



January 29, 2015

VIA EMAIL & MAIL

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Nunavut Impact Review Board
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Dear All:

Re: Kiggavik Project Field Program 2014 Annual Report

AANDC Land Use Permit N2014C0001
KIA Land Use Licence KVL306C02
NWB Water Licence 2BE-KIG1318

Please find enclosed, the 2014 AREVA Resources Canada Inc. (AREVA) Annual Report for the Kiggavik Project exploration field program. The hard copies of these documents have been sent via regular mail. AREVA believes this annual report provides a comprehensive summary of the activities conducted and fulfills the Nunavut Impact Review Board (NIRB) screening decision Condition 5, Aboriginal Affairs and Northern Development Canada (AANDC) permit condition No. 6, and Nunavut Water Board (NWB) Licence Part B, Item 2. Should you have any questions or comments, please do not hesitate to contact myself at 306-343-4035, Naomi.Stumborg@areva.ca, or John Robbins at 306-343-4513, John.Robbins@areva.com.

Regards,

Naomi Stumborg
Exploration Safety, Health, Environment and Quality (SHEQ) Supervisor

Enclosure: Kiggavik Project Field Program 2014 Annual Report
cc: Workers' Safety and Compensation Commission
AREVA Distribution



2014



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AREVA Resources Canada Inc.

KIGGAVIK PROJECT FIELD PROGRAM

2014 ANNUAL REPORT

Date of issue: January 2015




Kiggavik Project Field Program

2014 Annual Report

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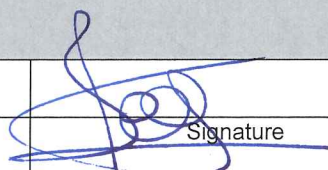
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EXECUTIVE SUMMARY

The following Annual Report provides a summary of the 2014 Kiggavik Project exploration field program conducted by AREVA Resources Canada Inc. (AREVA). This submission is required by Part B, Item 2 of Licence no. 2BE-KIG1318 issued by the Nunavut Water Board (NWB) and condition six of the Land Use Permit N2014C0001 issued by Aboriginal Affairs and Northern Development Canada (AANDC).

The 2014 field program included geophysical surveys to identify potential areas for further exploration and drilling operations to evaluate areas for potential uranium mineralization. Operations were based out of the Kiggavik camp with support provided by helicopter services and the Baker Lake office. The Kiggavik camp was opened on June 9, 2014 and operations were complete and camp closed by September 4, 2014. During this period, a total of 11,161 metres were drilled in 45 drill holes using diamond core equipment.

The Kiggavik Project Management Plans were implemented throughout the season to prevent or reduce any potential adverse effects from exploration activities. AREVA also maintained its ISO 14001:2004 and OHSAS 18001:2007 certifications for the Integrated Management System. Occupational health, safety and radiation protection programs were implemented to ensure workers performed in a safe and responsible manner and were not exposed to adverse effects from uranium exploration activities. There were no lost time incidents involving AREVA personnel or contractors. A community engagement program was carried out to support all aspects of the Kiggavik Project, including the exploration field program. The Management Plans and Integrated Management System were effective in guiding the exploration operations toward a successful season.

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1 Summary of Kiggavik 2014 Field Program

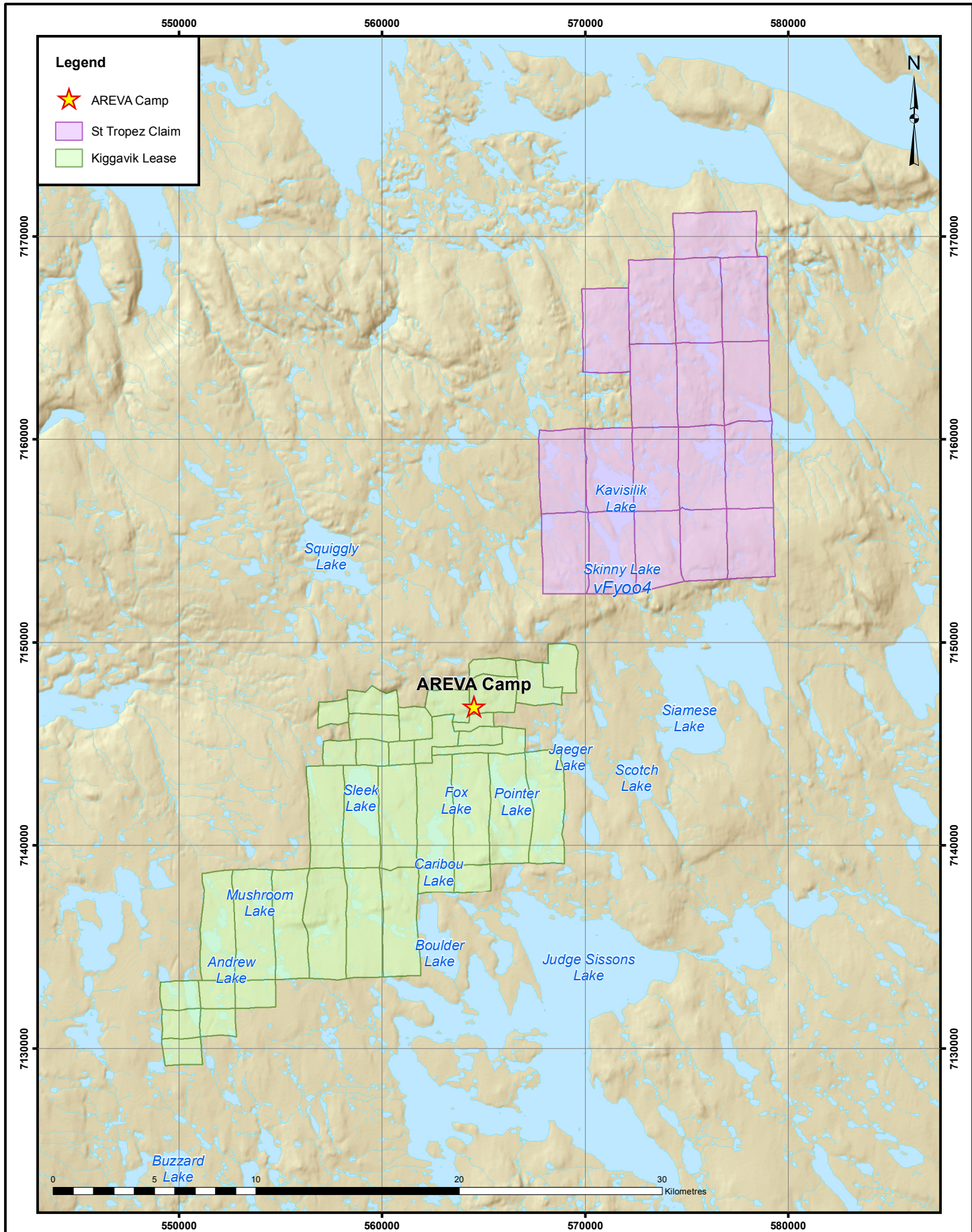
1.1 General

The Kiggavik uranium exploration project (Kiggavik Project) is located 80 kilometres (km) west of Baker Lake, Nunavut and is operated by AREVA Resources Canada Inc. (AREVA). The project includes the Kiggavik mineral leases and the St. Tropez claims which will be converted to lease in 2015 (See Figure 1.1-1). During the 2014 field program, AREVA and its contractors completed 11,161 metres (m) of exploration drilling on the Kiggavik lease. Ground gravity and magnetic VLF geophysics were completed on seven grid areas for a total of 631.65 km. An airborne electromagnetic survey was conducted on three grids for a total of 362.3 km. No prospecting, geological mapping, thermistor installation or packer-testing were conducted.

Operations were based out of the Kiggavik camp which opened on June 9, 2014. The remaining drilling and support staff mobilized to site June 12 and June 16 to support drilling operations which commenced June 14, 2014. The camp accommodated a maximum of 45 persons with an average of 33 persons during the season. Support was provided by the Baker Lake office and transport was provided by helicopter services. Drilling was complete September 1 and camp closed by September 4, 2014. Main Project contributors are shown in Table 1.1-1.

Table 1.1-1: Kiggavik Project Contributors

Activity	Contributors
Management	AREVA
Environment, Safety and Radiation Protection	AREVA
Geological logging and probing	AREVA
Camp Operations & Maintenance	AREVA & Peter's Expediting Ltd.
Wildlife Monitoring	AREVA & Peter's Expediting Ltd.
Expediting	AREVA, Peter's Expediting Ltd.
Fuel and other Overland Transportation	Peter's Expediting Ltd.
Drilling	Boart Longyear
Helicopter and Logistics	Kivallingmiut Aviation (Great Slave Helicopters)
Occupational First Aid & Catering	5136 Nunavut Ltd (1984 Inc.)
Ground Geophysics – ground gravity survey	MWH Geo-Surveys Inc.
Ground Geophysics – Magnetics/VLF	AREVA
Aerial Geophysics – VTEM plus survey	Aeroquest Airborne - Geotech



Projection: NAD 1983 UTM Zone 14N
 Compiled: C. Courant Drawn: C. Courant
 Date: 12/15/2014 Scale: Scalebar
 File: K101A033
 Data Sources: Natural Resources Canada, Geobase®, Nation
 Topographic Database, AREVA Resources Canada
 Inc.

FIGURE 1.1-1
 KIGGAVIK LEASES AND
 ST. TROPEZ BOUNDARIES

2014 KIGGAVIK Annual Report

**KIGGAVIK
 PROJECT**



1.2 Drilling, Sampling and Testing

Geological exploration was primarily reconnaissance drilling in the Bong South, Kiggavik East, End East, Roughland Trend, 85W, Sleet Lake, Igloo West, Muskox Grid, Jane Extension and the Contact Grid (See Figure 1.2-1).

As per the NWB Licence, Part F, Item 7, AREVA must record the depth of permafrost where drilling activity has penetrated below the permafrost layer. The pneumatic packer testing and installation of thermistors was not necessary in 2014, as these are activities specific to mine development. As further mine development activities are conducted, the relevant data will be provided in subsequent annual reports.

All drill core was logged and core samples (non-mineralized and mineralized) were collected for laboratory testing. Refer to Table 1.2-1 for a summary of the 2014 drilling program.

Table 1.2-1: Summary of 2014 Drill Holes

HOLE ID	Zone	UTM X Easting	UTM Y Northing	Azimuth /Dip	Start	Finish	Depth (m)
KE-07	Kiggavik East	569060	7149457	140/-80	June 14	June 18	255
KE-08	Kiggavik East	567205	7147715	150/-80	June 18	June 22	303
KE-09	Kiggavik East	567036	7147843	150/-80	June 22	June 25	255
KE-10	Kiggavik East	568314	7149133	180/-75	June 25	June 30	291
KE-11	Kiggavik East	568299	7148297	100/-80	July 2	July 7	180
BONG-064	Bong	562285	7143687	110/-80	July 8	July 11	279
BONG-065	Bong	562189	7143711	110/-80	July 11	July 14	201
BONG-065A	Bong	562189	7143711	110/-80	July 14	July 19	378
BONG-066	Bong	562255	7143799	110/-70	July 20	July 24	369
RHLD-05	Roughland Trend	560801	7139985	165/-80	June 17	June 21	279
RHLD-06	Roughland Trend	560248	7139519	165/-80	June 22	June 26	111
RHLD-07	Roughland Trend	558809	7138853	170/-80	June 27	June 30	291
RHLD-08	Roughland Trend	558180	7138591	330/-80	July 2	July 5	255
EE-01	End East	555230	7136022	170/-73	June 18	June 20	141
EE-01A	End East	555230	7136022	170/-68	June 20	June 24	318
EE-02	End East	556821	7136525	350/-80	June 24	June 29	312
EE-03	End East	557420	7136354	180/-80	June 30	July 5	279
EE-04	End East	557918	7136499	170/-80	July 6	July 11	318
EE-05	End East	556030	7135977	360/-80	July 12	July 15	162
CONT-006	Contact	550131	7129700	135/-70	July 16	July 21	252
CONT-007	Contact	550093	7129731	125/-70	July 22	July 29	360
CONT-008	Contact	550168	7129734	125/-70	July 30	Aug 5	249
CONT-009	Contact	550168	7129734	125/-50	Aug 5	Aug 08	248
CONT-010	Contact	550095	7129664	125/-70	Aug 10	Aug 13	274
CONT-011	Contact	550095	7129664	125/-55	Aug 13	Aug 15	165

HOLE ID	Zone	UTM X Easting	UTM Y Northing	Azimuth /Dip	Start	Finish	Depth (m)
CONT-012	Contact	550045	7129637	125/-75	Aug 16	Aug 21	264
CONT-013	Contact	550184	7129729	180/-68	Aug 21	Aug 23	173
CONT-014	Contact	550034	7130247	355/-70	Aug 24	Aug 28	261
CONT-015	Contact	550254	7130421	285/-75	Aug 28	Sept 1	234
SLEK-017	Sleek Lake	556845	7138121	330/-80	July 6	July 12	327
SLEK-018	Sleek Lake	557275	7138388	165/-80	July 12	July 20	39
SLEK-019	Sleek Lake	556757	7138574	310/-75	July 20	July 23	201
MO-01	Muskox	556613	7134810	180/-80	July 24	July 30	273
MO-02	Muskox	556217	7134957	180/-80	July 30	Aug 04	246
MO-03	Muskox	557663	7134772	180/-80	Aug 04	Aug 08	225
JE-01	Jane Extension	554410	7132537	180/-75	Aug 08	Aug 13	231
JE-02	Jane Extension	554058	7132478	165/-75	Aug 13	Aug 17	270
85W-04	85W	557636	7144525	165/-80	July 24	July 30	273
85W-05	85W	558171	7143599	090/-80	July 31	Aug 2	66
85W-05A	85W	558171	7143599	090/-75	Aug 2	Aug 6	255
85W-06	85W	558103	7144728	035/-70	Aug 7	Aug 9	225
85W-07	85W	557505	7144693	230/-80	Aug 19	Aug 21	227
85W-08	85W	557736	7144465	230/-80	Aug 21	Aug 23	204
IW-01	Igloo West	560211	7136853	180/-75	Aug 10	Aug 13	273
IW-02	Igloo West	560484	7137000	170/-80	Aug 7	Aug 18	369
TOTAL:							11,161m

1.2.1 Bong South

Results of 2014 program (4 holes/1,227 m):

The holes drilled in 2014 at Bong intersected dominantly metasediments with sporadic moderate to weak alteration. None of the boreholes encountered mineralization.

1.2.2 Kiggavik East

Results of 2014 program (5 holes/1,284 m):

The preliminary results indicate that the drill holes intersected the interpreted geology expected in each of the areas, a massive sequence of quartzite above fresh to altered metasediments. Only **KE-08** intersected intermittent weak to trace mineralization in the metasediments.

1.2.3 End East

Results of 2014 program (6 holes/1,530 m):

All the drill holes along the End East trend consist of moderate to strongly hematized metasediments of the Woodburn Group in the vicinity of major structures. The metasediments

outside of the structural disruption are in general weakly chloritized or fresh. No pervasive secondary alterations are noted except for some narrow halos of bleaching and/or chlorite alteration associated with minor structures. None of the hole drilled at End East in 2014 encountered mineralization.

1.2.4 Roughland Trend

Results of 2014 program (4 holes/936 m):

All the holes along the Roughland trend consist of moderate to strongly hematized metasediments of the Woodburn Group. The holes along the trend intersected minor fault zones that have either hematite or chlorite associated with the structures. Two of the drill holes RHLD-05 and RHLD-07 intersected major structures. These major structures (< 10 metres in size) consist of multiple generations of fluid movement consisting of quartz-hematite rich matrix as well as fine-grained intrusives. The Roughland trend is confirmed as a major fault zone but no uranium products or related alteration types has yet been identified.

1.2.5 85W

Results of 2014 program (6 holes/1,250 m):

The six drill holes completed at 85W encountered essentially Hudsonian granite with lesser amounts of metasediments and minor lamprophyres and syenites. The granite was locally observed pervasively altered with some intermittent mineralization as seen in 85W-04. 85W-04 was the only mineralized hole of this area.

1.2.6 Sleek Lake

Results of 2014 program (3 holes/567 m):

Two of the three holes were successful in being drilled to their intended depth. The targets included testing the ground geophysics as well as the structural interpretation. SLEK-17 intersected a major structure and associated alteration while SLEK-19 did not intersect any structures of interest and with only minor alteration. No mineralization was encountered at Sleek Lake in 2014.

1.2.7 Igloo West

Results of 2014 program (2 holes/642 m):

Drilling at Igloo West in 2014 outlined essentially metasediments with several positive features. Quartz breccias were intersected in IW-01, as they are seen in the deposits in the southern portion of the property as well as trace mineralization being observed in a fault zone as seen in IW-02. IW-01 was not mineralized.

1.2.8 Muskox Grid

Results of 2014 program (3 holes/744 m):

All three holes performed at Muskox grid encountered dominant metasediments. The first hole drilled in the area (MO-01) was prospective with strong alteration seen throughout most of the hole. The other holes (MO-02 and -03) were regional in appearance. None of the holes encountered mineralization.

1.2.9 Jane Extension

Results of 2014 program (2 holes/501 m):

In 2014, the two holes performed at Jane Extension intersected essentially metasediments with local intrusives and quartz breccias. Prospective alterations and structures were seen in the metasediments however no mineralization was encountered.

1.2.10 Contact Grid

Results of 2014 program (10 holes/2,480.2 m):

The ten boreholes performed at Contact Grid in 2014 intersected dominant granitic gneiss with lesser amounts of granite and quartz breccias. Intermittent uranium mineralization associated with moderate to strong alteration was encountered in CONT-06, -08, -10, -11, -12 and -13.

1.3 Geophysics

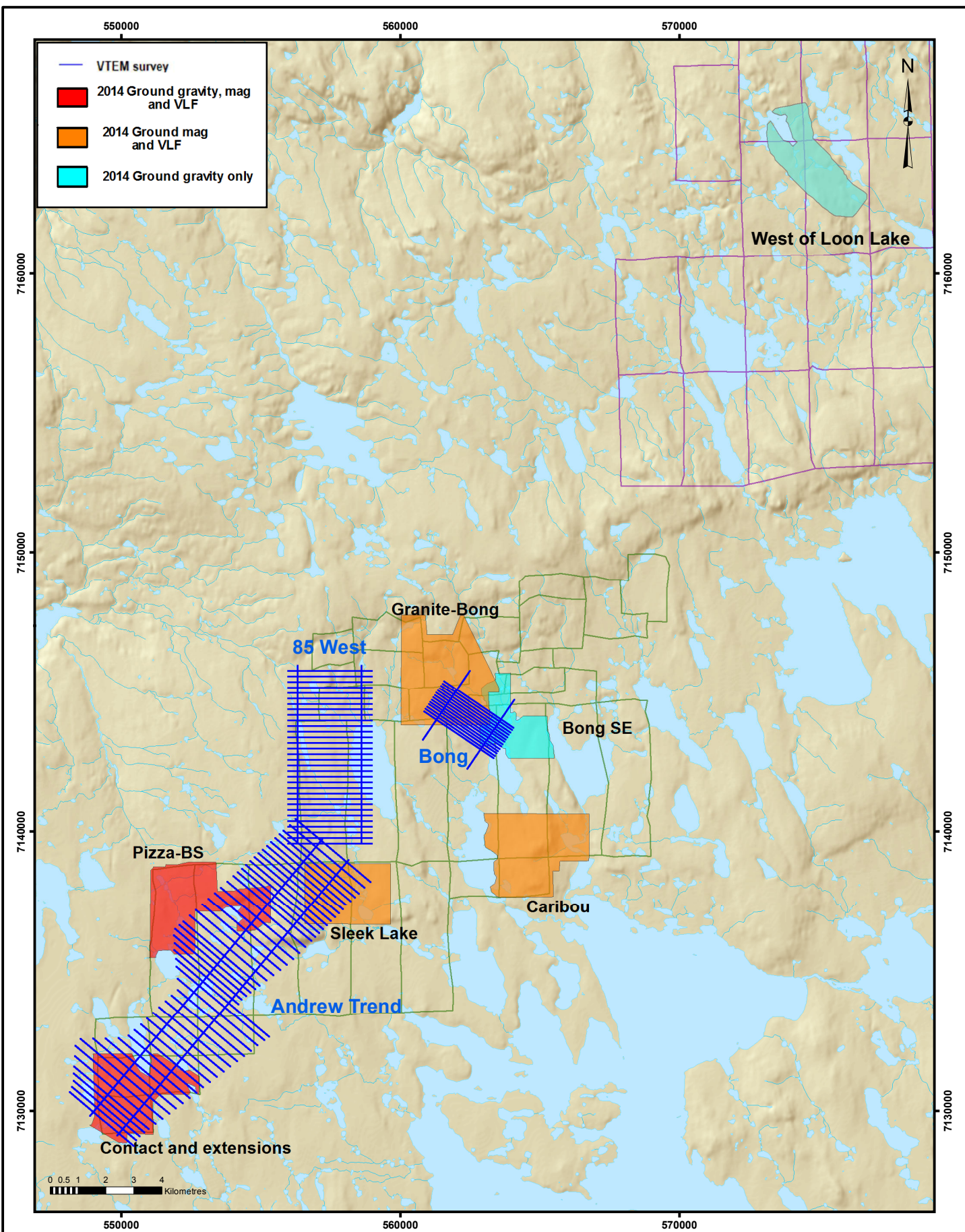
A program of ground geophysics was completed in 2014 on seven different grids as listed in Table 1.3-1: 2014 Ground Geophysics Program. These grids are current areas of interest that do not have ground gravity data but have significant airborne gravity lows or other structural or geophysical signatures of interest (see Figure 1.3-1). MWH Geo-Surveys Inc. was the

contractor who performed the ground gravity while the magnetic and VLF surveys were completed by AREVA personnel.

Table 1.3-1: 2014 Ground Geophysics Program

Area	Gravity (kilometres)	Magnetics & VLF-EM (kilometres)
Pizza-BS grid	72.0	74.70
Bong SE	38.8	0
Contact and extensions	20.0	67.65
Caribou	0	125.20
Granite Bong	0	103.10
Sleek Lake	0	62.10
West of Loon Lake	68.1	0
Total	198.9	432.75

A VTEM plus survey was completed in late September 2014 on the Bong, 85West and Contact, Jane, Andrew trend, a total of 362 line kilometers were flown (See Figure 1.3-1).



Projection: NAD 1983 UTM Zone 14N
 Compiled: M.Behaegel Drawn: C.Courant
 Date: 12/16/2014 Scale: Scalebar
 File: KI02A014
 Data Sources: Natural Resources Canada, Geobase®, Nation
 Topographic Database, AREVA Resources Canada
 Inc.

FIGURE 1.3-1
 2014 GEOPHYSICAL SURVEYS
 2014 KIGGAVIK Annual Report

**KIGGAVIK
 PROJECT**



1.4 Inspections

Inspections of the field activities were carried out by Aboriginal Affairs and Northern Development Canada (AANDC) on July 16, 2014, the Kivalliq Inuit Association (KIA) on September 22, 2014, and the Baker Lake Conservation Officer on August 13, 2014. Refer to Appendix A for further detail regarding compliance.

1.4.1 Aboriginal Affairs and Northern Development Canada

An inspection was conducted by the AANDC Water Resource Officer on July 16, 2014 for the Land Use Permit N2014C0001. The inspectors visited the Kiggavik camp, drilling area, and fuel storage areas. The recommendations and/or concerns were provided in the Water Licence Inspection Report, and are outlined in Table 1.4-1. The inspector did not identify any unacceptable conditions within the camp area.

Table 1.4-1: AANDC Inspection – July 16, 2014

RECOMMENDATIONS/CONCERNS	ACTION TAKEN
1. Rather than averaging maximum drill water capacities, install meters on the intake of the pump to ensure all water that is drawn is measured.	1. Water meters have been ordered for the 2015 season to be installed directly on the water pump.
2. The inspector noted a failure to prevent waste deposition into water when waste entered a small water body in the Bong area (N64° 24' 50.18" W 97° 42' 24.124")	2. AREVA provided both a spill report to regulators and a situational report that discussed the event, immediate measures taken, and a determination of additional long-term measures required to the inspector. Relocation of equipment, sandbag berms, and more frequent inspection were implemented in response to the spill. Further detail is provided in Section 3.4.2.
3. The drill waste area of End grid was observed. This location, though a great distance from a water body	3. The centralization of cuttings was considered best practice to ensure drill cuttings did not migrate toward any water

RECOMMENDATIONS/CONCERNS	ACTION TAKEN
<p>posed a concern to the inspector.</p> <p>The proponent will provide the rationale as to why the centralization of cuttings is best practice and provide more information as to how the location for the current sump was selected.</p>	<p>bodies. The depth of material gradually increased over time because extensive drilling was completed in the area for six years to further delineate the known deposit. Sandbags were used to contain drill waste as well as Curlex Sediment Logs and bark filled filter socks. The purpose of the sediment logs and bark filter socks was for reduced flow, filtration of sediment, and to provide a substrate for re-establishment of vegetation. With little drilling expected in the area and in response to the inspector's concerns, AREVA has begun remediating the site by removing plastic sand bags and spreading the sediment logs and filter socks to create a litter layer for seed establishment. Further detail is provided in Section 3.7.2.1.</p>
<p>4. A drill hole near End grid was noted to have a large hole around the collar. The proponent must include details specific to drill site and drill waste remediation within the revised Abandonment and Reclamation Plan, and the revisions shall be submitted with the 2014 Annual Report.</p>	<p>4. The drill hole identified showed evidence of permafrost degradation and will be reclaimed by placing material within the depression. Further information regarding the standard practice of refilling with clean cuttings is further explained in the revised Abandonment and Restoration Plan (See Appendix C). The large depression identified will require the use of additional fill material. The current proposal is to use gravel and/or clean discharge material to</p>

RECOMMENDATIONS/CONCERNS	ACTION TAKEN
	backfill and remediate the site.
5. A method for treatment of contaminated water from the secondary containment berms must be established.	5. The water accumulated in the secondary containment berms will be placed in the drum allocated for collection of berm water. The contaminated water will then be tested for petroleum hydrocarbon contamination to determine whether transport off site to a licensed disposal facility is required.
6. The proponent will confirm the fuel contractors land authorization number required for the winter resupply/fuel haul to the inspector no later than March 31, 2015.	6. AREVA has confirmed the land authorization number KVRW98F146 for access to Inuit-Owned-Lands (IOL), and the fuel contractor has applied to AANDC for their land use permit.

1.4.2 Kivalliq Inuit Association

The KIA conducted an inspection of the Kiggavik camp and fuel storage areas on September 22, 2014 for the Land Use Licence KVL306C02. The inspector noted that the buildings were in respectable condition greater than 100 m from any water body, and materials were stored properly in secondary containment with spill kits available. The following table outlines the inspection findings and action items.

Table 1.4-2: KIA Inspection – September 22, 2014

RECOMMENDATIONS/CONCERNS	ACTION TAKEN
1. An apple was left on the deck of the kitchen that may attract wildlife.	1. AREVA will ensure to inspect the entire area of the kitchen, including the back deck before leaving site to prevent wildlife attraction.
2. The radioactive compound door was	2. The latch will be replaced on the

RECOMMENDATIONS/CONCERNS	ACTION TAKEN
<p>open and lacked pertinent signage. Wildlife could have entered the compound and been contaminated.</p>	<p>compound door to prevent from inadvertent opening. Although the compound has signage along the western side, AREVA will install signage at the entrance to the compound.</p>
<p>3. A sea-container door was left open. Wildlife may seek shelter inside and contents not secure from possible dispersal.</p>	<p>3. AREVA mistakenly left the door open prior to departure. AREVA appreciates that the KIA closed the door, and AREVA will ensure to check these areas before season closure.</p>
<p>4. Contaminated sand was observed by fuel pump and under portable fuel container</p>	<p>4. AREVA will clean the sites that leaked diesel fuel and store for proper disposal off site.</p>

2 Summary of Planned Activities for 2015

2.1 General

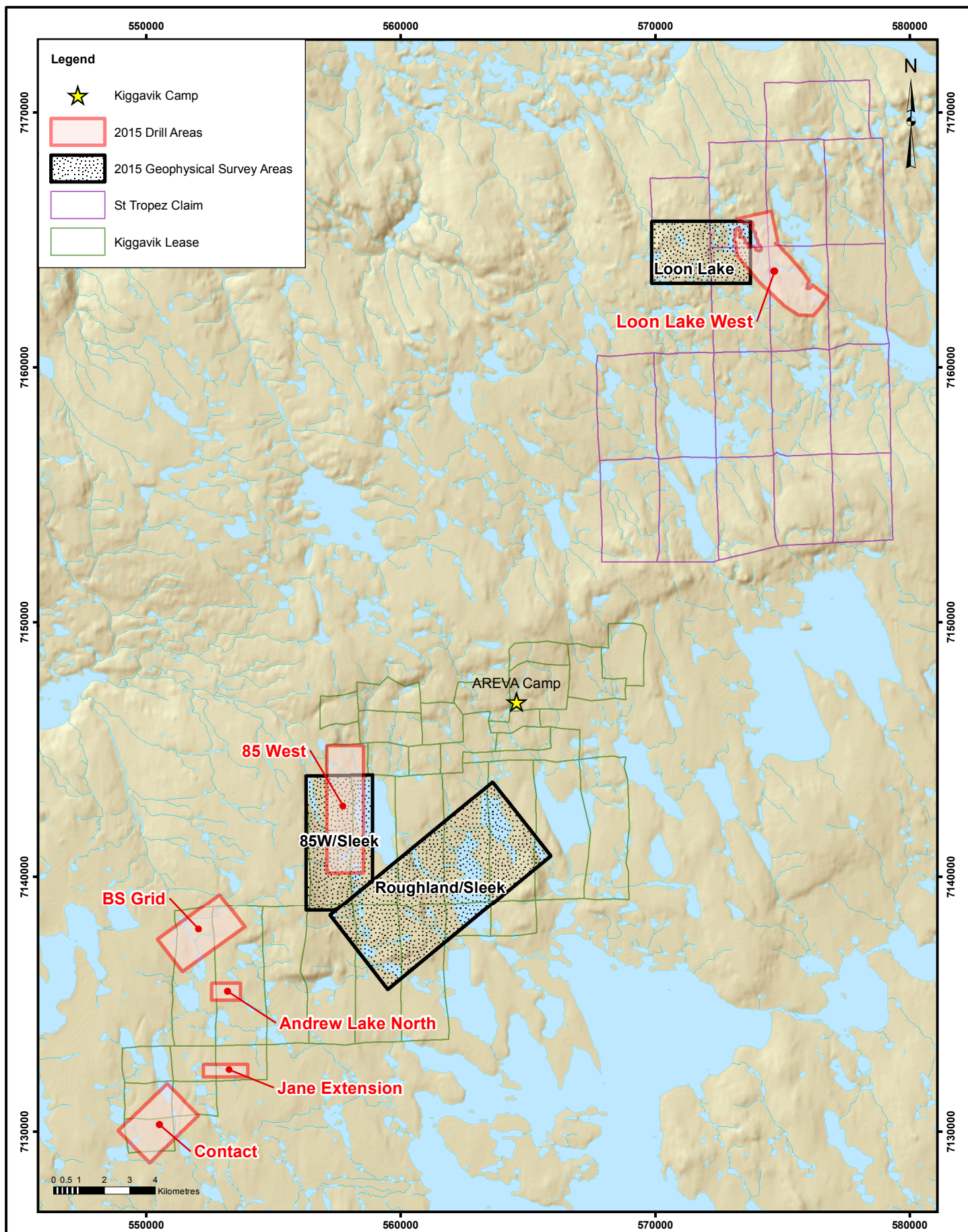
The upcoming 2015 field season will be similar to the 2014 season, and will consist of 100% greenfield exploration. The 2015 exploration program will be a focused drilling campaign to test for mineralization within a defined structural corridor that extends from Contact to the northern portion of the 85 West. A small number of holes will be completed in the St. Tropez area. The Kiggavik camp will accommodate a maximum of 59 people, but is expected to average from 30 to 35 in 2015. The drill and support crews will likely commence mobilization in early June, with drilling completed and camp prepared for the winter season by mid-September. All operations will be conducted out of the Kiggavik camp with support provided by helicopter services and the Baker Lake office.

2.2 Drilling, Sampling and Testing

Although the 2015 drilling program has not been fully defined at this time, it will likely include drilling at Contact, 85 West, BS Grid, Andrew Lake North, and Jane Extension. The St. Tropez claims will be converted to leases in early 2015, and four to five drill holes (~1,000 m) will be completed in this area during the upcoming program. All drilling areas are shown in Figure 2.2-1.

- a. The objectives of the drilling campaign will be to collect resource data in untested areas for mineralizing systems
- b. Diamond drilling will include a total of 29 - 30 drill holes
- c. Total meterage is expected to be approximately 8,500 m
- d. The drill hole size will be NQ, though HQ is being considered in some areas
- e. Core orientation will be conducted using the ACT core orientation system, or equivalent
- f. Holes will be inclined (between -86° and -45°)
- g. Hole length is expected to range between 200 m and 350 m
- h. Drill locations will be picked in the spring of 2015

Prospecting and geological mapping may take place on the Kiggavik and St. Tropez areas.



Projection: NAD 1983 UTM Zone 14N
 Compiled: M.Behaegel Drawn: C.Courant
 Date: 01/09/2015 Scale: Scalebar
 File: KI01A028
 Data Sources: Natural Resources Canada, Geobase®, Nation
 Topographic Database, AREVA Resources Canada
 Inc.

FIGURE 2.2-1

PROPOSED 2015 GEOPHYSICAL AND DRILLING AREAS

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2.3 Geophysics

Ground magnetic and VLF geophysics surveys will cover different areas of the Kiggavik lease to complete the coverage (e.g. 85 West and Roughland). There is potential that ground gravity (control profiles) geophysical and airborne surveys may be conducted as well. Gravity, magnetic and VLF surveys will be conducted as well on Loon Lake area on the Saint-Tropez lease (see Figure 2.2-1).

2.4 Environment and Radiation Monitoring

The 2015 environment and radiation monitoring program will continue to be conducted by AREVA staff with support provided by contractors if necessary. Wildlife monitoring will be conducted by Wildlife Monitors from Baker Lake and Kiggavik personnel. AREVA staff will be responsible for the implementation of the Management Plans which were designed to ensure compliance with regulatory conditions and internal AREVA requirements (see Appendix C).

3 Environmental Monitoring and Protection

AREVA is committed to taking every reasonable precaution toward ensuring the protection and conservation of the natural environment. This commitment is reflected in AREVA's Environmental Policy and is supported through a comprehensive environmental program for the exploration activities at the Kiggavik Project.

The 2014 field season was conducted in accordance with the ISO 14001:2004 certification for the Exploration Department's Environmental Management System. The ISO 14001 standard outlines the requirements for an Environmental Management System which enable an organization to implement a policy and objectives which address legal requirements and significant environmental aspects. The standard supports environmental protection and prevention of pollution in balance with socio-economic needs. The external third party, SGS, conducted the ISO 14001:2004 audit March 13, 2014, and later conducted the Kiggavik field audit from July 22 to July 23, 2014. The audit concluded that the management system conforms to the standard, the Kiggavik site has implemented the system, and that the system is capable of achieving AREVA's objectives.

The following Management Plans were submitted to regulatory agencies prior to commencing the field season:

- Uranium Exploration Plan
- Waste Management Plan
- Spill Contingency Plan
- Noise Abatement Plan
- Wildlife Mitigation and Monitoring Plan
- Abandonment and Restoration Plan
- Radiation Protection Plan

These Plans ensure compliance with regulatory conditions and internal AREVA requirements and guide the development of best management practices and procedures to mitigate any potential adverse environmental impacts. AREVA intends to operate in accordance with commitments made in the Plans; however, such Plans are living documents and lessons

learned during the field season and AREVA's commitment to continual improvement occasionally warrant revision of these Plans. The Plans were made available to personnel throughout the 2014 field season, and have been included with the submission of this Annual Report (refer to Appendix C). The following sections summarize the implementation and overall effectiveness of these plans during the field season.

3.1 Uranium Exploration Plan

The Uranium Exploration Plan is designed to meet the requirements of the Water Licence issued by the Nunavut Water Board (2BE-KIG1318) and the *Mineral Exploration Guidelines of Saskatchewan*, also referred to as Best Management Practices (BMPs). Although current activities are not regulated by the Canadian Nuclear Safety Commission (CNSC), the Uranium Exploration Plan is designed in accordance with the CNSC Regulations. The plan discusses activities related to uranium exploration including:

- Training requirements
- Drilling practices
- Core storage and logging
- Radioisotopes
- Spills
- Shipping radioactive material
- Site abandonment and restoration

Drill core samples (low specific activity) were shipped on September 5, 2014 via air transport from Kiggavik to Thompson, Manitoba. The core samples were then transported by truck to the Saskatchewan Research Council (SRC) located in Saskatoon, Saskatchewan. The Shipper's Declaration for Dangerous Goods was completed by appropriately trained AREVA staff.

3.2 Waste Management Plan

In accordance with AREVA's Environmental Policy, a Waste Management Plan was developed to guide waste segregation, storage, and disposal while mitigating any potential adverse environmental impacts. AREVA is committed to ensuring waste generated at the Kiggavik Project site is collected, stored, transported and disposed of in accordance with regulatory requirements. The Waste Management Plan is reviewed and revised upon the identification of new waste streams, new handling methods or requirements and improved logistics.

In the development of this plan, potential waste streams were identified, followed by identification of a treatment strategy and disposal plan. All site staff and contractors are trained in the aspects required to effectively adhere to the plan (i.e. proper identification of waste, proper storage methods, proper handling and transport methods).

All drill cuttings with a uranium concentration greater than 0.05 percent are collected and stored in the radioactive storage compound for future handling (See Photograph 3.2-1). Food, paper and non-treated wood waste are incinerated onsite (See Photograph 3.2-2).



Photograph 3.2-1: Kiggavik Radioactive Storage Compound



Photograph 3.2-2: Kiggavik Camp Incinerator

An inventory of all waste and material remaining on site was recorded upon seasonal shutdown and is summarized in Table 3.2-1.

