 0

   Circle Instrument Used: 2550TR #1 2900TR #2

   Protocol Used: 3 LLD: 957 pCi/L

3. Count Data:

   Sample #1 cpm 2705 dpm: 6.48 µCi/g: 2.705E-6

   Sample #2 cpm 2610 dpm: 6.48 µCi/g: 2.640E-6

   Sample #3 cpm 1271 dpm: 6.28 µCi/g: 1.211E-6

4. Sample Activity:

NOTE:	$\frac{1\mu Ci}{g}$	=	$\frac{10^9\ pCi}{L}$

4.1 Average Sample Activity (uncorrected), µCi/g: 2.185E-6 x 1.0E9= 2185 pCi/L

4.2 **If** sample is not analyzed within 7 days of collection, **then DECAY** correct activity as follows:

Uncorrected Average Sample Activity * $e^{(\ln 2/12.35)*(\text{days since sampling}/365.25)}$

4.3 Decay corrected ^3H activity = NA µCi/g x 1.0E9= NA pCi/L
(**If** samples are analyzed within 7 days of collection, **then ENTER** N/A.)

Performed by: _____ Date: 6.8.14

Data Entry (µCi/g)by: _____ Date: 6.8.14

Reviewed by: _____

DATA SHEET 2

TRITIUM SAMPLING AND CALCULATIONS FOR WATER SAMPLES

1. Sample Information:
   Sample Point: MW DN 1075
   Collection Date/Time: 6·8·14 1520
   Sample by: AA

2. Analysis Data:
   Sample Analysis Date: 6·8·14
   Days of Sample Decay: 0
   Circle Instrument Used: 2550TR #1 (2900TR #2)
   Protocol Used: 3 LLD: 957 pCi/L

3. Count Data:
   Sample #1 cpm 0 dpm: A µCi/g: 0
   Sample #2 cpm 0 dpm: A µCi/g: 0
   Sample #3 cpm 0 dpm: A µCi/g: 0

4. Sample Activity:

NOTE:	$\frac{1\mu Ci}{g}$	=	$\frac{10^9\ pCi}{L}$

(957)

4.1 Average Sample Activity (uncorrected), µCi/g: 0 x 1.0E9= 0 pCi/L

4.2 **If sample is not analyzed within 7 days of collection, then DECAY** correct activity as follows:

Uncorrected Average Sample Activity * $e^{(\ln 2/12.35)*(\text{days since sampling}/365.25)}$

4.3 Decay corrected ^3H activity = NA µCi/g x 1.0E9= NA pCi/L
(If samples are analyzed within 7 days of collection, **then ENTER** N/A.)

Performed by: JR Date: 6·8·14

Data Entry (µCi/g)by: JR Date: 6·8·14

Reviewed by: B

DATA SHEET 2

TRITIUM SAMPLING AND CALCULATIONS FOR WATER SAMPLES

1. Sample Information:
   Sample Point: DSP 125
   Collection Date/Time: 6.8.14 1442
   Sample by: AA

2. Analysis Data:
   Sample Analysis Date: 6.8.14
   Days of Sample Decay: 0
   Circle Instrument Used 3 2550TR #1 ~~2900TR #2~~
   Protocol Used: 3 LLD: 957 pCi/L

3. Count Data:
   Sample #1 cpm 236.13 dpm: N/A µCi/g: 9.979E-5
   Sample #2 cpm 238.49 dpm: N/A µCi/g: 1.015E-4
   Sample #3 cpm 230.30 dpm: N/A µCi/g: 9.838E-5

4. Sample Activity:

NOTE:	$\frac{1\mu Ci}{g}$	=	$\frac{10^9\ pCi}{L}$

4.1 Average Sample Activity (uncorrected), µCi/g: 9.990E-5 x 1.0E9= 99900 pCi/L

4.2 **If** sample is not analyzed within 7 days of collection, **then DECAY** correct activity as follows:

Uncorrected Average Sample Activity * $e^{(\ln 2/12.35)*(\text{days since sampling}/365.25)}$

4.3 Decay corrected ^3H activity = N/A µCi/g x 1.0E9= NA pCi/L
(**If** samples are analyzed within 7 days of collection, **then ENTER** N/A.)

Performed by: [signature] Date: 6.8.14

Data Entry (µCi/g)by: [signature] Date: 6.8.14

Reviewed by: [signature]

DATA SHEET 2

TRITIUM SAMPLING AND CALCULATIONS FOR WATER SAMPLES

1. Sample Information:

   Sample Point: STP EFF.

   Collection Date/Time: 6-4-14 / 0930

   Sample by: DM / FH

2. Analysis Data:

   Sample Analysis Date: 6-7-14

   Days of Sample Decay: 3

   Circle Instrument Used 2550TR #1 (2900TR #2)

   Protocol Used: 3 LLD: 1965 pCi/L

3. Count Data:

   Sample #1 cpm 123.82 dpm: N/A µCi/g: 5.214 E-5

   Sample #2 cpm 128.80 dpm: N/A µCi/g: 5.494 E-5

   Sample #3 cpm 122.91 dpm: N/A µCi/g: 5.254 E-5

4. Sample Activity:

NOTE:	$\frac{1\mu Ci}{g}$	=	$\frac{10^9\ pCi}{L}$

4.1 Average Sample Activity (uncorrected), µCi/g: 5.321 E-5 x 1.0E9= 53,210 pCi/L

4.2 **If** sample is not analyzed within 7 days of collection, **then DECAY** correct activity as follows:

Uncorrected Average Sample Activity * $e^{(\ln 2/12.35)*(\text{days since sampling}/365.25)}$

4.3 Decay corrected ^3H activity = N/A µCi/g x 1.0E9= N/A pCi/L
(**If** samples are analyzed within 7 days of collection, **then ENTER** N/A.)

Performed by: FH Date: 6-7-14

Data Entry (µCi/g)by: N/A Date: N/A

Reviewed by: 6/8/14

DATA SHEET 2

TRITIUM SAMPLING AND CALCULATIONS FOR WATER SAMPLES

1. Sample Information:

   Sample Point: STP EFF. (2)

   Collection Date/Time: 6-4-14 / 0930

   Sample by: DM/FH

2. Analysis Data:

   Sample Analysis Date: 6-7-14

   Days of Sample Decay: 3

   Circle Instrument Used 2550TR #1 (2900TR #2)

   Protocol Used: 3 LLD: 1965 pCi/L

3. Count Data:

   Sample #1 cpm 128.02 dpm: N/A µCi/g: 5.401 E-5

   Sample #2 cpm 117.37 dpm: / µCi/g: 5.003 E-5

   Sample #3 cpm 117.55 dpm: A µCi/g: 5.020 E-5

4. Sample Activity:

NOTE:	$\frac{1\mu Ci}{g}$	=	$\frac{10^9\ pCi}{L}$

4.1 Average Sample Activity (uncorrected), µCi/g: 5.141 E-5 x 1.0E9= 5141 pCi/L

4.2 **If** sample is not analyzed within 7 days of collection, **then DECAY** correct activity as follows:

Uncorrected Average Sample Activity * $e^{(\ln 2/12.35)*(\text{days since sampling}/365.25)}$

4.3 Decay corrected ^3H activity = NA µCi/g x 1.0E9= NA pCi/L
(**If** samples are analyzed within 7 days of collection, **then ENTER** N/A.)

Performed by: JR Date: 6-7-14

Data Entry (µCi/g)by: JR Date: 6-7-14

Reviewed by: DM 6/8/14

SRRS# 2K.100

DATA SHEET 2

TRITIUM SAMPLING AND CALCULATIONS FOR WATER SAMPLES

1. Sample Information:

   Sample Point: STP EFF. (Resample)

   Collection Date/Time: 6-7-14 / 1230

   Sample by: FH

2. Analysis Data:

   Sample Analysis Date: 6-7-14

   Days of Sample Decay: <1

   Circle Instrument Used 2550TR #1 (2900TR #2)

   Protocol Used: 3 LLD: 1965 pCi/L

3. Count Data:

   Sample #1 cpm 1032.5 dpm: N/A µCi/g: 4.313E-5

   Sample #2 cpm 107.87 dpm: N/A µCi/g: 4.574E-5

   Sample #3 cpm 105.79 dpm: N/A µCi/g: 4.491E-5

4. Sample Activity:

NOTE:	$\frac{1\mu Ci}{g}$	=	$\frac{10^9\ pCi}{L}$

4.1 Average Sample Activity (uncorrected), µCi/g: 4.4595E-5 x 1.0E9= 44593 pCi/L

4.2 **If sample is not analyzed within 7 days of collection, then DECAY** correct activity as follows:

Uncorrected Average Sample Activity * $e^{(\ln 2/12.35)*(\text{days since sampling}/365.25)}$

4.3 Decay corrected ^3H activity = N/A µCi/g x 1.0E9= N/A pCi/L
(If samples are analyzed within 7 days of collection, **then ENTER** N/A.)