Table 3.2-1: Kiggavik Site End of Season Inventory 2014

Type of Waste/Product	Quantity	Storage Method
Waste oil and fuel	6 – 205 L bung drums	Stored at site inside a sea container to be transported to Baker Lake over the winter road in 2015
Incinerator Ashes	5 – 205 L ring top drums	Drums are stored inside sea container to be transported to Baker Lake over the winter road in 2015
Diesel Fuel	4 – 205 L drums 5 – 379 L double walled slip tanks	Drums stored outside in secondary containment. Slip tanks stored on top of braced sea container.
Scrap metal and scrap drilling supplies (rubber hose plastic pails)	Approximately 10,000 pounds	Loaded inside one sea container at site to be transported to Baker Lake over the winter road in 2015
Scrap drill rods	Approximately 80,000 pounds	Drill rods loaded on top of trailer. Plans are to transport back to Baker Lake over the winter road in 2015
Engine filters Oil and Fuel	1 – 205 L ring top drum	Stored inside a sea container to be transported to Baker Lake over the winter road in 2015
Oil contaminated rags	5 – plastic lined rock bags	Stored inside a sea container to be transported to Baker Lake over the winter road in 2015
Empty/used paint cans	1 – 205 L ring top drum	Stored inside wooden storage building. Upright in mini berm with top secured
Small Generator and small engine Oil	8 – 1 L jugs	In secondary containment in generator building
Jet Fuel	1800 L	Stored in the Enviro-tanks at fuel cache for 2015 use.
Diesel Fuel	31000 L plus 20 - 379 L double walled slip tanks	Stored in the Enviro-tanks at fuel cache for 2015 use.
Gasoline	4 – 20 L plastic jerry cans	Stored inside wooden storage building at site in mini berm
Large Generator Oil	10 – 20 liter pails 15W 40 oil	Stored inside building on secondary containment
Propane	18 – 100 lb bottle	Upright in a locked fence compound
Aerosol cans – empty and punctured	1 – 205 L ring top drum	Stored inside wooden storage building. Upright in mini berm with top secured
Empty Plastic 20 L pails and various size other empty plastic bottles in bags		Inside sea container to be hauled into Baker Lake over the winter road 2015

Type of Waste/Product	Quantity	Storage Method
Boart Longyear Supplies	<u>Left at Camp Fall 2014</u> 30 pails -Hydrex Hydraulic Oil MV-36 60 cases - Motor oil 15-40 x 16L 36 cases - 2 cycle oil x 12L 65 – pails Linseed Soap 30 pails - Natural blue Cleaner 8 boxes (6 cans per box) Spray Paint 4 gallons Industrial Paint 10 cans Spray Foam 8 cans Brake Cleaner 13 cans Power Lube Spray 30 cans Starting Fluid 30 pails Rod Grease 40 cases Lube Grease (grease guns) 17 cases Kleene Flow Diesel Fuel Conditioner 30 cases Anti-Freeze 5 cases Fast Orange Cleaner 3 pails Solvent Cleaner 11 pails Vibra Guard 4 Cases DFI Diesel Conditioner 1 pail Extreme Stuff Hole Conditioner 15 pails Pervis 12 pails Penetrol 20 pails Poly Plus 6 pails 165 Conditioner 10 pails K-Ion 65 pails AMC133	In sea-can storage container for use in 2015
Boart Longyear Supplies	<u>Shipped up for 2014</u> 10 cases -15-40 Motor oil x 16L 5 cases - 2 cycle oil x 12L 5 cases Lube Grease 20 Fire Extinguishers 20 pails Univis	In sea-can storage container in Baker Lake for use in 2015. To be transported to site during winter haul.

3.2.1 Canada Wide Standards

Efforts to meet the *Canada-wide Standard (CWS) for Dioxins and Furans* and the *Canada-wide Standard for Mercury Emissions* include the development and implementation of a Waste Management Plan involving waste inventory, diversion and sorting prior to incineration. Waste materials incinerated include food waste, paper, untreated wood products and toilet wastes. Remaining wastes are sorted and stored in sea containers on site until they are removed via the winter haul to be shipped to a licensed disposal facility.

3.3 Water Consumption and Management

As outlined in the conditions of the Nunavut Water Board Licence No. 2BE-KIG1318, the domestic camp water is limited to 10 cubic metres per day (m³/day), and the drill water is limited to 289 m³/day for a total maximum consumption of 299 m³/day. Drilling during low flow artesian was compliant with Part F, Item 6 of the Licence and is further described in Section 3.3.2.

3.3.1 Camp and Drill Water Use

Domestic camp water was drawn from the local unnamed lake for hygienic use, and water sources proximal to drilling activities were used to support drilling. The locations and use of these water sources are listed below in Table 3.3-1 and Table 3.3-3.

Table 3.3-1: Domestic Water Source Coordinates

Location Name	Use	Coordinates	
		Lat/Long	UTM
Camp	Emergency water source (i.e. Firefighting)	64° 26' 31.78" N 97° 39' 30.83" W	14W 7146969N 564570E
Unnamed Lake	Hygienic water source	64° 26' 36.93" N 97° 39' 49.51" W	14W 7147123N 564317E

Domestic camp water was pumped from the unnamed lake into holding tanks with marked volumes. These tanks were filled daily, and a water meter measured the cumulative amount of water used. The water meter values were recorded and calculated to ensure the daily allowance was not exceeded. The daily domestic water use limit of 10 m³ was not exceeded at any time during season. The maximum amount of water use recorded in one day was 7.9 m³ on July 12 when the tanks were cleaned and filters changed (See Table 3.3-3).

Table 3.3-2: Drilling Water Source Coordinates

Location Name	Hole-ID	Coordinates	
		Lat/Long	UTM
Kiggavik East	KE-07	64° 27' 56.84" N 97° 34' 13.82" W	14W 7149694N 568749E
	KE-08	64° 27' 01.47" N	14W 7147950N
	KE-09	97° 35' 54.87" W	567437E
	KE-10	64° 27' 38.56" N 97° 34' 54.74" W	14W 7149116N 568215E
	KE-11	64° 26' 54.98" N 97° 34' 41.81" W	14W 7147771N 568418E
Bong South	Bong-64	64° 25' 17.26" N 97° 42' 55.01" W	14W 7144606N 561887E
	Bong-65, Bong-65A		
	Bong-066		
RoughLand Trend	RHLD-05	64° 22' 53.81" N 97° 44' 14.40" W	14W 7140145N 560913E
	RHLD-06	64° 22' 08.90" N 97° 45' 10.47" W	14W 7138740N 560189E
	RHLD-07	64° 22' 12.69" N 97° 47' 15.63" W	14W 7138825N 558509E
	RHLD-08	64° 22' 05.90" N 97° 47' 30.55" W	14W 7138611N 558313E
85W	85W-04	64° 25' 13.96" N 97° 48' 20.27" W	14W 7144419N 557537E
	85W-05	64° 24' 45.52" N 97° 47' 23.83" W	14W 7143553N 558309E
	85W-06	64° 25' 30.55" N 97° 47' 50.84" W	14W 7144940N 557921E
	85W-07	64° 25' 14.54" N	14W 7144437N
	85W-08	97° 48' 19.72" W	557544E
Sleek Lake	SLEK-017	64° 22' 01.65" N 97° 48' 43.68" W	14W 7138461N 557335E
	SLEK-018		
	SLEK-019		
End East	EE-01,EE-01A	64° 20' 39.91" N 97° 51' 01.73" W	14W 7135897N 555530E
	EE-02	64° 20' 42.34" N 97° 49' 20.49" W	14W 7135997N 556887E
	EE-03	64° 20' 44.26" N	14W 7136063N
	EE-04	97° 48' 53.95" W	557242E
	EE-05	64° 20' 38.05" N 97° 50' 14.41" W	14W 7135851N 556166E

Location Name	Hole-ID	Coordinates	
		Lat/Long	UTM
Igloo West	IW-01	64° 21' 09.11" N	14W 7136898N
	IW-02	97° 44' 38.51" W	560654E
Muskox Grid	MO-01	64° 20' 09.86" N	14W 7134987N
	MO-02	97° 49' 38.87" W	556659E
	MO-03	64° 20' 15.37" N	14W 7135171N
Contact Grid	CONT-006	64° 17' 20.01" N 97° 58' 28.67" W	14W 7129607N 549633E
	CONT-007		
	CONT-008		
	CONT-009		
	CONT-010		
	CONT-011		
	CONT-012		
	CONT-013		
	CONT-014		
	CONT-015		
Jane Extension	JE-01	64° 18' 49.45" N	14W 7132457N
	JE-02	97° 52' 29.49" W	554413E

The drilling contractor, Boart Longyear, used water pumps at each drill capable of pumping a maximum of 15 GPM (0.05678 m³/min or 81.76 m³/day). Although the water pumps did not operate consistently at this capacity, water use was calculated using precautionary maximums to demonstrate compliance with the 289 m³/day licence condition. Should all three pumps operate at maximum capacity for 24 hours, the volume of water would be 245.29 m³/day. Using this maximum, the drill water values presented in Table 3.3-3 represent the conservative estimate of 81.76 m³/day.

Table 3.3-3: Daily Water Use

Month	Date	Total camp (m ³)	Drill 1 (m ³)	Drill 2 (m ³)	Drill 3 (m ³)	Total
June	10	6.01				6.01
	11	2.35				2.35
	12	0.00				0
	13	3.23				3.23
	14	2.93	40.88 [†]			43.81
	15	2.48	40.88			43.36
	16	2.74	40.88			43.62
	17	3.82	81.76	81.76		167.34
	18	3.10	81.76	81.76	81.76	248.38
	19	3.73	81.76	81.76	81.76	249.01
	20	3.46	81.76	81.76	81.76	248.74
	21	3.85	81.76	81.76	81.76	249.13

Month	Date	Total camp (m³)	Drill 1 (m³)	Drill 2 (m³)	Drill 3 (m³)	Total
	22	3.77	81.76	81.76	-	167.29
	23	2.56	81.76	81.76	81.76	247.84
	24	3.40	81.76	81.76	81.76	248.68
	25	4.11	81.76	81.76	81.76	249.39
	26	3.27	81.76	81.76	81.76	248.55
	27	3.33	81.76	81.76	81.76	248.61
	28	3.15	81.76	81.76	81.76	248.43
	29	4.34	81.76	81.76	81.76	249.62
	30	4.04	81.76	81.76	81.76	249.32
July	1	4.74	81.76	81.76	81.76	250.02
	2	3.71	81.76	81.76	81.76	248.99
	3	4.12	81.76	81.76	81.76	249.4
	4	3.44	81.76	81.76	81.76	248.72
	5	3.41	81.76	40.88	81.76	207.81
	6	3.94	81.76	40.88	40.88	167.46
	7	3.05	81.76	81.76	81.76	248.33
	8	3.80	81.76	81.76	81.76	249.08
	9	3.59	81.76	81.76	81.76	248.87
	10	1.92	40.88	81.76	81.76	206.32
	11	0.00	81.76	81.76	40.88	204.4
	12	7.90	81.76	81.76	81.76	253.18
	13	3.43	81.76	40.88	81.76	207.83
	14	4.08	81.76	81.76	81.76	249.36
	15	4.24	81.76	81.76	81.76	249.52
	16	3.05	81.76	81.76	40.88	207.45
	17	2.86	81.76	81.76	81.76	248.14
	18	2.75	81.76	81.76	81.76	248.03
	19	3.14	81.76	40.88	81.76	207.54
	20	4.08	40.88	81.76	81.76	208.48
	21	3.05	81.76	81.76	81.76	248.33
	22	3.78	81.76	81.76	40.88	208.18
	23	3.67	81.76	81.76	81.76	248.95
	24	1.94	40.88	40.88	81.76	165.46
	25	4.15	81.76	81.76	81.76	249.43
	26	3.67	81.76	81.76	81.76	248.95
	27	4.29	81.76	81.76	81.76	249.57
	28	4.53	81.76	81.76	81.76	249.81

Month	Date	Total camp (m³)	Drill 1 (m³)	Drill 2 (m³)	Drill 3 (m³)	Total
	29	2.59	81.76	81.76	40.88	206.99
	30	3.83	81.76	40.88	81.76	208.23
	31	3.88	40.88	81.76	81.76	208.28
August	1	3.48	81.76	81.76	81.76	248.76
	2	2.84	81.76	81.76	81.76	248.12
	3	2.97	81.76	81.76	81.76	248.25
	4	2.84	81.76	81.76	81.76	248.12
	5	3.09	81.76	81.76	40.88	207.49
	6	3.49	81.76	81.76	81.76	248.77
	7	3.56	40.88	81.76	81.76	207.96
	8	2.78	81.76	40.88	81.76	207.18
	9	3.02	81.76	81.76	40.88	207.42
	10	4.09	40.88	81.76	81.76	208.49
	11	4.80	81.76	81.76	81.76	250.08
	12	3.18	81.76	81.76	81.76	248.46
	13	3.69	81.76	40.88	81.76	208.09
	14	3.30	40.88	81.76	81.76	207.7
	15	3.77	81.76	81.76	40.88	208.17
	16	3.30	81.76	81.76	81.76	248.58
	17	3.66	40.88	40.88	81.76	167.18
	18	3.85	81.76	-	81.76	167.37
	19	3.02	81.76	-	81.76	166.54
	20	3.53	81.76	-	81.76	167.05
	21	3.49	40.88	-	40.88	85.25
	22	3.74	81.76	-	81.76	167.26
	23	2.58	40.88	-	40.88	84.34
	24	3.19	-	-	40.88	44.07
	25	3.00	-	-	81.76	84.76
	26	2.68	-	-	81.76	84.44
	27	2.79	-	-	81.76	84.55
	28	2.47	-	-	40.88	43.35
	29	3.58	-	-	81.76	85.34
	30	2.24	-	-	81.76	84
	31	2.57	-	-	81.76	84.33
September	1	2.12	-	-	-	2.12
	2	2.38	-	-	-	2.38

[†] Lesser values were based on the estimated hours necessary during drill moves and subsequent pump shutdown

In an effort to determine exact flow, meters were installed within the drills to determine the water quantities used, however the amounts were quite low and not representative of the quantities drawn from the lake because the water bypassing the drill setup was not recorded. The flow meters located within the drill averaged 2.22 m³/day for three drill rigs, which indicates that water used during the drilling process was significantly lower than the estimated maximum pumped from the lakes. Flow meters have been ordered for direct installation on the water pumps to determine quantities drawn from the lake.

3.3.2 Artesians

As per the NWB Licence, Part F, Item 6 (c), AREVA must provide information on all artesian flows encountered, with GPS coordinates, dates, and flow rates, depth, permafrost, aquifer and packer testing data with associated water quality analytical results. Pneumatic packer testing and thermistor installation is specific to mine development and are not standard practices for exploration drilling. The definitive permafrost depths were unknown for the artesian flows discussed below. Should there be packer testing data available or thermistors installed in the future, AREVA will provide the associated data when artesian flows are encountered.

While drilling in the Bong area, two artesian flows were intercepted, and one artesian flow was intercepted in the Contact Grid. As per Part F item 6 (c) of the NWB licence, refer to Table 3.3-4 for the relevant artesian information. Water samples were taken directly from the artesian flows, and the corresponding water analysis results are shown in Table 3.3-5. Upon completion, each drill hole was permanently sealed and capped to prevent further outflow.

Table 3.3-4: Artesian Location, Date, Flow and Depth

	Coordinates		Date	Flow Rate (L/min)	Depth (m)
	Lat/Long	UTM			
Bong-065A	64° 24' 48.16" N 97° 42' 33.80" W	14W 7143711N 562189E	July 19, 2014	2	304
Bong-066	64° 24' 50.95" N 97° 42' 28.74" W	14 W 7143799N 562255E	July 23, 2014	4	301
				4	324 [†]
CONT-012	64° 17' 20.76" N 97° 57' 57.99" W	14 W 7129637N 550045E	August 20, 2014	8	294

[†]The artesian was encountered at 301 m, but the water sample was taken at 324 m

Table 3.3-5: Artesian Water Results

Analyte	Units	Bong-065A	Bong-066	CONT-012	CCME [†]
Bicarbonate	mg/L	101	57	85	
Carbonate	mg/L	<1	<1	<1	
Chloride	mg/L	2.4	3.6	11800	
Hydroxide	mg/L	<1	<1	<1	
P. alkalinity	mg/L	<1	<1	<1	
pH	pH units	7.36	7.52	8.14	6.5-9
Specific conductivity	uS/cm	125	93	27700	
Sum of Ions	mg/L	144	83	18200	
Total alkalinity	mg/L	83	47	70	
Total hardness	mg/L	37	41	15000	
Nitrate (calc. from NO ₂ +NO ₃ -N)	mg/L	<0.04	<0.04	0.13	13
Nitrite+Nitrate nitrogen	mg/L	-	<0.01	0.03	
Mercury	ug/L	<0.02	<0.02	<0.02	0.026
Fluoride	mg/L	0.16	0.21	0.55	
Total dissolved solids	mg/L	371	155	20500	
Total suspended solids	mg/L	19	16	163	
Calcium	mg/L	10	11	6000	
Magnesium	mg/L	3	3.4	3	
Potassium	mg/L	4	1.4	78	
Sodium	mg/L	24	4.6	180	
Sulfate	mg/L	<2	1.8	17	
Aluminum	mg/L	0.027	0.059	0.29	0.005 (pH < 6.5) 0.1 (pH ≥ 6.5)
Antimony	mg/L	<0.0002	<0.0002	<0.002	
Arsenic	ug/L	0.8	0.9	<1	5
Barium	mg/L	0.12	0.12	0.24	
Beryllium	mg/L	<0.0001	<0.0001	<0.001	
Boron	mg/L	<0.01	<0.01	<0.1	29 Short-term 1.5 Long-term
Cadmium	mg/L	<0.00001	0.00001	<0.0001	0.001 Short-term 0.00009 Long-term
Chromium	mg/L	<0.0005	<0.0005	<0.005	
Cobalt	mg/L	0.0001	0.0001	<0.001	
Copper	mg/L	0.0022	0.0023	0.02	0.002 (if hardness unknown) 0.004 (hardness>180 mg/L)
Iron	mg/L	0.35	0.39	4.4	0.3 (Long-term)
Lead	mg/L	0.0027	0.0015	0.021	0.001 (if hardness unkown) 0.007 (hardness >180 mg/L)
Lithium	ug/L	1.6	2.6	100	
Manganese	mg/L	0.026	0.019	0.045	
Molybdenum	mg/L	0.0001	0.0002	0.003	0.073
Nickel	mg/L	0.0011	0.0012	0.004	0.025 (if hardness unkown)

Analyte	Units	Bong-065A	Bong-066	CONT-012	CCME [†]
					0.15 (hardness >180 mg/L)
Selenium	mg/L	<0.0001	<0.0001	0.001	0.001
Silver	mg/L	<0.00005	<0.00005	<0.0005	0.0001
Strontium	mg/L	0.052	0.066	4.2	
Thallium	mg/L	<0.0002	<0.0002	<0.002	0.0008
Tin	mg/L	<0.0001	<0.0001	<0.001	
Titanium	mg/L	0.0010	0.0012	<0.002	
Uranium	ug/L	0.1	0.2	<1	33 Short-term 15 Long-term
Vanadium	mg/L	0.0002	0.0002	<0.001	
Zinc	mg/L	0.034	0.0081	0.047	0.03

[†]Canadian Council Ministers of Environment. Canadian Water Quality Guidelines for the Protection of Aquatic Life. 1999.

While drilling the CONT-12 hole, artesian flow of 8 L/min was encountered at 10:30 pm with the flow ceasing in minutes. As shown in the results above, the CONT-12 artesian was saline with elevated levels of copper, iron, lead, and zinc. The elevated calcium and chloride ions contributed to the higher Total Dissolved Solids (TDS) and specific conductivity observed. This elevated conductivity is indicative of increased salinity. The artesian flow experienced was of low quantity and short duration for a total of approximately 24 L. The flow was contained in the designated discharge area with no potential for harm to aquatic life. The CONT-12 hole was completed and capped the following morning, and the other nine holes in the Contact Grid area did not intercept artesian conditions.

3.4 Spill Contingency Plan

In accordance with existing legislation and requirements, AREVA maintains a Spill Contingency Plan for the Kiggavik Project. The objectives of this plan are to:

- Identify the potential for and the appropriate response to spills at the Project
- Provide procedures for prevention or mitigate adverse environmental effects through effective and efficient response
- Identify personnel and their responsibilities
- Identify emergency contacts
- Describe reporting requirements

To implement the plan effectively, all site staff and contractors receive orientation on the location of the Material Safety Data Sheets (MSDS), spill kit locations, and spill response supplies and tools. Personnel are trained to identify the probable location of potential leaks and spills and the response should leaks or spills be identified. Additional training for mock spill

scenarios is provided as necessary. Spill prevention is implemented through use of secondary containment, availability of spill kits where hazards exist, conducting inspections at all storage locations, and providing MSDS sheets. Spill response is reviewed with all site personnel, and the site supervisors or designates are aware of spill reporting procedures.

3.4.1 Fuel Cache

The primary fuel storage area is located on an esker 3.5 km southwest of the Kiggavik camp. The fuel cache includes eight 50,000 L double walled steel Envirotanks that are registered with Environment Canada, and were installed in accordance with Canadian Council for Ministers of the Environment (CCME) – *Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products*. Three Envirotanks are used for jet fuel and five for diesel fuel (See Photograph 3.4-1).



Photograph 3.4-1: Kiggavik Fuel Cache

A small number of 205 L diesel fuel drums are used to fuel the geostoves and incinerator and are stored within secondary containment berms. Five double walled slip tanks containing diesel are used to fuel the camp generator. All fuel containers are labeled, identifying the contents and AREVA's name. The camp fuel storage is located at 64° 26' 25.82" N, 97° 39' 39.05" W (14W 564464, 7146782).

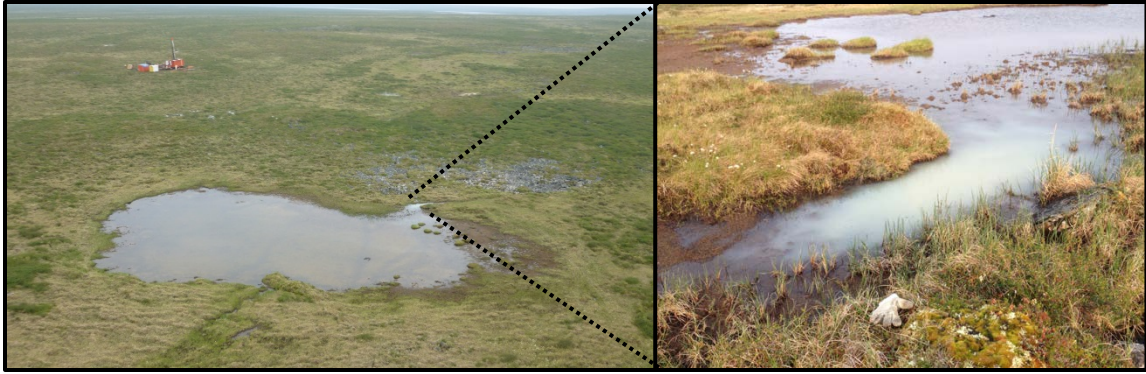
3.4.2 Reportable Spill

While drilling in the Bong area on July 16, 2014, non-mineralized drill cuttings mobilized into a water body located at 64°24'51" N, 97°42'24" W (14W 562318E 7143802N). The spill was detected during an annual inspection by the AANDC Water Resource Officer (See Photograph 3.4-2). Reporting was completed in accordance with the NWB licence Part H item five and the AANDC Land Use Permit N2014C0001 item 32. In addition to immediate notification to the NT-NU Spill Report Line, the thirty day report summarizing the incident and corrective actions was distributed to regulators.



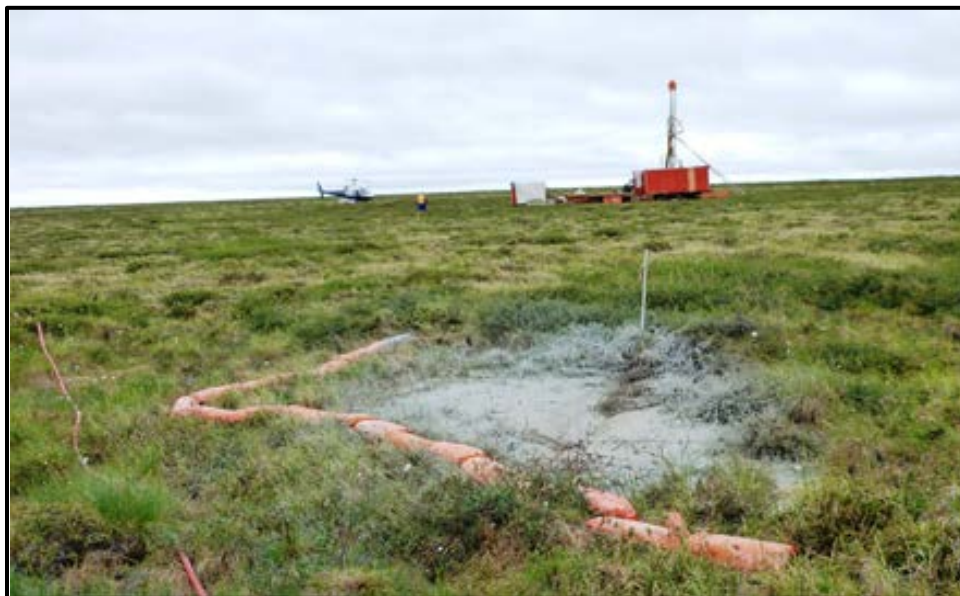
Photograph 3.4-2: Unauthorized Cuttings Discharge near Bong 065A

Upon initial inspection of the white discoloration noted at the edge of the water body, it appeared that a hose discharging clean water from a nearby pump flowed downslope into the cuttings discharge site of a previous non-mineralized drill hole located at 64°24'51" N, 97°42'31" W (14W 562225E 7143800N). Upon returning to the site for further investigation, it was determined that the excess water from the hose had not come into contact with the cuttings discharge site near the water. The material appeared to have been remobilized independently of the pump water; likely by recent heavy rains, and flowed downhill into a rocky area (See Photograph 3.4-3). Here, it was allowed to penetrate below the ground surface where the cuttings then traveled to the adjacent water body and were observed collecting at the water's edge.



Photograph 3.4-3: White Discoloration in Water

Various corrective and preventative measures were implemented following the spill identification. To limit the spatial extent of the spill, the pump discharging clean water was stopped, and the hose was relocated to the opposing side of the drill. As the existing cuttings discharge area was migrating downhill towards the drill, the discharge hose was moved a considerable distance to the west to eliminate the return flow of drill discharge to the drill pad. The drill crews on site were subsequently instructed not to place their excess clean water hoses in places that could create a potential uncontrolled runoff into a water body and to alert AREVA staff if discharge fluids are accumulating around the drill. A sandbag berm was constructed around the cuttings discharge site the following day to ensure there was no further mobility of cuttings (See Photograph 3.4-4). The site was monitored over the days following the spill and by July 18 the white discoloration of the water was no longer visible. Water samples were taken the day of the spill and again two weeks following the incident (See Photograph 3.4-5).



Photograph 3.4-4: Bermed Cuttings – July 17, 2014



Photograph 3.4-5: Bong Water Body – July 26, 2014

The placement of drill discharge sites and follow-up inspection by AREVA staff and contractors was reviewed to ensure all personnel were aware of the requirements. It was concluded that the spill of non-mineralized drill cuttings entered the water body of the Bong area following remobilization from heavy rain. This allowed the cuttings to flow downhill away from their original location and eventually collect at the proximal edge of the water body. Increased diligence in the appropriate placement of future drill discharge sites will be used to prevent any repeat occurrences.

Table 3.4-1: Bong Water Body Results

Analyte	Units	July 16 - Spill	July 30 – Post Spill	CCME [†]
Bicarbonate	mg/L	60	28	
Carbonate	mg/L	<1	<1	
Chloride	mg/L	128	50	
Hydroxide	mg/L	<1	<1	
P. alkalinity	mg/L	<1	<1	
pH	pH units	7.10	6.94	6.5-9
Specific conductivity	uS/cm	492	224	
Sum of Ions	mg/L	276	118	
Total alkalinity	mg/L	49	23	
Total hardness	mg/L	192	87	
Nitrate (calc. from NO ₂ +NO ₃ -N)	mg/L	0.4	<0.04	13
Nitrite+Nitrate nitrogen	mg/L	-	<0.01	
Mercury	ug/L	<0.02	<0.02	0.026
Fluoride	mg/L	0.05	0.05	
Total dissolved solids	mg/L	1100	237	

Analyte	Units	July 16 - Spill	July 30 – Post Spill	CCME [†]
Total suspended solids	mg/L	119	<1	
Calcium	mg/L	54	23	
Magnesium	mg/L	14	7.3	
Potassium	mg/L	6.5	1.5	
Sodium	mg/L	9.8	3.3	
Sulfate	mg/L	2.8	4.8	
Aluminum	mg/L	2.21	0.12	0.005 (pH < 6.5) 0.1 (pH ≥ 6.5)
Antimony	mg/L	<0.0002	<0.0002	
Arsenic	ug/L	0.4	0.3	5
Barium	mg/L	0.68	0.32	
Beryllium	mg/L	0.0001	<0.0001	
Boron	mg/L	<0.01	<0.01	29 Short-term 1.5 Long-term
Cadmium	mg/L	0.00022	0.00005	0.001 Short-term 0.00009 Long-term
Chromium	mg/L	0.0043	<0.0005	
Cobalt	mg/L	0.0020	0.0004	
Copper	mg/L	0.0082	0.0034	0.002 (if hardness unknown) 0.004 (hardness >180 mg/L)
Iron	mg/L	2.44	0.31	0.3 (Long-term)
Lead	mg/L	0.0022	0.0009	0.001 (if hardness unknown) 0.007 (hardness >180 mg/L)
Lithium	ug/L	20	5.2	
Manganese	mg/L	0.49	0.044	
Molybdenum	mg/L	0.0002	0.0002	0.073
Nickel	mg/L	0.0042	0.0023	0.025 (if hardness unknown) 0.15 (hardness >180 mg/L)
Selenium	mg/L	<0.0001	<0.0001	0.001
Silver	mg/L	0.00009	<0.00005	0.0001
Strontium	mg/L	0.32	0.14	
Thallium	mg/L	<0.0002	<0.0002	0.0008
Tin	mg/L	<0.0001	<0.0001	
Titanium	mg/L	0.016	0.0018	
Uranium	ug/L	0.9	0.1	33 Short-term 15 Long-term
Vanadium	mg/L	0.0032	0.0002	
Zinc	mg/L	0.019	0.012	0.03

3.5 Noise Abatement Plan

A Noise Abatement Plan was developed to mitigate the effects from noise generated during camp set-up, camp operation, winter road use, and drilling activities. Noise controls and abatement serve a combination of environmental and occupational health and safety purposes. The focus of the plan is the control of environmental noise for the protection of wildlife.

Implementation of the plan ensures that drill rigs and vehicles are equipped with mufflers and/or silencers and is subject to commitments made in the Wildlife Mitigation and Monitoring Plan regarding minimum flying altitudes required and the take-off and landing of aircraft.

The plan is reviewed by all site staff, contractors, and head office contract administrators to ensure all contractors operating drill rigs, vehicles or aircraft are aware of requirements. Frequent review allows for revision to occur with the expansion of infrastructure, changing field programs and the identification of improved practices.

3.6 Wildlife Mitigation and Monitoring Plan

The Wildlife Mitigation and Monitoring Plan (WMMP) was developed to monitor and reduce disturbance to wildlife, particularly caribou. The plan incorporated recommendations from the Government of Nunavut – Department of Environment (GN-DoE), Environment Canada (EC) and the Beverly and Qamanirjuaq Caribou Management Board (BQCMB); as well as conditions from the NIRB, Kivalliq Inuit Association (KIA), Aboriginal Affairs and Northern Development Canada (AANDC) and the Nunavut Water Board (NWB). The plan is designed to protect wildlife from Project activities, increase the current understanding of wildlife interactions with human development and aid in determining the effectiveness of mitigation measures.

The objective of the WMMP is to prevent or reduce any potential adverse effects from exploration activities on wildlife. The plan was implemented by Wildlife Monitors from the Baker Lake community, as well as AREVA staff. Wildlife monitoring and mitigation measures were summarized in monthly reports, and distributed to the Baker Lake Hunter and Trapper's Organization (HTO), the KIA, the Baker Lake Conservation Officer, AANDC, and the GN-DoE Regional Biologist. The reports are also publicly available at www.kiggavik.ca/resources/.

3.6.1 Summary of Wildlife Monitoring Activities and Results

The Kiggavik personnel and Wildlife Monitors implement the WMMP through providing regular reports of wildlife sightings. Apart from the regular observations from local Wildlife Monitors,

personnel record wildlife sightings as well. Observation methods vary with sightings provided from the personnel in camp, the field, aerial flights, and the Wildlife Monitors. Wildlife logs are placed in the camp kitchen, camp office and in each helicopter for ease of recording. During site orientation, personnel are informed of the wildlife log locations and are encouraged to record all sightings. Animals present regularly around camp such as the ptarmigan, siksik and arctic hare were often not recorded each day they were observed, thus being under recorded by this method. The Government of Northwest Territories (GNWT) also provides collar data that enables proper implementation of the WMMP.

Ground-based monitoring was primarily conducted by the Wildlife Monitor, however additional data was collected from incidental field observations by personnel. The Wildlife Monitors discussed sightings with the Safety, Health, Environment, and Quality (SHEQ) Supervisor, while the remainder of Kiggavik personnel recorded sightings which were collected weekly. The Wildlife Monitor observed wildlife activity from five height-of-land (HOL) locations around camp and occasionally visited areas outside of camp where required. While caribou were observed in the area, the Wildlife Monitor was responsible for assisting in the determination of herd movements and proximity to activity. Occasionally the Wildlife Monitor was flown to elevated locations for ease of monitoring the herd movements. The SHEQ Supervisor and designate recorded all observations in a spreadsheet for inclusion in the monthly reports. As shown in Table 3.6-1, there was a total of 21 species documented from 193 wildlife sightings.

Table 3.6-1: Summary of Wildlife Sightings

Species (common name)	Wildlife Sightings	Total Number Observed	Range of Individuals per Sighting	Timeline of Sightings		Observation Method		
				Initial	Final	Field Observation*	Aerial	Camp*
Arctic Fox	14	16	1 - 3	Jun-15	Aug-31	X	X	X
Arctic Hare	9	12	1 - 3	Jun-14	Jul-21	X	X	X
Bald Eagle	1	1	1	Aug-10	Aug-10	X		
Caribou	53	95,468†	1 – 10,000	Jun-10	Sep-2	X	X	X
Eagle	1	1	1	Jul-28	Jul-28		X	
Golden Plover	2	2	1	Jul-15	Jul-19	X		X
Grizzly Bear	5	5	1	Jun-13	Jul-20	X	X	

Species (common name)	Wildlife Sightings	Total Number Observed	Range of Individuals per Sighting	Timeline of Sightings		Observation Method		
				Initial	Final	Field Observation*	Aerial	Camp*
Lemming	2	2	1	Jun-26	Jul-19	X		
Loon	1	1	1	Jul-16	Jul-16	X		
Moose	1	1	1	Jul-30	Jul-30	X		
Muskox	61	933	1 - 60	Jun-12	Sept-2	X	X	X
Peregrine Falcon	1	1	1	Jun-27	Jun-27			X
Ptarmigan	3	34	4 - 20	Jun-29	Aug-10			X
Raptor	1	2	2	Aug-19	Aug-19	X		
Sandhill Cranes	3	7	2 - 3	Jun-21	Aug-14	X	X	X
Seagull	1	1	1	Jul-19	Jul-19	X		
Siksik (Ground Squirrel)	3	3	1	Jun-16	Jun-28			X
Sparrow	3	4	1 - 2	Jun-18	Jul-19	X		X
Snow Geese†	3	1,052	2 – 1,000	Jun-22	Aug-31	X	X	X
Weasel	2	2	1	Aug-4	Aug-7			X
Wolf	23	37	1 - 3	Jun-16	Aug-25	X	X	X
Total	193	97,585						

* Wildlife Monitor sightings were often recorded as camp sightings, but were also included in the field observations

†From June 25 to July 8, caribou herds numbering in the thousands migrated through the area. The number observed is overestimated due to repeat reporting of the same herds

‡There were thousands of snow geese near the end of August to the beginning of September

3.6.2 Wildlife Mitigation Summary

Mitigation measures were implemented for caribou herds, nest sites near a drill, and deterrence measures for grizzly bears and wolves. As shown in Table 3.6-1, five grizzly bears and 37 wolves were observed during the season. Many wolf sightings were repeat observations of the pack of three commonly present around camp. The increased frequency of predatory species was likely due to caribou migrations in the area.

3.6.2.1 *Caribou Migration*

During caribou migrations, mitigation measures were implemented as required by the Nunavut Impact Review Board (NIRB) 2007 screening decision and the WMMP. During the post calving period from May 15 to July 15, operations were suspended within 10 km of areas occupied by cows and calves. Occasionally shutdown was required after July 15 when herds greater than 50 caribou were within two km of operations. Caribou herds numbering in the thousands were intermittently present during the post calving period, thus causing temporary shutdown of drilling operations and helicopter activity. Aircraft pilots abided by the altitude restrictions and did not land within one km of herds.

Caribou migrated through the area from June 25 to July 8. During regular trips to Baker Lake from June 25 to 30, herds were observed east of Siamese Lake moving westward. From July 1 to July 3, operations were intermittently shutdown to allow caribou herds to pass undisturbed. While drilling remained on standby, the helicopters also remained grounded at the fuel cache because the herds had moved within one kilometer of camp (See Photograph 3.6-1). The herd moved northward, but later migrated within the western edge of camp (See Photograph 3.6-2). Although caribou were absent on July 4, another herd migrated through the area on July 6. The drilling operations and geophysical crews were temporarily shut down until the Wildlife Monitor determined the herds were sufficient distance from activities. A smaller herd was present on July 7, but moved outside the 10 km buffer by the morning of July 8. Caribou were later observed on July 23 when a small herd travelled near a drill located approximately 20 km southwest of the camp. They moved through quickly towards Aberdeen Lake, which allowed drilling to recommence within half an hour. Large herds were absent during the remainder of the season.



Photograph 3.6-1: Caribou Herd - July 3, 2014



Photograph 3.6-2: Caribou West of Camp - July 3, 2014

3.6.2.2 *Deterrence Measures*

As outlined in the WMMP, deterrent measures were implemented to ensure the safety of personnel. These interventions were necessary on three occasions. The first occurred when a grizzly bear ran toward personnel causing them to climb onto the roof of the drill. They used bear bangers to deter the bear from the area. Considering the unresponsive reaction of the bear, the Conservation Officer recommended the use of rubber slugs for added deterrent. Following the initial encounter, Wildlife Monitors were stationed with firearms at points surrounding the geophysical crews until personnel were confident the bear would not return to the area. Wildlife Monitors were also provided the Government of Nunavut deterrent range guide. A second incident occurred on July 20 when a bear approached the drill site southwest of the fuel cache. The drillers shot bear bangers and went onto the roof of the drill, but requested added deterrence with the helicopter. The Wildlife Monitor indicated that the bear was likely pursuing a herd of approximately 20 muskox near the drill; however, the Wildlife Monitor voluntarily spent the night at the drill to watch over the night shift crew. The third safety intervention occurred on July 13 when a young wolf came into camp. Bear bangers were fired, but rubber bullets were not necessary for further deterrence. There were no physical interactions between bears or wolves with project personnel.

3.7 Abandonment and Restoration Plan

The Abandonment and Restoration Plan was developed to address permit conditions, regulations and industry standards for seasonal operation, shut-down and final closure. This plan is frequently reviewed and revised to reflect the expansion of infrastructure, cost estimates, changing field programs and the identification of improved reclamation practices. Following the recent inspection by AANDC, it was identified that the current practices for reclaiming depressions around bore holes was absent from the plan. The backfilling of sink holes with fill material has been added to the revised Abandonment and Restoration Plan as appended to this report.

The objectives of the plan are to:

- Protect human health
- Reduce or eliminate environmental effects
- Re-establish conditions to similar pre-exploration land use
- Establish physical and chemical stability of disturbed areas

3.7.1 Seasonal Shutdown

As required by the Abandonment and Restoration Plan, the following activities were conducted for the seasonal shutdown of the Kiggavik camp during the first week of September:

- All equipment stored in secure buildings or containers
- Plywood placed over windows and doors to prevent inadvertent opening
- Pumps and hoses drained and dismantled
- Inventory of chemicals, products and wastes remaining on site (See Table 3.2-1)
- Final inspection of all storage areas and secondary containment
- Removal of chemicals or storage in secure buildings
- Drill rigs dismantled and stored appropriately
- Generator shut down and winterized
- Waterlines drained, flushed and winterized with antifreeze

All personnel vacated the site by September 4, 2014. Photograph 3.7-1 shows the Kiggavik camp during seasonal shutdown.



Photograph 3.7-1: Kiggavik Camp Seasonal Shutdown

3.7.2 Progressive Reclamation

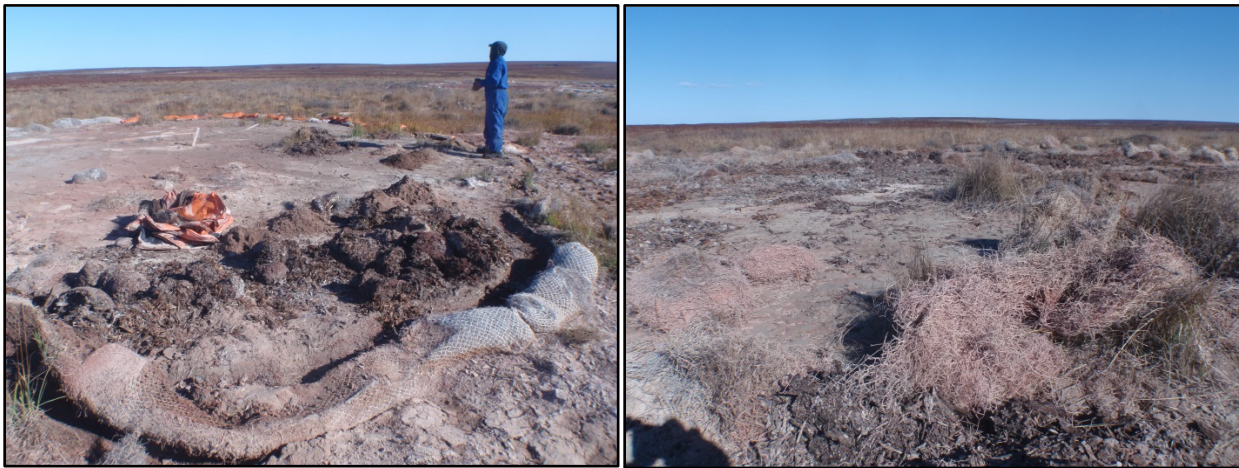
The Abandonment and Restoration Plan has been implemented to ensure drill site stability. Consistent with the objective to return lands to a state similar to pre-exploration use, AREVA intends to implement progressive restoration practices and incorporate new abandonment and/or reclamation methods and procedures, where applicable. Radiologically or chemically contaminated soil or cuttings are collected inside industrial bulk bags and stored in the radioactive storage compound for future handling, which may include transfer to an operating mine site. The gamma radiation 1 m from the boundary of the radioactive storage compound is reduced as much as practical to less than 1 $\mu\text{Sv/h}$ and in no instances exceeding 2.5 $\mu\text{Sv/h}$. Where collected cuttings are non-mineralized, they are used to re-establish physical stability by levelling depressions that may have formed from permafrost thaw. Where inadequate fill material is available, excess material from the End grid discharge or gravel may be used to fill larger depressions. AREVA is currently working with local contractors on the procurement of gravel for reclamation purposes.

Challenges surrounding physical reclamation of disturbed surfaces include lack of local knowledge or available information. To minimize the affected footprint and the amount of physical reclamation required, there is a focused effort on proper planning of infrastructure placement and drill sites. Reclamation techniques are currently being investigated and when required, will be implemented under the direction and approval of experienced consultants, community members and regulatory agencies. During a meeting with available members of the Baker Lake Community, Land and Resources Committee (CLARC), the CLARC stated a preference that any re-vegetation occurs without seeding or fertilization interventions.

3.7.2.1 *End grid Discharge Reclamation*

Following the AANDC inspection in July, reclamation work was completed on the End grid discharge area to promote seed establishment for natural revegetation. The area was identified as an area of concern with the depth of material deposited over the last six years. Drilling was extensive in this area due to delineation drilling for the deposit. Due to the slope experienced towards streams and End grid Lake, efforts were made to contain the drill discharge to reduce the risk of a spill. This containment resulted in an accumulation of drill cuttings that inhibited prompt regeneration. With the recent absence of drilling in the area and concerns identified, AREVA has begun progressive reclamation for the area and will continue efforts to improve reclamation success and monitor the vegetation establishment.

To reduce potential flow toward End grid Lake, sand bags were used in combination with bark and wood fibre filter socks for containment and eventual revegetation. To prepare the site for reclamation, the plastic sand bags are removed and filter socks spread to encourage establishment of vegetative cover. Remediation efforts have begun with the removal of plastic sand bag material and the spreading of the filter socks (See Photograph 3.7-2 and Photograph 3.7-3). As shown in Photograph 3.7-4 and Photograph 3.7-5, the Bark Filled Filter Sock and Curlex Sediment Logs create a seed bed for native tundra species. With the spreading of these biodegradable filter socks, a litter layer is created for promotion of natural revegetation.



Photograph 3.7-2: Spreading of Litter Layer for Seed Establishment



Photograph 3.7-3: Spreading of Litter Material



Photograph 3.7-4: Seed Establishment in Bark Filter Sock



Photograph 3.7-5: Seed Establishment in Curlex Wood Fibre Filter Sock

3.7.2.2 Chemical and Radiological Restoration

Drill sites are inspected for fuel stained soil and undergo a gamma survey for radioactive contamination. Gamma surveys are conducted prior to commencing drilling activities and following the completion of drilling. Should it be required, drill sites are remediated to the greatest extent possible to ensure the gamma dose rate 1 m above surface is less than 1 micro Sievert per hour ($\mu\text{Sv/h}$) above background. Following remediation activities, another gamma survey would be conducted to ensure levels have been reduced to below 1 $\mu\text{Sv/h}$ above background.

As shown in Table 3.7-1, gamma surveys were conducted for each drill location. Readings with the Ludlum 2221 Scaler Ratemeter and Trimble GPS PRO-XRT were made at 1 second intervals at one meter above ground. As mentioned in the 2013 Annual Report, the pre-gamma survey was completed for drill hole BN-03, but there was an error in collecting the post gamma survey data. The area was re-surveyed in 2014, and the dose rate was below 1 $\mu\text{Sv/h}$. During the 2014 field season, all gamma survey dose rates were below 1 $\mu\text{Sv/h}$ as shown in Figure 3.7-1 to Figure 3.7-43 of Appendix B.

Table 3.7-1: 2014 Drill Hole Gamma Surveys

Drill Hole	Pre-gamma	Post-gamma	Figure Number
	Date	Date	
BN-03 [†]	June 22, 2013	June 14, 2014	Figure 3.7-42
KE-07	13-Jun-14	25-Jun-14	Figure 3.7-16
KE-08	17-Jun-14	27-Jun-14	Figure 3.7-15
KE-09	17-Jun-14	27-Jun-14	Figure 3.7-13
KE-10	25-Jun-14	8-Jul-14	Figure 3.7-14
KE-11	28-Jun-14	8-Jul-14	Figure 3.7-12
BONG-064	16-Jun-14	26-Jul-14	Figure 3.7-1
BONG-065	16-Jun-14	30-Jul-14	Figure 3.7-2
BONG-065A			
BONG-066	11-Jul-14	30-Jul-14	Figure 3.7-3
RHLD-05	14-Jun-14	3-Jul-14	Figure 3.7-17
RHLD-06	20-Jun-14	3-Jul-14	Figure 3.7-18
RHLD-07	20-Jun-14	4-Jul-14	Figure 3.7-19
RHLD-08	20-Jun-14	9-Jul-14	Figure 3.7-20
EE-01	15-Jun-14	25-Jun-14	Figure 3.7-26
EE-01A			
EE-02	15-Jun-14	4-Jul-14	Figure 3.7-28
EE-03	26-Jun-14	13-Jul-14	Figure 3.7-27
EE-04	20-Jun-14	13-Jul-14	Figure 3.7-29
EE-05	9-Jul-14	19-Jul-14	Figure 3.7-30
CONT-006	15-Jul-14	8-Aug-14	Figure 3.7-33
CONT-007	22-Jul-14	8-Aug-14	Figure 3.7-34
CONT-008	25-Jul-14	15-Aug-14	Figure 3.7-35
CONT-009	25-Jul-14	15-Aug-14	Figure 3.7-43
CONT-010	8-Aug-14	24-Aug-14	Figure 3.7-36
CONT-011	8-Aug-14	24-Aug-14	Figure 3.7-37
CONT-012	15-Aug-14	24-Aug-14	Figure 3.7-38
CONT-013	19-Aug-14	24-Aug-14	Figure 3.7-39
CONT-014	19-Jul-14	2-Sep-14	Figure 3.7-40
CONT-015	19-Jul-14	2-Sep-14	Figure 3.7-41
SLEK-017	28-Jun-14	19-Jul-14	Figure 3.7-21
SLEK-018	28-Jun-14	25-Jul-14	Figure 3.7-22
SLEK-019	19-Jul-14	30-Jul-14	Figure 3.7-23
MO-01	22-Jun-14	1-Aug-14	Figure 3.7-4

Drill Hole	Pre-gamma	Post-gamma	Figure Number
	Date	Date	
MO-02	22-Jun-14	9-Aug-14	Figure 3.7-5
MO-03	20-Jul-14	9-Aug-14	Figure 3.7-6
JE-01	18-Jun-14	20-Aug-14	Figure 3.7-31
JE-02	20-Jul-14	20-Aug-14	Figure 3.7-32
85W-04	28-Jun-14	6-Aug-14	Figure 3.7-7
85W-05	28-Jun-14	9-Aug-14	Figure 3.7-8
85W-05A			
85W-06	6-Aug-14	13-Aug-14	Figure 3.7-9
85W-07	19-Aug-14	26-Aug-14	Figure 3.7-10
85W-08	19-Aug-14	26-Aug-14	Figure 3.7-11
IW-01	10-Aug-14	21-Aug-14	Figure 3.7-24
IW-02	19-Jun-14	21-Aug-14	Figure 3.7-25

[†]BN-03 was resurveyed in 2014 to confirm radiological clearance

4 Effects of the Project on Human Health

AREVA is committed to providing a healthy and safe work environment for all employees and contractors and to ensuring work is performed in a safe and responsible manner. To meet this commitment, AREVA takes every reasonable precaution to ensure the health and safety of personnel to mitigate the potential harmful effects of uranium exploration activities. This commitment is supported through a comprehensive Health and Safety Program.

4.1 Health and Safety Program

The Health and Safety Program ensures work activities are performed in a safe and responsible manner and that they are conducted in accordance with the Nunavut *Mine Health and Safety Regulations*, exploration best practices and AREVA safety requirements. AREVA completed the field season in accordance with its OHSAS 18001:2007 certification for the Exploration Department's Health and Safety Management System. The OHSAS 18001 standard provides the minimum requirements for a comprehensive Health and Safety Management System which allows an organization to proactively minimize occupational health and safety risks and to continually improve its health and safety performance. An external third party, SGS, conducted the OHSAS 18001:2007 audit for the Health and Safety Management System on March 13 and later conducted the Kiggavik field audit from July 22 to July 23, 2014. The audit concluded that the health and safety program continues to meet requirements.

The Project Geologist was responsible for overseeing the Health and Safety Program with the assistance of the SHEQ Supervisor to ensure worker safety and protection of the environment. All Kiggavik personnel received orientation and appropriate safety training prior to commencing work. Employees and contractors were also required to participate in weekly safety meetings to discuss and reinforce safety issues and act as the Occupational Health and Safety Committee (OHC). The meeting minutes were forwarded monthly to the Workers' Safety and Compensation Commission (WSCC) Mines Inspector. The monthly accident summary was forwarded to the WSCC Mines Inspector, which outlined the two first aids and one medical aid that occurred during the field program. There were no lost time accidents involving AREVA or contractor personnel.

4.2 Radiation Protection

To prevent radiation exposure during drilling, the Radiation Protection program was implemented to ensure work activities were performed in a safe and responsible manner. The results of the radiation monitoring program indicate that the work activities did not pose a health risk to workers or the public.

The Radiation Protection program was completed using:

- Gamma dosimetry which included optically stimulated luminescent dosimeters (OLDs) and direct reading dosimeters (DRDs/Canaries) for personal dosimetry
- Autotess survey instrument for gamma radiation monitoring
- Ludlum model 2221 with Trimble Pro-Xrt for pre and post gamma surveys
- Ludlum model 12 survey instrument and swipes for contamination monitoring
- Alpha monitors for radon progeny and long lived radioactive dust (LLRD) monitoring

The Radiation Protection Program is supported through a comprehensive series of work instructions for worker dosimetry, radiological monitoring, contamination control and the safe handling of radioactive materials.

4.2.1 Radiation Protection Plan

The Radiation Protection Plan for the Kiggavik Project is designed to meet the requirements of the applicable Nunavut Occupational Health and Safety Regulations, exploration best management practices, and AREVA's Integrated Management System (IMS). Although current activities are not regulated by the CNSC, the Radiation Protection Plan is designed in accordance with CNSC Regulations. The Radiation Protection Plan guides the implementation of the Radiation Protection Program to keep exposures As Low as Reasonably Achievable (ALARA) through ongoing monitoring, management of radioactive materials, and proper abandonment and restoration. The plan is implemented through routine radiation monitoring by AREVA personnel. This includes dosimetry monitoring to determine worker exposure, management of radioisotopes, shipping and receiving of radioactive material, the collection and storage of radioactive materials, and emergency response planning.

All AREVA employees and contractors receive appropriate radiation protection training prior to beginning work to ensure worker safety and protection of the environment. This includes the designation and obligations of Occupational Workers, dose limits and dose levels, and relevant hazards. Personnel involved with the shipment of radioactive materials received the required

training in Transportation of Dangerous Goods (TDG) Class 7 Radioactive Material for both ground and air transport.

4.2.1.1 Radiological Monitoring

As part of the Radiation Protection Program, workplace radiological monitoring was performed for gamma radiation, RnP and LLRD to detect potentially abnormal conditions and estimate worker doses. Appropriate personal protective equipment and ventilation methods were used during all work activities, and continuous monitoring was conducted for LLRD and RnP in the geology core shacks. A summary of the radiological monitoring results is provided in Table 4.2-1. Working Level (WL) is the unit of concentration of radon progeny equivalent to the potential alpha energy concentration that results from 3.7 Bq of each radon decay product. LLRD is expressed in units of becquerel per cubic meter (Bq/m³) which refers to number of Bq inhaled or ingested and is used to determine the dose received from radioactive dusts.

Table 4.2-1: Radiological Area Monitoring Results

Radiation Type	Minimum	Maximum	Average
Radon Progeny (WL)	0.0003	0.0007	0.0005
Long-Lived Radioactive Dust (Bq/m ³)	--	0.003	0.0006

Contamination control measures are implemented to minimize the spread of radioactive materials. When gamma dose rates on contact with the core exceed 10 µSv/h, contamination monitoring is conducted and the affected surface or equipment cleaned if necessary.

4.2.1.2 Radiation Exposure

The total effective dose of Kiggavik personnel considers gamma radiation and the results from area monitoring for RnP and LLRD in units of millisieverts (mSv). This cumulative dose is compared to dosimetry limits to confirm the adequacy of the Radiation Protection Program.

Gamma Exposures

Radiation exposure during uranium exploration activities primarily originates from external gamma radiation emitted from mineralized core, rock and drill cuttings. Worker exposures to gamma radiation were measured using optically stimulated luminescent dosimeters (OLDs) provided by the licensed dosimetry provider, Landauer Inc. For exposure control, workers handling and logging radioactive drill core and rock samples were also issued direct reading dosimeters (DRDs) or Canaries. Action and Administrative Levels are set for gamma radiation

dose rates which are which measured by the DRD or Canaries. Worker gamma radiation exposures ranged from 0.01 mSv to 0.02 mSv with an average exposure of 0.012 mSv which are well below the public dose limit of 1 mSv/year.

Radon Progeny and Long-Lived Radioactive Dust Exposures

Worker exposures to RnP and LLRD are estimated from industry-accepted area monitoring techniques and occupancy time information. Worker exposures to RnP and LLRD ranged from 0.0004 mSv to 0.006 mSv with an average exposure of 0.0038 mSv.

Total Effective Exposure

As per the *Radiation Protection Regulations*, the maximum annual dose for an occupational worker is 50 millisievert per year (mSv/year) or an average of 20 mSv/year over 5 years. The maximum annual dose for a member of the public is 1 mSv/year. Total effective exposure for Kiggavik personnel was calculated for each individual based on OLD results, RnP and LLRD radiological monitoring results and time occupancy information. As shown in Figure 4.2-1, the worker radiation doses were well below regulatory dose limits for members of the public and occupational workers. The maximum dose received by an individual working at Kiggavik in 2014 was 0.02 mSv and the average dose was 0.005 mSv. Therefore, the Kiggavik personnel exposures were below the regulatory limit for members of the public.

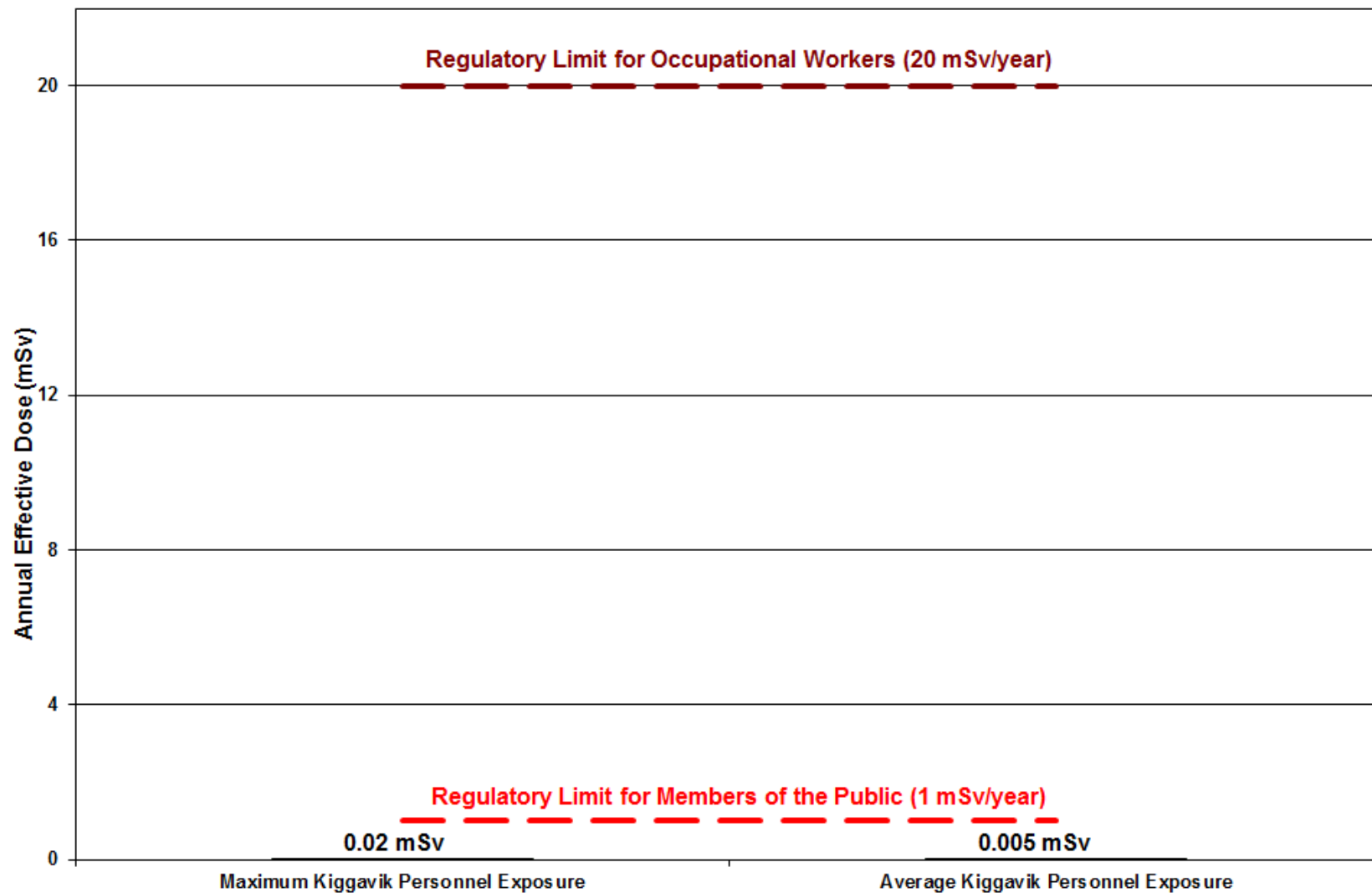


Figure 4.2-1: 2014 Kiggavik Personnel Annual Effective Dose

5 Summary of Local Hires and Initiatives

An important aspect of the Kiggavik Project is that it brings employment and business opportunities to local residents. In 2014, local people were hired for work carried out at the Kiggavik camp and in Baker Lake. Northern companies were successful in winning contracts. In addition to providing direct employment and business contracts, AREVA sponsored several events in the Kivalliq region in 2014.

5.1 Local Employment

The Kiggavik Project provided employment to local people through direct hiring as well as by hiring local companies to supply labor services to the Project. During 2014, a Community Liaison Officer was hired to work afternoons throughout the year.

The Project contracted Inuit workers through Peter's Expediting Ltd. (PEL), a company based in Baker Lake, for the winter haul, camp operations and maintenance, wildlife monitoring, and kitchen help. The Project's drilling contractor, Boart Longyear, hired four graduates from the Arviat drill program as drill helpers at the Kiggavik site. Kivallingmiut Aviation, the helicopter contractor, also hired two local Baker Lake residents to support operations in Baker Lake. Table 5.1-1 summarizes the employment provided to local Inuit workers for the past six years.

Table 5.1-1: Local Employment

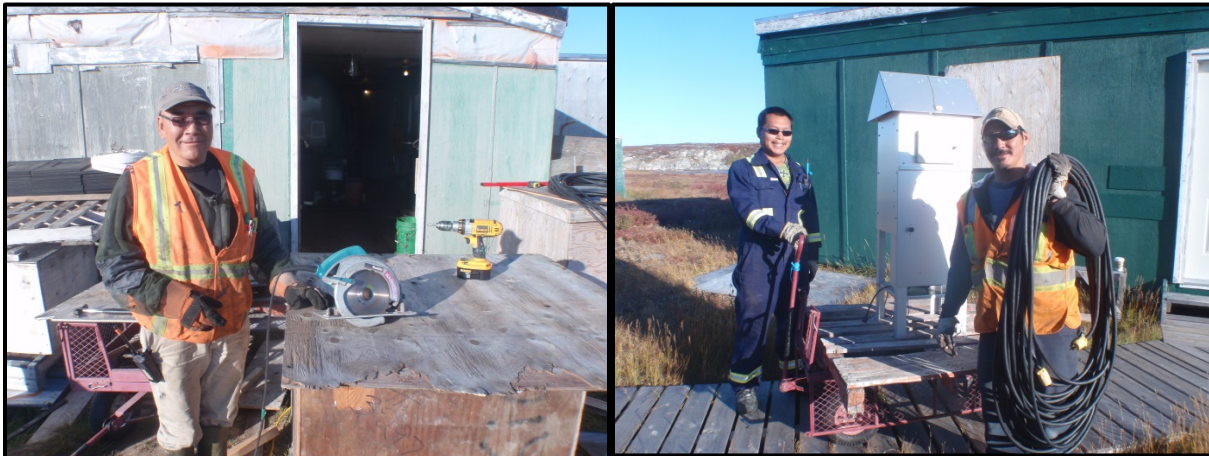
Year		AREVA Employees	Contracted Workers	Total
2009	Inuit Workers	3	31	34
	Hours	2,993	10,205	13,198
2010	Inuit Workers	3	27	30
	Hours	3,076	6,495	9,571
2011	Inuit Workers	2*	17	19
	Hours	2,044	4,980	7,024
2012	Inuit Workers	3*	10	13
	Hours	1,830	4,332	6,162
2013	Inuit Workers	3**	19	22
	Hours	2,059	6,752	8,811
2014	Inuit Workers	1	11	12
	Hours	1,239	3352.5	4,591.5

* Includes a non-Inuit local Community Relations Assistant from Baker Lake who worked in Baker Lake during the summer

**Includes Inuit worker hired by AREVA to work at the Cluff Lake site



Photograph 5.1-1: Camp Maintenance Workers



Photograph 5.1-2: Camp Maintenance Workers Closing Camp

5.2 Locally Contracted Work

Many goods and services obtained for the Kiggavik Project were contracted to local suppliers. The total value of the contracts to northern vendors in 2014 was \$3.8M, 55% of the total exploration and mine development contract expenditures of \$6.9M. Much of this work went to companies with offices in Baker Lake and Rankin Inlet. There was also accommodation and meals in other Kivalliq communities. Table 5.2-1 summarizes the value of contracts awarded to northern businesses since 2007. The work contracted to local companies in 2014 consists of:

- Diesel and jet fuel
- Expediting and transportation
- Environmental Assessment studies
- Helicopter services
- Groceries

- Meals and accommodations
- Translation services
- Cleaning services
- Labour
- Office utilities
- Construction of core boxes and core racks

Table 5.2-1: Kiggavik Project Northern Contracts

	Inuit Owned companies*	Nunavut companies**	Other Northern Companies***	Total Northern Expenditures	Total Contract Expenditures	% spent total northern	% spent Inuit owned Firms
2007	\$1.0M	\$0.90M	\$0.75	\$2.65M	\$8.5M	30%	11%
2008	\$1.75M	\$1.2M	\$1.2M	\$4.15M	\$13.7M	30%	13%
2009	\$1.4M	\$0.76M	\$0.60M	\$2.75M	\$14.5M	19%	10%
2010	\$2.2M	\$1.00M	\$0.33M	\$3.5M	\$12.5M	28%	18%
2011	\$2.4M	\$0.36M	\$0.26M	\$3.03M	\$9.2M	33%	26%
2012	\$2.2M	\$0.5M	\$0.06M	\$2.76M	\$7.1M	39%	31%
2013	\$2.30M	\$0.55	\$0.58M	\$3.43	\$6.8M	50%	34%
2014	\$3.00M	\$0.50	\$0.31M	\$3.79M	\$6.9M	55%	43%
Total	\$16.2M	\$5.8M	\$4.1M	\$26.1M	\$79.2M	33%	21%

*Companies qualifying as Inuit owned Firms

**Companies not Inuit owned Firms but with offices in Nunavut and a significant number of Inuit employees

***Northern based companies from outside of Nunavut

5.3 Sponsorships and Donations

The Kiggavik Project has sponsored community events in Baker Lake and other communities in the Kivalliq since 2006. Sponsorships were given to educational, community, cultural and sports events and celebrations. The list of events sponsored and donations given in 2014 is shown in Table 5.3-1.

Table 5.3-1: Sponsorships and Donations for 2014

Category	Organization	Activity
Community	Baker Lake Hamlet	Hamlet Days feast
	Baker Lake Hamlet	Mayors meeting dinner
	Coral Harbour Youth Centre	Purchase equipment
	Baker Lake Hamlet	Holiday celebrations
	Chesterfield Inlet Hamlet	Holiday celebrations
	Baker Lake Hospice Society	Elders party
Sports and Recreation	Baker Lake minor hockey	Tournament
	Chesterfield Inlet minor hockey	Tournament
	Baker Lake Square Dance	Showdown
	Baker Lake minor hockey	Tournament
	Kivalliq Science Camp	Kivalliq Communities
	Baker Lake snowmobile club	Races
	Chesterfield Inlet cod derby	Fishing Derby
	Chesterfield Inlet Fishing derby	Fishing Derby
	Arviat Sila Rainbow committee	Dance competitions
	Rankin Inlet minor hockey	Tournament
Education	Baker Lake high school	Exchange trip
	Baker Lake Schools on board	Trip
	Kivalliq	Science Camp
	Baker Lake high school	Graduation award
	Rankin Inlet high school	Graduation award
	Chesterfield Inlet high school	Graduation award
Culture	Bowhead Whale Hunt	Chesterfield Inlet
Environment	Baker Lake Health Committee	Spring cleanup
Health & Safety	Baker Lake Search and Rescue	Helicopter support for searches. Funds for operation
	Rankin Inlet Hamlet	Suicide Prevention Week activities

6 Community Engagement

AREVA recognizes that for success of the Kiggavik Project, AREVA will need the support of the people in the region. Information sharing and community engagement are not only requirements of the environmental assessment process, but also one of AREVA's corporate commitments. This section presents the engagement activities that were carried out by AREVA in Nunavut in 2014 primarily for the environmental assessment process. The exploration program carried out at Kiggavik was discussed at some of these events.

6.1 Information Sharing

6.1.1 Information Office

AREVA has operated an information office in Baker Lake since August of 2006. The office continued to be open to the public throughout 2014 on a daily basis. A bilingual Community Liaison Officer was present each afternoon to speak with visitors.

6.1.2 Kiggavik Project Community Liaison Committee

The Kiggavik Project established a Community Liaison Committee (CLC) in December 2006 as a means of maintaining community involvement in Baker Lake. Committee members are appointed by their respective organizations and a community member is elected as Chair of the Committee.

The organizations represented on the CLC are:

- Hamlet Council
- Elders Society (male and female representatives)
- Youth Group (male and female representatives)
- District Education Authority
- Hunter and Trappers Organization
- Health Committee
- Justice Committee
- Business Community
- Aberdeen Lake People

During 2014, the Baker Lake CLC met on 3 occasions. The dates are shown in Table 6.1-2. Meetings were held at the AREVA Information Office in Baker Lake and were open to the public.

Meeting announcements were made on the local radio with the date, time and location. Following the meetings, radio announcements were made to provide Baker Lake residents with a meeting summary. Translation was provided and minutes were kept of each meeting. Meeting minutes are available at the information office in Baker Lake and are posted on the Kiggavik blog at www.kiggavik.ca.

The Baker Lake CLC provided community advice to the Kiggavik Project throughout the year. Following is a summary of topics discussed with the CLC:

- Updates of Project activities including the field program, the overland haul, environmental baseline work and permits
- Updates on the environmental assessment process
- Land Use, navigable waters and fisheries offset possibilities
- Information and updates on local employment opportunities and sponsorships

6.1.3 Kiggavik Blog

On June 29, 2010 a new communication initiative, the Kiggavik Blog www.kiggavik.ca went live. In May 2013 the look of the website changed. This website contains project information, a schedule of events and allows for the public to ask questions. Statistics for the blog are shown in Table 6.1-1. Blog activity was fairly consistent throughout the year with the highest activity in October, after the Final Environmental Impact Statement (FEIS) submission. There were 3,856 site visits in 2014, lower than the previous three years which varied between 4,211 and 5,649.

Table 6.1-1: Statistics for Kiggavik Blog

Month	Site Visits	Page views	Unique visitors	Average Pages viewed per visit
December 2014	370	857	302	2.32
November 2014	374	893	325	2.39
October 2014	478	1,351	363	2.83
September 2014	261	718	211	2.75
August 2014	266	675	207	2.54
July 2014	368	1,026	272	2.79

Month		Site Visits	Page views	Unique visitors	Average Pages viewed per visit
June 2014		273	689	212	2.52
May 2014		208	591	183	2.84
April 2014		258	735	219	2.85
March 2014		396	1,023	332	2.58
February 2014		241	704	212	2.92
January 2014		363	1,207	276	3.33
Totals	2014	3,856	10,469	3,114	
	2013	4,670	13,954	3,516	
	2012	4,211	10,589	3,075	
	2011	5,649	12,986	4,657	

6.1.4 Summary of Meetings and Events

AREVA has engaged in a series of initiatives to inform, consult with and involve the community in the Kiggavik Project since 2005. The initiatives and events carried out in 2014 are detailed in this section and are listed in Table 6.1-2. Included are events that were organized by AREVA as engagement for the environmental assessment and as part of community involvement. The majority of events occurred in Kivalliq communities or with organizations from Kivalliq communities. Some events took place with communities outside the Kivalliq Region. The various activities are discussed in the remainder of the section.

Table 6.1-2: Community Information, Involvement and Engagement Activities - 2014

Community	Group	Date	Purpose/ Topic
Baker Lake	Community Liaison Committee	Feb 20	Overland Haul, status of Kiggavik Environment Assessment, election of Chair and Vice Chair
		Jun 23	Discussed fisheries offset possibilities and navigable waters use
		Aug 12	The Kiggavik field season, the Environmental Assessment, wildlife monitoring and reporting at Kiggavik.
	HTO	Apr 24, 25, 29	Special Meeting to discuss the Kiggavik EA
	Elders	Apr 28	Informal meeting with elders regarding land use
		Jun 23	Informal meeting with hunters and elders regarding fisheries offset possibilities
Chesterfield Inlet	Hunters and Trappers Organization	Feb 25	Special meeting to discuss EA issues
Rankin Inlet	Hamlet	Dec 10	Meeting with Mayor to discuss the EA
Coral Harbour	Hamlet	Jan 21	Kiggavik EA Update
	HTO	Jan 21	Kiggavik EA Update
	School	Jan 21	Mining Cycle and environmental assessment discussion
	Public Meeting	Jan 21	Open House on EA and monitoring
Regional Organizations, Inuit, Government and IPG meetings	KIA	Apr 30	Meeting with KIA/Sakku in Rankin Inlet regarding contracting
		Aug 11	Meeting with staff in Rankin Inlet regarding EA
	NIRB	Apr 11	Meeting with staff in Iqaluit
		Sep 30	Meeting with staff in Cambridge Bay to deliver FEIS
	Nunavut Mine Training Roundtable	Apr 9	Annual meeting in Iqaluit
	Kivalliq Wildlife Board	Apr 9	Project EA wildlife update at annual general meeting in Rankin Inlet
		Oct 23	Project EA Update at meeting in Rankin Inlet
	Kivalliq Socioeconomic Monitoring Committee	Oct 7/8	Annual meeting in Baker Lake
	Northern Project Management Office	Jan 29	Update meeting in Vancouver
		Apr 10	Update meeting in Iqaluit
	AANDC	Mar 3	Meeting with staff in Toronto re EA

Community	Group	Date	Purpose/ Topic
		Apr 11	Meeting with staff in Iqaluit re EA
	GN ED&T/ Housing	Apr 10	Discussion of EA issues in Iqaluit
	MLA for Baker Lake	Aug 13	Project Update meeting in Baker Lake
	GN Minister of ED&T	Jan 26	Update meeting
	MP for Nunavut	Mar 3	Project discussion in Toronto
	Federal Senator for Nunavut	Mar 3	Project Update meeting in Toronto
Transboundary meetings	BQCMB	Apr 3&4	Special meeting in Saskatoon to discuss outstanding EA issues
		May 6-8	Meeting in Regina
		Nov 19	Meeting in Winnipeg
	Hudson Bay Roundtable	Apr 15/16	Meeting and presentation at annual meeting in Churchill, MB
	Tadoule Lake, MB	Jun 25	Meeting with Council re Kiggavik EA
		Jun 25	Public meeting re Kiggavik EA & transboundary issues
	Lac Brochet, MB	Jun 26	Meeting with Council re Kiggavik EA & transboundary issues
	Fond du Lac, SK	Nov 12	Meeting with Council re Kiggavik EA & transboundary issues
		Nov 12	Public meeting re Kiggavik EA and transboundary issues
	Black Lake, SK	Nov 13	Meeting with Council re Kiggavik EA & transboundary issues
		Nov 13	Public meeting re Kiggavik EA and transboundary issues
	Wollaston Lake, SK	Nov 17	Public meeting re Kiggavik EA and transboundary issues

Hamlet Representatives

Kiggavik team members met with the Mayor and Council of Coral Harbour during the visit to Coral Harbour for the 2013/14 public meeting. A Kiggavik team member met with the Mayor of Rankin Inlet to discuss the Kiggavik EA and the final hearing.

Hunters and Trappers Organizations/ Kivalliq Wildlife Board

AREVA engaged three of the Kivalliq HTOs in 2014. Kiggavik team members met with the Coral Harbour HTO to discuss the Kiggavik EA in January during the visit to Coral Harbour for the

2013/14 Open House. In February, Kiggavik team members and a consultant met with the Chesterfield Inlet HTO to discuss marine issues. In April, Kiggavik team members held a three session meeting with the Baker Lake HTO to discuss Kiggavik EA issues.

AREVA met with the Kivalliq Wildlife Management Board on October 31 for a project update meeting during their Annual General Meeting in Arviat. AREVA met with the Kivalliq Wildlife Board during their annual meetings in April and November to provide updates on the wildlife aspects of the Kiggavik EA.

6.2 Kivalliq Community Involvement

Community involvement for the Kiggavik project began in 2006. Community involvement activities for 2014 are described in this section.

The Kiggavik Project has been speaking with high school students in the Kivalliq region since 2006. In 2014, awards were given to students in Baker Lake, Rankin Inlet and Chesterfield Inlet.

The final community to be visited for the 2013/14 Open House tour of Kivalliq communities was Coral Harbour. It was visited in January 2014. Kiggavik team members held an open house and also met with the Hamlet Council, the HTO and held a discussion on mining phase and the environmental assessment process with students at the high school.

On two occasions during the summer exploration season, a helicopter from the Kiggavik site rescued people requiring assistance in remote areas. The rescues appeared on the [Kiggavik blog](#) and the Nunatsiaq News (See Appendix D).

Appendix A Compliance with Conditions

The following sections list the conditions of the Nunavut Impact Review Board (NIRB) Screening Decision, the Aboriginal Affairs and Northern Development Canada (AANDC) Land Use Permit, the Kivalliq Inuit Association (KIA) Land Use Licence and the Nunavut Water Board (NWB) Water Licence for the Kiggavik Project and also describe the means by which the Project has achieved compliance with these conditions.