Performed by: [signature] Date: 6.7.14

Data Entry (µCi/g)by: [signature] Date: 6/7/14

Reviewed by: [signature] 6/8/14

SRRS# 2K.100

DATA SHEET 2

TRITIUM SAMPLING AND CALCULATIONS FOR WATER SAMPLES

1. Sample Information:
   Sample Point: SD-1 / CB-1
   Collection Date/Time: 6·8·14 1710
   Sample by: [signature]

2. Analysis Data:
   Sample Analysis Date: 6·8·14
   Days of Sample Decay: 0
   Circle Instrument Used: 2550TR #1 ~~2900TR #2~~
   Protocol Used: 3 LLD: 957 pCi/L

3. Count Data:
   Sample #1 cpm 63.89 dpm: A µCi/g: 2.709E-5
   Sample #2 cpm 55.97 dpm: A µCi/g: 2.405E-5
   Sample #3 cpm 64.39 dpm: A µCi/g: 2.762E-5

4. Sample Activity:

NOTE:	$\frac{1\mu Ci}{g}$	=	$\frac{10^9\ pCi}{L}$

4.1 Average Sample Activity (uncorrected), µCi/g: 2.625E-5 x 1.0E9= 26255 pCi/L

4.2 **If** sample is not analyzed within 7 days of collection, **then DECAY** correct activity as follows:

Uncorrected Average Sample Activity * $e^{(\ln 2/12.35)*(\text{days since sampling}/365.25)}$

4.3 Decay corrected ^3H activity = N/A µCi/g x 1.0E9= N/A pCi/L
(**If** samples are analyzed within 7 days of collection, **then ENTER** N/A.)

Performed by: [signature] Date: 6·8·14

Data Entry (µCi/g)by: [signature] Date: 6·8·14

Reviewed by: [signature] 6-11-14

DATA SHEET 2

TRITIUM SAMPLING AND CALCULATIONS FOR WATER SAMPLES

1. Sample Information:
   Sample Point: RW TANK FARM BERM
   Collection Date/Time: 6-9-14 @ 0130
   Sample by: EK

2. Analysis Data:
   Sample Analysis Date: 6-9-14
   Days of Sample Decay: 0
   Circle Instrument Used 2550TR #1 (2900TR #2)
   Protocol Used: 3 LLD: 1965 pCi/L

3. Count Data:
   Sample #1 cpm 1.84 dpm: N/A µCi/g: $7.805E^{-7}$
   Sample #2 cpm 0 dpm: N/A µCi/g: 0
   Sample #3 cpm 0.97 dpm: N/A µCi/g: $4.13E^{-7}$

4. Sample Activity:

NOTE:	$\frac{1\mu Ci}{g}$	=	$\frac{10^9\ pCi}{L}$

4.1 Average Sample Activity (uncorrected), µCi/g: $3.979E^{-7}$ x 1.0E9= 397.9 pCi/L

4.2 **If** sample is not analyzed within 7 days of collection, **then DECAY** correct activity as follows:

Uncorrected Average Sample Activity * $e^{(\ln 2/12.35)*(\text{days since sampling}/365.25)}$

4.3 Decay corrected ^3H activity = N/A µCi/g x 1.0E9= N/A pCi/L
(**If** samples are analyzed within 7 days of collection, **then ENTER** N/A.)

Performed by: EK Date: 6-9-14

Data Entry (µCi/g)by: N/A Date: N/A

Reviewed by: B 6-11-14

DATA SHEET 2

TRITIUM SAMPLING AND CALCULATIONS FOR WATER SAMPLES

1. Sample Information:
   Sample Point: DSP 119-5
   Collection Date/Time: 6-8-14/1910
   Sample by: AA

2. Analysis Data:
   Sample Analysis Date: 6.8.14
   Days of Sample Decay: 0
   Circle Instrument Used 2550TR #1 (2900TR #2)
   Protocol Used: 3 LLD: 957 pCi/L

3. Count Data:
   Sample #1 cpm 2.87 dpm: A µCi/g: 1.213E-6
   Sample #2 cpm 0 dpm: A µCi/g: 0
   Sample #3 cpm 32 dpm: A µCi/g: 1.349E-7

4. Sample Activity:

NOTE:	$\frac{1\mu Ci}{g}$	=	$\frac{10^9\ pCi}{L}$

4.1 Average Sample Activity (uncorrected), µCi/g: 4.492E-7 x 1.0E9= 449 pCi/L

4.2 **If** sample is not analyzed within 7 days of collection, **then DECAY** correct activity as follows:

Uncorrected Average Sample Activity * $e^{(\ln 2/12.35)*(\text{days since sampling}/365.25)}$

4.3 Decay corrected ^3H activity = NA µCi/g x 1.0E9= NA pCi/L
(**If** samples are analyzed within 7 days of collection, **then ENTER** N/A.)

Performed by: JR Date: 6-8-14

Data Entry (µCi/g)by: JR Date: 6-8-14

Reviewed by: GS 6-11-14

DATA SHEET 2

TRITIUM SAMPLING AND CALCULATIONS FOR WATER SAMPLES

1. Sample Information:

   Sample Point: SS106

   Collection Date/Time: 6-9-14 / 1825

   Sample by: FH

2. Analysis Data:

   Sample Analysis Date: 6-9-14

   Days of Sample Decay: <1

   Circle Instrument Used 2550TR #1 (2900TR #2)

   Protocol Used: 3 LLD: 1965 pCi/L

3. Count Data:

   Sample #1 cpm 2869.31 dpm: N/A µCi/g: $1.211E^{-3}$

   Sample #2 cpm 2876.68 dpm: N/A µCi/g: $1.225E^{-3}$

   Sample #3 cpm 2843.81 dpm: N/A µCi/g: $1.215E^{-3}$

4. Sample Activity:

NOTE:	$\frac{1\mu Ci}{g}$	=	$\frac{10^9\ pCi}{L}$

4.1 Average Sample Activity (uncorrected), µCi/g: $1.217E^{-3}$ x 1.0E9= 1,217,000 pCi/L

4.2 **If** sample is not analyzed within 7 days of collection, **then DECAY** correct activity as follows:

Uncorrected Average Sample Activity * $e^{(\ln 2/12.35)*(\text{days since sampling}/365.25)}$

4.3 Decay corrected ^3H activity = N/A µCi/g x 1.0E9= N/A pCi/L
(**If** samples are analyzed within 7 days of collection, **then ENTER** N/A.)

Performed by: FH Date: 6-9-14

Data Entry (µCi/g)by: N/A Date: N/A

Reviewed by: PS 6-11-14

DATA SHEET 2

TRITIUM SAMPLING AND CALCULATIONS FOR WATER SAMPLES

1. Sample Information:

   Sample Point: 2/3 'B' CST

   Collection Date/Time: 6-9-14 / 1630

   Sample by: FH

2. Analysis Data:

   Sample Analysis Date: 6-9-14

   Days of Sample Decay: <1

   Circle Instrument Used 2550TR #1 (2900TR #2)

   Protocol Used: 4 LLD: N/A pCi/L

3. Count Data:

   Sample #1 cpm 7596 dpm: N/A µCi/g: 2.930 E-3

   Sample #2 cpm 7631 dpm: N/A µCi/g: 2.975 E-3

   Sample #3 cpm 7534 dpm: N/A µCi/g: 2.943 E-3

4. Sample Activity:

NOTE:	$\frac{1\mu Ci}{g}$	=	$\frac{10^9\ pCi}{L}$

4.1 Average Sample Activity (uncorrected), µCi/g: 2.949E-3 x 1.0E9= 2,949,000 pCi/L

4.2 **If** sample is not analyzed within 7 days of collection, **then DECAY** correct activity as follows:

Uncorrected Average Sample Activity * $e^{(\ln 2/12\ 35)*(\text{days since sampling}/365\ 25)}$

4.3 Decay corrected ^3H activity = N/A µCi/g x 1.0E9= N/A pCi/L
(**If** samples are analyzed within 7 days of collection, **then ENTER** N/A.)

Performed by: FH Date: 6-9-14

Data Entry (µCi/g)by: N/A Date: N/A

Reviewed by: BS 6-11-14

DATA SHEET 2

TRITIUM SAMPLING AND CALCULATIONS FOR WATER SAMPLES

1. Sample Information:

   Sample Point: 2/3 'A' CST

   Collection Date/Time: 6-9-14 / 1618

   Sample by: FH

2. Analysis Data:

   Sample Analysis Date: 6-9-14

   Days of Sample Decay: <1

   Circle Instrument Used 2550TR #1 (2900TR #2)

   Protocol Used: 4 LLD: N/A pCi/L

3. Count Data:

   Sample #1 cpm 6767 dpm: N/A µCi/g: 2.479 E-3

   Sample #2 cpm 6769 dpm: N/A µCi/g: 2.496 E-3

   Sample #3 cpm 6760 dpm: N/A µCi/g: 2.494 E-3

4. Sample Activity:

NOTE:	$\frac{1\mu Ci}{g}$	=	$\frac{10^9\ pCi}{L}$

4.1 Average Sample Activity (uncorrected), µCi/g: 2.489 E-3 x 1.0E9= 2,489,000 pCi/L

4.2 **If** sample is not analyzed within 7 days of collection, **then DECAY** correct activity as follows:

Uncorrected Average Sample Activity * $e^{(\ln 2/12.35)*(\text{days since sampling}/365.25)}$

4.3 Decay corrected ^3H activity = N/A µCi/g x 1.0E9= N/A pCi/L
(**If** samples are analyzed within 7 days of collection, **then ENTER** N/A.)