A.1 Nunavut Impact Review Board file no. 06AN085

On March 26, 2008 NIRB re-issued the original terms and conditions ([April 3, 2007 Screening Decision](#)) along with the additional terms and conditions outlined in the August 30, 2007 and January 9, 2011 letters.

A.1.1 Original NIRB Screening Decision – April 3, 2007

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
AANDC imposed mitigation measures, conditions and monitoring requirements pursuant to the Federal Land Use Permit, which require AREVA (the Proponent) to respect the sensitivities and importance of the area. These mitigation measures, conditions and monitoring requirements should be in regard to: <ul style="list-style-type: none">a. Location and Areab. Timec. Equipmentd. Methods and Techniquese. Control or Prevention of Flooding, Erosion and Subsidence of Landf. Use, Storage, Handling and Disposal	Refer to Section A.4 for AANDC permit conditions.

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
<p>of Chemical or Toxic Material</p> <ul style="list-style-type: none"> g. Wildlife and Fisheries Habitat h. Objects and Places of Recreational, Scenic and Ecological Value i. Petroleum Fuel Storage j. Matters Not Consistent with Regulations 	
<p>AANDC must consider the importance of conducting regular Land Use Inspections, pursuant to the authority of the Federal Land Use Permit, while the project is in operation. The Land Use Inspections should be focused on ensuring the Proponent is in compliance with the DIAND Caribou Protection Measures.</p>	<p>AANDC conducted a field inspection pursuant to the Federal Land Use Permit on July 16, 2014. Refer to section 1.4.1 for details on this inspection.</p>
<p>KIA imposed mitigation measures and/or Environment Terms and Conditions pursuant to the IOL Licence in regard to:</p> <ul style="list-style-type: none"> a. General Standards b. Fuel and Chemical Storage c. Campsites d. Fisheries e. Ground Disturbance f. Wildlife g. Any other conditions recommended by the appropriate Community Lands and Resource Committee (CLARC) 	<p>Refer to Section A.5 KIA Land Use Licence.</p>
<p>Additional work (related to AANDC or KIA land applications) outside the original scope of the project proposal requires screening by NIRB; NIRB recommends any renewal request to be</p>	<p>Continual communication efforts are made with all regulatory agencies and boards.</p>

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
forwarded to them for re-screening	
GN – DOE CO's should conduct random inspections of the location from May to August to monitor compliance with DIAND Caribou Protection Measures	The Baker Lake Conservation Officer and student conducted an inspection on August 13, 2014.
GN-DOE should conduct on-going review of wildlife monitoring results as required by WMMP	Monthly wildlife reports were submitted to GN-DOE during the duration of the 2014 field season.
After receiving the annual report, GN-DOE should report to NIRB and AANDC its findings regarding the possible impact of the Project on the Beverly and Ahiak caribou herds	No AREVA action required.
AANDC permit and KIA licence subject to any findings, direction or advice received from GN-DOE as result of 2007 GN/GNWT population surveys of the Beverly and Ahiak Caribou Herds.	No AREVA action required.
AREVA to maintain a copy of Screening Decision at the site	Located in the camp office and kitchen.
AREVA is to forward copies to NIRB of all permits obtained and required for the Project.	Ongoing.
AREVA to operate in accordance with proponent commitments stated in Appendix A (see A.1.2 below)	Refer to Section A.1.2 Summary of Proponent Commitments.
AREVA shall operate in accordance with	AREVA is committed to maintaining

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
commitments made in all the Operation Plans (namely Spill Contingency, Abandonment and Restoration, Noise Abatement, Waste Management, Wildlife Mitigation and Monitoring, Radiation Safety and the Environmental Code of Practice)	compliance as part of AREVA's commitment to continuous improvement. Management Plans are continually reviewed and are submitted with this annual report.
AREVA to submit annual report to NIRB, AANDC, KIA and GN-DOE by January 31 each year that the project is in operation commencing January 31, 2008.	Annual Reports have been submitted for 2007, 2008, 2009, 2010, 2011, 2012, and 2013. This submission represents the Annual Report for the 2014 exploration field program.
Shall abide by DIAND Caribou Protection Measures (see A.2) and those mitigation measures outlined in the WMMP.	This is ongoing throughout the field season with employee/contractor training and awareness. This is monitored by AREVA staff and Wildlife Monitors. Refer to Section 3.6.
Prohibited to allow aircraft to take-off or land if groups of caribou are within 1 km of the airstrip or helipad.	Addressed in the Wildlife Mitigation and Monitoring Plan; pilots receive training and awareness; verified by a Wildlife Monitor. Refer to Section 3.6 for more information.
Update WMMP to include "Section 2.1 During June and July – To avoid injuries to caribou and humans, if one or more caribou approach within 1 km of drilling operations, then activities will be suspended until caribou leave the area." Any direction from GN-DOE or KIA regarding caribou management plan must be forwarded to NIRB.	Revised conditions established in previous Wildlife Mitigation and Monitoring Plan. GNDOE believes that 50 caribou is an appropriate threshold for the suspension of activities (December 16, 2008 letter to NIRB regarding INAC and KIA land use permit extension request). Monitoring program (including Inuit wildlife monitors) help to guide this protection measure.
Ensure no hunting or fishing without proper Nunavut authorizations	Employees and contractors made aware of required authorization during orientation and

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
	through on-going awareness. Employees request fishing licences from the SHEQ Supervisor who obtains them from the Conservation Officer.
Compliance with the <i>CWS for Dioxins and Furans</i> , and the <i>CWS for Mercury</i> . Efforts to achieve compliance reported in annual report.	Refer to Section 3.2.1.
Adherence to conditions in Appendix B <i>Archaeological and Paleontological Resources – Terms and Conditions for Land Use Permit Holders</i> (see A.1.3 below)	Refer to Section A.1.3
Shall avoid known archaeological and/or paleontological sites	Record of known sites is kept updated and sites are avoided or handled appropriately by consultants and responsible authorities.

A.1.2 Appendix A: Summary of Proponent Commitments

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
Disturbance to permafrost mitigated through insulating floors of buildings, keeping sump and incinerator area small and raising incinerator above ground	In compliance through proper site planning.
Use walkways to minimize soil and vegetation disturbance	Walkways are present between all buildings at the cabin and geology areas of camp; The importance regarding the use of walkways is stressed during the site orientation.
The impact of helicopter and airplane noise and presence on wildlife and people will be	Ongoing through the implementation of the Wildlife Mitigation and Monitoring Plan; proper

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
mitigated by avoiding wildlife during flights and avoiding low flying. This will require ongoing communication and diligence.	training and awareness to all site employees/contractors. Refer to Section 3.6 for more information.
The presence of wildlife will be carefully monitored to ensure minimal disturbance. Daily wildlife siting records will be maintained and these will be used to plan work so that wildlife disturbance will be minimized. The information will also be provided to management boards and regulatory authorities.	
Use protective procedures and containments to protect water quality	Ongoing through the implementation of the Spill Contingency Plan.
Grey water treated through sumps and carefully monitored to ensure containment	Prior to the completion of the 2012 season, a punctured barrel with sand and gravel was used to construct a sump for the grey water discharge. During the 2013 inspection, it was deemed adequate by the AANDC inspector. The sump was continuously monitored through 2014 to ensure containment.
No garbage to remain on site	Ongoing through the implementation of the Waste Management Plan.
Camp to be decommissioned when no longer in use	Addressed in the Abandonment and Restoration Plan.
No fuel, drill cuttings, chemicals, wastes or sediment will be deposited into any water body as per the <i>Fisheries Act</i> , S 36(3).	Ongoing through the implementation of the Waste Management Plan and the Spill Contingency Plan; proper training and awareness is provided to all site

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
	employees/contractors. Non-compliance identified during spill in Bong Area (See Section 3.4.2)
Sumps, including those created for the disposal of drill cuttings located above the high water mark of any water body to prevent contents from entering any water body frequented by fish	No sumps are located within the high water mark of any water body.
Drilling additives or mud not to be used in connection with holes drilled through lake ice unless re-circulated or contained such that they do not enter the water or are demonstrated to be non-toxic	On ice drilling has not been conducted to date. If such activities take place in the future, all proper methods will be applied to ensure drilling additives and muds do not enter the water. AREVA uses non-toxic materials wherever possible.
Land-based drilling not to occur within 30 m of the high water mark of any water body	Ongoing through the implementation of the Environmental Code of Practice; proper training and awareness provided; regular inspections of drill sites performed by SHEQ personnel. Any drilling within 30 m of the high water mark will be under an approved licence with applicable protection and mitigation measures in place to the satisfaction of the NWB and DFO.
Material will not be stored on the surface ice of lakes or streams. Materials on ice surface must be for immediate use.	Any materials on ice surface are for immediate use and completely removed before the melting of the ice.
If artesian flow is encountered, the drill hole will be immediately plugged and permanently sealed.	As approved by the NWB on March 14, 2012, AREVA is allowed to drill while under low flow artesian conditions within all areas

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
	encompassed by the Kiggavik Lease provided the appropriate measures are implemented (as outlined in Amendment approval). The amendment was further incorporated into the licence renewal for 2BE-KIG1318. Refer to Section 3.3.2 for information regarding artesian encountered during the 2014 field season.
Winter road travel will not begin until the ground is sufficiently frozen to provide support and to avoid surface damage and rutting	In compliance and ongoing. This is done by following the Environmental Code of Practice; proper training and awareness is provided.
Locate winter road stream crossings that will minimize grades. Avoid bank disturbance and mechanized clearing immediately adjacent to any watercourse.	Committed to conduct when required and achievable.
Winter road lake and stream crossings to be constructed entirely of ice and snow materials and stream crossings are to be removed or notched prior to spring break-up.	Committed to conduct when required and achievable.

A.1.3 Appendix B: Archaeological and Palaeontological Resources

Terms and Conditions for Land Use Permit Holders (Also attached to AANDC permit).

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
AREVA shall not operate any vehicle over a known or suspected archaeological or paleontological site	In compliance; use of ATV's only permitted around camp and for limited activities; addressed through proper training and awareness; included in site orientation.
AREVA shall not remove, disturb, or displace any archaeological artifact or site, or any fossil or paleontological site	Site rule that is reinforced during orientation.
AREVA will immediately contact the Dept. of Culture, Language, Elders and Youth (CLEY) should an archaeological site or specimen, or a paleontological site or fossil be encountered or disturbed by a land use activity.	AREVA will promptly contact CLEY should any site or specimen be encountered or disturbed.
AREVA will cease any activity that disturbs an archaeological or paleontological site until permitted to proceed by CLEY	In compliance through proper training and awareness; included in site orientation.
AREVA will follow CLEY and DIAND direction in restoring disturbed sites if required	AREVA strives to promptly follow-up on all recommendations/concerns.
AREVA will provide CLEY with requested information on sites encountered in the course of land use	Any information requested on sites encountered will be provided to CLEY.
AREVA will make best efforts to ensure all those working under a permit are aware of conditions concerning archaeological or paleontological sites	Training and awareness of archaeological and paleontological protocol is included in site orientation. Copies of all permits and licences are provided on site for reference.

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
AREVA shall avoid known archaeological or paleontological sites	Record of known sites is kept updated and avoided or handled by consultants on the advice/recommendations of responsible authorities.
AREVA shall have an archaeologist or paleontologist perform those functions required and permitted by CLEY.	In compliance; Previously hired an independent consultant to conduct heritage surveys and investigations.

A.1.4 Additional NIRB Terms and Conditions

Terms and conditions contained in [August 30, 2007 letter](#):

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
<i>Spill Contingency Plan</i>	
AREVA to consult and implement recommendations found in the 2003 CCME guidance document PN 1326 entitled "Environmental Code of Practice for Aboveground Storage Tank Systems Containing Petroleum Product and Allied Petroleum Products"	The site layout and tanks have been designed by a consulting professional engineer and have been installed by a registered company/petroleum contractor to ensure compliance with the <i>Canadian Council of Ministers of the Environment (CCME) Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products, 2003</i> . In 2007 Golder Associates (Golder) conducted an engineering assessment to identify potential issues with the installation of storage tanks. Recommendations were provided for the foundation support for the storage tanks. To mitigate the potential issues described in the report, Golder recommended that the tanks be
AREVA to revise Spill Contingency Plan regarding this amendment and conduct personnel re-training as per revised Spill Contingency Plan. AREVA to submit revised plan to NIRB and other regulators within 30 days of this decision	
Revisions to include: quantity of the proposed double-walled tanks and the site layout plan; design considerations for safe operation and	

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
maintenance; operation, maintenance and inspection procedures and an emergency response plan.	<p>placed on timbers located under each saddle to provide an increased bearing area.</p> <p>The use of timbers is a deviation from the CCME COP, however it should be noted that this is common practice in the area and AREVA received permission from the area Fire Marshal, Tim Hinds with the Government of Nunavut-Community and Government Services via email (Trevor Carlson, AREVA) on November 20th, 2007.</p> <p>All necessary changes and appropriate training requirements have been made in both the Project's Spill Contingency Plan and the Emergency Response Manual.</p>
Secondary containment or surface liner with adequate size and volume utilized during all fuel or hazardous substance transfers	In compliance and ongoing through the implementation of the Spill Contingency Plan and the Environmental Code of Practice.
Sufficient absorbent materials and spill kits during fuel transportation, storage and transfers are provided	In compliance and ongoing through the implementation of the Spill Contingency Plan.
<i>Drilling and Disposal of Radioactive Substances</i>	
Use of biodegradable and non-toxic additives (Canadian Environmental Protection Act lists CaCl_2 as a toxic substance)	Committed to minimize the use of CaCl_2 when drilling conditions allow.
Drill holes that encounter uranium mineralization with a content $>1.0\%$ over a length of >1 m with a meter-percent concentration greater than 5% should be sealed by cementing over the entire	Committed to conduct when required and achievable as per Uranium Exploration Plan.

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
mineralization zone; this should be at least 10 m above and below each mineralization zone.	
All land-based artesian holes shall be documented, plugged and sealed with grout.	Refer to section 3.3.2 for information regarding all artesian encountered during the 2014 field season.
Core storage areas should be located at least 100 m from the high waterline of all water bodies.	Ongoing through the implementation of the Radiation Protection Program and appropriate site planning.
<i>Physical Environment</i>	
No movement of equipment or vehicles unless the ground is in a state capable of fully supporting the equipment or vehicles without rutting or gouging. Overland travel suspended if rutting occurs	Ongoing throughout field season. Importance communicated to employees and contractors during orientation and on-going awareness. ATV and snowmobile use is strictly controlled.
Additional camp facilities to be located on gravel, sand or other durable land	Is in compliance and is ongoing through site planning. All buildings/sleeping units built in 2007 and later are located on timbers placed on gravel to allow airflow underneath the building which prevents degradation to permafrost.
New sleeping units properly designed to prevent any degradation to permafrost	
Final inspections of entire site to be conducted by proponent and lead agency to ensure all areas have been reclaimed in accordance with authorizations	Addressed in the Abandonment and Restoration Plan

Terms and conditions contained in [January 9, 2009 letter](#):

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
The Proponent shall make all efforts to minimize the use of aerial surveys to obtain information about caribou. It is recommended that the Proponent employ daily stationary ground observations and satellite caribou collar data in obtaining the necessary monitoring data.	In replacement of aerial surveys, ground observations are used by the Wildlife Monitor. Satellite caribou collar data from the government is provided to AREVA. See Section 3.6 for further details on wildlife monitoring and mitigation.
The Proponent shall not conduct aerial surveys with flight altitudes less than 120 m above ground level between June 1 and August 15.	Aerial surveys are conducted for the purpose of gathering geophysical data. As included in the Wildlife Mitigation and Monitoring Plan, it is required that such surveys are conducted at an altitude ≥ 120 m.
The Proponent shall not construct camps, cache fuel, conduct blasting or drilling activities, or operate ground, air, or marine based mobile equipment within 10 km of a 'designated and/or recognized caribou crossing' during periods of caribou migration.	There is no infrastructure or activities occurring within 10 km of a designated and/or recognized caribou crossing. Refer to the Wildlife Mitigation and Monitoring Plan appended to this report for further details on AREVA's requirements.
Where wildlife are present, AREVA shall maintain a minimum flight altitude of 610 m above ground level where it is safe to do so	This requirement is specified in the Wildlife Mitigation and Monitoring Plan and communicated to the helicopter pilots. Flight altitudes checks are conducted by AREVA personnel to confirm compliance.
The Proponent shall maintain a daily logbook of caribou observations and submit these records to the Government of Nunavut, Department of Environment on a monthly basis.	A wildlife log is maintained in the Kiggavik kitchen, camp office and in each helicopter for personnel to track wildlife sightings. Wildlife sightings made by the wildlife monitor are also recorded. All wildlife sightings are reported to

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
	the GN-DoE monthly during the field season. See Section 3.6 for further details on monitoring and mitigation.

A.2 DIAND Caribou Protection Measures

Note that these conditions are also required by the KIA Land Use Licence, AANDC Land Use Permit and the NIRB Screening Decision.

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
Caribou Protection Areas	
No activity, without approval of Land Use Inspector, between May 15 and July 15 within the Caribou Protection Areas	AREVA does not conduct any activity within the designated Caribou Protection Areas.
When caribou cows approach area of operation within the Caribou Protection Areas all personnel not required for maintenance and protection of camp and equipment must leave the area.	
Activities within the Caribou Protection Areas occurring between May and July may be permitted by the Land Use Inspector if caribou cows are not expected to use the area for calving or post-calving.	
Caribou Protection - General	
In the event that caribou cows calve outside of the Caribou Protection Areas, operations will be suspended within the area(s) occupied by cows and/or calves between May 15 and	These requirements are included in the Wildlife Monitoring and Mitigation Plan. Employees are made aware of these commitments and they are monitored by

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
July 15.	AREVA staff and Wildlife Monitors. See Section 3.6 for further information.
The following operations will be suspended in the presence of caribou cows and calves: <ul style="list-style-type: none">• blasting• overflights at < 300 m above ground• snowmobile and ATV use outside vicinity of camp	
Caribou Protection - Migration	
No operation will block or cause diversion to migration	Ongoing through the implementation of the Wildlife Mitigation and Monitoring Plan; proper training and awareness provided to all site employees/contractors. See Section 3.6 for further information.
All activities that may interfere with migration will cease during migration	
Caribou Crossing	
No camp construction, caching of fuel or blasting will occur within 10 km of a Designated Caribou Crossing between May 15 and September 1	Ongoing through the implementation of the Wildlife Mitigation and Monitoring Plan; proper training and awareness provided to all site employees/contractors. See Section 3.6 for further information.
No diamond drilling operations within 5 km of a Designated Caribou Crossing between May 15 and September 1	
Additional	
Concentrations of caribou should be avoided by low level aircraft at all times	Ongoing through the implementation of the Wildlife Mitigation and Monitoring Plan; proper training and awareness provided to all pilots. Refer to Section 3.6 for more information

A.3 Nunavut Planning Commission Keewatin Regional Land Use Plan Conformity Determination

The Kiggavik Project received a positive conformity determination for advanced exploration on December 15, 2006, which is further outlined in the table below.

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
<i>Archaeological Sites and Artifacts</i>	
Artifacts must be left where they are found. All land users are responsible for reporting the location of, or any removal or disturbance of, artifacts to CLEY.	During orientation, personnel are informed of their responsibility to report the discovery of archaeological sites or artifacts. They are also informed that they shall not disturb known or suspected sites or artifacts.
The NPC and CMC shall continue to hold a central registry of archaeological sites and continue to monitor land use activities to protect these sites. Information about the location and identity of archaeological sites in specific areas, and the measures necessary to protect them, shall be included in land use permits. Land users shall report the discovery of all suspended archaeological sites to CLEY.	AANDC Land Use Permit N2014C0001 and the site orientation inform all employees of these requirements.
<i>Caribou Protection</i>	
Development activities shall be prohibited on all public lands and waters within all caribou calving areas during calving season and within caribou water crossings in the Keewatin, in accordance with the terms of DIAND caribou protection measures contained in Appendix H. Development activities shall be prohibited on IOL within all caribou calving areas during calving season and	KIA Land Use Licence KVL306C02 and AANDC Land Use Permit N2014C0001 These requirements are included in the Wildlife Mitigation and Monitoring Plan. Employees are made aware of these commitments and they are monitored by AREVA staff and Wildlife Monitors. See

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
within caribou water crossings in the Keewatin, in accordance with the KIA caribou protection measures (an example of which is contained in Appendix H). These measures shall be enforced throughout the region by DIAND, KIA and DSD, to the full extent of their respective jurisdictions.	Section 3.6 for further information.
During the caribou calving, post-calving and migrating seasons, land use activities should be restricted to avoid disturbing caribou, in general, and activities will be governed more specifically by caribou protection measures such as those contained in Appendix H.	Ongoing through the implementation of the Wildlife Mitigation and Monitoring Plan; proper training and awareness provided to all site employees/contractors.
<i>Cleanup and Pollution</i>	
<p>Community residents in particular, and all land users in general, shall be actively involved in planning and conducting cleanup operations, whenever possible and practicable.</p> <p>Refuse, such as fuel drums and scrap metal, shall be recycled where possible.</p> <p>Sites containing toxic materials shall be given priority for cleanup, and the location of these sites shall be widely publicized to warn residents.</p> <p>Sites within or near caribou calving grounds, near water and near communities shall also be given priority for cleanup.</p>	The Spill Contingency Plan, Abandonment and Restoration Plan, and Waste Management Plan outline the cleanup requirements and describe the methods for handling waste. This includes proper sorting and disposal of wastes. Personnel are trained and made aware of requirements during orientation.
New occurrences of pollution, garbage and contamination caused by anyone shall be prevented. Land users shall ensure that all drums are safely recovered.	During site orientation, employees are made aware of the requirements as described in the Spill Contingency Plan.

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
The principle of “the polluter pays” shall apply to a strategy for cleaning up the environment. Where it is possible to identify the person, or company or agency responsible for creating an abandoned or inactive waste site, they shall be made responsible for the cleanup and restoration of the site.	All lands will be cleaned up prior to the expiry of the existing permits and licences in accordance with the Spill Contingency Plan, Waste Management Plan, and Abandonment and Restoration Plan.
The landscape of each camp and other land use sites will be restored to its original condition to the greatest degree possible. When possible and feasible, old sites will be restored to the natural state. (Code of Good Conduct – Appendix G)	Clean-up activities are outlined within the Abandonment and Restoration Plan, and will be completed prior to the expiry of existing permits and licences.
<i>Hydrocarbon Exploration</i>	
Hydrocarbon exploration shall continue to be restricted in the area encompassing southern Southampton Island and Coats Island, as at present.	The project proposal is not for hydrocarbon exploration in the area encompassing southern Southampton Island and Coats Island (Conformity Requirement 3.8 is not applicable).
<i>Hydroelectric Development</i>	
The possible cumulative impacts of additional hydroelectric power development in Manitoba, Ontario and Quebec on the ecosystem of Hudson Bay, James Bay and Hudson Strait must be examined before more hydroelectric development proceeds.	The project proposal is not for hydroelectric development (conformity requirement 2.13 is not applicable).
<i>Local Purchase of Supplies and Services</i>	
Whenever practicable, and consistent with sound	AREVA employs people from the local

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
procurement management, land users will follow the practice of local purchase of supplies and services. (Code of Good Conduct, Appendix G)	community, and contractors employ from surrounding communities of the region. Various services and supplies are provided by local companies.
Low Level Flights	
Generally, low-level flights by aircraft at less than 300 metres should not occur where they will disturb wildlife or people. If such flights are necessary, they should only take place after consultation with the appropriate communities. All land users are responsible for reporting to the land managers any illegal or questionable low-level flight.	The project proposal does involve absolutely necessary low level flights, the proponent has or will consult with the communities, and pilots will avoid disturbance to wildlife and people. Reasonable comments on the necessity of low-level flight (NPC, 2006). These requirements are included in the Wildlife Monitoring and Mitigation Plan. Employees are made aware of these commitments and they are monitored by AREVA staff.
Low level flights shall not take place unless absolutely necessary. Should they be necessary, pilots shall avoid disturbance to people and wildlife wherever possible.	
Mine Closure and Restoration	
All proposals for mining developments shall include adequate plans for mine closure and restoration of the site.	The project proposal is not for mining development (conformity requirement 3.4 is not applicable).
Academic and / or Scientific Research	
Local and traditional knowledge shall be sought and, when available and relevant, shall be integrated with the scientific knowledge.	The project proposal does not involve academic and/or scientific research (conformity requirements are not applicable).
Research programs conducted in the Keewatin shall, where possible, rely on local services and local employment.	

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
All scientific researchers shall communicate with the communities in clear, non-technical language in Inuktitut and English. Scientific researchers shall communicate the results of their research to the communities.	
Academic and scientific researchers shall make all reasonable efforts to consults the NRI concerning research topics or fields that would be of benefit and interest to local residents.	
Transportation and/or Communications Corridors	
All parties wishing to develop a transportation and/or communications corridor shall submit to the NPC a detailed application for an amendment. This application must include an assessment of alternative routes, plus the cumulative effects of the preferred route. It shall provide reasonable options for other identifiable transportation and utility facilities. In particular, this application must meet the information requirements set out in Appendix J.	The project proposal is not for the development of a transportation and/or communications corridor (conformity requirements 5.6 and 5.7 are not applicable).
The NPC and either NIRB or a panel acting under s. 12.4.7 of the NLCA shall publicly review the proposed corridor to determine whether the proposal adequately meets the requirements of Appendix J and the guidelines of Appendix J. Once it is determined that a proposal meets the guidelines, the NPS may request the Minister of DIAND to amend the plan to include the new transportation corridor.	

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
<i>Uranium Development</i>	
Uranium development shall not take place until the NPC, NIRB, the NWB, and the NWMB have reviewed all of the issues relevant to uranium exploration and mining. Any review of uranium exploration and mining shall pay particular attention to questions concerning health and environmental protection.	The project proposal is not for uranium development (conformity requirements 3.5 and 3.6 are not applicable).
Any future proposal to mine uranium must be approved by the people of the region.	

A.4 Aboriginal Affairs and Northern Development Canada

The following table lists terms and conditions of the AANDC Land Use Permit N2014C0001 (Received May 30, 2014, Expires May 29, 2016).

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
Shall not conduct land use operation on any lands not designated in the accepted application, unless otherwise authorized in writing by the Engineer.	Ongoing through operations.
Shall remove from Territorial Lands, all scrap metal, discarded machinery and parts, barrels and kegs, buildings and building material.	All wastes will be removed upon permanent cessation of activity as per the approved Waste Management Plan and Abandonment and Restoration Plan.

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
Shall not construct an adit or drill site within 31 metres of the normal high water mark of a water body unless approval in writing is obtained from the Engineer.	Ongoing through operations. Should drilling within 31 m of the water mark be required, AREVA will seek the Engineer's approval.
Shall contact or meet with a Land Use Inspector at least 48 hours prior to commencement of the land use operation	Ongoing through regular communication prior to commencement of operations.
Shall provide notification to the Engineer of commencement of the land use operation by emailing landsmining@aandc.gc.ca or telephone at (867) 975-4283	Ongoing through regulator communication prior to commencement of operations.

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
<p>Shall submit an annual report to the Engineer by March 30 of each year of permitted activities. The report must contain, but not limited to, the following information:</p> <ul style="list-style-type: none"> a) A summary of activities undertaken for the year including b) A map showing the following items with exact coordinates (degrees/min/sec, in NAD 83): <ul style="list-style-type: none"> i. All drilling locations ii. All fuel caches iii. Any other location where activities were conducted c) A work plan for the following year, including any progressive reclamation work undertaken. 	<p>This annual report</p>
<p>Advise the Land Use Inspector at least 10 days prior to the completion of land use operation of:</p> <ul style="list-style-type: none"> a) His plan for removal or storage of equipment and materials, and b) When final clean-up and restoration of the lands used will be completed 	<p>Ongoing through regular communication. Final clean-up will occur upon permanent cessation of activities.</p>
<p>Shall complete all clean-up and restoration of lands used prior to the expiry date of the permit.</p>	<p>Noted – Restoration will be completed upon permanent cessation of activity prior to the expiry of the permit.</p>
<p>The Engineer reserves the right to impose closure to any area to the permittee in periods when dangers to natural resources are severe</p>	<p>Noted.</p>

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
Shall not use any equipment except of the type, size and number listed in the accepted application, unless otherwise authorized in writing by the Land Use Inspector	Ongoing.
All garbage and debris must be kept in a covered container until disposed of and must be kept as to avoid access by wildlife	Garbage is kept inside or in appropriate containers until incinerated or stored in sea-containers for disposal at a licensed facility.
Shall plug all bore holes as the land use operation progresses	All drill holes are cemented and grouted as required.
Shall refill and restore bore-hole craters as the land use operation progresses	Ongoing – Refer to Section 3.7.2. Where clean cuttings is not available, gravel will be used to backfill craters.
Shall not erect camps or store material on the surface ice of streams	Noted
Cut and cap all anchors as close to the ground as possible when completed at any drill holes	Noted
Ensure land use area is kept clean and tidy at all times	Ongoing through operations. Personnel are informed of requirements during site orientation.
Shall remove any obstruction to natural drainage caused by any part of this land use operation	Noted.
Shall not cut any stream bank unless authorized in writing by a Land Use Inspector	Noted.
Shall not construct interceptor or off-shoot drainage ditches unless approved in writing by the Land Use Inspector	Noted.

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
Shall install erosion control structures as the land use operation progress unless otherwise authorized by a Land Use Inspector	Noted.
Shall prepare the site in such a manner as to prevent rutting of the ground surface	Walkways around camp prevent rutting and ground disturbance. As well an ATV is used around camp, however its use is not permitted when ground is soft. The area is inspected regularly by AREVA site personnel.
Shall not use chemicals in connect with the land use operation without the prior approval of the Engineer	Comply with list provided in application.
Shall not to allow any drilling waste to spread to the surrounding lands	All non-radioactive drill waste is contained to a low-lying depression. All radioactive drill waste is disposed of down hole when achievable or collected and stored in long-term on-site storage facility. See 3.4.2 for drill waste in Bong area
Remove all non-combustible garbage and debris from land use area to a disposal site approved in writing by a Land Use Inspector	Currently being separated and stored for future removal off-site; some items are being backhauled off-site for disposal at an approved facility.

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
Shall dispose of all combustible waste petroleum products by removal	Noted – All waste petroleum products will be transported to a licensed facility for disposal
Shall dispose of all toxic or persistent substances in a manner as approved in writing by the Engineer	Noted
Shall dispose of all fluids used to wash machinery and equipment at the Kiggavik camp as indicated in the land use application	Noted
Shall remove and treat hydrocarbon contaminated soils on site or transport them to an approved disposal site for treatment	Noted – All hydrocarbon contaminated soils are backhauled from site for transfer to a licensed disposal facility
Shall ensure that appropriate spill response equipment and clean-up materials (e.g. shovels, pumps, barrels, drip pans, and absorbents) must be readily available during any transfer of fuel or hazardous substances, as well as at fuel caches and drill sites	Ongoing through operations. Spill kits are available at all fuel cache and drill sites.
Shall report all spills immediately in accordance with instructions contained in “Spill Report” form NWT 1752(05/93). Twenty four (24) hour spill report line (867) 920-8130.	Ongoing through operations. See Section 3.4.2.
Shall not unnecessarily damage wildlife habitat	Development and implementation of the Environmental Code of practice and the Wildlife Mitigation and Monitoring Plan; training and awareness
Shall not obstruct the movement of fish	Ongoing through operations

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
Shall not extract water from any fish-bearing waterbody unless the water intake is equipped with a screen of appropriate mesh size to ensure that there is no entrapment of fish	Ongoing through operations. The drill contractor is aware of the requirement and continues to use the appropriate mesh size.
The operation is in an area where bears may be encountered. Proper food handling and garbage disposal procedures will lessen the likelihood of bears being attracted to the operation. Information about the latest bear detection and deterrent techniques can be obtained from the Department of Renewable Resources.	AREVA continues open communication with the local Conservation Officer to ensure proper deterrents are on hand and that personnel are aware of how to use the deterrents.
Shall not harass wildlife. This includes persistently worrying or chasing animals, or disturbing large groups of animals. Shall not hunt or fish, unless proper Nunavut authorizations have been acquired.	Ongoing through implementation of the Wildlife Mitigation and Monitoring Plan and training during site orientation.
Shall not disturb or destroy the nests or eggs of any birds. If nests are encountered and/or identified, precaution must be taken to avoid further interaction and/or disturbance. If active nests are discovered (with eggs or young), the area must be avoided until nesting is complete and the young have left the nest.	Ongoing through implementation of the Wildlife Mitigation and Monitoring Plan and training during site orientation. Four nest sites were identified in June 2014. One was marked off by drillers to avoid the area, two were noted on cabins, and one was noted in a core box. Geologists avoided the core racks until the young had left the nest.
Shall not feed the wildlife	Implementation of the Wildlife Monitoring and Mitigation Plan; Communicated as site rule during orientation, training and awareness.

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
Fuel storage must be a minimum of 31 m from normal high water mark	The main and camp fuel caches are located > 31 m from the normal high water mark.
Shall ensure re-fuelling of all equipment occurs a minimum of 31 m from the high water mark of any water body	Ongoing through proper planning, inspection, and training.
Shall not allow petroleum products to spread to surrounding lands or into water bodies and prevent access by wildlife	Fuels are properly contained within secondary containment structures
Mark all fuel containers with Permittee's name	Ongoing
Shall keep on hand, at all time during the land use operation, a copy of the Land Use Permit	Ongoing through operations
<p>Shall provide in writing to the Engineer, at least forty-eight (48) hours prior to commencement of land use operation, the following information:</p> <ul style="list-style-type: none"> a. Person, or persons, in charge of the field operation to whom notices, orders, and reports may be served; b. Alternates; c. All the indirect methods for contacting the above person(s). 	The Kiggavik Contact list is provided to all regulators prior to commencement of field operations.
Shall submit to the Engineer a contingency plan, for chemical and petroleum spills, for use during the construction and operation of the winter road	In addition to the contractor spill response policy, AREVA also maintains the Kiggavik Spill Contingency Plan

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
<p>Shall abide by and comply with all applicable lawful rules, acts, regulations, and by-laws of Canada, Nunavut, any Municipal or regulatory body or authority having jurisdiction the Nunavut Land Claim Agreements, and all other agreements, permits, licenses, and other instruments whatsoever related to the project</p>	<p>This commitment to compliance is ongoing through operations. Regulatory requirements are regularly reviewed to ensure that recent updates or amendments that may influence operations are noted and implemented in advance of land use operation.</p>
<p><i>Caribou Protection Measures</i></p>	
<p>Shall not, without approval, conduct any activity between May 15 and July 15 within the Caribou Protection Areas depicted on the map certified by the Engineer as the “Caribou Protection Map” annexed to the Land Use Permit.</p> <p>Upon approval by the Land Use Inspector, may operate within the Caribou Protection Areas beyond the May 15 deadline provided that when monitoring information indicates the caribou cows are approaching the area of operation, activities will cease, personnel will be removed who are not required for maintenance and protection of the camp facilities and equipment, unless otherwise directed by the Land Use Inspector. Activities may resume prior to July 15 within those parts of the Caribou Protection Areas released by the Land Use Inspector for the reason that caribou cows are not expected to use those parts for calving or post-calving.</p>	<p>AREVA does not operate within the Caribou Protection Areas depicted on the map.</p>

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
<p>In the event that caribou cows calve outside of the Caribou Protection Areas, the Permittee shall suspend operations within the area(s) occupied by cows and/or calves between May 15 and July 15.</p> <p>In the event that caribou cows and calves are present, the permittee shall suspend:</p> <ul style="list-style-type: none"> i. Blasting; ii. Overflights by aircraft at any altitude of less than 300 m above ground level; and iii. The use of snowmobiles and ATV (all-terrain vehicles) outside the immediate vicinity of the camp. 	<p>Compliance achieved through implementation of the Wildlife Mitigation and Monitoring Plan, which is communicated to all personnel during site orientation. See Section 3.6 for further information.</p>
<p>During migration of caribou, operation shall not be placed as to block or cause substantial diversion to migration. Activities shall cease that may interfere with migration, such as airborne geophysics surveys or movement of equipment, until the migrating caribou have passed.</p>	<p>Ongoing through implementation of the Wildlife Mitigation and Monitoring Plan. See Section 3.6 for further information.</p>
<p>Shall not, between May 15 and September 1, construct any camp, cache any fuel, or conduct any blasting within 10 km of any “Designated Crossing” as outlined on the map certified by the Engineer as the “Caribou Protection Map” annexed to this Land Use Permit.</p>	<p>AREVA will not construct camp, cache fuel, or conduct blasting within 10 km of a caribou crossing. No activities are conducted within 10 km of a caribou crossing.</p>

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
Shall not, between May 15 and September 1, conduct any diamond drilling operation within 5 km of any “Designated Crossing” as outlined on the map certified by the Engineer as the “Caribou Protection Map” annexed to this Land Use Permit.	AREVA will not drill within 5 km of a designated caribou crossing.
Archaeological and Paleontological Terms and Conditions	
Shall avoid any known or suspected archaeological and/or paleontological sites	Ongoing through operations and personnel are trained during site orientation
Shall not remove, disturb, or displace any archaeological artifact or site, or any paleontological site or fossil	Ongoing through operations and personnel are trained during site orientation

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
<p>Shall immediately cease any activity should a suspected archaeological, paleontological, or burial site be discovered during the course of a land use operation. Immediately contact the AANDC Land Administration division (867) 975-4283 or (867) 975-4285 and Department of Culture, Language, Elders and Youth at (867) 934-2046 or (867) 975-5500 or 1 (866) 934-2035. Permission to resume land use operations must be obtained from the Engineer. At such time the Engineer may, at his/her discretion, require that you have an archaeologist or paleontologist perform the following functions:</p> <ul style="list-style-type: none"> a) Survey b) Inventory and documentation of the archaeological or paleontological resources of the land use area c) Assessment of potential for damage to archaeological or paleontological sites d) Mitigation e) Marking boundaries of archaeological or paleontological sites f) Site restoration 	<p>AREVA maintains a map of known archaeological sites to ensure that any new sites are properly reported if encountered during the course of land use operations. Training for personnel is provided during site orientation.</p>
<p>Shall ensure that all persons working under the authority of the permit are aware of these conditions pertaining to archaeological sites and artifacts as well as paleontological sites and fossils.</p>	<p>AREVA maintains a map of known archaeological sites to ensure that any new sites are properly reported if encountered during the course of land use operations. Training for personnel is provided during site orientation.</p>

A.5 Kivalliq Inuit Association Land Use Licence

The following table lists terms and conditions appended to KIA Land Use Licence KVL306C02 (received April 3, 2007; expiry January 3, 2015).

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
<i>Licence Terms and Conditions</i>	
Compliance with all applicable regulations, laws, orders and with terms of licence. Provide KIA with written notices of non-compliance.	AREVA complies with all regulations, laws, orders and with terms of licence. Written notices are and will continue to be provided to KIA should a non-compliance occur.
Obtain and maintain such licences, permits or approvals from the federal, territorial or other governing bodies as may be necessary to enable the Licencee to undertake the permitted activities on the lands	AREVA will obtain all required authorizations.
Permit KIA reasonable access to site for purpose of inspecting	Ongoing. KIA conducted an inspection of the Kiggavik Project on September 22, 2014.
All fees required under licence due on the first of each month. AREVA responsible for reasonable costs of inspections KIA deems necessary to monitor compliance.	AREVA has provided all formally requested fees.
Obtain and maintain appropriate insurance at all times during occupation. Proof of all insurance shall be provided	Ongoing.
AREVA is required to pay the applicable licence fees if operations cease and environmental remediation reclamation occurs	Condition is recognized by AREVA.

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
Any damage or injury to lands or property caused by licensee will be repaired, rebuilt, replaced and restored to the satisfaction of KIA.	Addressed in the Abandonment and Restoration Plan.
Submit a Work Plan (proposed operation for upcoming year) and an Environmental Action Plan (reclamation and remediation plans) to KIA no later than September 30 th each year	Obtained agreement from KIA allowing all revised Plans to be submitted with the Annual Report in January of each year.
<i>Schedule A: General Standards</i>	
No operations on lands not covered by approved licence	In compliance and ongoing.
Contact KIA at least 48 hours prior to commencement of licensed activities	KIA has been and will continue to be notified prior to the start of each field season.
Keep all combustible garbage and debris in a covered metal container; combustible garbage burned in a suitable container; non-combustible removed to approved locations	Ongoing by implementing the Waste Management Plan; includes the proper sorting and storage of garbage; non-combustible garbage back-hauled off-site.
Sewage deposited into a sump or removed from lands	Received verbal approval from inspector to incinerate solid sewage waste and discharge liquid waste with grey water.
No metal wastes buried without consent of the KIA	In compliance through the implementation of the Waste Management Plan; proper training and awareness; proper sorting and storage.
Locate all camps on gravel, sand or other durable land. No permanent structures erected without KIA consent.	Addressed in site plans; all permanent structures have approval of KIA.

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
Housekeeping – keep lands free of garbage and debris	Addressed through formal daily site inspections conducted by AREVA site personnel. Expectations are reviewed during site orientation.
All man-bear interactions reported to nearest Renewable Resources Office	AREVA will continue to comply if such interactions were to occur.
Licence available for viewing in a conspicuous place on site	All site staff is made aware of its location in the camp office and kitchen.
Within 60 days of licence expiry AREVA to provide KIA with final plan showing all areas used in operations	Condition noted and will be complied with upon expiry of approvals.
All buildings, equipment and materials removed (unless otherwise authorized) at completion of operations or licence termination.	This is addressed in the Abandonment and Restoration Plan.
All burial grounds avoided and left undisturbed. All discovered sites to be reported to KIA.	Condition noted and will be complied with upon occurrence.
Operations carried out as to minimize surface disturbance	Ongoing by implementation of the Environmental Code of Practice
All disturbed areas restored	AREVA continues to implement the Abandonment and Restoration Plan.
Surface vehicles not to be used to move drill rigs or other equipment/supplies without prior authorization. Vehicle use off approved routes prohibited.	In compliance; ATV approved to be used around camp only. Most material is transported by helicopter.

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
No petroleum storage containers within 12 m of the normal high water mark.	In compliance through the implementation of the Spill Contingency Plan; generally adhere to the more stringent condition of 31 m.
No petroleum or chemical products to spread to surrounding lands or waters	Ongoing through the implementation of the Environmental Code of Practice and the Spill Contingency Plan. This involves extensive preventative measures and careful monitoring. All fuel and equipment is kept at a minimum of 31 m from the high water mark
All petroleum shall be kept in approved containers marked or within a bermed area. All containers labeled with licensee name	Ongoing through the implementation of the Spill Contingency Plan.
All spills reported	Noted
All combustible waste will be incinerated or removed	Ongoing through the implementation of the Waste Management Plan; proper sorting of wastes; proper training and awareness.
All drill fluids disposed of in sump or naturally occurring contained depression. Drill fluids recycled whenever possible.	Non-mineralized drill fluids are deposited in a naturally low lying depression >31 m from any water body. Mineralized cuttings are collected and stored in the Radioactive storage compound.
No drill sumps to be located within 30 m of any water body	Instructed through Management Plans and adhered to through site planning.
All drill sumps to be restored to natural surrounding contours of the land prior to licence expiry	To be completed through the implementation of the Abandonment and Restoration Plan.
Restrict vegetation disturbance from deposit of	Ongoing throughout field season and

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
drill fluids/cuttings to the area of the sump and ground prepared for re-vegetation upon abandonment	implemented through the Abandonment and Restoration Plan.
No deposit of deleterious substances into any water body	Ongoing through the implementation of the Spill Contingency Plan.
Not cause obstruction of any stream	In Compliance through implementation of the Environmental Code of Practice; proper training and awareness.
Winter stream crossings must be removed prior to annual break-up	Condition noted.
Shall abide by Caribou Protection Measures	Measures have been integrated into the Wildlife Mitigation and Monitoring Plan.
Ensure there is not damage to wildlife habitat	Condition integrated into Wildlife Mitigation and Monitoring Plan and continued employee awareness through orientation and on-going training.
Shall cease activities that may interfere with migration or calving	Integrated into Wildlife Mitigation and Monitoring Plan and considered when planning site activities.
Shall not move any equipment or vehicles without prior testing the thickness of ice	No on ice drilling conducted to date; recommendation is implemented by contractors conducting winter haulage.
Shall suspend overland travel of equipment or vehicles if rutting occurs	Condition is noted. AREVA site personnel monitor land conditions during regular inspections of field operations and winter hauls.

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
Shall construct and maintain winter roads with a minimum of ten centimeters of packed snow at all times	Condition communicated to contractor carrying out winter haul.
Shall not use any equipment except of the type, size and number listed in the application	AREVA is in compliance with this list and any other amendments issued.

A.6 Nunavut Water Board Licence

The following table lists terms and conditions appended to NWB licence 2BE-KIG1318 (previous licence No.'s 2BE-KIG0812, 2BE-KIG0708 and 2BE-SIS0607).

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
<i>General</i>	
Annual fees paid in advance of water use	Ongoing.
<p>File an annual report by March 31st containing the following:</p> <ul style="list-style-type: none"> a. A summary report of water use and waste disposal activities; b. A list of unauthorized discharges and a summary of follow-up actions taken; c. Any revisions to the Spill Contingency Plan, Abandonment and Restoration Plan, Uranium Exploration Plan, as required by Part B, Item 7, submitted in the form of an Addendum; d. A description of all progressive and or final reclamation work undertaken, 	<p>Fulfilled with submission of this report. Annual Reports had previously been submitted for 2007, 2008, 2009, 2010, 2011, 2012, and 2013.</p>

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
<p>including photographic records of site conditions before, during and after completion of operations;</p> <p>e. Report all artesian flow occurrences as required under Part F, Item 6;</p> <p>f. A summary of all information requested and results of the Monitoring Program; and</p> <p>g. Any other details on water use or waste disposal requested by the Board by November 1 of the year being reported.</p>	
<p>Notify NWB of any changes in operating plans or conditions associated with the project at least 30 days prior to the change</p>	<p>Continual communication efforts are made with all regulatory agencies and boards and amendments applied for as necessary.</p>
<p>Install flow meters or other such devices, or implement suitable methods required for measuring of water volumes</p>	<p>Complete on camp water supply. Pumping capacities for all pumps at drills are known and can be used to calculate the maximum amount of water that can be used at the drills each day. This number is below the allowable limit for water used at the drills each day. Meters are on order for more definitive measurements of flow from drilling pumps. Refer to Section 3.1 for further information.</p>
<p>Include proposed implementation timetable with submitted plans for Board approval and direction and implement plans as approved</p>	<p>All plans have been implemented.</p>
<p>Review plans as required by changes in operation and/or technology, and modify the</p>	<p>Plans are included as an addendum to this</p>

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
plans accordingly. Revisions to the plans shall be submitted in the form of Addendum to the Annual Report.	Annual Report.
Every plan to be carried out pursuant to the terms and conditions of this Licence shall become a part of this Licence, and any additional terms and conditions imposed upon approval of a Plan by the Board become part of this Licence. All terms and conditions of the Licence should be contemplated in the development of a plan where appropriate.	Term and conditions are considered and incorporated into the plans which are included as an addendum to this report.
Copy of Licence is maintained at site.	Available in site office and kitchen.
Shall submit one paper copy and one electronic copy of all reports, studies, and plans to the Board. Reports or studies submitted to the board shall include a detailed executive summary in Inuktitut.	Ongoing.
<i>Water Use</i>	
Obtain all camp water from a small unnamed lake located to the north of the camp or a small unnamed lake located to the east of the camp, to a maximum of ten (10) cubic metres per day. Drill water shall be obtained from water sources, proximal to the drilling targets, to a maximum of two-hundred and eighty nine (289) cubic metres per day. The total volume of water for the purposes of this Licence shall not exceed two hundred ninety nine (299) cubic metres per day.	Ongoing compliance through the field season is demonstrated in Section 3.1.

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
Streams cannot be used as a water source unless authorized and approved by the Board in writing.	Streams were not used as water sources.
Notify NWB of potential drawdown of a water source at least 30 days prior to commencement of use of water, submit to the Board for approval in writing, the following: volume required, hydrological overview of the water body, details of impacts, and proposed mitigation measures.	Condition is noted. NWB will be notified as required.
Water intake hoses have screens of appropriated mesh size to ensure fish are not entrained and shall withdraw water at a rate such that fish do not become impinged on the screen.	Ongoing. All water pumps are inspected by AREVA site personnel to ensure compliance with this condition. The appropriate mesh size is described in the Department of Fisheries and Oceans Freshwater Intake End-of-Pipe Fish Screen Guideline.
Shall not remove any material from below the ordinary high water mark of any water body	Training and awareness. Inspections are conducted to ensure compliance.
Shall not cause erosion to banks of any body of water	Condition met throughout the field season.
Implement sediment and erosion controls prior to and maintained during operation	Condition noted. Preventative and mitigation measures are in place for sediment and erosion control during drilling activities.
<i>Waste Disposal</i>	
Waste disposal is a minimum of 31 m from ordinary high water mark of any water body such that the quality, quantity or flow of water is not	Waste disposal sites are located more than 31 m from the high water mark.

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
impaired, unless otherwise approved by the Board in writing.	
<p>Shall not practice on-site land filling of domestic waste, unless otherwise approved by the Board in writing.</p> <p>AREVA is authorized to dispose of all acceptable food waste, paper waste and untreated wood products in an incinerator.</p> <p>AREVA shall not open burn plastics, wood treated with preservatives, electric wire, Styrofoam, asbestos or painted wood to prevent the deposition of waste materials of incomplete combustion and/or leachate from contaminated ash residual, from impacting surrounding waters, unless otherwise approved by the Board in writing.</p>	<p>As per the Waste Management Plan, wastes are managed and sorted, the incinerator is then used to dispose of acceptable waste and the remaining materials are stored on site for future disposal at a licensed facility.</p>
Provide authorization from all communities in Nunavut receiving wastes from the Kiggavik Project prior to backhauling and disposal of wastes	Received written consent from the Hamlet of Baker Lake in 2007, forwarded to NWB. No waste was disposed of in any community in 2014.
Backhaul and dispose of all hazardous wastes, waste oil and non-combustible waste at a licensed waste disposal site	Waste oil generated during the 2014 season will be backhauled during the 2015 winter haul and later disposed of at an approved facility.
Shall maintain records of all waste backhauled and records of confirmation of proper disposal of backhauled waste.	Waste manifests are completed for all waste backhauled, and records are available.
Contain all grey water in a sump 31 m from the	Currently grey water is being placed in a

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
ordinary high water mark of any water body, at a site where direct flow into a water body is not possible and no additional impacts are created, unless otherwise approved by the Board in writing.	sump which is comprised of a punctured barrel buried in the ground and filled with sand/gravel for filtration. The location is greater than 100 m from any water body.
<p>Shall contain all toilet wastes in latrine pits or use incineration, chemical, portable or composting toilets. Latrine pits shall be located at a distance of at least thirty one (31) metres above the ordinary high water mark of any water body, treated with lime and covered with native material to achieve the pre-existing natural contours of the land prior to abandonment.</p> <p>Shall dispose of all toilet wastes through incineration, chemical or composting toilets. Any remaining residue generated through the course of the operation shall be backhauled and disposed of in an approved waste disposal site.</p>	Sewage waste is collected and incinerated. The ashes are backhauled for disposal in an approved waste disposal site.
Shall ensure that any hazardous materials, including waste oil, receive proper treatment and disposal at an approved treatment facility.	Hazardous materials are stored on site until they are backhauled for shipment to a licensed facility.
<i>Camps, Access Infrastructures and Operations</i>	
Shall not erect camps or store material on the surface of frozen streams or lakes including the immediate banks except what is for immediate use. Camps shall be located such as to minimize impacts on surface drainage.	Operation is seasonal from May to September. Informed through training and awareness. The camp does not impact surface drainage.
Conduct activities in a way to minimize impacts on surface drainage	Drainage and flow are considered prior to activities.

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
<p>Winter lake and stream crossings shall be constructed entirely of water, ice or snow. Choose locations that minimize disturbance by locating ice bridges in an area that requires the minimum approach grading and the shortest crossing route. Stream crossings shall be removed or the ice notched prior to spring break-up.</p>	<p>This is ongoing through proper selection of routes for the Winter Haul of materials.</p>
<p>With respect to access road, pad construction or earthworks, the deposition debris or sediment into or onto any water body is prohibited. These materials shall be disposed a distance of at least thirty one (31) metres from the ordinary high water mark in such a fashion that they do not enter the water.</p>	<p>Currently the site is not accessed by road; however should there be construction or earthworks in the future, this item has been noted. Compliance is achieved through training, awareness and project planning.</p>
<p>Shall not mobilize heavy equipment or vehicles for trenching or other activities unless the ground is capable of fully supporting the equipment or vehicles without rutting or gouging. Overland travel of equipment or vehicles shall be suspend if rutting occurs</p>	<p>The winter haul is performed only when the ground is capable of supporting the equipment or vehicles without rutting.</p>
<p><i>Drilling Operations</i></p>	
<p>AREVA to review and revise Uranium Exploration Plan as required by changes in operation and/or technology. Revisions to Plan submitted as addendum with Annual Report.</p>	<p>Board approved AREVA's original Uranium Exploration Plan submitted October 17, 2007. As part of AREVA's commitment to continual improvement, Management Plans are reviewed regularly and the current plans are included in Appendix C.</p>
<p>AREVA shall not conduct any land based drilling</p>	<p>Any drilling within 31 m of the high water</p>

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
within thirty-one (31) metres of the ordinary high water mark of any water body with the exception of the End Grid Lake area as identified in the application received dated October 9, 2008.	mark will be under an approved licence amendment with applicable protection and mitigation measures in place to the satisfaction of the NWB and DFO.
Drill waste (water, chips, muds, salts) from land-based drilling are disposed of in properly constructed sump or natural depression	Use natural depressions, supplemented by temporary sandbag berms and visually monitoring flow. These areas are regularly inspected by AREVA staff. There was a failure to contain drilling waste on one occasion (See Section 3.4.2). Progressive reclamation underway (See Section 3.7.2).
Drill mud solids or cuttings with a uranium concentration greater than 0.05 percent are to be collected and then disposed of down the drill hole and sealed.	Due to difficulty disposal down the drill hole, this material is collected in bags and should the radiation levels exceed 1 µSv/h, the bags are stored in the radioactive storage compound at the Kiggavik Camp for future handling. All drill holes are sealed.
<p>AREVA is permitted to drill under low flow artesian conditions within all areas encompassed by the Kiggavik Lease provided that appropriate measures are implemented to prevent induced contamination of groundwater or salinization of surface waters and that AREVA adheres to the following:</p> <ul style="list-style-type: none"> a. Shall analyze water encountered from the artesian flow to confirm the quality of the water as per Part J, Item 12; b. Shall adhere to the operational and 	When low flow artesian (≤ 95 L/min) are intercepted during drilling operations, the operational and mitigation measures are implemented as per the Technical Support Document submitted with the March 29, 2012 application. Refer to Section 3.3.2 for details regarding all artesian flows encountered during the season.

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
<p>mitigation measures as outlined in the technical support document “Drilling in Low Flow Artesian Conditions” submitted as part of the application dated March 29, 2011.</p> <p>c. Shall provide as part of the Annual Report required by Part B, Item 2, information on all artesian flow encountered, with GPS coordinates, dates, and flow rates, depth, permafrost, aquifer and Packer testing data and associated water quality analytical results.</p>	
<p>Record the depth of permafrost – include in annual report</p>	<p>The pneumatic packer testing and installation of thermistors did not occur through the 2014 season as these are activities specific to baseline studies for mine development. The permafrost depths are therefore estimated based upon previous thermistor locations (See Section 1.2).</p>
<p>No on-ice drilling</p>	<p>On ice drilling will only occur under applicable approved licence amendments with appropriate protection and mitigation measures in place to the satisfaction all regulatory bodies.</p>
<p>When conducting drilling within 31 m of the ordinary high water mark of End Grid Lake, activities are to be on stable ground such as frozen tundra or bedrock, to prevent disturbance to the natural ground and limit erosion and</p>	<p>Drill platforms are located on stable ground and set up on timbers to prevent ground disturbance and damage to permafrost.</p>

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
sedimentation.	
AREVA shall establish water quality conditions of adjacent waters or waters immediately downstream prior to and upon completion of any drilling program within 31 m of the high water mark proximal to the End Grid Lake Area.	There were no drill holes completed within 31 m of the End Grid Lake high water mark.
If artesian flow is encountered in areas other than the Kiggavik Lease, drill holes shall be immediately sealed and permanently capped to prevent induced contamination of groundwater or salinization of surface waters. AREVA shall report all artesian flow occurrences within the Annual Report, including the location (GPS coordinates) and dates.	There were no artesian flows encountered outside the Kiggavik Lease.
<i>Modifications</i>	
<p>AREVA may, without written consent from the Board, carry out Modifications to the Water Supply Facilities and Waste Disposal Facilities provided that such Modifications are consistent with the terms of this Licence and the following requirements are met:</p> <ul style="list-style-type: none"> a. AREVA has notified the Board in writing at least 60 days prior to beginning Modifications; b. Modifications do not place AREVA in contravention of the Licence or the <i>Act</i> c. Modifications are consistent with the NIRB Screening Decision; d. The Board has not, during the 60 days 	Management is aware of these conditions and will comply to them if modifications are required.

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
<p>following notification of the proposed Modifications, informed AREVA that review of the proposal will require more than 60 days; and</p> <p>e. The Board has not rejected the proposed Modifications.</p>	
<p>Modifications for which all of the conditions referred to in Part G, Item 1 have not been met can be carried out only with written approval from the Board.</p>	Noted
<p>AREVA shall provide as-built plans and drawings of the Modifications within 90 days of completion. These plans and drawings shall be stamped by an Engineer.</p>	Noted
<p><i>Spill Contingency Planning</i></p>	
<p>AREVA shall review the Spill Contingency Plan as required by changes in operation and/or technology and modify the Plan accordingly. Revisions to the Plan are to be submitted in the form of an Addendum to be included with the Annual Report.</p>	<p>The plan is reviewed at least annually and reviews are submitted with the annual report.</p>
<p>Prevent any chemicals, petroleum products or wastes associated with the project from entering water. All sumps and fuel caches shall be located at least 31 m from the ordinary high water mark of any adjacent water body and inspected on a regular basis. An exception to this condition is provided for activities within 31 m of End Grid</p>	<p>Non-compliance noted in Section 3.4.2; however in compliance through the implementation of the Spill Contingency Plan, proper training and awareness. All drilling sites are inspected regularly by AREVA staff. Double walled tanks are used at the drills and secondary containment is</p>

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
Lake.	used for chemical or petroleum products.
Equipment maintenance and servicing conducted only in designated areas and shall implement special procedures (such as the use of drip pans) to manage motor fluids and other waste and contain potential spills.	Addressed through training and regular inspections.
<p>If an unauthorized discharge of waste occurs, or if such a discharge is foreseeable, AREVA shall:</p> <ul style="list-style-type: none"> a. Employ the approved Spill Contingency Plan b. Report the spill immediately to the 24-Hour Spill Line at (867) 920-8130 and to the Inspector at (867) 975-4295; and c. For each spill occurrence, submit to the Inspector, no later than 30 days after initially reporting the event, a detailed report that will include the amount and type of spilled product, the GPS locations of the spill, and the measures take to contain and clean up the spill site. 	See Section 3.4.2. Addressed through training and inspections.
Shall, in addition to Part H, Item 5, regardless of the quantity of releases of harmful substances, report to the NWT/NU Spill Line if the release is near or into a water body.	See summary of spill of drill cuttings in Section 3.4.2.
While drilling is occurring within the 31 m high water mark at End Grid, AREVA may allow a limited supply of fuel within 31 m of the ordinary	Noted. There was no drilling conducted within 31 m of End Grid Lake during the 2014 season.

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
high water mark to support the drilling operations, provided that secondary containment is made available for the storage of fuel and all external pumps and motorized equipment used.	
<i>Abandonment and Restoration or Temporary Closing</i>	
AREVA to review and revise Abandonment and Restoration Plan as required by changes in operation and/or technology. Revisions to Plan submitted as addendum with Annual Report.	Noted. Revisions are submitted with the annual report.
Complete restoration work prior to the expiry of this Licence	Addressed in the Abandonment and Restoration Plan.
Shall carry out progressive reclamation of any components of the project no longer required for AREVA's operations.	Reclamation to ensure chemical stability occurs in a progressive manner; best management practices for reclamation to ensure physical stability of surface disturbance are currently being investigated (See Section 3.7.2.1)
All sumps are backfilled to pre-existing natural contours of the land.	This will be done where required to the satisfaction of the inspector. For progressive reclamation underway see Section 3.7.2.
Remove all site infrastructure, site material, including all fuel caches, drums, barrels, buildings and contents, docks, water pumps and lines, material and equipment prior to the expiry of the Licence.	Addressed in the Abandonment and Restoration Plan.
All roads and airstrip, if any, shall be re-graded to match natural contour to reduce erosion.	Currently not required.

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
Remove any culverts and restore the drainage to match the natural channel. Measures shall be implemented to minimize erosion and sedimentation.	Currently not required.
To promote growth of vegetation and the needed microclimate for seed deposition, all disturbed surfaces shall be prepared by ripping, grading or scarifying the surface to conform to natural topography.	Addressed in the Abandonment and Restoration Plan.
Shall reclaim areas that have been contaminated by hydrocarbons from normal fuel transfer procedures to meet objectives as outlined in the Government of Nunavut's (GN) <i>Environmental Guideline for Site Remediation</i> (2009). The use of reclaimed soils for the purpose of back fill or general site grading may be carried out only upon consultation and approval by the GN, Department of Environment and an Inspector.	This is addressed in the Abandonment and Restoration Plan and the Spill Contingency Plan.
Drill core must be stored greater than 31 m above the ordinary high water mark of any adjacent water body, where direct flow into a water body is not possible and no additional impacts are created.	Core is transported from the drill location to the Kiggavik camp on a daily basis and stored greater than 31 m above the high water mark of the nearest water body.
Long term storage of core will not exceed radiation measurements of greater than 1.0 μSv at 1 m from the surface and not to exceed 2.5 μSv	Implemented Radiation Protection Plan; regular inspections and monitoring are conducted by AREVA site personnel.
Drill holes and disturbed areas to be restored to	Completed as required for all drill holes to

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
natural conditions immediately upon completion of drilling. Any drill hole that encounters mineralization with uranium content greater than 1.0 percent over a length greater than 1 m, and with a meter-percent concentration greater than 5.0 will be sealed by grouting over the entire length of the mineralization zone and not less than 10 m above or below each mineralization zone.	date.
Seal by cementing the upper 30 m of bedrock or entire depth of hole, whichever is less	Completed as required for all drill holes to date.
If the radiation levels for the stored core exceed the levels identified in Part I, Item 12, AREVA shall submit to the AANDC Water Resources Inspector, a detailed report of test results and the proposed long term core handling and mitigation measures for the long term storage or removal.	Condition is noted; AREVA is committed to its compliance if required
Shall contour and stabilise all disturbed areas to a pre-disturbed state upon completion of work.	Addressed in the Abandonment and Restoration Plan
<i>Monitoring Program</i>	
Measure and record, in cubic metres, daily water quantities for camp, drilling and other purposes.	Conducted and recorded daily by site staff. Please refer to Section 3.3.1 for further details.
Provide GPS coordinates (in degrees, minutes and seconds of latitude and longitude) of all locations where water sources are utilized for all purposes.	Completed; refer to Section 3.3.1 for GPS coordinates.

RECOMMENDATION/CONDITION	COMPLIANCE ACTION	
Provide GPS coordinates (in degrees, minutes and seconds of latitude and longitude) of all waste locations	Incinerator	64° 26' 26.97" N 97° 39' 30.47" W
	Grey Water Discharge Point (south of Kitchen)	64° 26' 26.75" N 97° 39' 31.68" W
Provide follow-up monitoring and analytical results of the potable water supply previously utilized under previous Licences, in order to assess the oil and grease contamination during the Licence term and investigate the source of contamination and possible mitigation measures required. Plans to address this matter shall be submitted to the NWB within the Annual Report.	Lab analysis was determined to be subject to error. AREVA re-sampled the camp water supply referenced under Licence 2BE-KIG0708 on June 27, 2009. Analysis conducted by the Saskatchewan Research Council (SRC) Laboratory showed no traces of grease and oil	
All sampling, preservation and analysis to be conducted in accordance with the <i>Standard Methods for the Examination of Water and Wastewater</i>	Noted	
All analyses shall be performed in an accredited lab (ISO/IEC Standard 17025). The accreditation shall be current and in good standing.	SRC is accredited by the Canadian Association for Environmental Analytical Laboratories (CAEAL) for environmental testing procedures. Accreditation ensures that procedures, facilities, and methods conform to the internationally recognized ISO 17025 standard. AREVA commits to only using labs that are adequately accredited.	
Additional monitoring requirements may be requested by the Inspector.	Noted	

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
Where uranium mineralization has been encountered, under Part I, Items 13 and 14, AREVA shall monitor the drill sumps and core storage areas to provide the necessary data needed in order to assess and ensure that mitigation measures required for restoration under the Abandonment and Restoration Plan have been completed.	Ongoing, refer to Section 3.7.2.2
All data, monitoring results and information required by this “Monitoring” section to be included in the Annual Report.	In compliance through submission of this Annual Report
<p>AREVA shall establish water quality conditions prior to and upon completion of drilling at the End Grid Lake areas as identified in the application dated October 9, 2008 in accordance with Part F, Item 10, and monitoring shall include the following:</p> <p>Total Suspended Solids</p> <p>pH</p> <p>Electrical Conductivity</p> <p>Total Trace Metals as determined by a standard ICP Scan (to include at a minimum, the following elements: Al, Sb, Ba, Be, Cd, Cr, Co, Cu, Fe, Pb, Li Mn, Mo, Ni, Se, Sn, Sr, Tl, Ti, U, V, Zn), and</p> <p>Trace Arsenic and Mercury</p>	There were no drill holes completed within 31 m of the ordinary high water mark at the End Grid areas.

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
<p>AREVA shall determine GPS co-ordinates (in degrees, minutes and seconds of latitude and longitude) of all drill hole locations within the 31 m ordinary high water mark in the End Grid area and provide these locations on a map of suitable scale for review as part of the annual report.</p>	<p>There was no drilling within 31 m of the ordinary high water mark at the End Grid area.</p>
<p>AREVA shall determine water quality of low-flow artesian conditions identified in Part F, Item 6, by including the following analyses:</p> <p>Total Suspended Solids</p> <p>pH</p> <p>Electrical Conductivity</p> <p>Total Trace Metals as determined by a standard ICP Scan (to include at a minimum, the following elements: Al, Sb, Ba, Be, Cd, Cr, Co, Cu, Fe, Pb, Li Mn, Mo, Ni, Se, Sn, Sr, Tl, Ti, U, V, Zn), and</p> <p>Trace Arsenic and Mercury</p>	<p>Completed for the three artesian encountered during the season (See Section 3.3.2)</p>

Appendix B Gamma Survey Results

Legend

Drill Hole

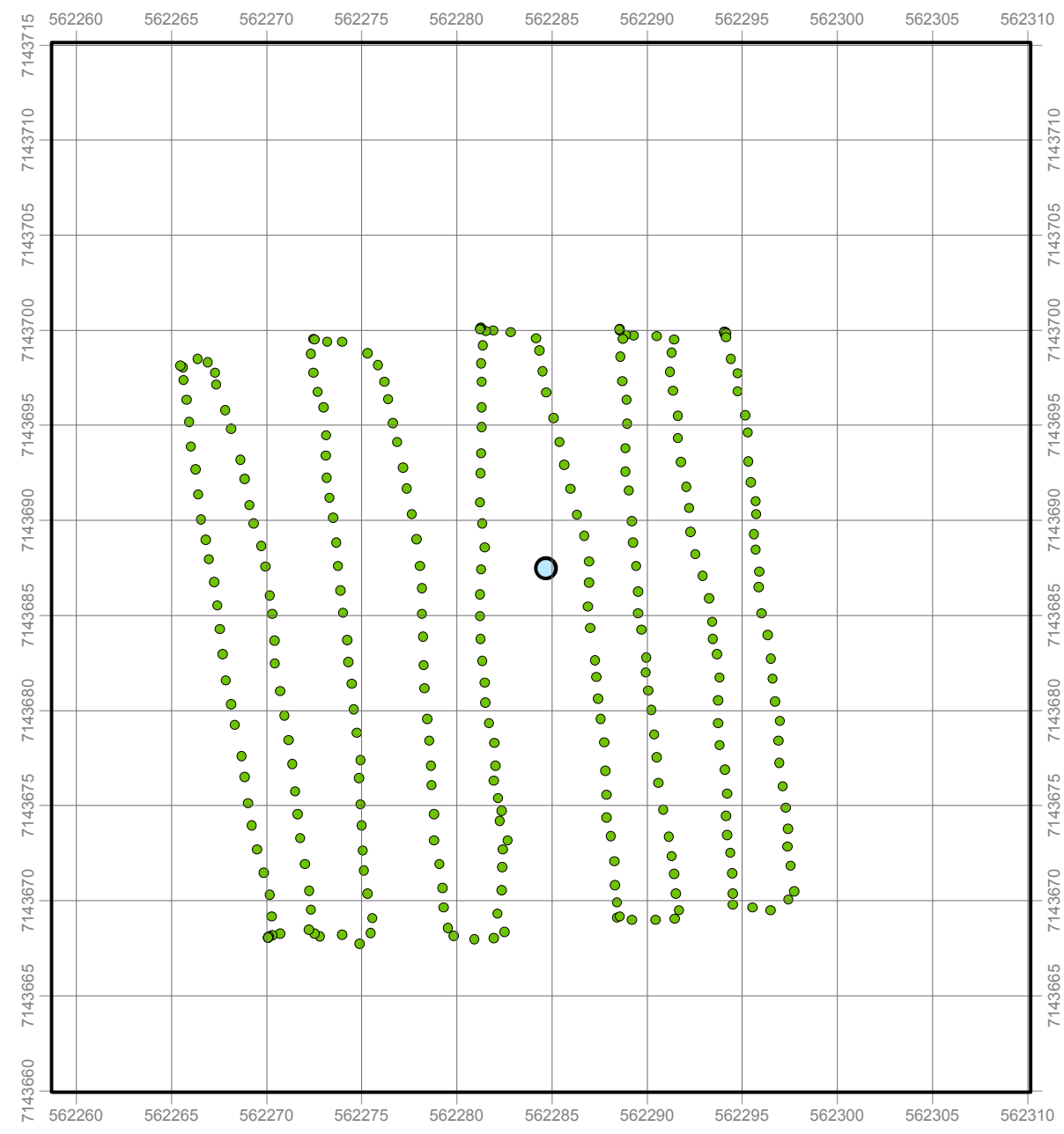
0.0 - 0.3 μSv

0.3 - 0.6 μSv

0.6 - 1.0 μSv

1.0 - 2.5 μSv

> 2.5 μSv

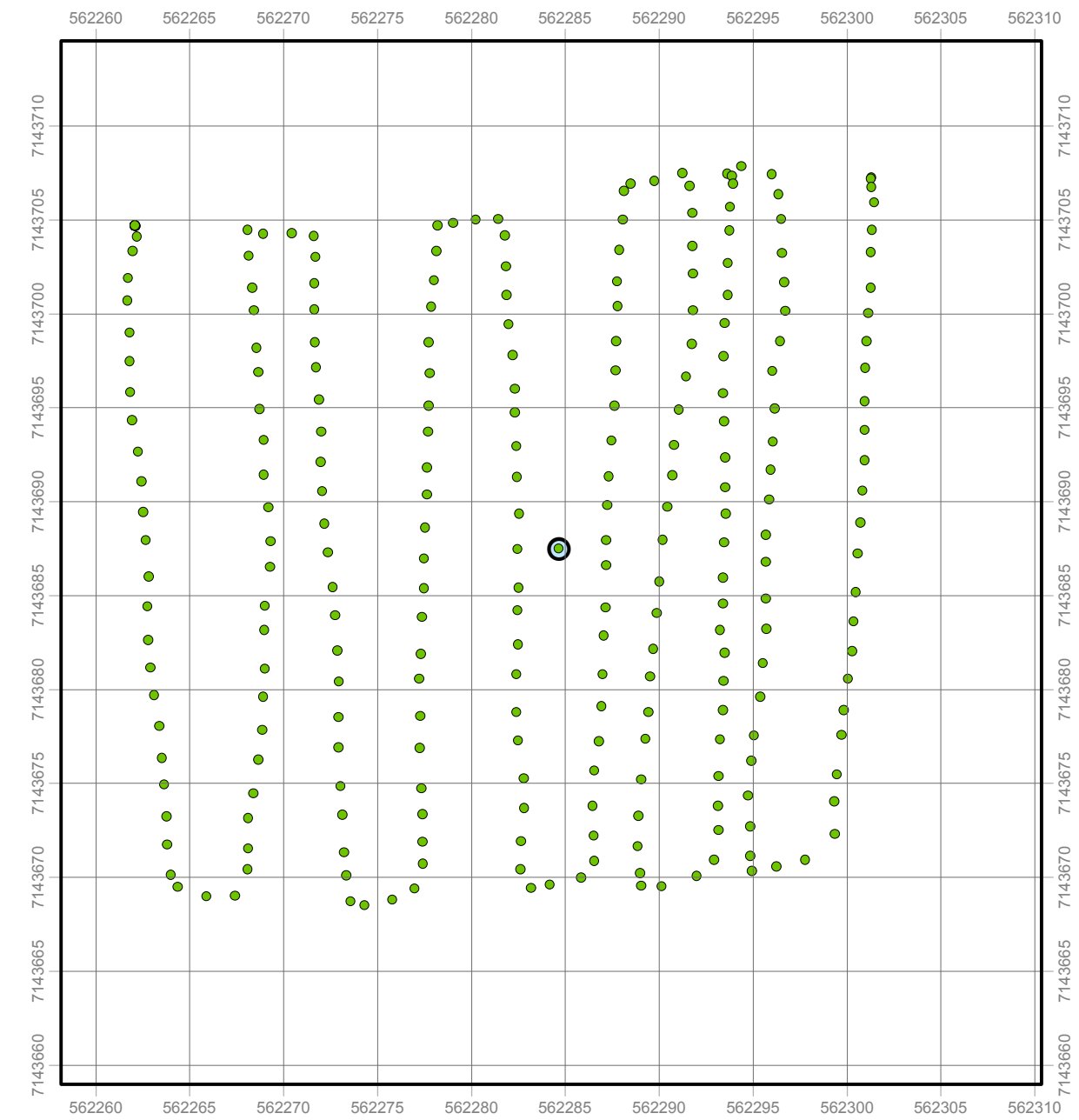


BONG 064

Pre Gamma Survey

Point Count: 321

Min-Max: 0.050 - 0.086 μSv



BONG 064

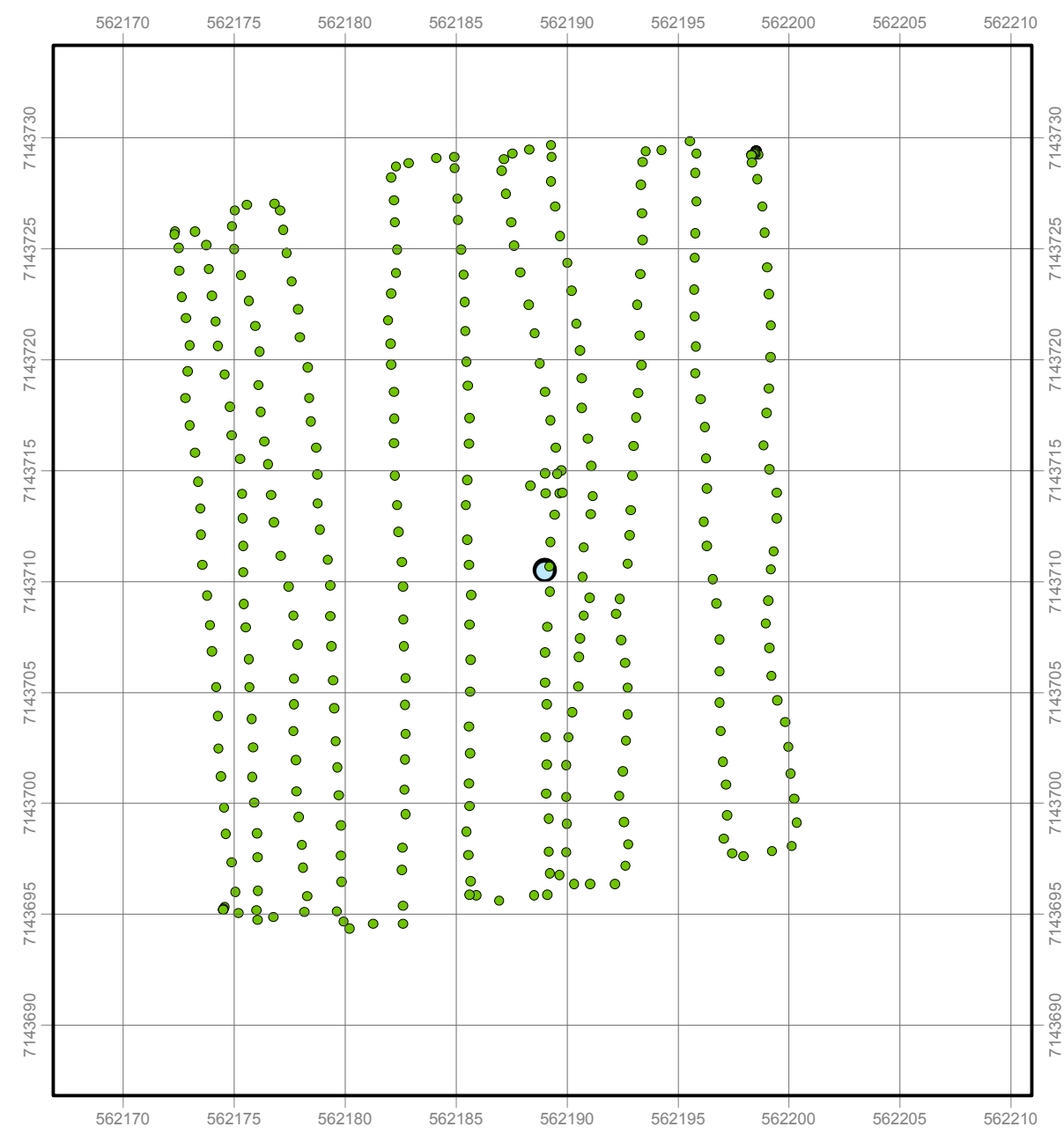
Post Gamma Survey

Point Count: 285

Min-Max: 0.055 - 0.093 μSv

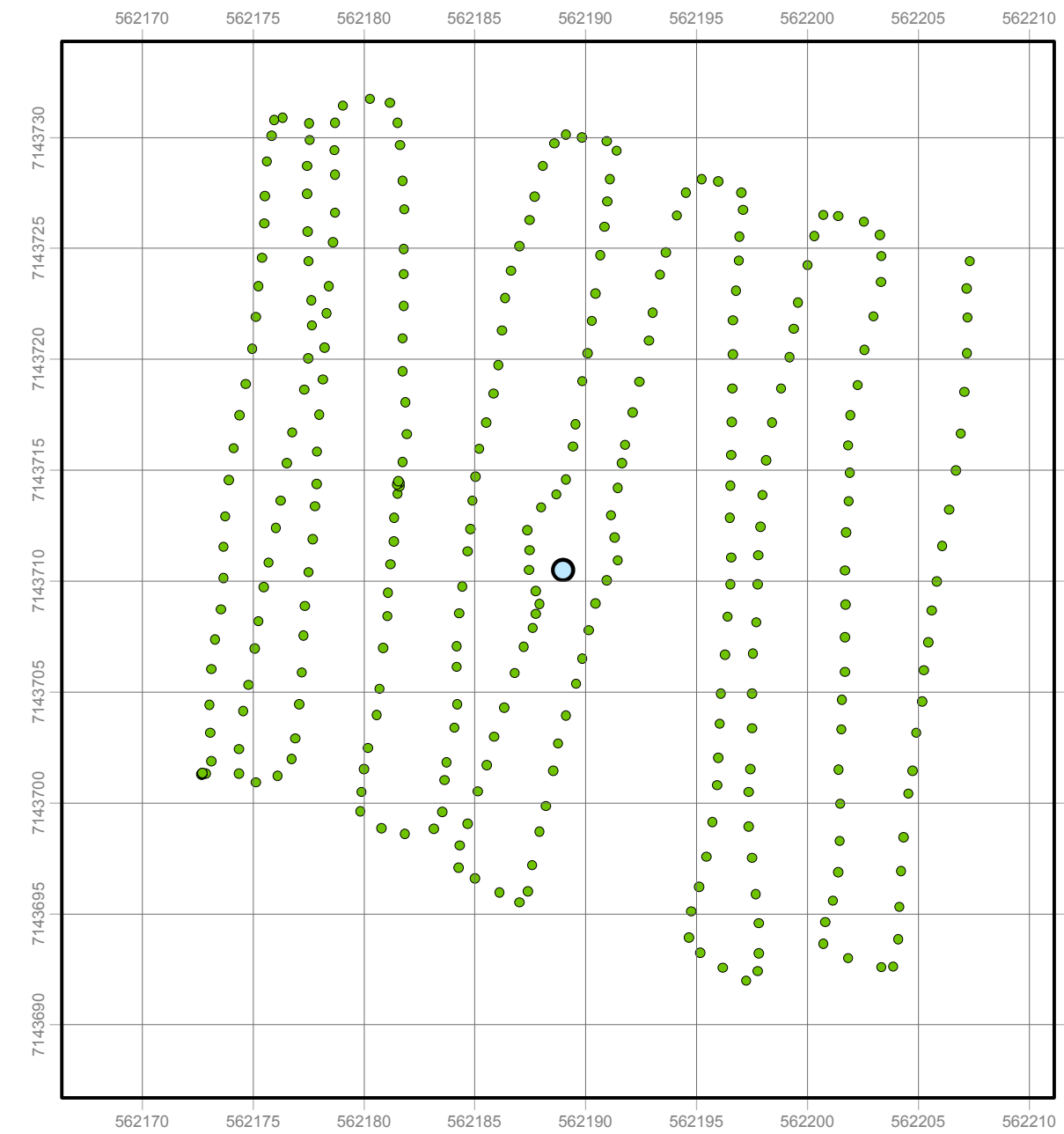
Legend

- Drill Hole
- 0.0 - 0.3 μSv
- 0.3 - 0.6 μSv
- 0.6 - 1.0 μSv
- 1.0 - 2.5 μSv
- > 2.5 μSv