Performed by: FH Date: 6-9-14

Data Entry (µCi/g)by: N/A Date: N/A

Reviewed by: RS 6-11-14

SRRS# 2K.100

DATA SHEET 2

TRITIUM SAMPLING AND CALCULATIONS FOR WATER SAMPLES

1. Sample Information:
   Sample Point: Old Surge Tank
   Collection Date/Time: 6-9-14 / 1156
   Sample by: MA

2. Analysis Data:
   Sample Analysis Date: 6-9-14
   Days of Sample Decay: <1
   Circle Instrument Used 2550TR #1 (2900TR #2)
   Protocol Used: 3 LLD: 1965 pCi/L

3. Count Data:
   Sample #1 cpm 52.27 dpm: N/A µCi/g: 2.336 E-5
   Sample #2 cpm 59.80 dpm: N/A µCi/g: 2.699 E-5
   Sample #3 cpm 53.18 dpm: N/A µCi/g: 2.406 E-5

4. Sample Activity:

NOTE:	$\frac{1\mu Ci}{g}$	=	$\frac{10^9\ pCi}{L}$

4.1 Average Sample Activity (uncorrected), µCi/g: 2.481 E-5 x 1.0E9= 24,810 pCi/L

4.2 **If** sample is not analyzed within 7 days of collection, **then DECAY** correct activity as follows:

Uncorrected Average Sample Activity * $e^{(\ln 2/12.35)*(\text{days since sampling}/365.25)}$

4.3 Decay corrected ^3H activity = N/A µCi/g x 1.0E9= N/A pCi/L
(**If** samples are analyzed within 7 days of collection, **then ENTER** N/A.)

Performed by: FH Date: 6-9-14

Data Entry (µCi/g)by: N/A Date: N/A

Reviewed by: BS 6-11-14

DATA SHEET 2

TRITIUM SAMPLING AND CALCULATIONS FOR WATER SAMPLES

1. Sample Information:
   Sample Point: New Surge tank
   Collection Date/Time: 6-9-14 / 1150
   Sample by: AA

2. Analysis Data:
   Sample Analysis Date: 6-9-14
   Days of Sample Decay: <1
   Circle Instrument Used 2550TR #1 (2900TR #2)
   Protocol Used: 3 LLD: 1965 pCi/L

3. Count Data:
   Sample #1 cpm 123.53 dpm: N/A µCi/g: 5.332 E-5
   Sample #2 cpm 117.97 dpm: N/A µCi/g: 5.143 E-5
   Sample #3 cpm 113.15 dpm: N/A µCi/g: 4.935 E-5

4. Sample Activity:

NOTE:	$\frac{1\mu Ci}{g}$	=	$\frac{10^9\ pCi}{L}$

4.1 Average Sample Activity (uncorrected), µCi/g: 5.137 E-5 x 1.0E9= 51,370 pCi/L

4.2 **If** sample is not analyzed within 7 days of collection, **then DECAY** correct activity as follows:

Uncorrected Average Sample Activity * $e^{(\ln 2/12.35)*(\text{days since sampling}/365.25)}$

4.3 Decay corrected ^3H activity = N/A µCi/g x 1.0E9= N/A pCi/L
(**If** samples are analyzed within 7 days of collection, **then ENTER** N/A.)

Performed by: FH Date: 6-9-14

Data Entry (µCi/g)by: N/A Date: N/A

Reviewed by: PS 6-11-14

DATA SHEET 2

TRITIUM SAMPLING AND CALCULATIONS FOR WATER SAMPLES

1. Sample Information:
   Sample Point: A Aeration TK
   Collection Date/Time: 6-9-14 / 1140
   Sample by: AA

2. Analysis Data:
   Sample Analysis Date: 6-9-14
   Days of Sample Decay: <1
   Circle Instrument Used 2550TR #1 (2900TR #2)
   Protocol Used: 3 LLD: 1965 pCi/L

3. Count Data:
   Sample #1 cpm 110.95 dpm: N/A µCi/g: 4.717 E-5
   Sample #2 cpm 103.55 dpm: N/A µCi/g: 4.451 E-5
   Sample #3 cpm 107.84 dpm: N/A µCi/g: 4.633 E-5

4. Sample Activity:

NOTE:	$\frac{1\mu Ci}{g}$	=	$\frac{10^9\ pCi}{L}$

4.1 Average Sample Activity (uncorrected), µCi/g: 4.600 E-5 x 1.0E9= 46,000 pCi/L

4.2 **If** sample is not analyzed within 7 days of collection, **then DECAY** correct activity as follows:

Uncorrected Average Sample Activity * $e^{(\ln 2/12.35)*(\text{days since sampling}/365.25)}$

4.3 Decay corrected ^3H activity = N/A µCi/g x 1.0E9= N/A pCi/L
(If samples are analyzed within 7 days of collection, **then ENTER** N/A.)

Performed by: FH Date: 6-9-14

Data Entry (µCi/g)by: N/A Date: N/A

Reviewed by: PS 6-11-14

DATA SHEET 2

TRITIUM SAMPLING AND CALCULATIONS FOR WATER SAMPLES

1. Sample Information:
   Sample Point: B Aeration Tk
   Collection Date/Time: 6-9-14/ 1146
   Sample by: AD

2. Analysis Data:
   Sample Analysis Date: 6-9-14
   Days of Sample Decay: <1
   Circle Instrument Used 2550TR #1 (2900TR #2)
   Protocol Used: 3 LLD: 1965 pCi/L

3. Count Data:
   Sample #1 cpm 98.90 dpm: N/A µCi/g: 4.194 E-5
   Sample #2 cpm 95.33 dpm: N/A µCi/g: 4.076 E-5
   Sample #3 cpm 95.36 dpm: N/A µCi/g: 4.076 E-5

4. Sample Activity:

NOTE:	$\frac{1\mu Ci}{g}$	=	$\frac{10^9\ pCi}{L}$

4.1 Average Sample Activity (uncorrected), µCi/g: 4.115 E-5 x 1.0E9= 41,150 pCi/L

4.2 **If** sample is not analyzed within 7 days of collection, **then DECAY** correct activity as follows:

Uncorrected Average Sample Activity * $e^{(\ln 2/12\ 35)*(\text{days since sampling}/365\ 25)}$

4.3 Decay corrected ^3H activity = N/A µCi/g x 1.0E9= N/A pCi/L
(**If** samples are analyzed within 7 days of collection, **then ENTER** N/A.)

Performed by: FH Date: 6-9-14

Data Entry (µCi/g)by: N/A Date: N/A

Reviewed by: PS 6-11-14

DATA SHEET 2

TRITIUM SAMPLING AND CALCULATIONS FOR WATER SAMPLES

1. Sample Information:
   Sample Point: WEST of 2/3 BCST
   Collection Date/Time: 6-9-14 1250
   Sample by: SCHALDT

2. Analysis Data:
   Sample Analysis Date: 6-9-14
   Days of Sample Decay: <1
   Circle Instrument Used 2550TR #1 (2900TR #2)
   Protocol Used: 4 LLD: N/A pCi/L

3. Count Data:
   Sample #1 cpm 5932 dpm: N/A µCi/g: 2.158 E-3
   Sample #2 cpm 5836 dpm: N/A µCi/g: 2.148 E-3
   Sample #3 cpm 5844 dpm: N/A µCi/g: 2.146 E-3

4. Sample Activity:

NOTE:	$\frac{1\mu Ci}{g}$	=	$\frac{10^9\ pCi}{L}$

4.1 Average Sample Activity (uncorrected), µCi/g: 2.150 E-3 x 1.0E9= 2,150,000 pCi/L

4.2 **If** sample is not analyzed within 7 days of collection, **then DECAY** correct activity as follows:

Uncorrected Average Sample Activity * $e^{(\ln 2/12.35)*(\text{days since sampling}/365.25)}$

4.3 Decay corrected ^3H activity = N/A µCi/g x 1.0E9= N/A pCi/L
(**If** samples are analyzed within 7 days of collection, **then ENTER** N/A.)

Performed by: FH Date: 6-9-14

Data Entry (µCi/g)by: N/A Date: N/A

Reviewed by: PS 6-11-14

DATA SHEET 2

TRITIUM SAMPLING AND CALCULATIONS FOR WATER SAMPLES

1. Sample Information:

   Sample Point: MD-11

   Collection Date/Time: 6-7-14 @ 2155

   Sample by: MB

2. Analysis Data:

   Sample Analysis Date: 6-8-14

   Days of Sample Decay: <1

   Circle Instrument Used (2550TR #1) 2900TR #2

   Protocol Used: 3 LLD: 2000 pCi/L

3. Count Data:

   Sample #1 cpm 3439 dpm: 13206 µCi/g: 1.4872E-3

   Sample #2 cpm 3448 dpm: 13252 µCi/g: 1.4923E-3

   Sample #3 cpm 3449 dpm: 13228 µCi/g: 1.4896E-3

4. Sample Activity:

NOTE:	$\frac{1\mu Ci}{g}$	=	$\frac{10^9\ pCi}{L}$

4.1 Average Sample Activity (uncorrected), µCi/g: 1.4891E-3 x 1.0E9= 1489700 pCi/L

4.2 **If** sample is not analyzed within 7 days of collection, **then DECAY** correct activity as follows:

Uncorrected Average Sample Activity * $e^{(\ln 2/12.35)*(\text{days since sampling}/365.25)}$

4.3 Decay corrected ^3H activity = N/A µCi/g x 1.0E9= N/A pCi/L
(**If** samples are analyzed within 7 days of collection, **then ENTER** N/A.)