BONG 065 and BONG 065A
Pre Gamma Survey

Point Count: 360
Min-Max: 0.048 - 0.082 μSv



BONG 065 and BONG 065A
Post Gamma Survey

Point Count: 304
Min-Max: 0.055 - 0.090 μSv

Legend

Drill Hole

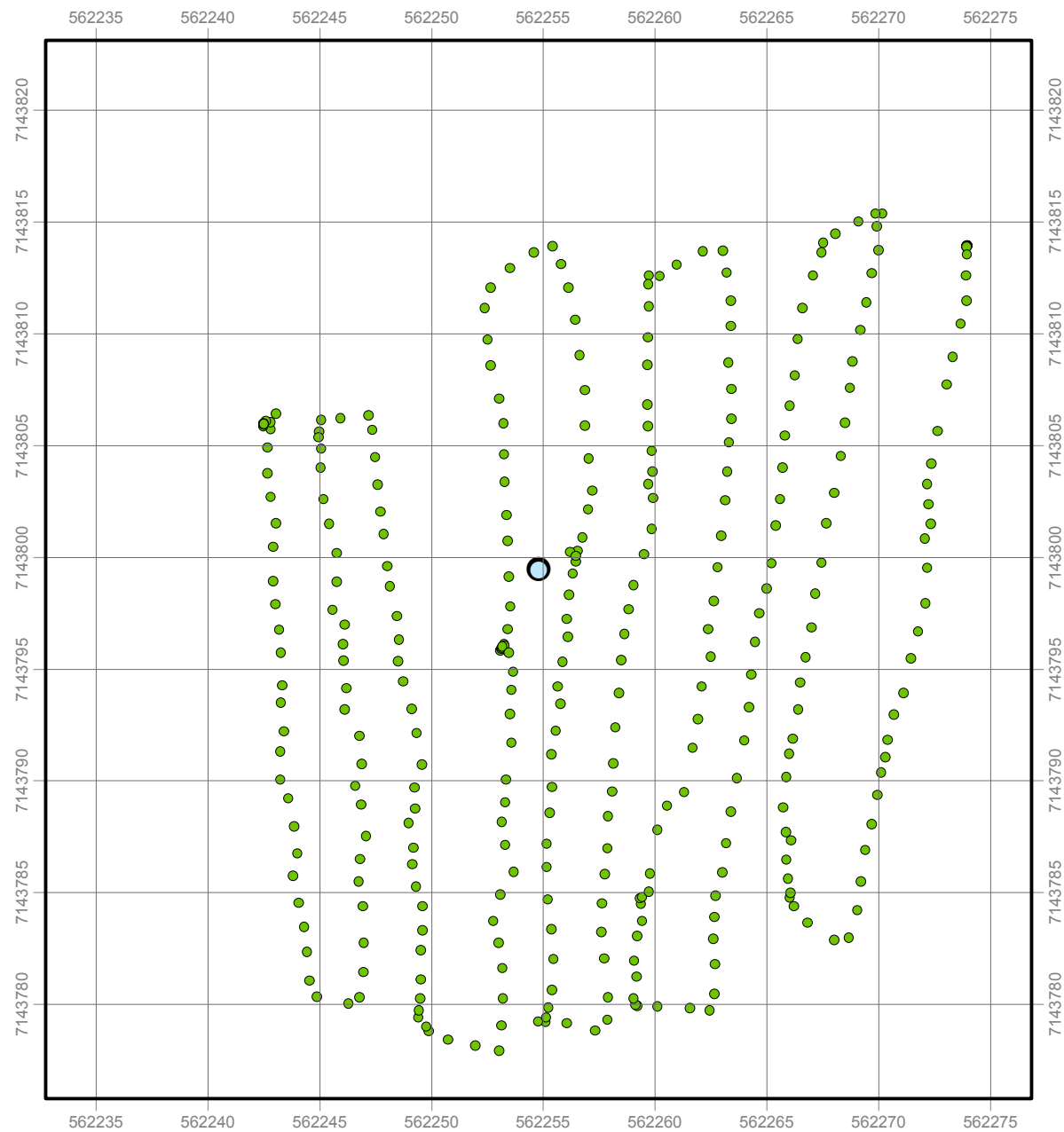
0.0 - 0.3 μSv

0.3 - 0.6 μSv

0.6 - 1.0 μSv

1.0 - 2.5 μSv

> 2.5 μSv

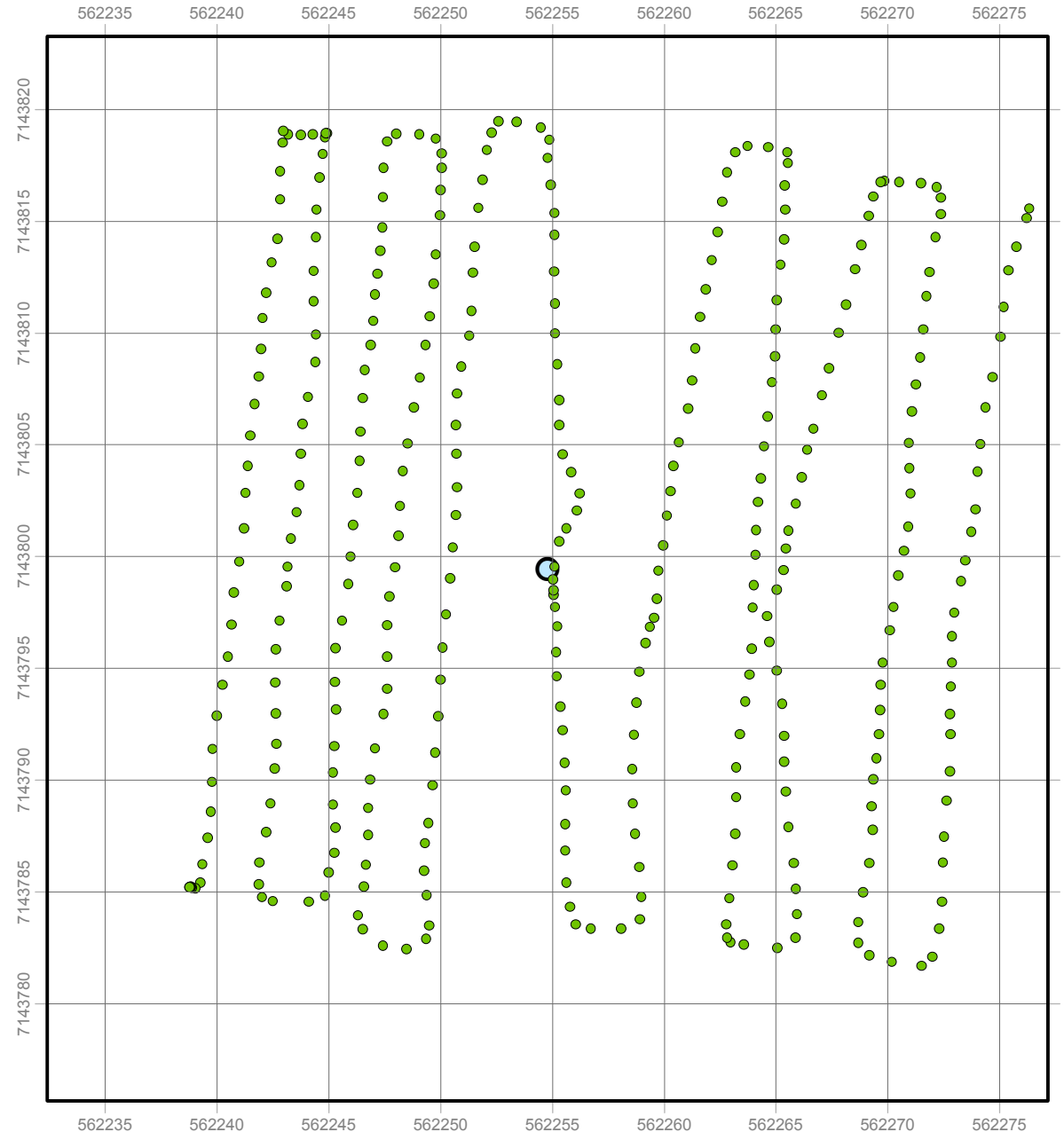


BONG 066

Pre Gamma Survey

Point Count: 351

Min-Max: 0.047 - 0.095 μSv



BONG 066

Post Gamma Survey

Point Count: 352

Min-Max: 0.050 - 0.094 μSv

Legend

Drill Hole

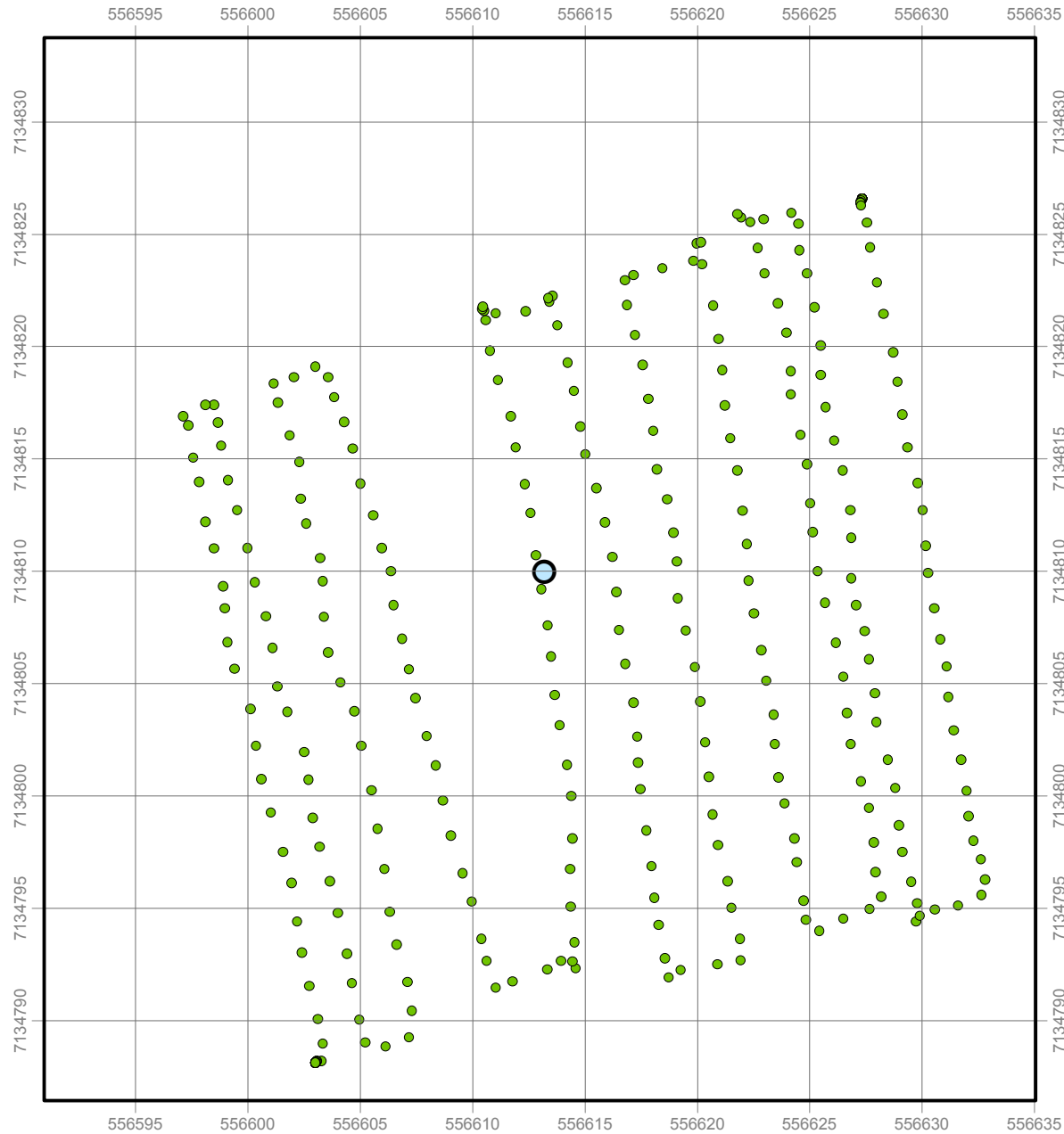
0.0 - 0.3 μSv

0.3 - 0.6 μSv

0.6 - 1.0 μSv

1.0 - 2.5 μSv

> 2.5 μSv

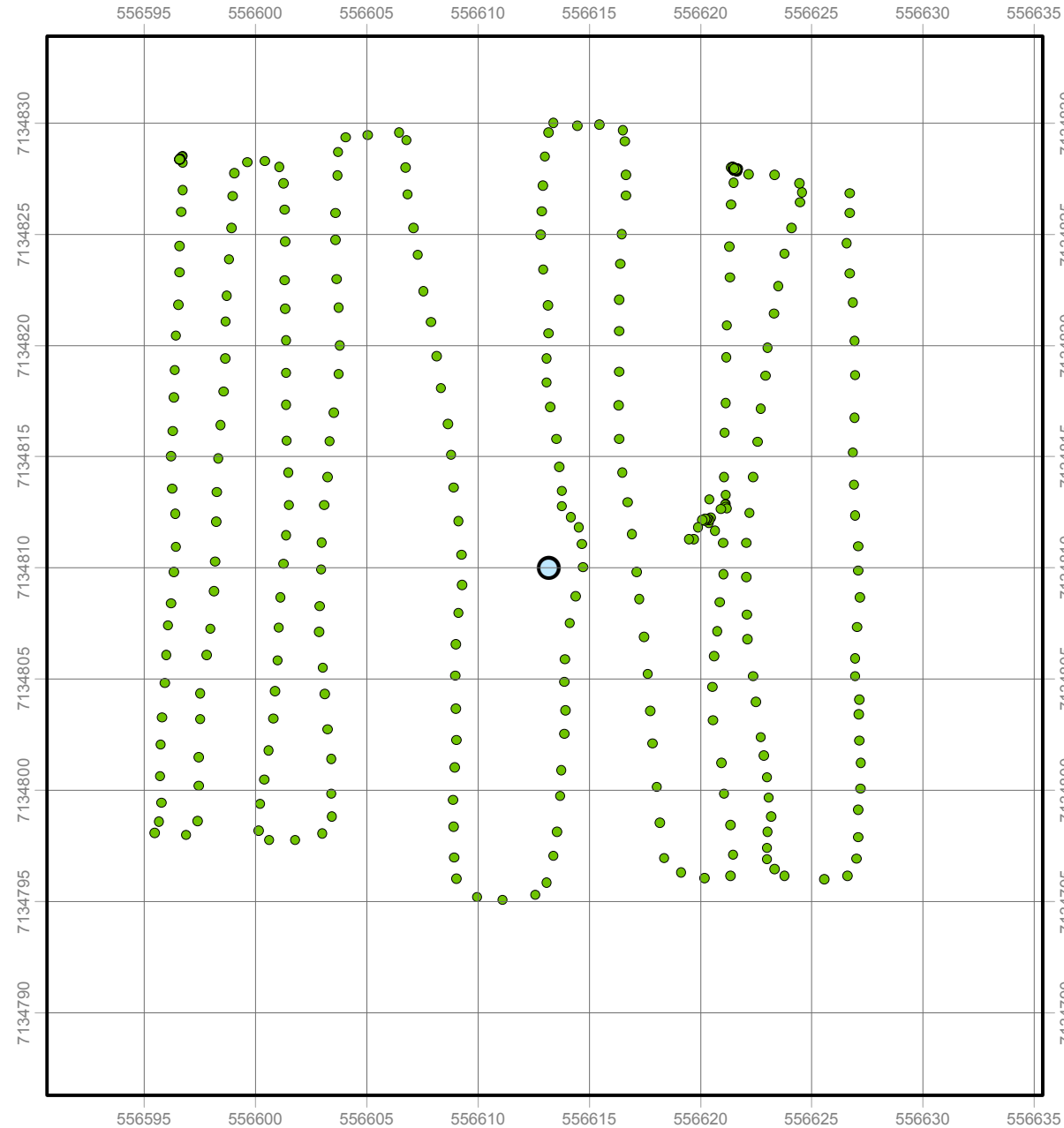


MO 01

Pre Gamma Survey

Point Count: 331

Min-Max: 0.046 - 0.077 μSv



MO 01

Post Gamma Survey

Point Count: 363

Min-Max: 0.048 - 0.089 μSv

Legend

Drill Hole

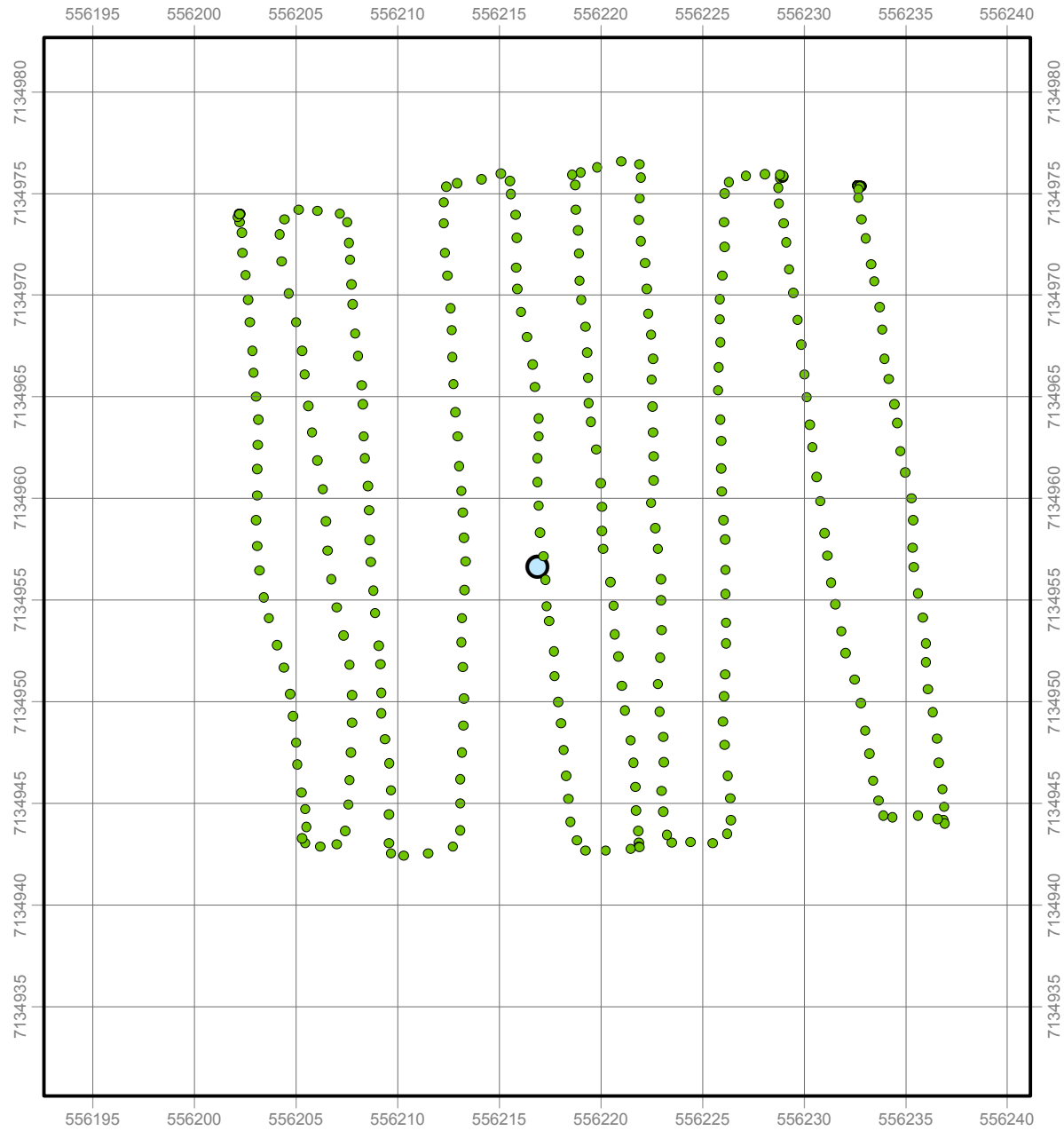
0.0 - 0.3 μSv

0.3 - 0.6 μSv

0.6 - 1.0 μSv

1.0 - 2.5 μSv

> 2.5 μSv

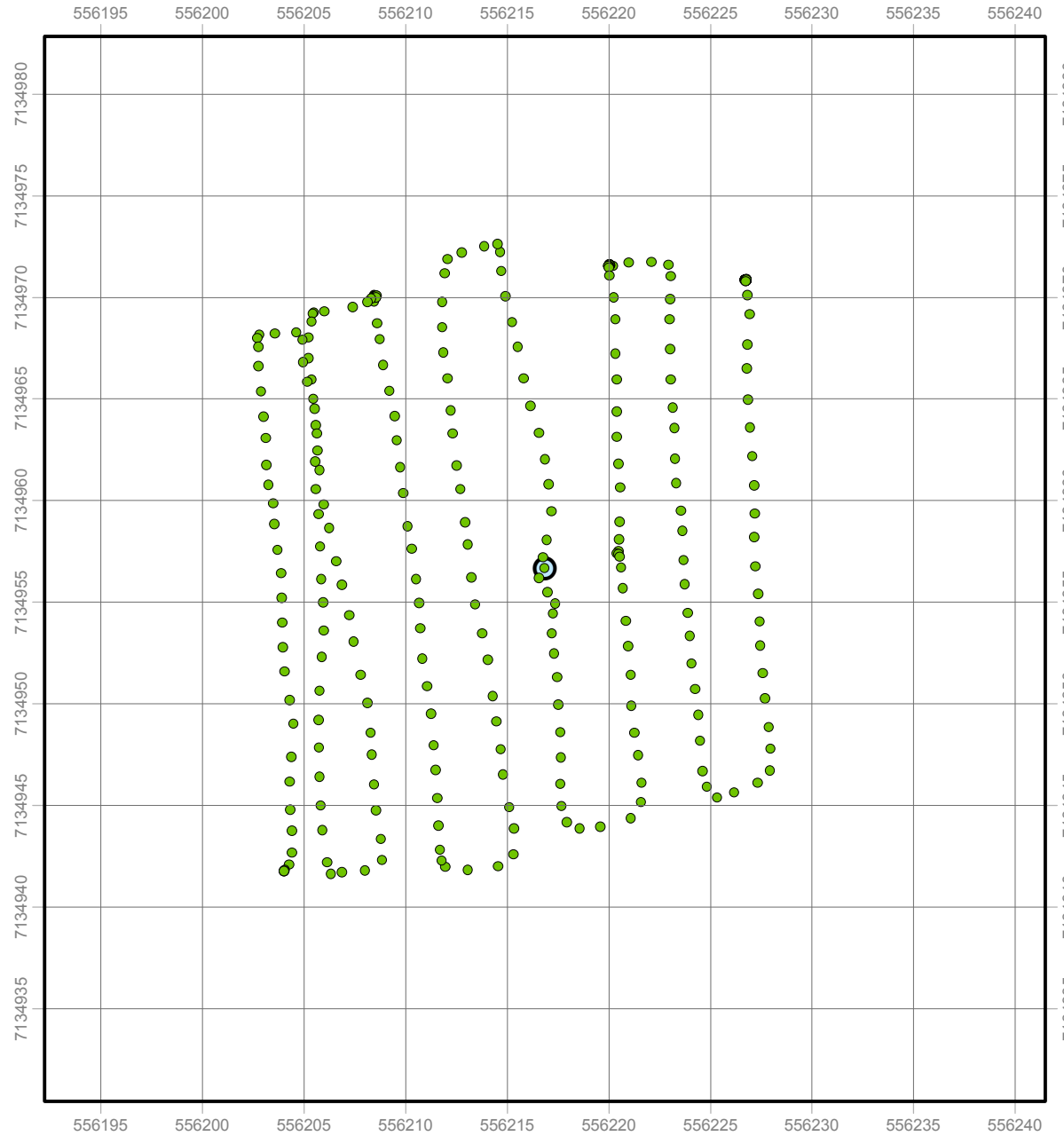


MO 02

Pre Gamma Survey

Point Count: 345

Min-Max: 0.043 - 0.068 μSv



MO 02

Post Gamma Survey

Point Count: 293

Min-Max: 0.044 - 0.073 μSv

Legend

Drill Hole

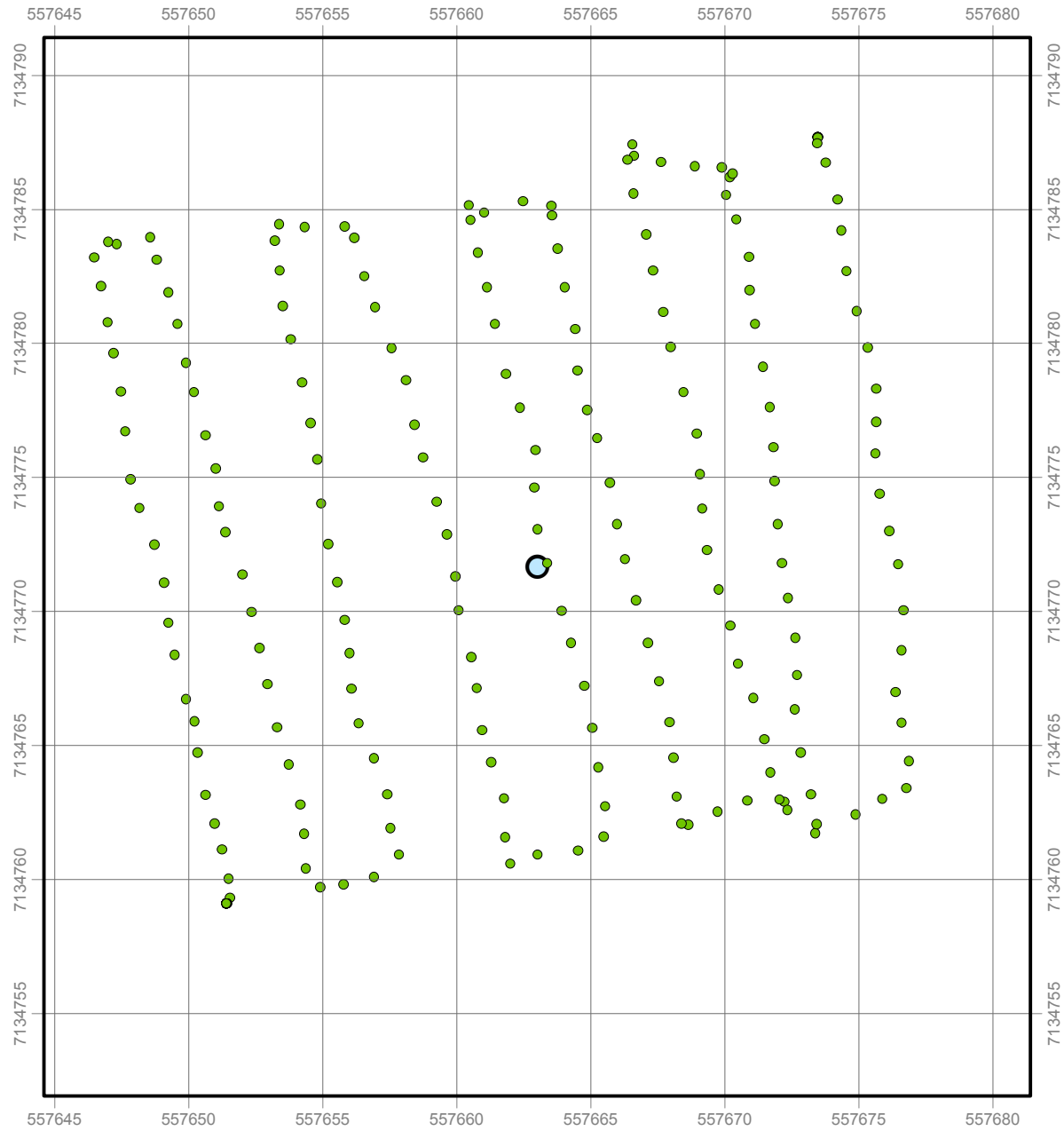
0.0 - 0.3 μSv

0.3 - 0.6 μSv

0.6 - 1.0 μSv

1.0 - 2.5 μSv

> 2.5 μSv

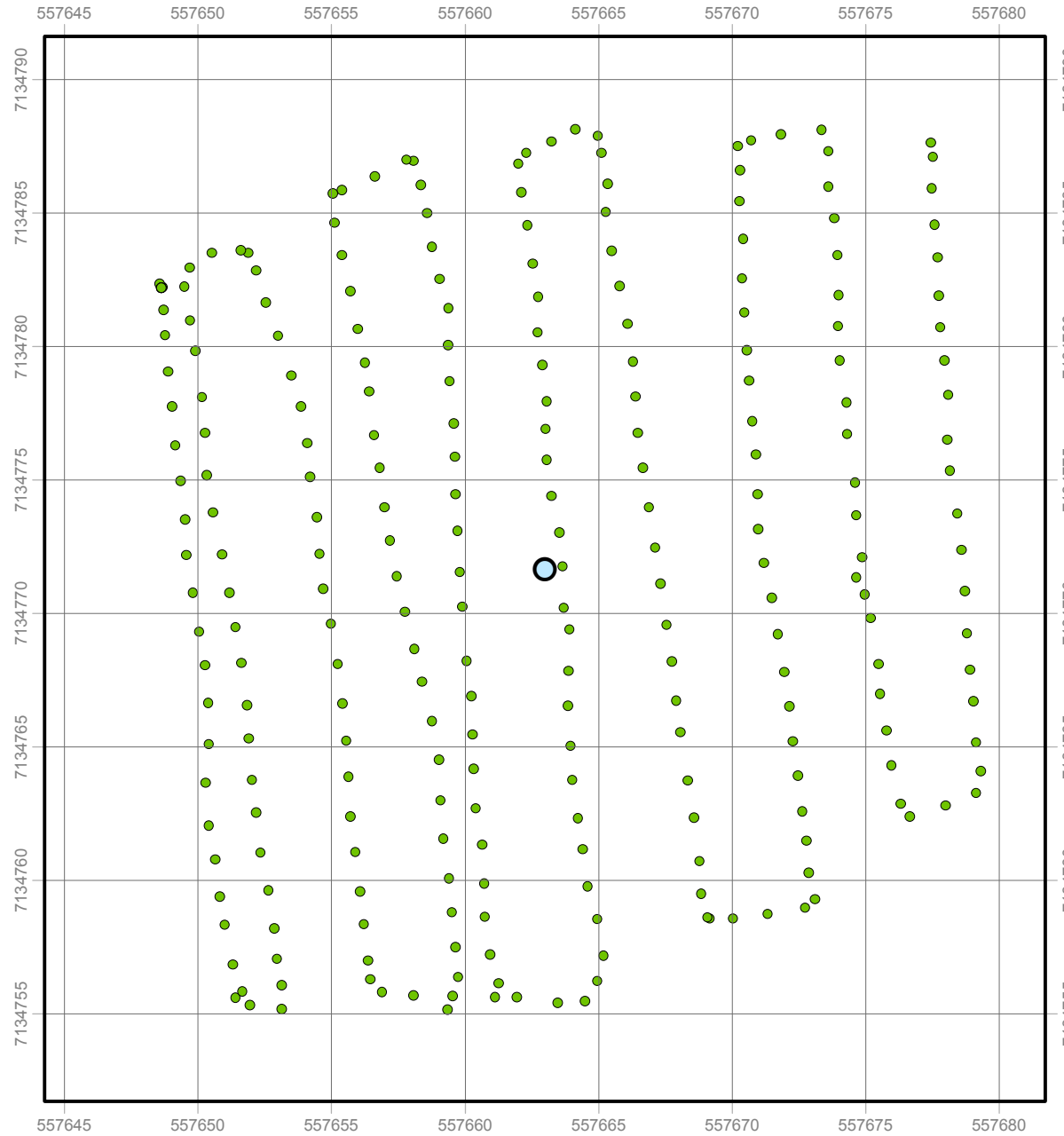


MO 03

Pre Gamma Survey

Point Count: 230

Min-Max: 0.057 - 0.113 μSv



MO 03

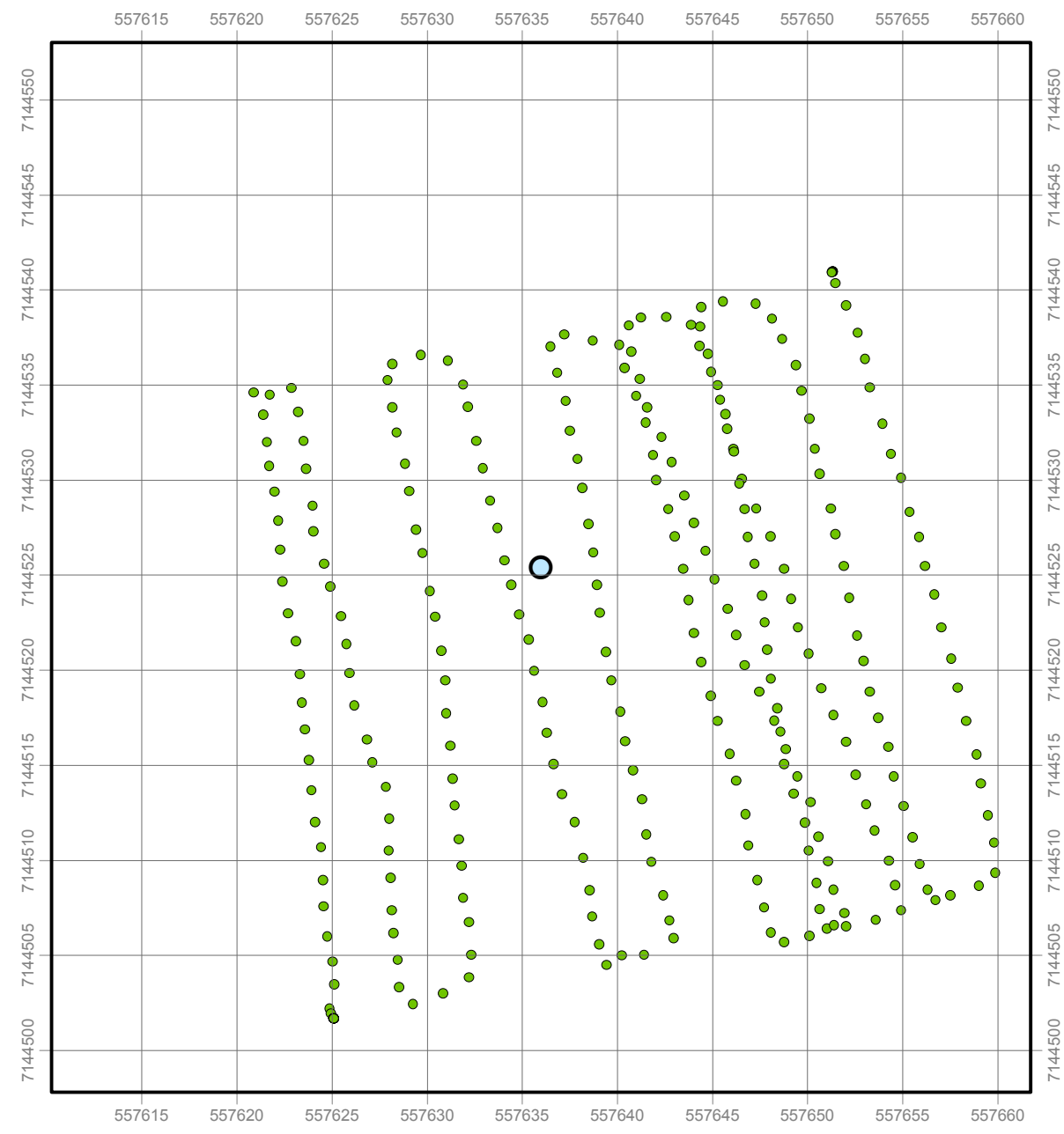
Post Gamma Survey

Point Count: 256