Performed by: MB Date: 6-8-14

Data Entry (µCi/g)by: N/A Date: N/A

Reviewed by: RS 6-11-14

DATA SHEET 2

TRITIUM SAMPLING AND CALCULATIONS FOR WATER SAMPLES

1. Sample Information:

   Sample Point: STP Ejector

   Collection Date/Time: 6-7-14 @ 2100

   Sample by: JG

2. Analysis Data:

   Sample Analysis Date: 6-8-14

   Days of Sample Decay: <1

   Circle Instrument Used (2550TR #1) 2900TR #2

   Protocol Used: 3 LLD: 2000 pCi/L

3. Count Data:

   Sample #1 cpm 49 dpm: 192 µCi/g: 2.16E-5

   Sample #2 cpm 51 dpm: 200 µCi/g: 2.25E-5

   Sample #3 cpm 53 dpm: 206 µCi/g: 2.32E-5

4. Sample Activity:

NOTE:	$\frac{1\mu Ci}{g}$	=	$\frac{10^9\ pCi}{L}$

4.1 Average Sample Activity (uncorrected), µCi/g: 2.24E-5 x 1.0E9= 22400 pCi/L

4.2 **If** sample is not analyzed within 7 days of collection, **then DECAY** correct activity as follows:

Uncorrected Average Sample Activity * $e^{(\ln 2/12.35)*(\text{days since sampling}/365.25)}$

4.3 Decay corrected ^3H activity = N/A µCi/g x 1.0E9= N/A pCi/L
(**If** samples are analyzed within 7 days of collection, **then ENTER** N/A.)

Performed by: [illegible] Date: 6-8-14

Data Entry (µCi/g)by: N/A Date: N/A

Reviewed by: PS 6-11-14

DATA SHEET 2

TRITIUM SAMPLING AND CALCULATIONS FOR WATER SAMPLES

1. Sample Information:

   Sample Point: Domestic Water (MW05)

   Collection Date/Time: 6-7-14 @ 2205

   Sample by: INB

2. Analysis Data:

   Sample Analysis Date: 6-8-14

   Days of Sample Decay: <1

   Circle Instrument Used (2550TR #1) 2900TR #2

   Protocol Used: 3 LLD: 2000 pCi/L

3. Count Data:

   Sample #1 cpm 2 dpm: 7 µCi/g: 7E-7

   Sample #2 cpm 1 dpm: 2 µCi/g: 3E-7

   Sample #3 cpm 3 dpm: 10 µCi/g: 1.1E-6

4. Sample Activity:

NOTE:	$\frac{1\mu Ci}{g}$	=	$\frac{10^9\ pCi}{L}$

4.1 Average Sample Activity (uncorrected), µCi/g: 7E-7 x 1.0E9= 700 pCi/L

4.2 **If** sample is not analyzed within 7 days of collection, **then DECAY** correct activity as follows:

Uncorrected Average Sample Activity * $e^{(\ln 2/12.35)*(\text{days since sampling}/365.25)}$

4.3 Decay corrected ^3H activity = N/A µCi/g x 1.0E9= N/A pCi/L
(**If** samples are analyzed within 7 days of collection, **then ENTER** N/A.)

Performed by: INB Date: 6-8-14

Data Entry (µCi/g)by: N/A Date: N/A

Reviewed by: PS 6-11-14

DATA SHEET 2

TRITIUM SAMPLING AND CALCULATIONS FOR WATER SAMPLES

1. Sample Information:
   Sample Point: STP Sand Filter Effluent
   Collection Date/Time: 6-7-14 @ 2230
   Sample by: NB

2. Analysis Data:
   Sample Analysis Date: 6-8-14
   Days of Sample Decay: <1
   Circle Instrument Used (2550TR #1) 2900TR #2
   Protocol Used: 3 LLD: 2000 pCi/L

3. Count Data:
   Sample #1 cpm 107 dpm: 410 µCi/g: 4.61E-5
   Sample #2 cpm 108 dpm: 411 µCi/g: 4.63E-5
   Sample #3 cpm 94 dpm: 360 µCi/g: 4.05E-5

4. Sample Activity:

NOTE:	$\frac{1\mu Ci}{g}$	=	$\frac{10^9\ pCi}{L}$

4.1 Average Sample Activity (uncorrected), µCi/g: 4.43E-5 x 1.0E9= 44300 pCi/L

4.2 **If** sample is not analyzed within 7 days of collection, **then DECAY** correct activity as follows:

Uncorrected Average Sample Activity * $e^{(\ln 2/12.35)*(\text{days since sampling}/365.25)}$

4.3 Decay corrected ^3H activity = N/A µCi/g x 1.0E9= N/A pCi/L
(**If** samples are analyzed within 7 days of collection, **then ENTER** N/A.)

Performed by: NB Date: 6-8-14

Data Entry (µCi/g)by: N/A Date: N/A

Reviewed by: PS 6-11-14

SRRS# 2K.100

DATA SHEET 2

TRITIUM SAMPLING AND CALCULATIONS FOR WATER SAMPLES

1. Sample Information:
   Sample Point: STP Effluent
   Collection Date/Time: 6-7-14 @ 2232
   Sample by: JNB

2. Analysis Data:
   Sample Analysis Date: 6-8-14
   Days of Sample Decay: <1
   Circle Instrument Used (2550TR #1) 2900TR #2
   Protocol Used: 3 LLD: 2000 pCi/L

3. Count Data:
   Sample #1 cpm 109 dpm: 417 µCi/g: 4.70E-5
   Sample #2 cpm 107 dpm: 408 µCi/g: 4.60E-5
   Sample #3 cpm 103 dpm: 394 µCi/g: 4.43E-5

4. Sample Activity:

NOTE:	$\frac{1\mu Ci}{g}$	=	$\frac{10^9\ pCi}{L}$

4.1 Average Sample Activity (uncorrected), µCi/g: 4.58E-5 x 1.0E9= 45800 pCi/L

4.2 **If** sample is not analyzed within 7 days of collection, **then DECAY** correct activity as follows:

Uncorrected Average Sample Activity * $e^{(\ln 2/12.35)*(\text{days since sampling}/365.25)}$

4.3 Decay corrected ^3H activity = N/A µCi/g x 1.0E9= N/A pCi/L
(**If** samples are analyzed within 7 days of collection, **then ENTER** N/A.)

Performed by: JNB Date: 6-8-14

Data Entry (µCi/g)by: N/A Date: N/A

Reviewed by: BS 6-11-14

SRRS# 2K.100

DATA SHEET 2

TRITIUM SAMPLING AND CALCULATIONS FOR WATER SAMPLES

1. Sample Information:

   Sample Point: 213 Intake Canal

   Collection Date/Time: 6-7-14 @ 2225

   Sample by: INB

2. Analysis Data:

   Sample Analysis Date: 6-8-14

   Days of Sample Decay: < 1

   Circle Instrument Used (2550TR #1) 2900TR #2

   Protocol Used: 3 LLD: 2000 pCi/L

3. Count Data:

   Sample #1 cpm 12 dpm: 45 µCi/g: 5.1E-6

   Sample #2 cpm 13 dpm: 49 µCi/g: 5.5E-6

   Sample #3 cpm 10 dpm: 38 µCi/g: 4.3E-6

4. Sample Activity:

NOTE:	$\frac{1\mu Ci}{g}$	=	$\frac{10^9\ pCi}{L}$

4.1 Average Sample Activity (uncorrected), µCi/g: 5E-6 x 1.0E9= 5000 pCi/L

4.2 **If** sample is not analyzed within 7 days of collection, **then DECAY** correct activity as follows:

Uncorrected Average Sample Activity * $e^{(\ln 2/12.35)*(\text{days since sampling}/365.25)}$

4.3 Decay corrected ^3H activity = N/A µCi/g x 1.0E9= N/A pCi/L
(**If** samples are analyzed within 7 days of collection, **then ENTER** N/A.)

Performed by: INB Date: 6-8-14

Data Entry (µCi/g)by: N/A Date: N/A

Reviewed by: JS 6-11-14

DATA SHEET 2

TRITIUM SAMPLING AND CALCULATIONS FOR WATER SAMPLES

1. Sample Information:
   Sample Point: STP Effluent
   Collection Date/Time: 6-7-14 @ 1230
   Sample by: FH

2. Analysis Data:
   Sample Analysis Date: 6-8-14
   Days of Sample Decay: < 1
   Circle Instrument Used 2550TR #1 (2900TR #2)
   Protocol Used: 3 LLD: 1965 pCi/L

3. Count Data:
   Sample #1 cpm 98.55 dpm: N/A µCi/g: 4.141E-5
   Sample #2 cpm 93.06 dpm: N/A µCi/g: 3.941E-5
   Sample #3 cpm 95.24 dpm: N/A µCi/g: 4.048E-5

4. Sample Activity:

NOTE:	$\frac{1\mu Ci}{g}$	=	$\frac{10^9\ pCi}{L}$

4.1 Average Sample Activity (uncorrected), µCi/g: 4.045E-5 x 1.0E9= 40432 pCi/L

4.2 **If** sample is not analyzed within 7 days of collection, **then DECAY** correct activity as follows:

Uncorrected Average Sample Activity * $e^{(\ln 2/12.35)*(\text{days since sampling}/365.25)}$

4.3 Decay corrected ^3H activity = N/A µCi/g x 1.0E9= N/A pCi/L
(**If** samples are analyzed within 7 days of collection, **then ENTER** N/A.)

Performed by: INB Date: 6-8-14

Data Entry (µCi/g)by: N/A Date: N/A

Reviewed by: [signature] 6/8/14

SRRS# 2K.100

DATA SHEET 2

TRITIUM SAMPLING AND CALCULATIONS FOR WATER SAMPLES

1. Sample Information:
   Sample Point: 213 Intake Canal
   Collection Date/Time: 6-7-14 @ 2225
   Sample by: JNB

2. Analysis Data:
   Sample Analysis Date: 6-8-14
   Days of Sample Decay: < 1
   Circle Instrument Used 2550TR #1 (2900TR #2)
   Protocol Used: 3 LLD: 1965 pCi/L

3. Count Data:
   Sample #1 cpm 10.86 dpm: N/A µCi/g: 4.600E-6
   Sample #2 cpm 8.93 dpm: N/A µCi/g: 3.833E-6
   Sample #3 cpm 7.13 dpm: N/A µCi/g: 3.060E-6

4. Sample Activity:

NOTE:	$\frac{1\mu Ci}{g}$	=	$\frac{10^9\ pCi}{L}$

4.1 Average Sample Activity (uncorrected), µCi/g: 3.831E-6 x 1.0E9= 3831 pCi/L

4.2 **If** sample is not analyzed within 7 days of collection, **then DECAY** correct activity as follows:

Uncorrected Average Sample Activity * $e^{(\ln 2/12.35)*(\text{days since sampling}/365.25)}$

4.3 Decay corrected ^3H activity = N/A µCi/g x 1.0E9= N/A pCi/L
(If samples are analyzed within 7 days of collection, **then ENTER** N/A.)

Performed by: JNB Date: 6-8-14

Data Entry (µCi/g)by: N/A Date: N/A

Reviewed by: [signature] 6/8/14

SRRS# 2K.100

DATA SHEET 2

TRITIUM SAMPLING AND CALCULATIONS FOR WATER SAMPLES

1. Sample Information:
   Sample Point: MD-11
   Collection Date/Time: 6-7-14 @ 2155
   Sample by: JNB

2. Analysis Data:
   Sample Analysis Date: 6-8-14
   Days of Sample Decay: <1
   Circle Instrument Used 2550TR #1 (2900TR #2)
   Protocol Used: 3 LLD: 1965 pCi/L

3. Count Data:
   Sample #1 cpm 3209.13 dpm: N/A µCi/g: 1.356E-3
   Sample #2 cpm 3192.77 dpm: N/A µCi/g: 1.362E-3
   Sample #3 cpm 3183.07 dpm: N/A µCi/g: 1.362E-3
   JNB 6-8-14

4. Sample Activity:

NOTE:	$\frac{1\mu Ci}{g}$	=	$\frac{10^9\ pCi}{L}$

4.1 Average Sample Activity (uncorrected), µCi/g: 1.360E-3 x 1.0E9= 1360000 pCi/L

4.2 **If** sample is not analyzed within 7 days of collection, **then DECAY** correct activity as follows:

Uncorrected Average Sample Activity * $e^{(\ln 2/12.35)*(\text{days since sampling}/365.25)}$

4.3 Decay corrected ^3H activity = N/A µCi/g x 1.0E9= N/A pCi/L
(**If** samples are analyzed within 7 days of collection, **then ENTER** N/A.)

Performed by: JNB Date: 6-8-14

Data Entry (µCi/g)by: N/A Date: N/A

Reviewed by: [signature] 6/18/14

DATA SHEET 2

TRITIUM SAMPLING AND CALCULATIONS FOR WATER SAMPLES

1. Sample Information:
   Sample Point: STP Ejector
   Collection Date/Time: 6-7-14 @ 2100
   Sample by: JG

2. Analysis Data:
   Sample Analysis Date: 6-8-14
   Days of Sample Decay: <1
   Circle Instrument Used 2550TR #1 (2900TR #2)
   Protocol Used: 3 LLD: 1965 pCi/L

3. Count Data:
   Sample #1 cpm 53.13 dpm: N/A µCi/g: 2.281E-5
   Sample #2 cpm 54.91 dpm: N/A µCi/g: 2.375E-5
   Sample #3 cpm 57.47 dpm: N/A µCi/g: 2.501E-5

4. Sample Activity:

NOTE:	$\frac{1\mu Ci}{g}$	=	$\frac{10^9\ pCi}{L}$

4.1 Average Sample Activity (uncorrected), µCi/g: 2.386E-5 x 1.0E9= 23855 pCi/L

4.2 **If** sample is not analyzed within 7 days of collection, **then DECAY** correct activity as follows:

Uncorrected Average Sample Activity * $e^{(\ln 2/12.35)*(\text{days since sampling}/365\ 25)}$

4.3 Decay corrected ^3H activity = N/A µCi/g x 1.0E9= N/A pCi/L
(**If** samples are analyzed within 7 days of collection, **then ENTER** N/A.)

Performed by: N/A Date: 6-8-14

Data Entry (µCi/g)by: N/A Date: N/A

Reviewed by: 6/9/14

SRRS# 2K.100

DATA SHEET 2

TRITIUM SAMPLING AND CALCULATIONS FOR WATER SAMPLES

1. Sample Information:
   Sample Point: Domestic Water (MW05)
   Collection Date/Time: 6-7-14 @ 2205
   Sample by: INB

2. Analysis Data:
   Sample Analysis Date: 6-8-14
   Days of Sample Decay: < 1
   Circle Instrument Used 2550TR #1 (2900TR #2)
   Protocol Used: 3 LLD: 1965 pCi/L

3. Count Data:
   Sample #1 cpm 0.97 dpm: N/A µCi/g: 4.095E-7
   Sample #2 cpm 1.96 dpm: N/A µCi/g: 8.311E-7
   Sample #3 cpm 0 dpm: N/A µCi/g: 0

4. Sample Activity:

NOTE:	$\frac{1\mu Ci}{g}$	=	$\frac{10^9\ pCi}{L}$

4.1 Average Sample Activity (uncorrected), µCi/g: 4.135E-7 x 1.0E9= 413.5 pCi/L

4.2 **If** sample is not analyzed within 7 days of collection, **then DECAY** correct activity as follows:

Uncorrected Average Sample Activity * $e^{(\ln 2/12.35)*(\text{days since sampling}/365.25)}$

4.3 Decay corrected ^3H activity = N/A µCi/g x 1.0E9= N/A pCi/L
(**If** samples are analyzed within 7 days of collection, **then ENTER** N/A.)

Performed by: INB Date: 6-8-14

Data Entry (µCi/g)by: N/A Date: N/A

Reviewed by: 6/8/14

SRRS# 2K.100

DATA SHEET 2

TRITIUM SAMPLING AND CALCULATIONS FOR WATER SAMPLES

1. Sample Information:
   Sample Point: STP Sand Filter Effluent
   Collection Date/Time: 6-7-14 @ 2230
   Sample by: INB

2. Analysis Data:
   Sample Analysis Date: 6-8-14
   Days of Sample Decay: < 1
   Circle Instrument Used 2550TR #1 (2900TR #2)
   Protocol Used: 3 LLD: 1965 pCi/L

3. Count Data:
   Sample #1 cpm 106.78 dpm: N/A µCi/g: 4.496E-5
   Sample #2 cpm 95.96 dpm: N/A µCi/g: 4.084E-5
   Sample #3 cpm _____ dpm: N/A µCi/g: 3.876E-5

4. Sample Activity:

NOTE:	$\frac{1\mu Ci}{g}$	=	$\frac{10^9\ pCi}{L}$

4.1 Average Sample Activity (uncorrected), µCi/g: 4.152E-5 x 1.0E9= 41520 pCi/L

4.2 **If** sample is not analyzed within 7 days of collection, **then DECAY** correct activity as follows:

Uncorrected Average Sample Activity * $e^{(\ln 2/12.35)*(\text{days since sampling}/365.25)}$

4.3 Decay corrected ^3H activity = N/A µCi/g x 1.0E9= N/A pCi/L
(**If** samples are analyzed within 7 days of collection, **then ENTER** N/A.)