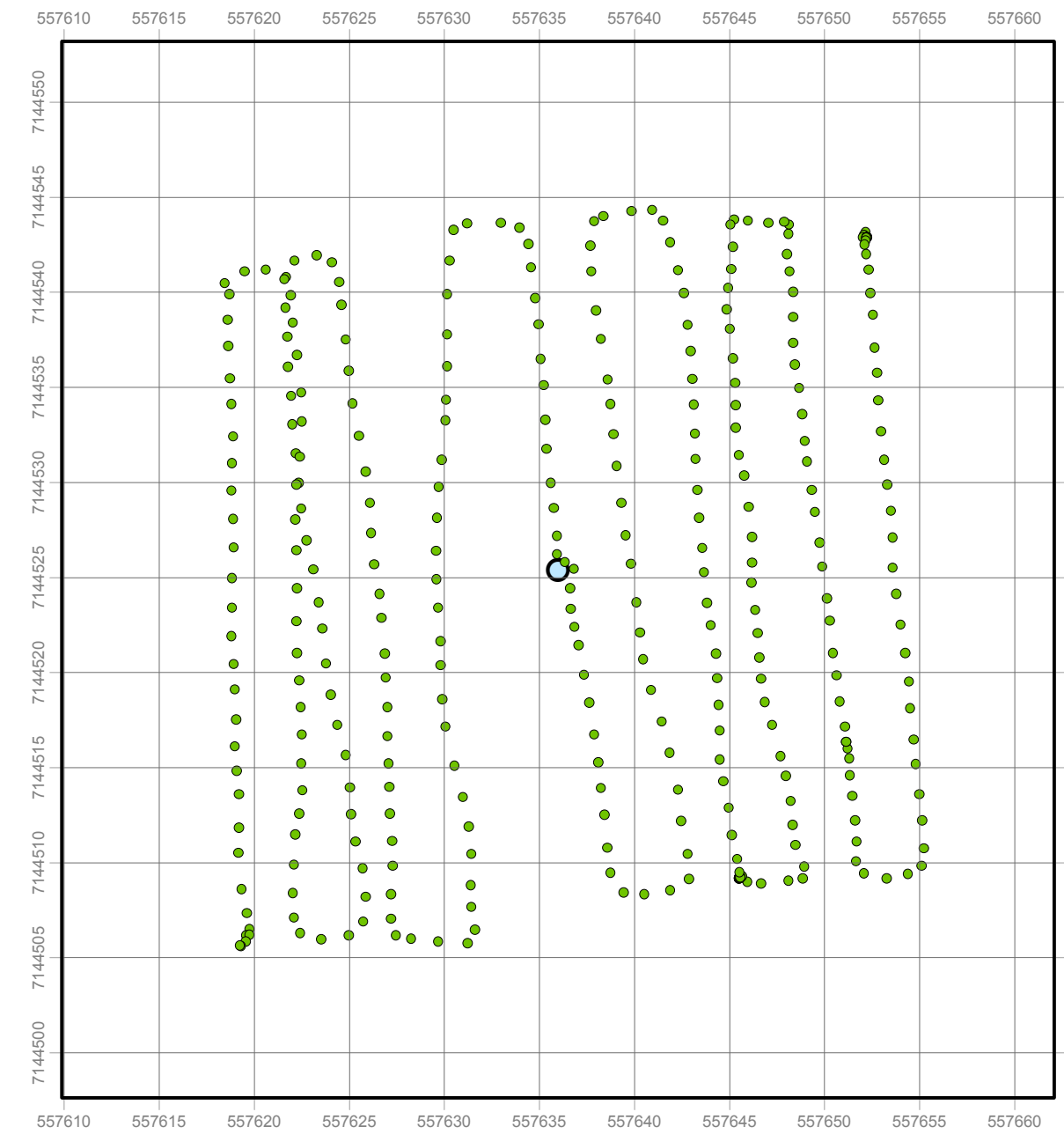
Min-Max: 0.051 - 0.085 μSv

Legend

- Drill Hole
- 0.0 - 0.3 μSv
- 0.3 - 0.6 μSv
- 0.6 - 1.0 μSv
- 1.0 - 2.5 μSv
- > 2.5 μSv



85W 04
Pre Gamma Survey
 Point Count: 292
 Min-Max: 0.044 - 0.078 μSv

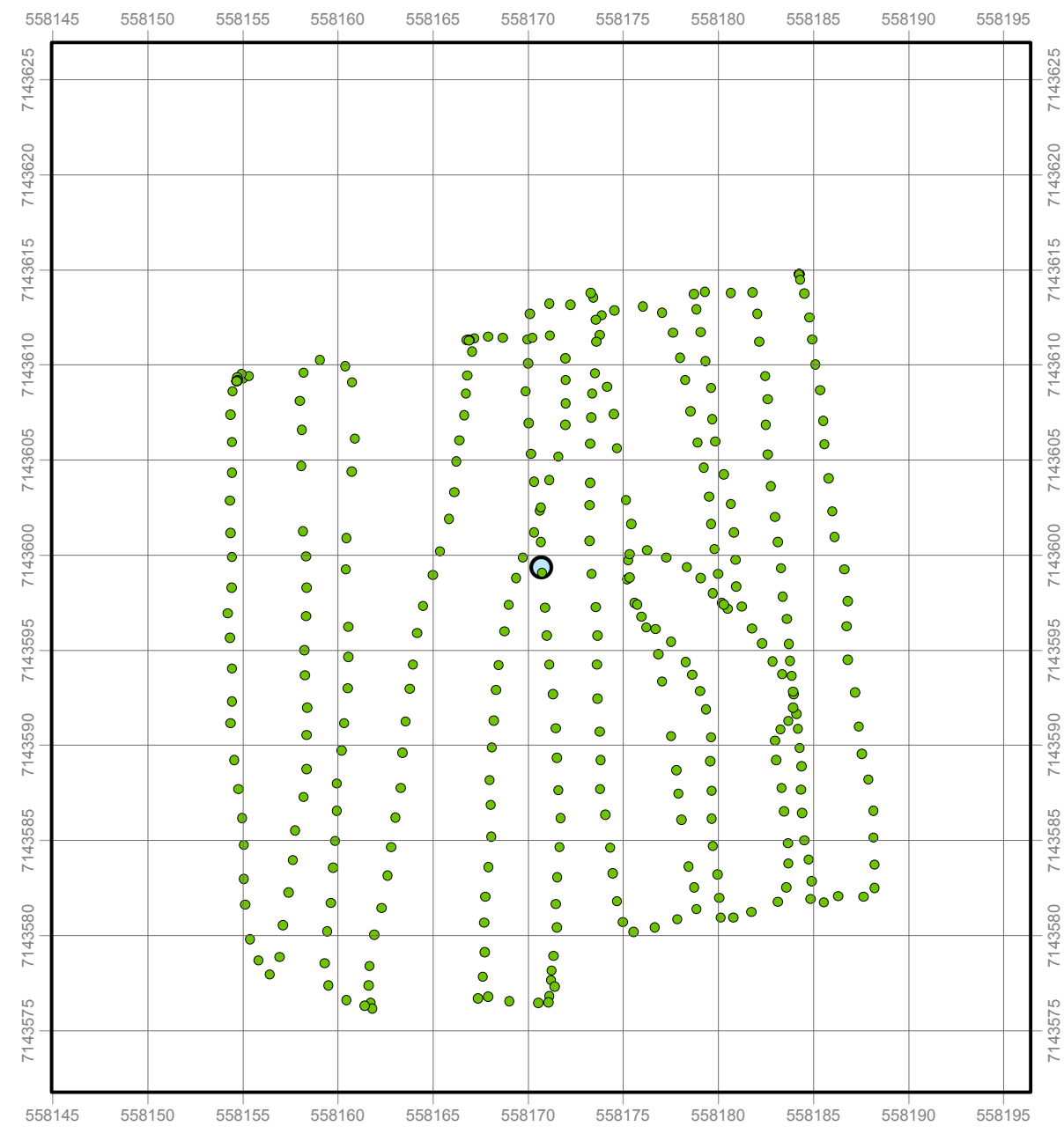


85W 04
Post Gamma Survey
 Point Count: 338
 Min-Max: 0.046 - 0.099 μSv



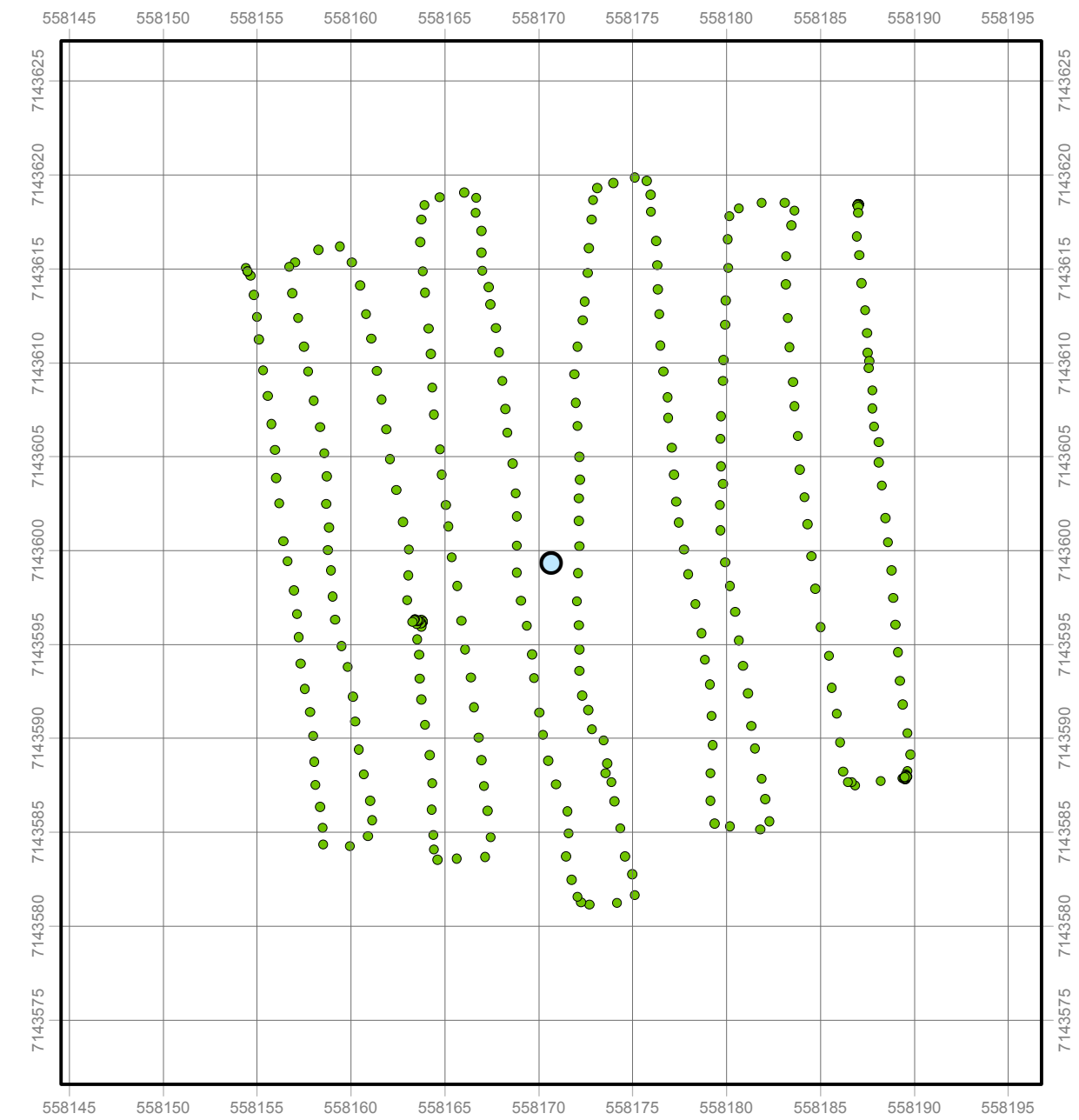
Legend

- Drill Hole
- 0.0 - 0.3 μSv
- 0.3 - 0.6 μSv
- 0.6 - 1.0 μSv
- 1.0 - 2.5 μSv
- > 2.5 μSv



85W 05 and 85W 05A
Pre Gamma Survey

Point Count: 374
Min-Max: 0.032 - 0.049 μSv



85W 05 and 85W 05A
Post Gamma Survey

Point Count: 349
Min-Max: 0.028 - 0.049 μSv



Legend

Drill Hole

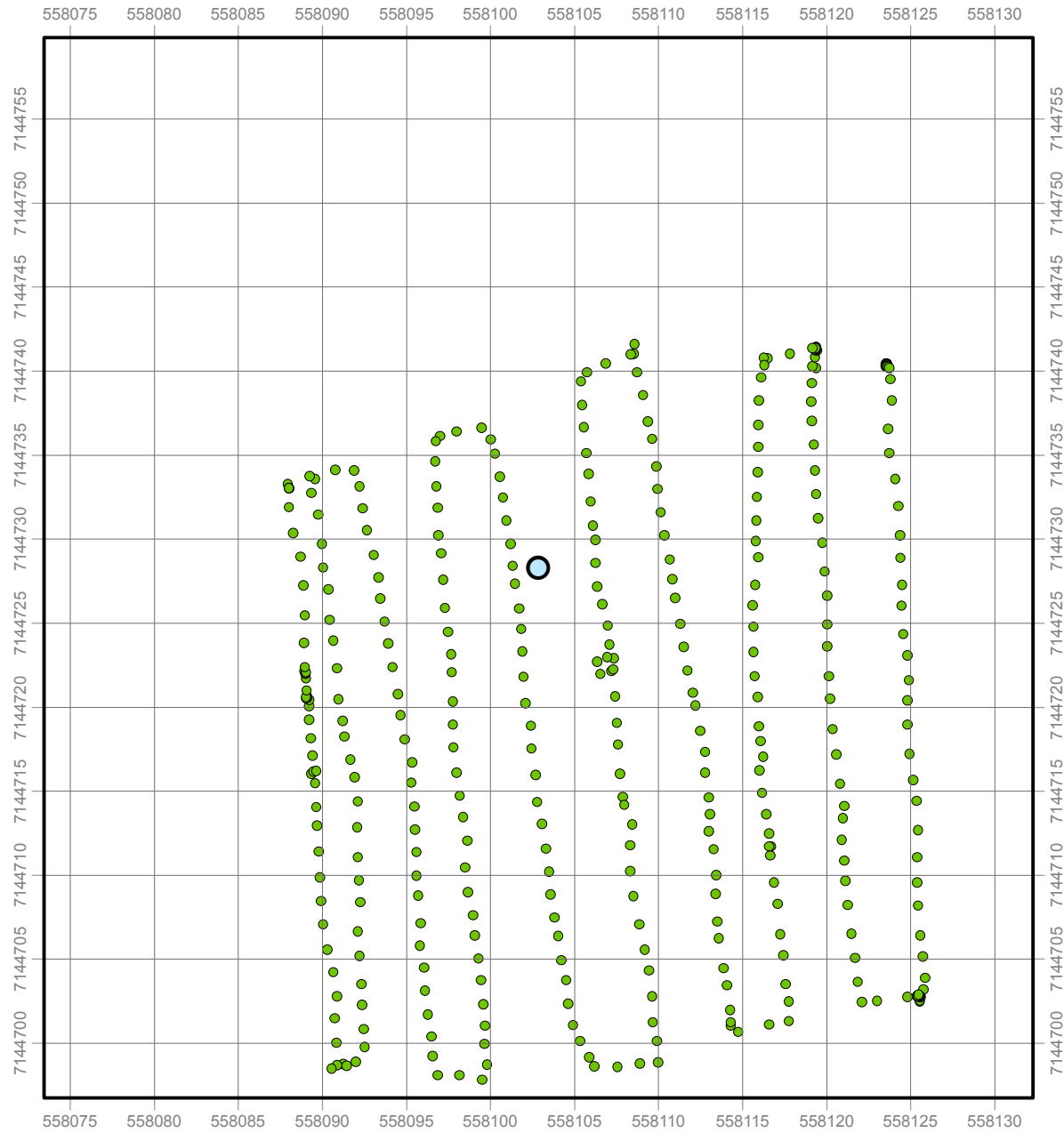
0.0 - 0.3 μ Sv

0.3 - 0.6 μ Sv

0.6 - 1.0 μ Sv

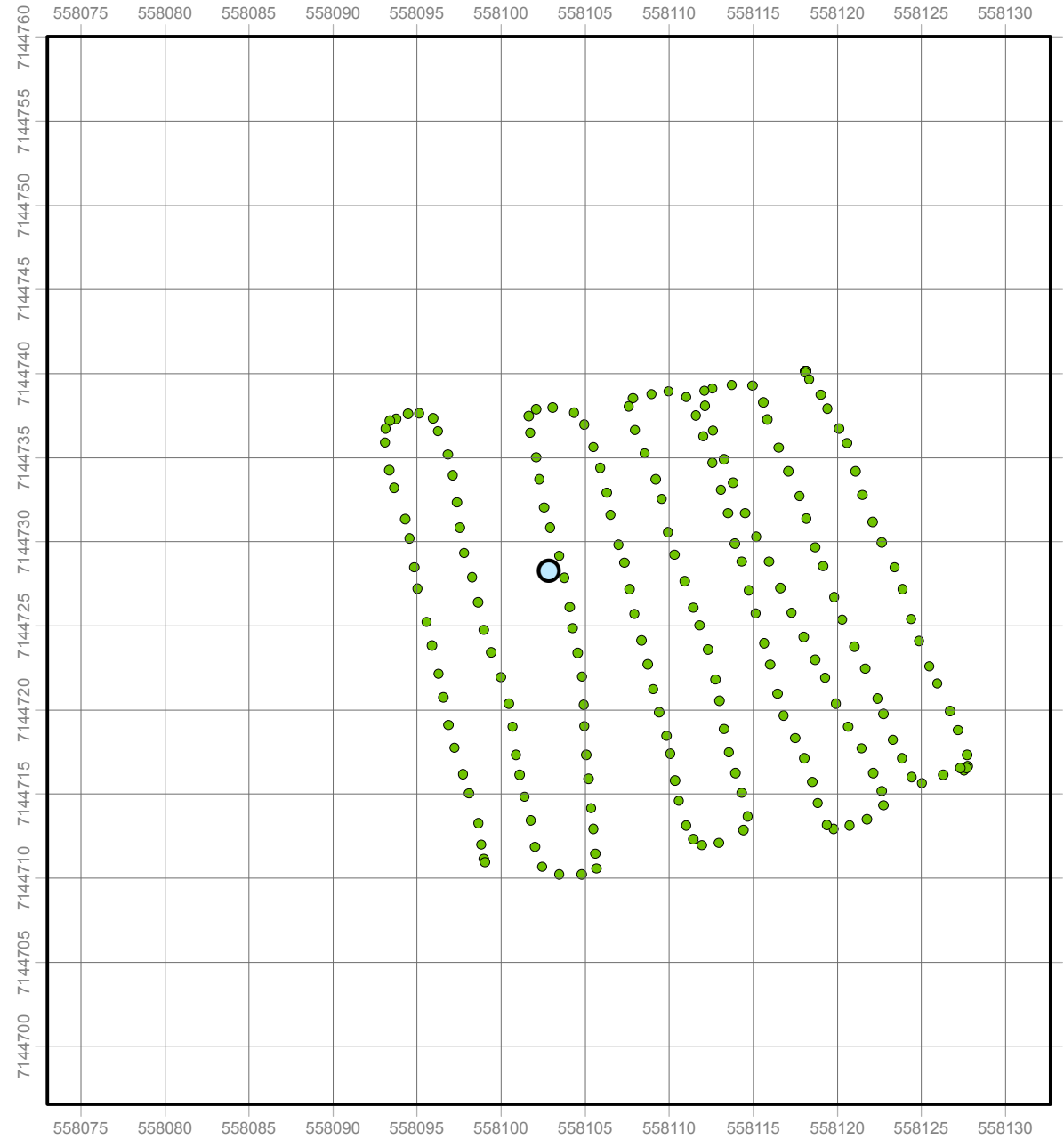
1.0 - 2.5 μ Sv

> 2.5 μ Sv



85W 06
Pre Gamma Survey

Point Count: 484
Min-Max: 0.038 - 0.084 μ Sv



85W 06
Post Gamma Survey

Point Count: 205
Min-Max: 0.039 - 0.080 μ Sv

Legend

Drill Hole

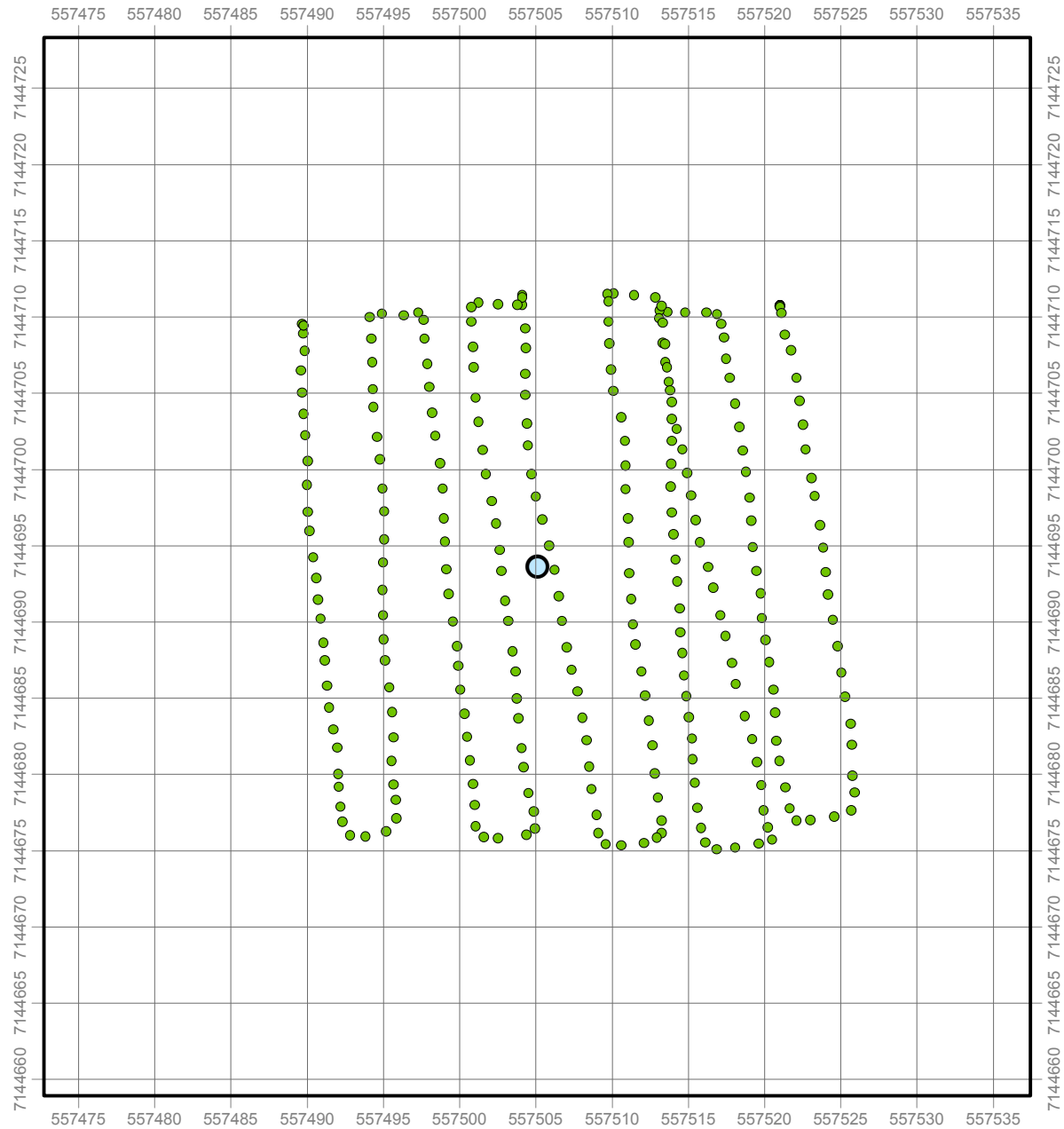
0.0 - 0.3 μ Sv

0.3 - 0.6 μ Sv

0.6 - 1.0 μ Sv

1.0 - 2.5 μ Sv

> 2.5 μ Sv

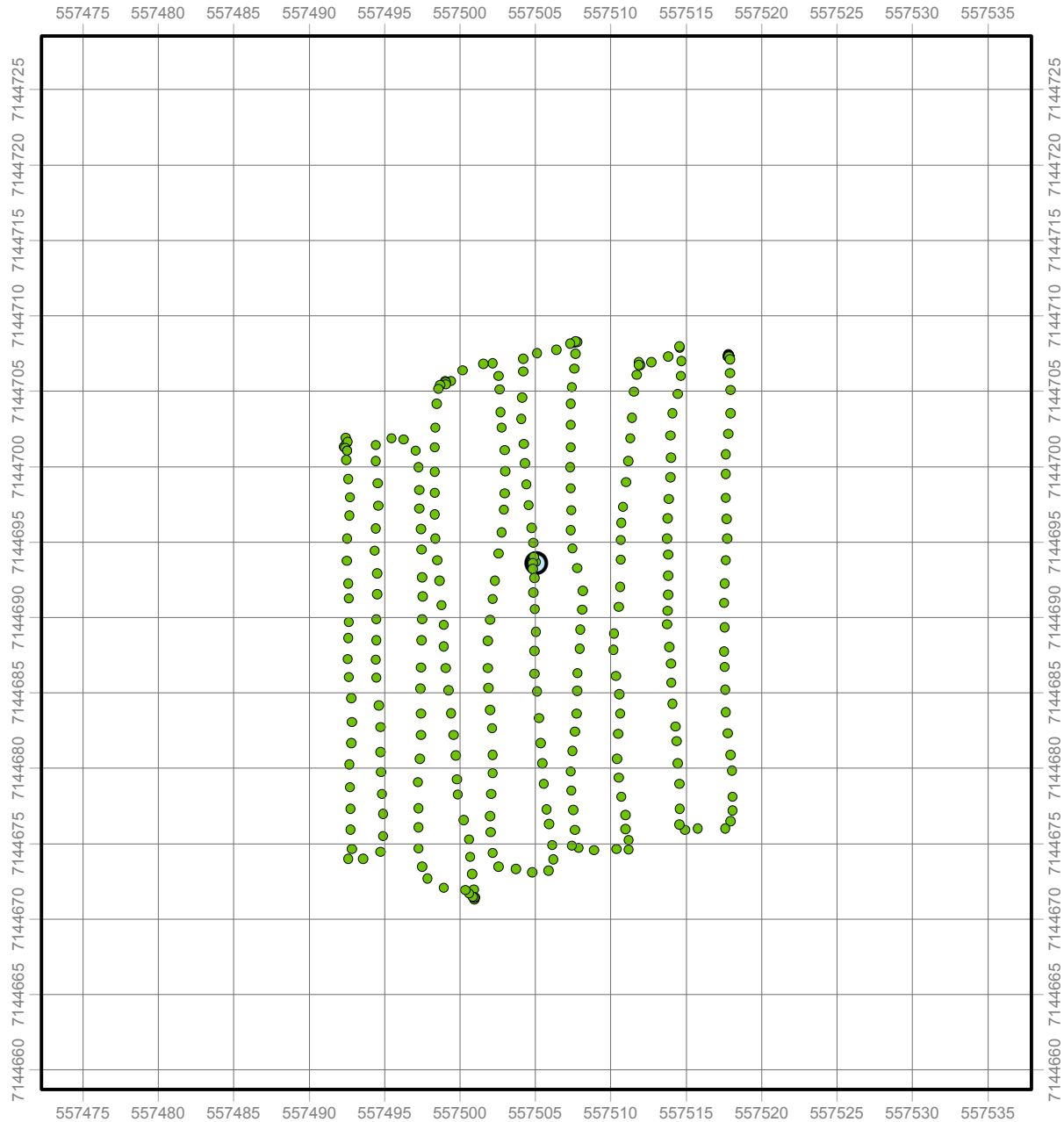


85W 07

Pre Gamma Survey

Point Count: 275

Min-Max: 0.051 - 0.098 μ Sv



85W 07

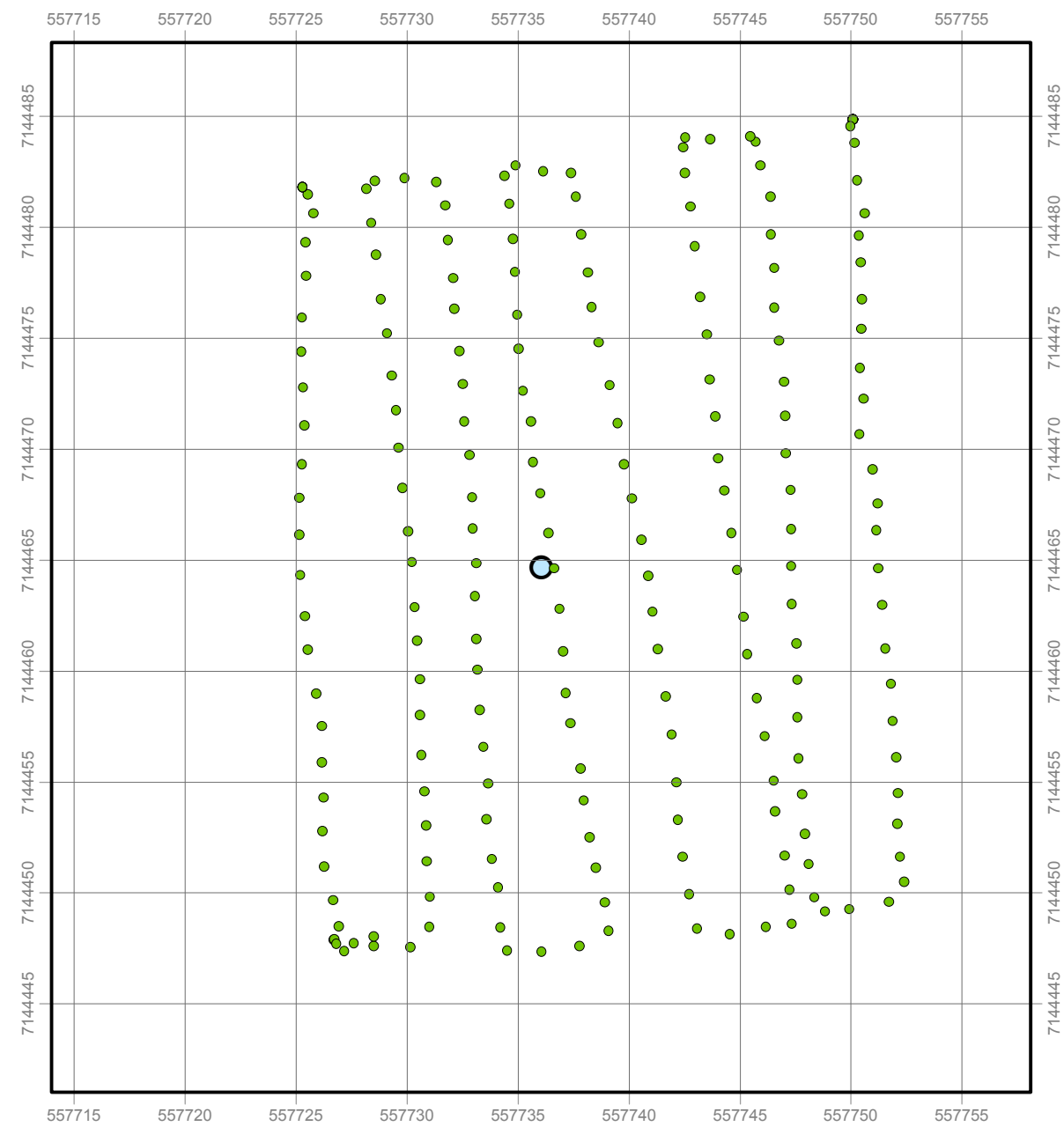
Post Gamma Survey

Point Count: 286

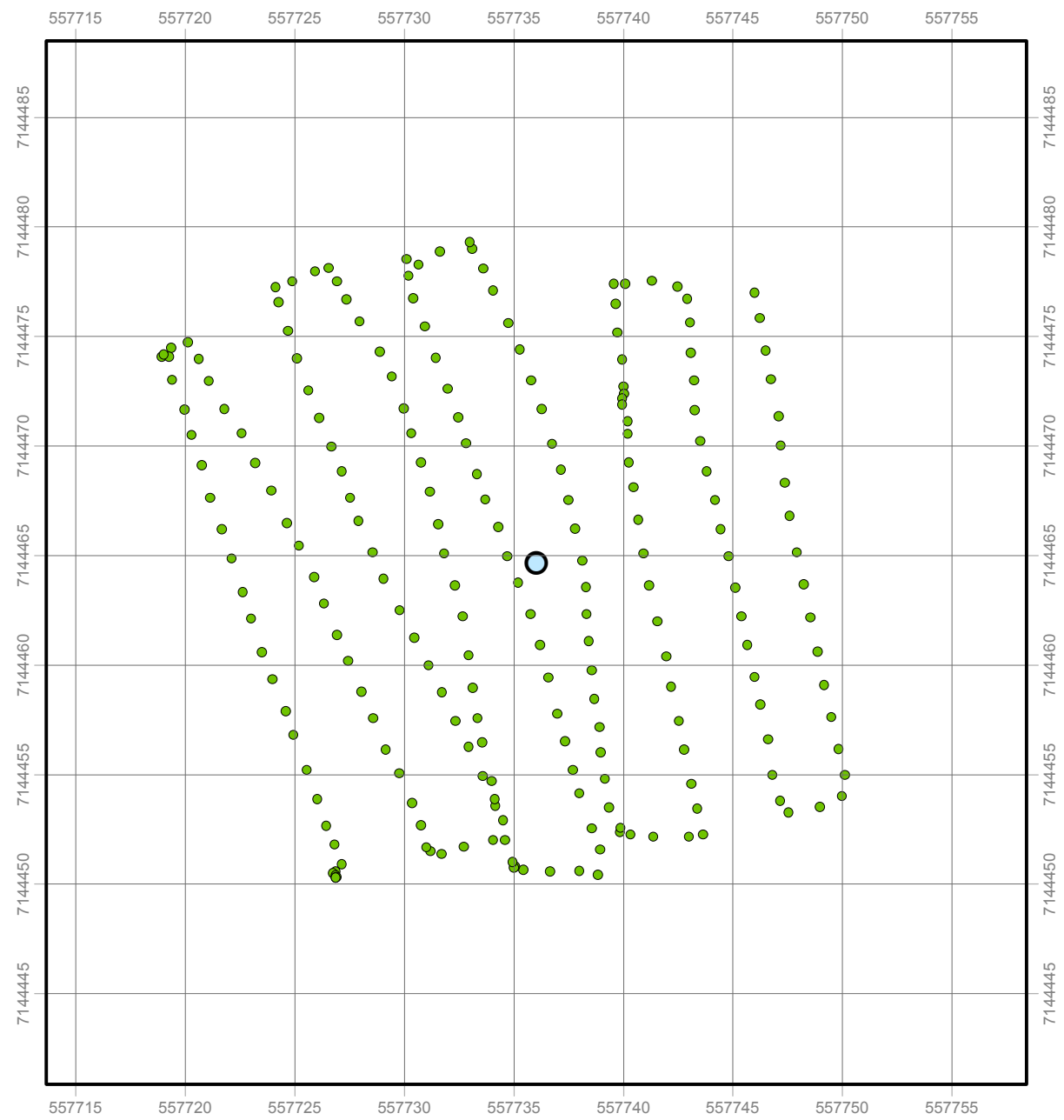
Min-Max: 0.057 - 0.109 μ Sv

Legend

- Drill Hole
- 0.0 - 0.3 μSv
- 0.3 - 0.6 μSv
- 0.6 - 1.0 μSv
- 1.0 - 2.5 μSv
- > 2.5 μSv