Performed by: INB Date: 6-8-14

Data Entry (µCi/g)by: N/A Date: N/A

Reviewed by: [signature] 6/8/14

SRRS# 2K.100

DATA SHEET 2

TRITIUM SAMPLING AND CALCULATIONS FOR WATER SAMPLES

1. Sample Information:

   Sample Point: STP Effluent

   Collection Date/Time: 6-7-14 @ 2232

   Sample by: MB

2. Analysis Data:

   Sample Analysis Date: 6-8-14

   Days of Sample Decay: < 1

   Circle Instrument Used 2550TR #1 (2900TR #2)

   Protocol Used: 3 LLD: 1965 pCi/L

3. Count Data:

   Sample #1 cpm 99.27 dpm: N/A µCi/g: ~~4.167E-5~~ 4.167E-5

   Sample #2 cpm 89.10 dpm: N/A µCi/g: ~~3.781E-5~~ 3.781E-5

   Sample #3 cpm 99.42 dpm: N/A µCi/g: 4.233E-5

4. Sample Activity:

NOTE:	$\frac{1\mu Ci}{g}$	=	$\frac{10^9\ pCi}{L}$

4.1 Average Sample Activity (uncorrected), µCi/g: 4.060E-5 x 1.0E9= 40600 pCi/L

4.2 **If** sample is not analyzed within 7 days of collection, **then DECAY** correct activity as follows:

Uncorrected Average Sample Activity * $e^{(\ln 2/12.35)*(\text{days since sampling}/365.25)}$

4.3 Decay corrected ^3H activity = N/A µCi/g x 1.0E9= N/A pCi/L
(**If** samples are analyzed within 7 days of collection, **then ENTER** N/A.)

Performed by: MB Date: 6-8-14

Data Entry (µCi/g)by: N/A Date: N/A

Reviewed by: 6/18/14

DATA SHEET 2

TRITIUM SAMPLING AND CALCULATIONS FOR WATER SAMPLES

1. Sample Information:
   Sample Point: DSP-150
   Collection Date/Time: 6-9-14/0520
   Sample by: [signature]

2. Analysis Data:
   Sample Analysis Date: 6.9.14
   Days of Sample Decay: 0
   Circle Instrument Used (2550TR #1) 2900TR #2
   Protocol Used: 17 LLD: 736 pCi/L

3. Count Data:
   Sample #1 cpm 0 dpm: 0 µCi/g: 0
   Sample #2 cpm 0 dpm: 1 µCi/g: 0.0000002
   Sample #3 cpm 1 dpm: 3 µCi/g: 0.0000003

4. Sample Activity:

NOTE:	$\frac{1\mu Ci}{g}$	=	$\frac{10^9\ pCi}{L}$

4.1 Average Sample Activity (uncorrected), µCi/g: 0.0000002 x 1.0E9= 200 (<736) pCi/L

4.2 **If** sample is not analyzed within 7 days of collection, **then DECAY** correct activity as follows:

Uncorrected Average Sample Activity * $e^{(\ln 2/12.35)*(\text{days since sampling}/365.25)}$

4.3 Decay corrected ^3H activity = N/A µCi/g x 1.0E9= N/A pCi/L
(**If** samples are analyzed within 7 days of collection, **then ENTER** N/A.)

Performed by: [signature] Date: 6.9.14

Data Entry (µCi/g)by: N/A Date: N/A

Reviewed by: PS 6-11-14

DATA SHEET 2

TRITIUM SAMPLING AND CALCULATIONS FOR WATER SAMPLES

1. Sample Information:

   Sample Point: CBG

   Collection Date/Time: 6-9-14/0045

   Sample by: R

2. Analysis Data:

   Sample Analysis Date: 6-9-14

   Days of Sample Decay: 0

   Circle Instrument Used (2550TR #1) 2900TR #2

   Protocol Used: 3 LLD: 2000 pCi/L

3. Count Data:

   Sample #1 cpm 174 dpm: 665 µCi/g: 0.0000749

   Sample #2 cpm 179 dpm: 687 µCi/g: 0.0000774

   Sample #3 cpm 172 dpm: 660 µCi/g: 0.0000743

4. Sample Activity:

NOTE:	$\frac{1\mu Ci}{g}$	=	$\frac{10^9\ pCi}{L}$

4.1 Average Sample Activity (uncorrected), µCi/g: 0.0000753 x 1.0E9= ~~74,900~~ 75,500 pCi/L

4.2 **If** sample is not analyzed within 7 days of collection, **then DECAY** correct activity as follows:

Uncorrected Average Sample Activity * $e^{(\ln 2/12.35)*(\text{days since sampling}/365.25)}$

4.3 Decay corrected ^3H activity = N/A µCi/g x 1.0E9= N/A pCi/L
(If samples are analyzed within 7 days of collection, **then ENTER** N/A.)

Performed by: [signature] Date: 6-9-14

Data Entry (µCi/g)by: N/A Date: N/A

Reviewed by: [signature] 6-11-14

DATA SHEET 2

TRITIUM SAMPLING AND CALCULATIONS FOR WATER SAMPLES

1. Sample Information:
   Sample Point: DSP-140
   Collection Date/Time: 6-9-14/0030
   Sample by: [signature]

2. Analysis Data:
   Sample Analysis Date: 6.9.14
   Days of Sample Decay: 0
   Circle Instrument Used (2550TR #1) 2900TR #2
   Protocol Used: 17 LLD: 736 pCi/L

3. Count Data:
   Sample #1 cpm 18 dpm: 70 µCi/g: 0.0000079
   Sample #2 cpm 20 dpm: 77 µCi/g: 0.0000087
   Sample #3 cpm 18 dpm: 70 µCi/g: 0.0000079

4. Sample Activity:

NOTE:	$\frac{1\mu Ci}{g}$	=	$\frac{10^9\ pCi}{L}$

4.1 Average Sample Activity (uncorrected), µCi/g: 0.0000082 x 1.0E9= 8200 pCi/L

4.2 **If** sample is not analyzed within 7 days of collection, **then DECAY** correct activity as follows:

Uncorrected Average Sample Activity * $e^{(\ln 2/12.35)*(\text{days since sampling}/365.25)}$

4.3 Decay corrected ^3H activity = N/A µCi/g x 1.0E9= N/A pCi/L
(**If** samples are analyzed within 7 days of collection, **then ENTER** N/A.)

Performed by: [signature] Date: 6.9.14

Data Entry (µCi/g)by: N/A Date: N/A

Reviewed by: RS 6-11-14

DATA SHEET 2

TRITIUM SAMPLING AND CALCULATIONS FOR WATER SAMPLES

1. Sample Information:

   Sample Point: CBR

   Collection Date/Time: 6-8-14 6-9-14 / 0025

   Sample by: R

2. Analysis Data:

   Sample Analysis Date: 6-9-14

   Days of Sample Decay: 0

   Circle Instrument Used (2550TR #1) 2900TR #2

   Protocol Used: 3 LLD: 2000 pCi/L

3. Count Data:

   Sample #1 cpm Ø dpm: Ø µCi/g: Ø

   Sample #2 cpm Ø dpm: Ø µCi/g: Ø

   Sample #3 cpm 3 dpm: 10 µCi/g: 0.00000011

4. Sample Activity:

NOTE:	$\frac{1\mu Ci}{g}$	=	$\frac{10^9\ pCi}{L}$

4.1 Average Sample Activity (uncorrected), µCi/g: 0.00000083 x 1.0E9= 300 (2000) pCi/L

4.2 **If** sample is not analyzed within 7 days of collection, **then DECAY** correct activity as follows:

Uncorrected Average Sample Activity * $e^{(\ln 2/12.35)*(\text{days since sampling}/365.25)}$

4.3 Decay corrected ^3H activity = N/A µCi/g x 1.0E9= N/A pCi/L
(**If** samples are analyzed within 7 days of collection, **then ENTER** N/A.)

Performed by: [signature] Date: 6.9.14

Data Entry (µCi/g)by: N/A Date: N/A

Reviewed by: RS 6-11-14

SRRS# 2K.100

DATA SHEET 2

TRITIUM SAMPLING AND CALCULATIONS FOR WATER SAMPLES

1. Sample Information:

   Sample Point: MW-DN-1135

   Collection Date/Time: 6-9-14/0230

   Sample by: [signature]

2. Analysis Data:

   Sample Analysis Date: 6-9-14

   Days of Sample Decay: 0

   Circle Instrument Used 2550TR #1 (2900TR #2)

   Protocol Used: 2 LLD: 957 pCi/L

3. Count Data:

   Sample #1 cpm 0 dpm: 0 µCi/g: 0

   Sample #2 cpm 0 dpm: 0 µCi/g: 0

   Sample #3 cpm 0 dpm: 0 µCi/g: 0

4. Sample Activity:

NOTE:	$\frac{1\mu Ci}{g}$	=	$\frac{10^9\ pCi}{L}$

4.1 Average Sample Activity (uncorrected), µCi/g: 0 x 1.0E9= 0 (957) pCi/L

4.2 **If** sample is not analyzed within 7 days of collection, **then DECAY** correct activity as follows:

Uncorrected Average Sample Activity * $e^{(\ln 2/12.35)*(\text{days since sampling}/365.25)}$

4.3 Decay corrected ^3H activity = N/A µCi/g x 1.0E9= N/A pCi/L
(**If** samples are analyzed within 7 days of collection, **then ENTER** N/A.)

Performed by: PS for MM Date: 6-9-14

Data Entry (µCi/g)by: N/A Date: N/A

Reviewed by: PS 6-11-14

SRRS# 2K.100

DATA SHEET 2

TRITIUM SAMPLING AND CALCULATIONS FOR WATER SAMPLES

1. Sample Information:

   Sample Point: MW-DN-1025

   Collection Date/Time: 6-9-14/0300

   Sample by: [illegible]

2. Analysis Data:

   Sample Analysis Date: 6-9-14

   Days of Sample Decay: 0

   Circle Instrument Used 2550TR #1 (2900TR #2)

   Protocol Used: 2 LLD: 957 pCi/L

3. Count Data:

   Sample #1 cpm 0 dpm: 0 µCi/g: 0

   Sample #2 cpm 0 dpm: 0 µCi/g: 0

   Sample #3 cpm 0 dpm: 0 µCi/g: 0

4. Sample Activity:

NOTE:	$\frac{1\mu Ci}{g}$	=	$\frac{10^9\ pCi}{L}$

4.1 Average Sample Activity (uncorrected), µCi/g: 0 x 1.0E9= 0 (957) pCi/L

4.2 **If** sample is not analyzed within 7 days of collection, **then DECAY** correct activity as follows:

Uncorrected Average Sample Activity * $e^{(\ln 2/12.35)*(\text{days since sampling}/365.25)}$

4.3 Decay corrected ^3H activity = N/A µCi/g x 1.0E9= N/A pCi/L
(**If** samples are analyzed within 7 days of collection, **then ENTER** N/A.)

Performed by: [signature] Date: 6-9-14

Data Entry (µCi/g)by: N/A Date: N/A

Reviewed by: [signature] 6-11-14

DATA SHEET 2

TRITIUM SAMPLING AND CALCULATIONS FOR WATER SAMPLES

1. Sample Information:
   Sample Point: DSP-1155
   Collection Date/Time: 6-8-14 / 2305
   Sample by: R

2. Analysis Data:
   Sample Analysis Date: 6-9-14
   Days of Sample Decay: 0
   Circle Instrument Used 2550TR #1 (2900TR #2)
   Protocol Used: 2 LLD: 957 pCi/L

3. Count Data:
   Sample #1 cpm 0 dpm: N/A µCi/g: 0
   Sample #2 cpm 0 dpm: N/A µCi/g: 0
   Sample #3 cpm 0 dpm: N/A µCi/g: 0

4. Sample Activity:

NOTE:	$\frac{1\mu Ci}{g}$	=	$\frac{10^9\ pCi}{L}$

4.1 Average Sample Activity (uncorrected), µCi/g: 0 x 1.0E9= 0 pCi/L

4.2 **If** sample is not analyzed within 7 days of collection, **then DECAY** correct activity as follows:

Uncorrected Average Sample Activity * $e^{(\ln 2/12.35)*(\text{days since sampling}/365.25)}$

4.3 Decay corrected ^3H activity = N/A µCi/g x 1.0E9= N/A pCi/L
(If samples are analyzed within 7 days of collection, **then ENTER** N/A.)

Performed by: EK Date: 6-9-14

Data Entry (µCi/g)by: RS N/A Date: N/A

Reviewed by: RS 6-11-14

DATA SHEET 2

TRITIUM SAMPLING AND CALCULATIONS FOR WATER SAMPLES

1. Sample Information:
   Sample Point: 107
   Collection Date/Time: 6·10·14 / 0350
   Sample by: Mroczek

2. Analysis Data:
   Sample Analysis Date: 6-10-14
   Days of Sample Decay: <1
   Circle Instrument Used 2550TR #1 (2900TR #2)
   Protocol Used: 3 LLD: 1965 pCi/L

3. Count Data:
   Sample #1 cpm 188.82 dpm: N/A µCi/g: $8.065E^{-5}$
   Sample #2 cpm 185.29 dpm: N/A µCi/g: $7.954E^{-5}$
   Sample #3 cpm 181.33 dpm: N/A µCi/g: $7.791E^{-5}$

4. Sample Activity:

NOTE:	$\frac{1\mu Ci}{g}$	=	$\frac{10^9\ pCi}{L}$

4.1 Average Sample Activity (uncorrected), µCi/g: $7.937E^{-5}$ x 1.0E9= 79,370 pCi/L

4.2 **If** sample is not analyzed within 7 days of collection, **then DECAY** correct activity as follows:

Uncorrected Average Sample Activity * $e^{(\ln 2/12\ 35)*(\text{days since sampling}/365\ 25)}$

4.3 Decay corrected ^3H activity = N/A µCi/g x 1.0E9= N/A pCi/L
(**If** samples are analyzed within 7 days of collection, **then ENTER** N/A.)

Performed by: EK Date: 6-10-14

Data Entry (µCi/g)by: N/A Date: N/A

Reviewed by: PS 6-11-14

DATA SHEET 2

TRITIUM SAMPLING AND CALCULATIONS FOR WATER SAMPLES

1. Sample Information:
   Sample Point: 'B' CST HOLE
   Collection Date/Time: 6-10-14 / 0235
   Sample by: Mroczek

2. Analysis Data:
   Sample Analysis Date: 6-10-14
   Days of Sample Decay: <1
   Circle Instrument Used 2550TR #1 (2900TR #2)
   Protocol Used: 4 LLD: N/A pCi/L

3. Count Data:
   Sample #1 cpm 3465 dpm: N/A µCi/g: $1.242E^{-3}$
   Sample #2 cpm 3510 dpm: N/A µCi/g: $1.274E^{-3}$
   Sample #3 cpm 3534 dpm: N/A µCi/g: $1.288E^{-3}$

4. Sample Activity:

NOTE:	$\frac{1\mu Ci}{g}$	=	$\frac{10^9\ pCi}{L}$

4.1 Average Sample Activity (uncorrected), µCi/g: $1.268E^{-3}$ x 1.0E9= 1,268,000 pCi/L

4.2 **If** sample is not analyzed within 7 days of collection, **then DECAY** correct activity as follows:

Uncorrected Average Sample Activity * $e^{(\ln 2/12.35)*(\text{days since sampling}/365.25)}$

4.3 Decay corrected ^3H activity = N/A µCi/g x 1.0E9= N/A pCi/L
(**If** samples are analyzed within 7 days of collection, **then ENTER** N/A.)

Performed by: EK Date: 6-10-14

Data Entry (µCi/g)by: N/A Date: N/A

Reviewed by: PS 6-11-14

DATA SHEET 2

TRITIUM SAMPLING AND CALCULATIONS FOR WATER SAMPLES

1. Sample Information: EK 6-10-14
   Sample Point: ~~SS108~~ SS105
   Collection Date/Time: 6-9-14 / 2145
   Sample by: FH

2. Analysis Data:
   Sample Analysis Date: 6-10-14
   Days of Sample Decay: <1
   Circle Instrument Used 2550TR #1 (2900TR #2)
   Protocol Used: 3 LLD: 1965 pCi/L

3. Count Data:
   Sample #1 cpm 1228.78 dpm: N/A µCi/g: $5.932E^{-4}$
   Sample #2 cpm 1235.24 dpm: N/A µCi/g: $6.032E^{-4}$
   Sample #3 cpm 1237.68 dpm: N/A µCi/g: $6.055E^{-4}$

4. Sample Activity:

NOTE:	$\frac{1\mu Ci}{g}$	=	$\frac{10^9\ pCi}{L}$

4.1 Average Sample Activity (uncorrected), µCi/g: $6.006E^{-4}$ x 1.0E9= 600,600 pCi/L

4.2 If sample is not analyzed within 7 days of collection, **then DECAY** correct activity as follows:

Uncorrected Average Sample Activity * $e^{(\ln 2/12.35)*(\text{days since sampling}/365.25)}$

4.3 Decay corrected ^3H activity = N/A µCi/g x 1.0E9= N/A pCi/L
(If samples are analyzed within 7 days of collection, **then ENTER** N/A.)

Performed by: EK Date: 6-10-14

Data Entry (µCi/g)by: N/A Date: N/A

Reviewed by: 6-11-14

SRRS# 2K.100

DATA SHEET 2

TRITIUM SAMPLING AND CALCULATIONS FOR WATER SAMPLES

1. Sample Information:

   Sample Point: MUDS MH

   Collection Date/Time: 6-9-14 / 2140

   Sample by: FH

2. Analysis Data:

   Sample Analysis Date: 6-10-14

   Days of Sample Decay: <1

   Circle Instrument Used 2550TR #1 (2900TR #2)

   Protocol Used: 3 LLD: 1965 pCi/L

3. Count Data:

   Sample #1 cpm 34.41 dpm: N/A µCi/g: $1.550E^{-5}$

   Sample #2 cpm 39.17 dpm: N/A µCi/g: $1.781E^{-5}$

   Sample #3 cpm 36.41 dpm: N/A µCi/g: $1.651E^{-5}$

4. Sample Activity:

NOTE:	$\frac{1\mu Ci}{g}$	=	$\frac{10^9\ pCi}{L}$

4.1 Average Sample Activity (uncorrected), µCi/g: $1.661E^{-5}$ x 1.0E9= 16,610 pCi/L

4.2 **If** sample is not analyzed within 7 days of collection, **then DECAY** correct activity as follows:

Uncorrected Average Sample Activity * $e^{(\ln 2/12.35)*(\text{days since sampling}/365.25)}$

4.3 Decay corrected ^3H activity = N/A µCi/g x 1.0E9= N/A pCi/L
(**If** samples are analyzed within 7 days of collection, **then ENTER** N/A.)

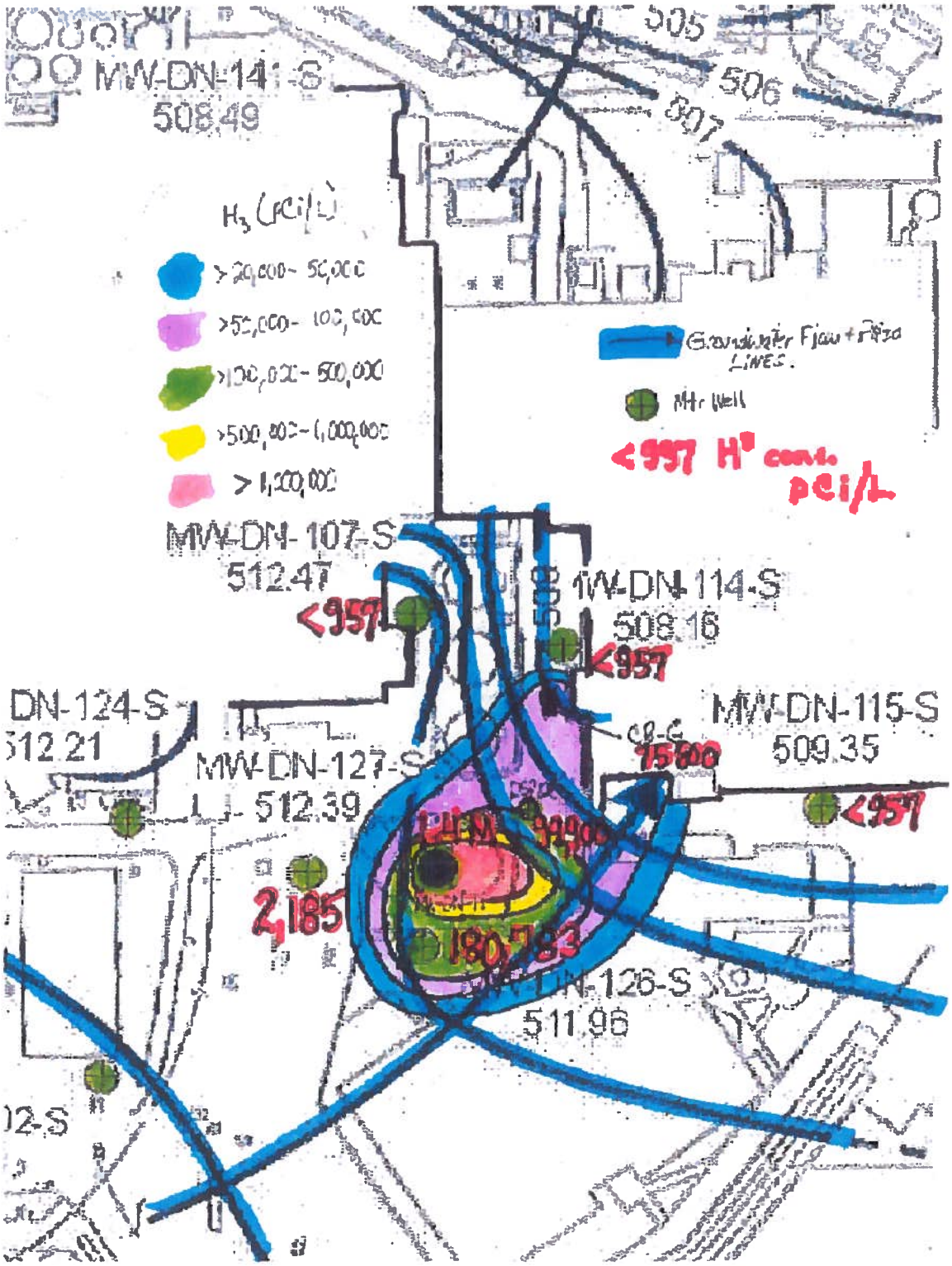
Performed by: EK Date: 6-10-14

Data Entry (µCi/g)by: N/A Date: N/A

Reviewed by: 6-11-14

Attachment 2
Map showing the locations of samples taken to confirm the release

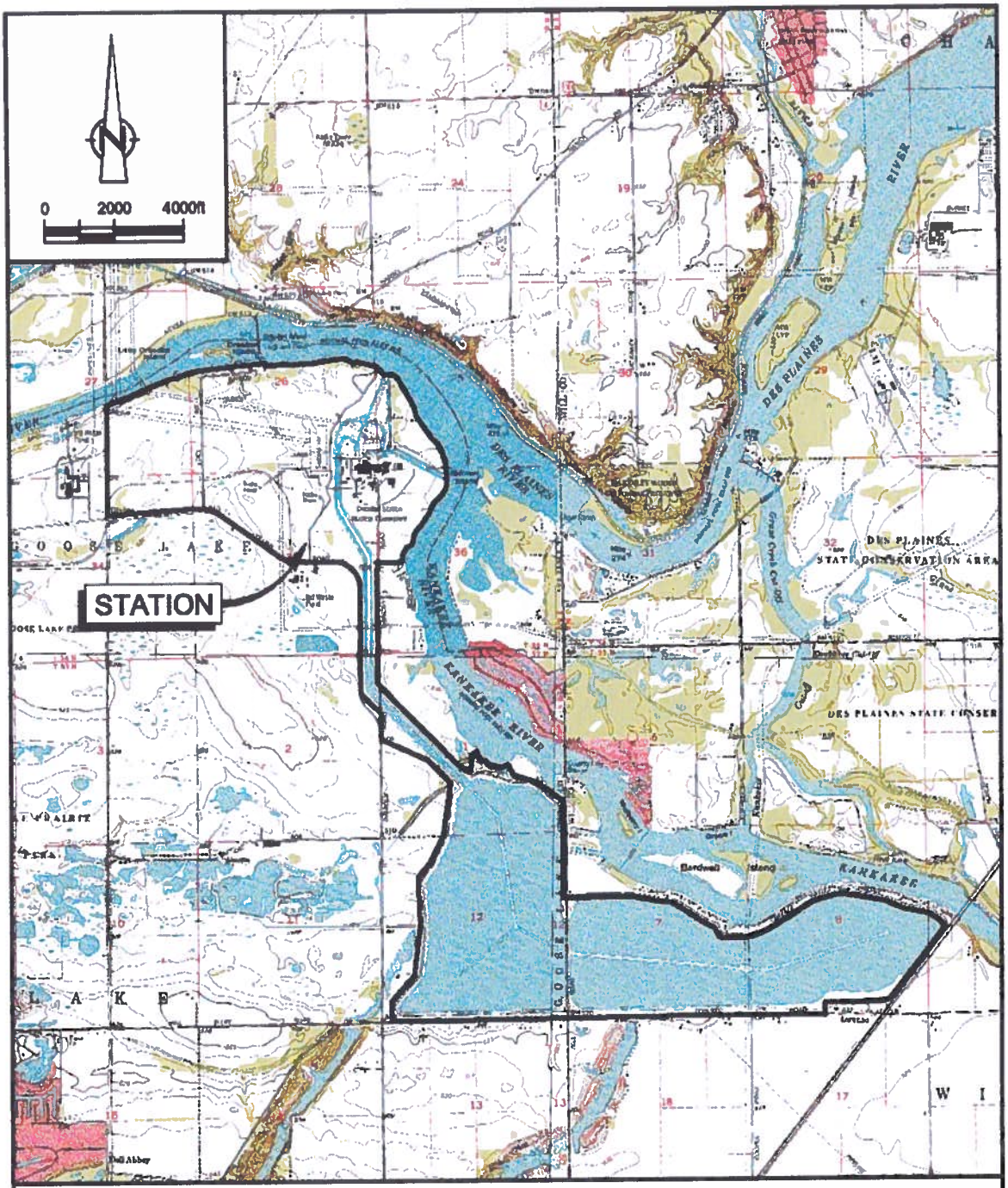
Initial Sample Location Map



Attachment 3
Map showing the groundwater flow direction and groundwater contours

Attachment 4

Map showing the boundary of the licensee controlled area, and structures, roads, and other surface features



SOURCE: USGS QUADRANGLE MAP;
DRESDEN MOSAIC, ILLINOIS
1986 (EDITED: 1991)

figure 1.1

STATION LOCATION MAP
DRESDEN GENERATING STATION
EXELON GENERATION COMPANY, LLC
Morris, Illinois

Exelon

45136-23(015)GN-WA055 AUG 30/2006