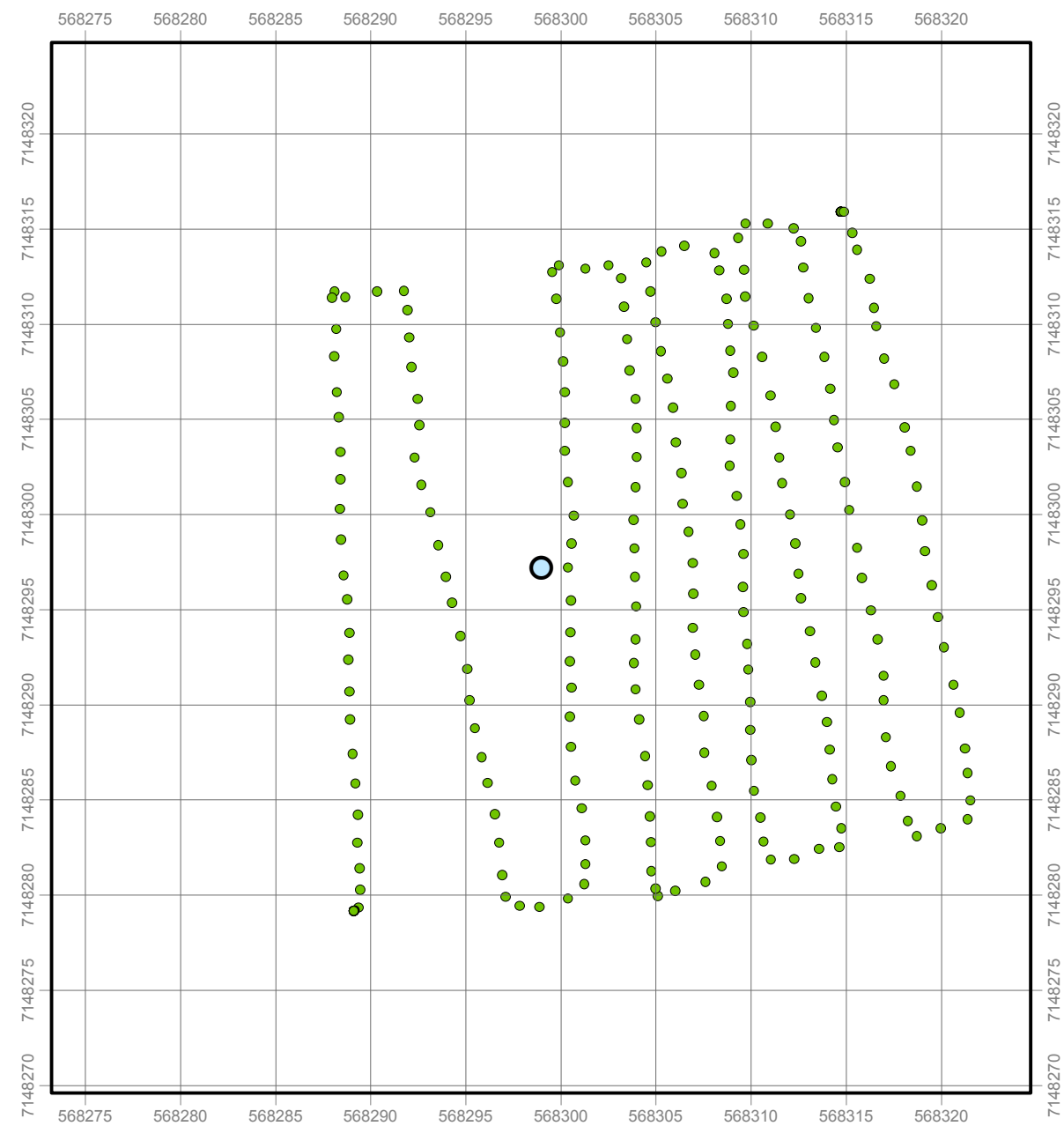
85W 08
Pre Gamma Survey
 Point Count: 217
 Min-Max: 0.046 - 0.073 μSv



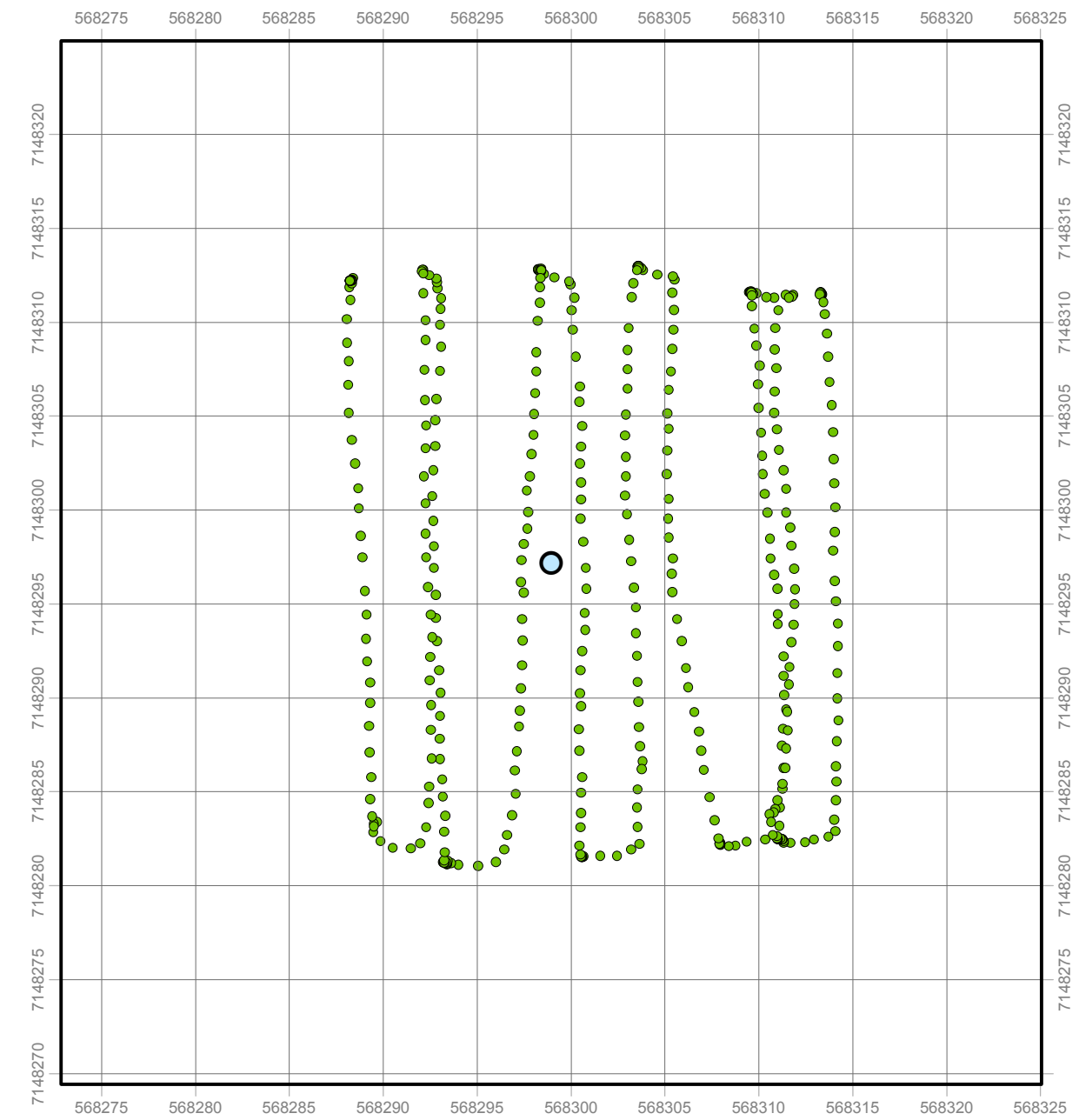
85W 08
Post Gamma Survey
 Point Count: 217
 Min-Max: 0.052 - 0.112 μSv

Legend

- Drill Hole
- 0.0 - 0.3 μSv
- 0.3 - 0.6 μSv
- 0.6 - 1.0 μSv
- 1.0 - 2.5 μSv
- > 2.5 μSv



KE 11
Pre Gamma Survey
 Point Count: 263
 Min-Max: 0.038 - 0.070 μSv

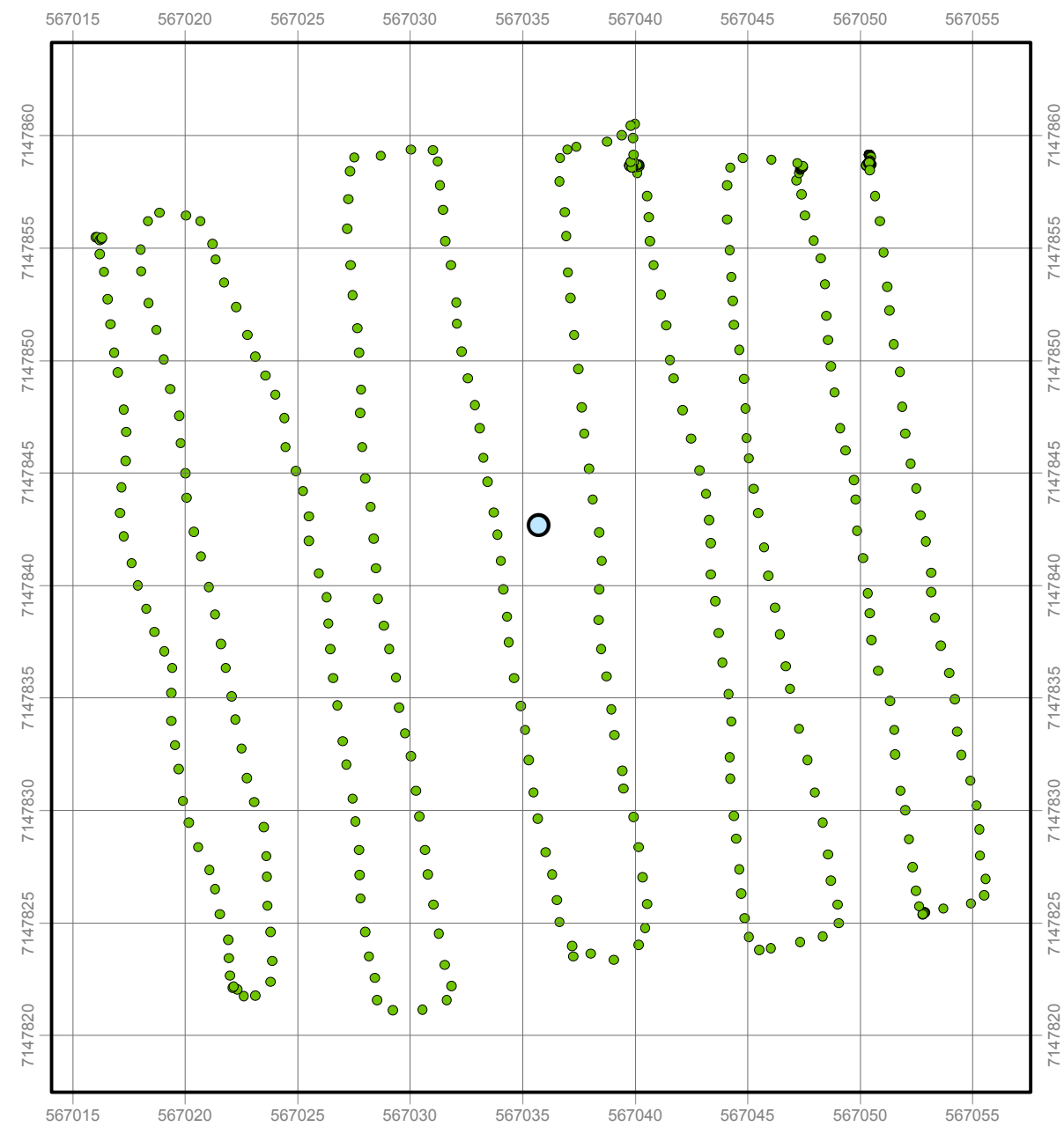


KE 11
Post Gamma Survey
 Point Count: 428
 Min-Max: 0.039 - 0.067 μSv

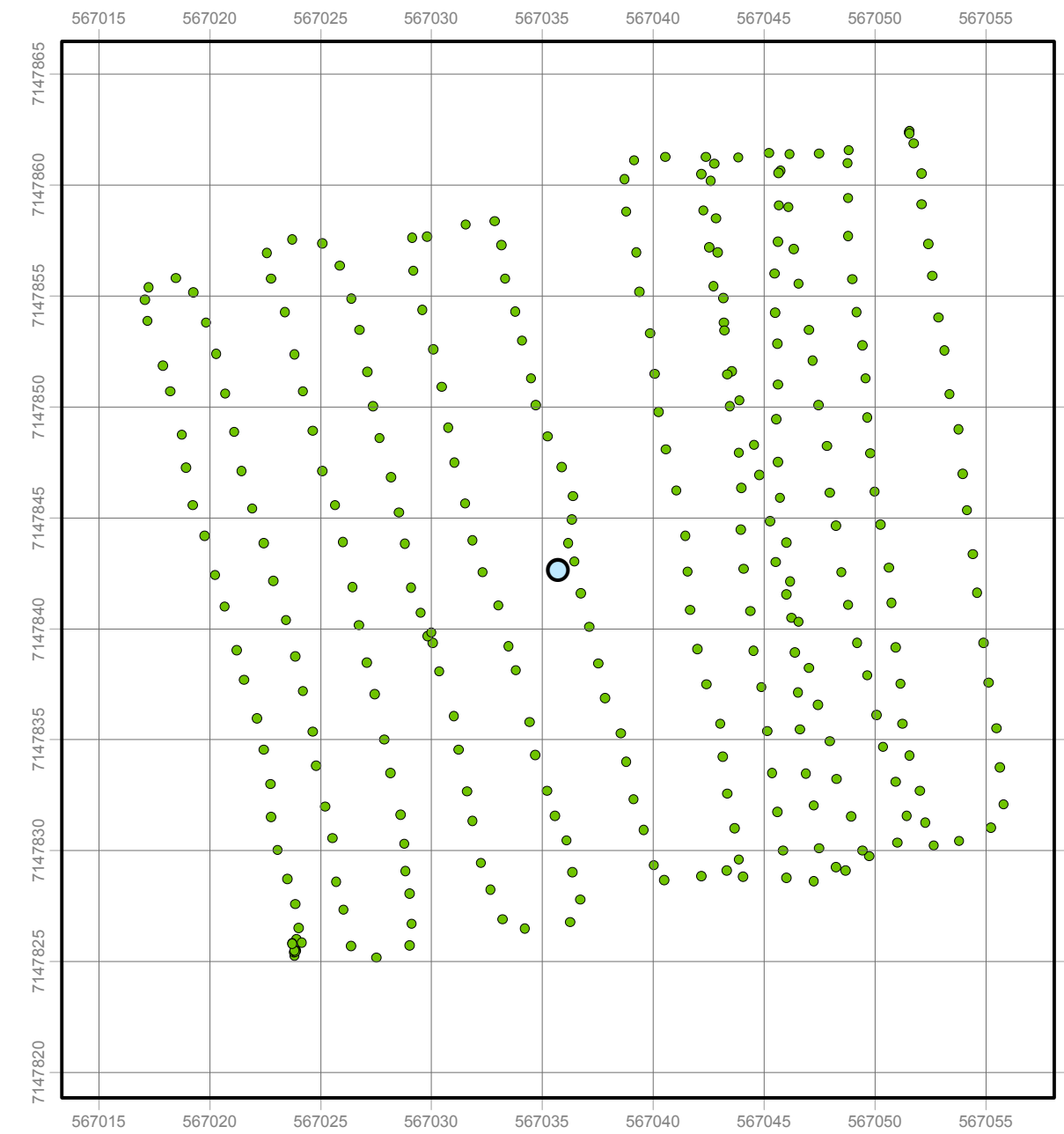


Legend

- Drill Hole
- 0.0 - 0.3 μSv
- 0.3 - 0.6 μSv
- 0.6 - 1.0 μSv
- 1.0 - 2.5 μSv
- > 2.5 μSv



KE 09
Pre Gamma Survey
 Point Count: 433
 Min-Max: 0.052 - 0.091 μSv



KE 09
Post Gamma Survey
 Point Count: 300
 Min-Max: 0.058 - 0.101 μSv



Legend

Drill Hole

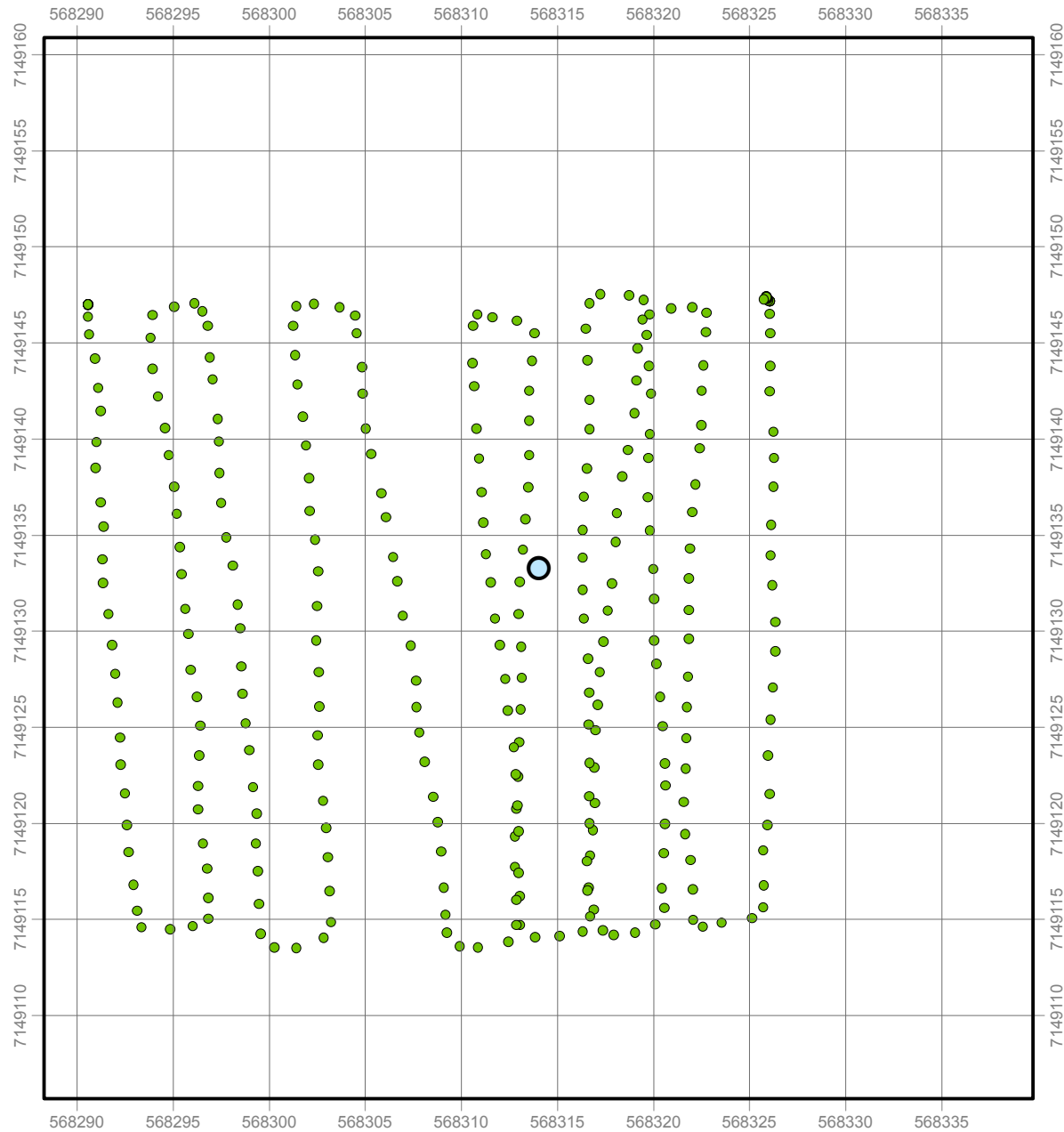
0.0 - 0.3 μSv

0.3 - 0.6 μSv

0.6 - 1.0 μSv

1.0 - 2.5 μSv

> 2.5 μSv

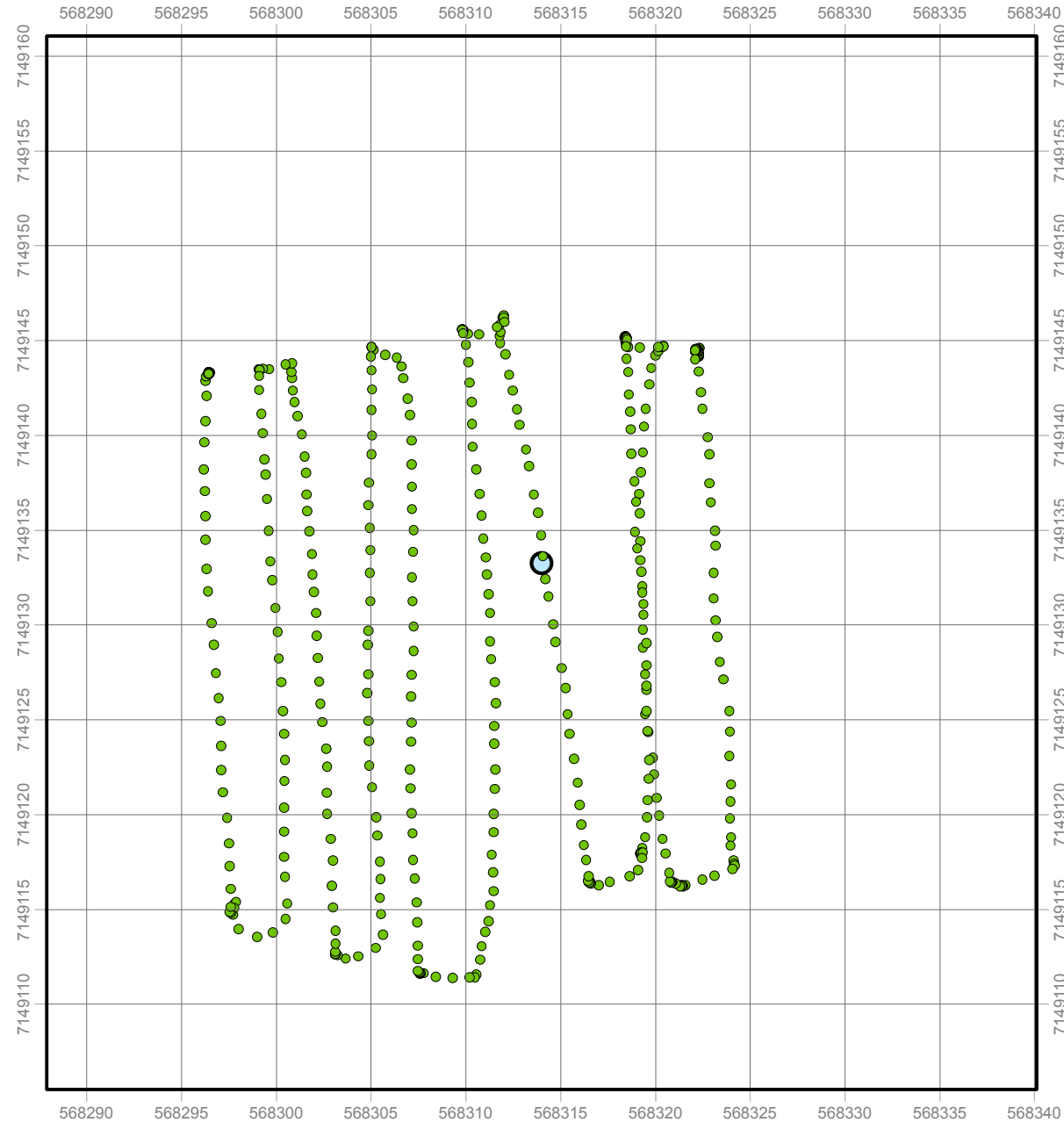


KE 10

Pre Gamma Survey

Point Count: 307

Min-Max: 0.051 - 0.090 μSv



KE 10

Post Gamma Survey

Point Count: 538

Min-Max: 0.053 - 0.087 μSv

Legend

Drill Hole

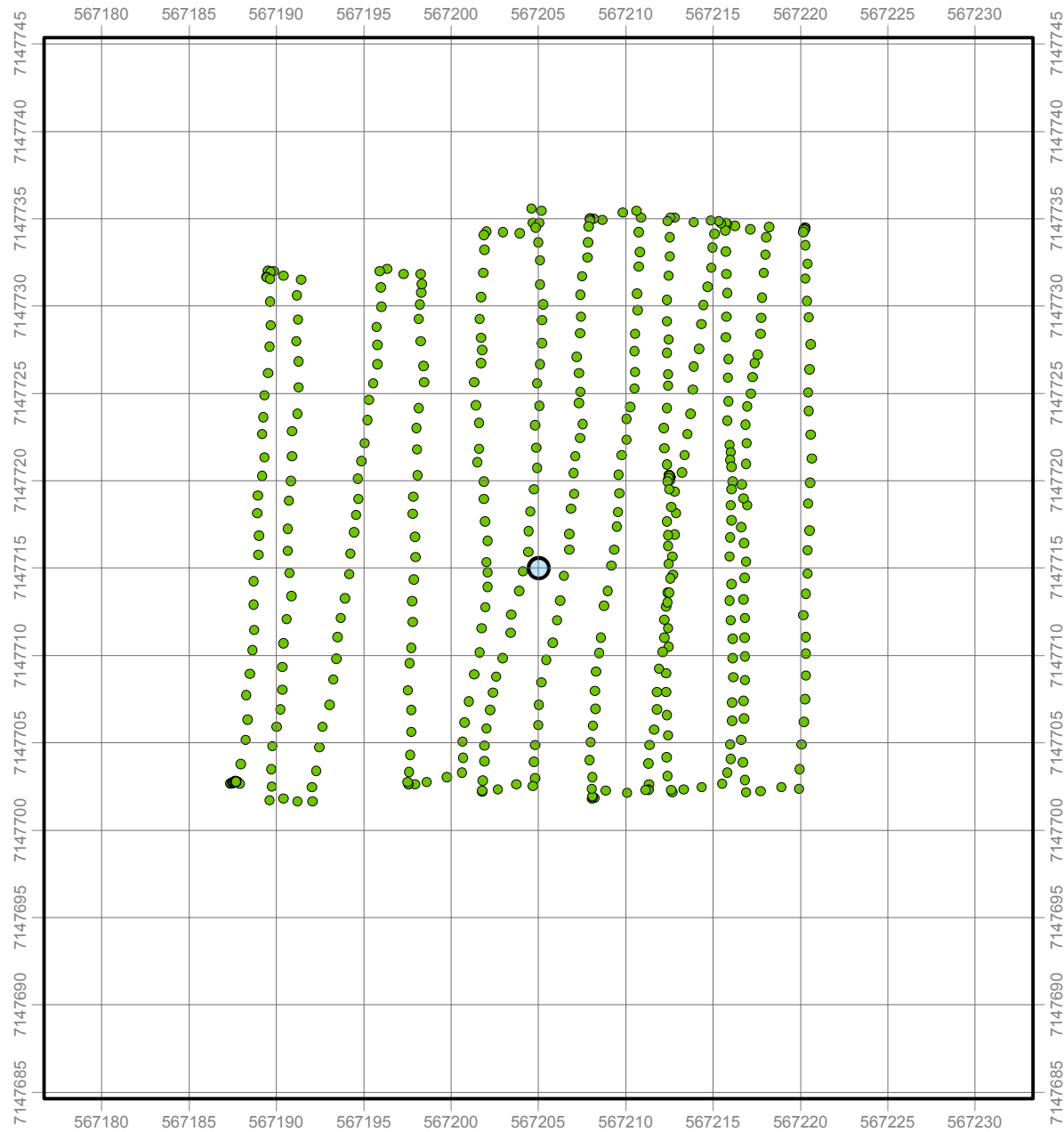
0.0 - 0.3 μSv

0.3 - 0.6 μSv

0.6 - 1.0 μSv

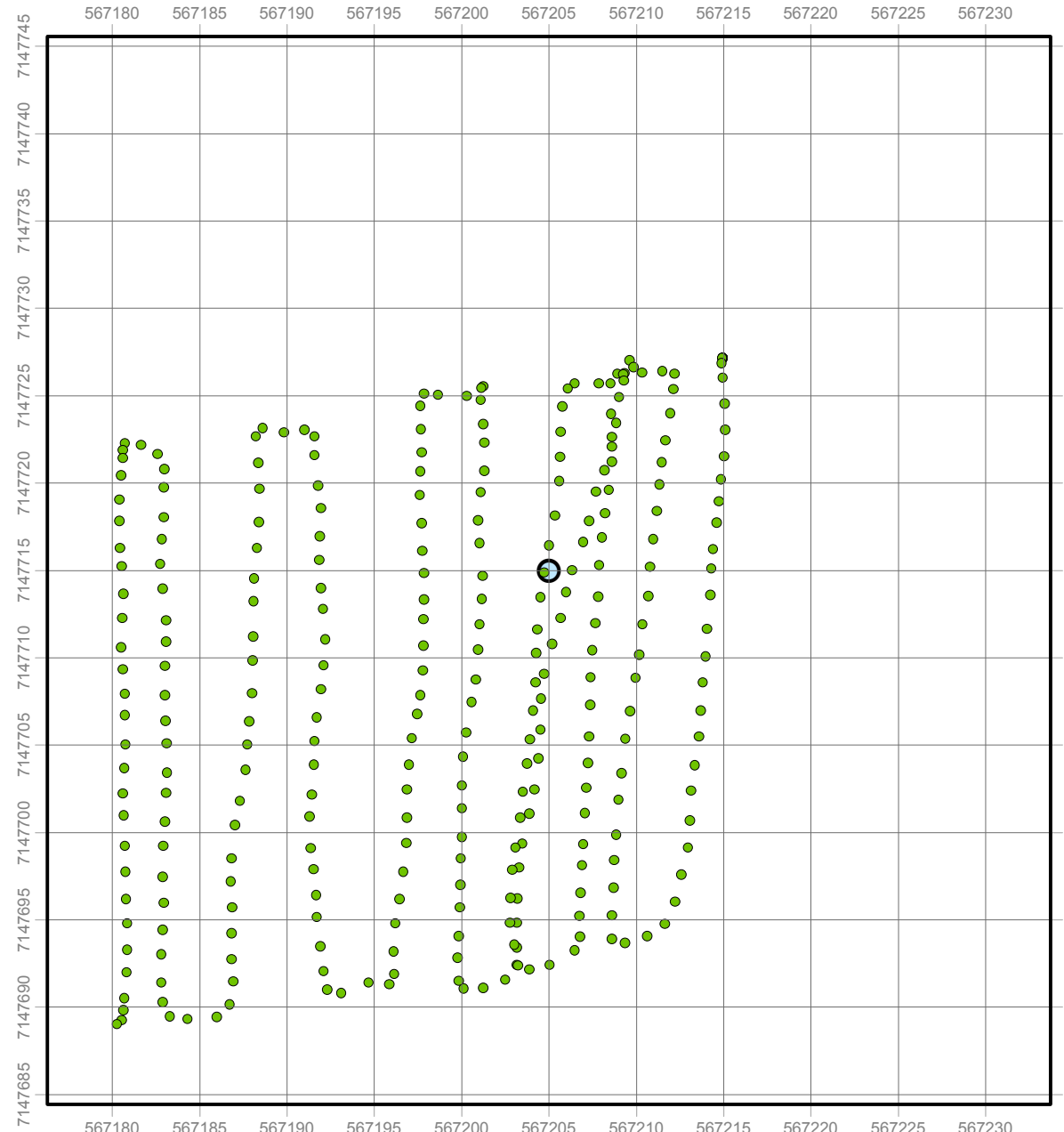
1.0 - 2.5 μSv

> 2.5 μSv



KE 08
Pre Gamma Survey

Point Count: 534
Min-Max: 0.048 - 0.092 μSv



KE 08
Post Gamma Survey

Point Count: 303
Min-Max: 0.054 - 0.103 μSv



Legend

Drill Hole

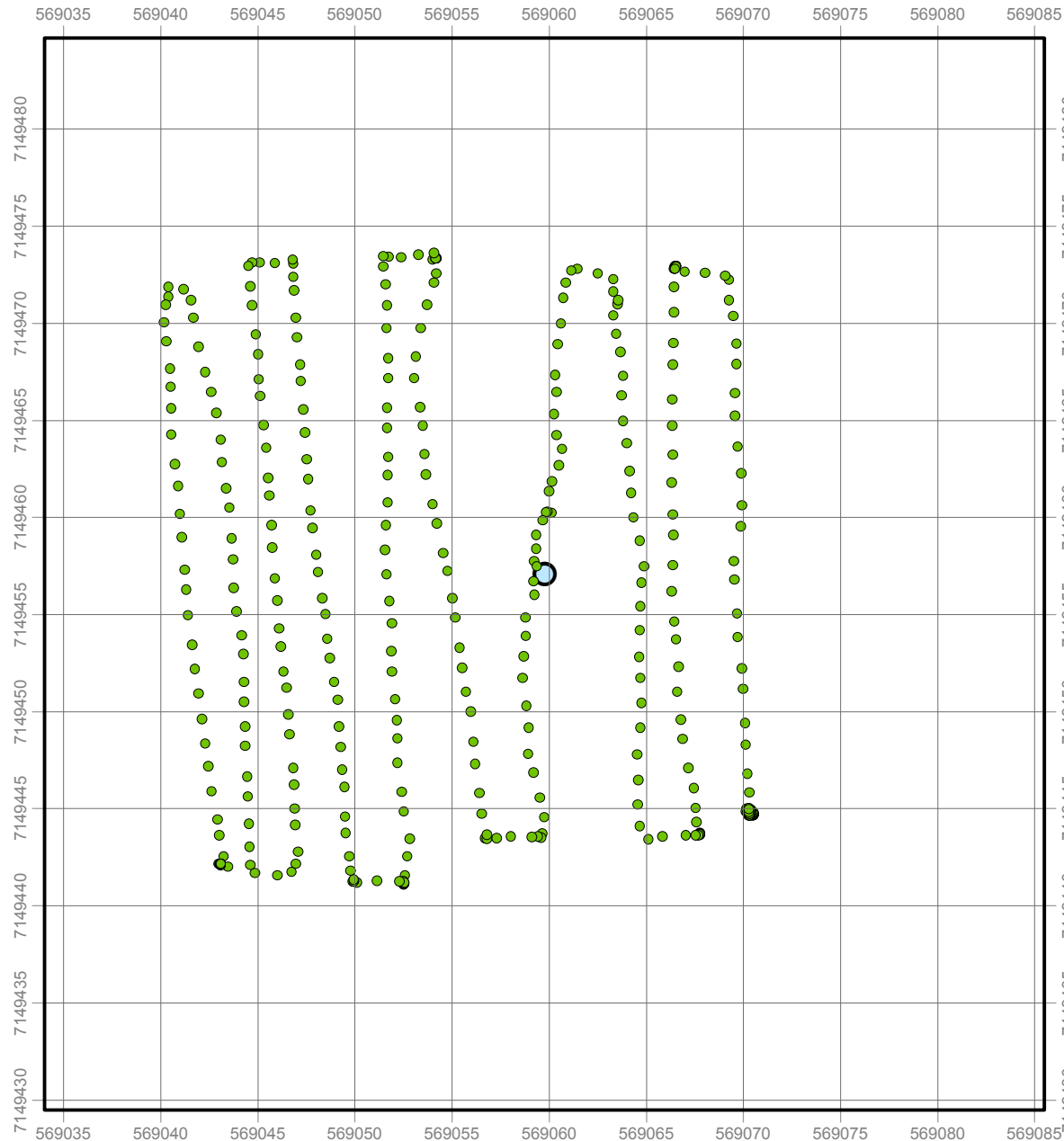
0.0 - 0.3 μSv

0.3 - 0.6 μSv

0.6 - 1.0 μSv

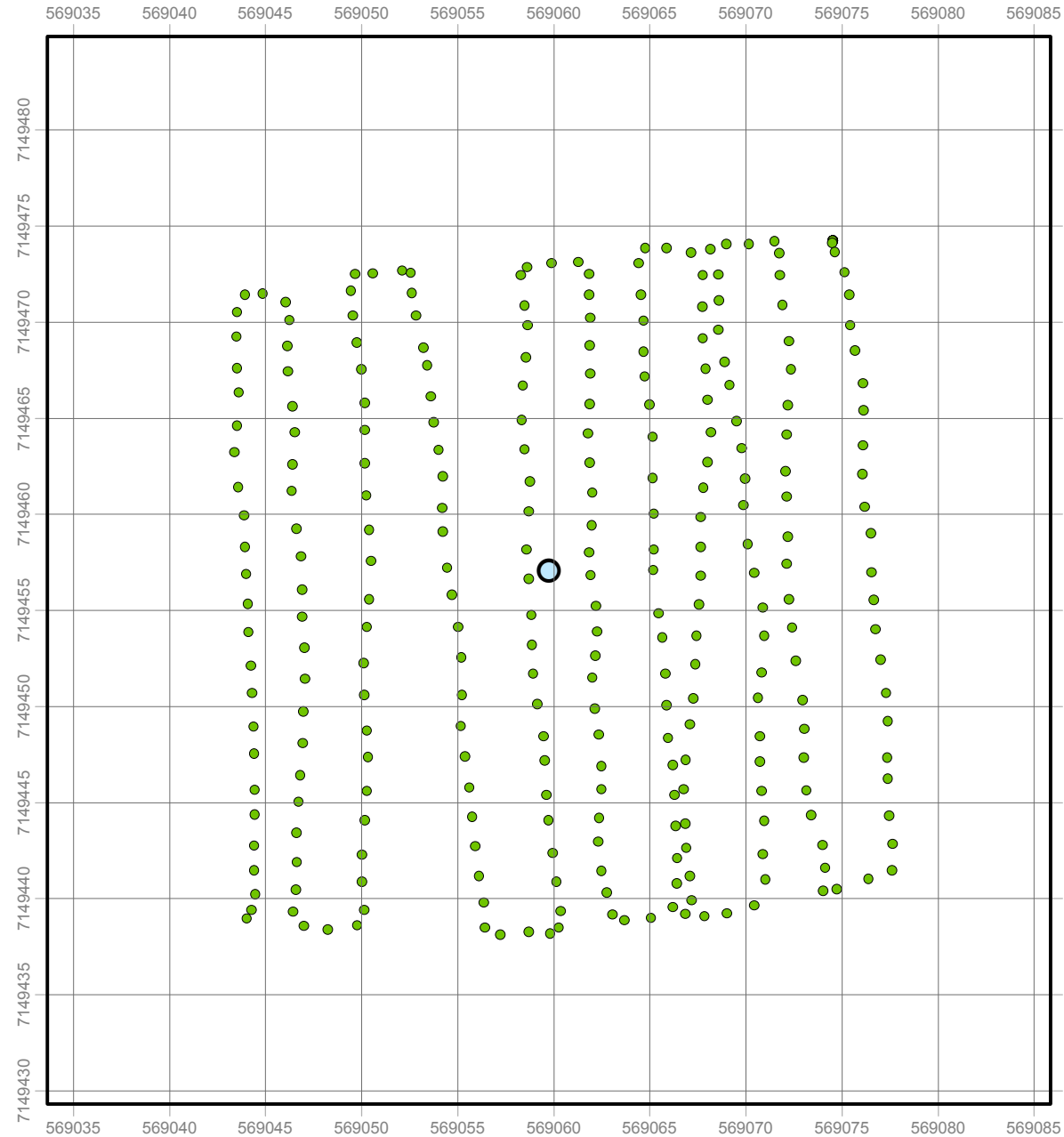
1.0 - 2.5 μSv

> 2.5 μSv



KE 07
Pre Gamma Survey

Point Count: 507
Min-Max: 0.048 - 0.084 μSv



KE 07
Post Gamma Survey

Point Count: 295
Min-Max: 0.059 - 0.087 μSv

Legend

Drill Hole

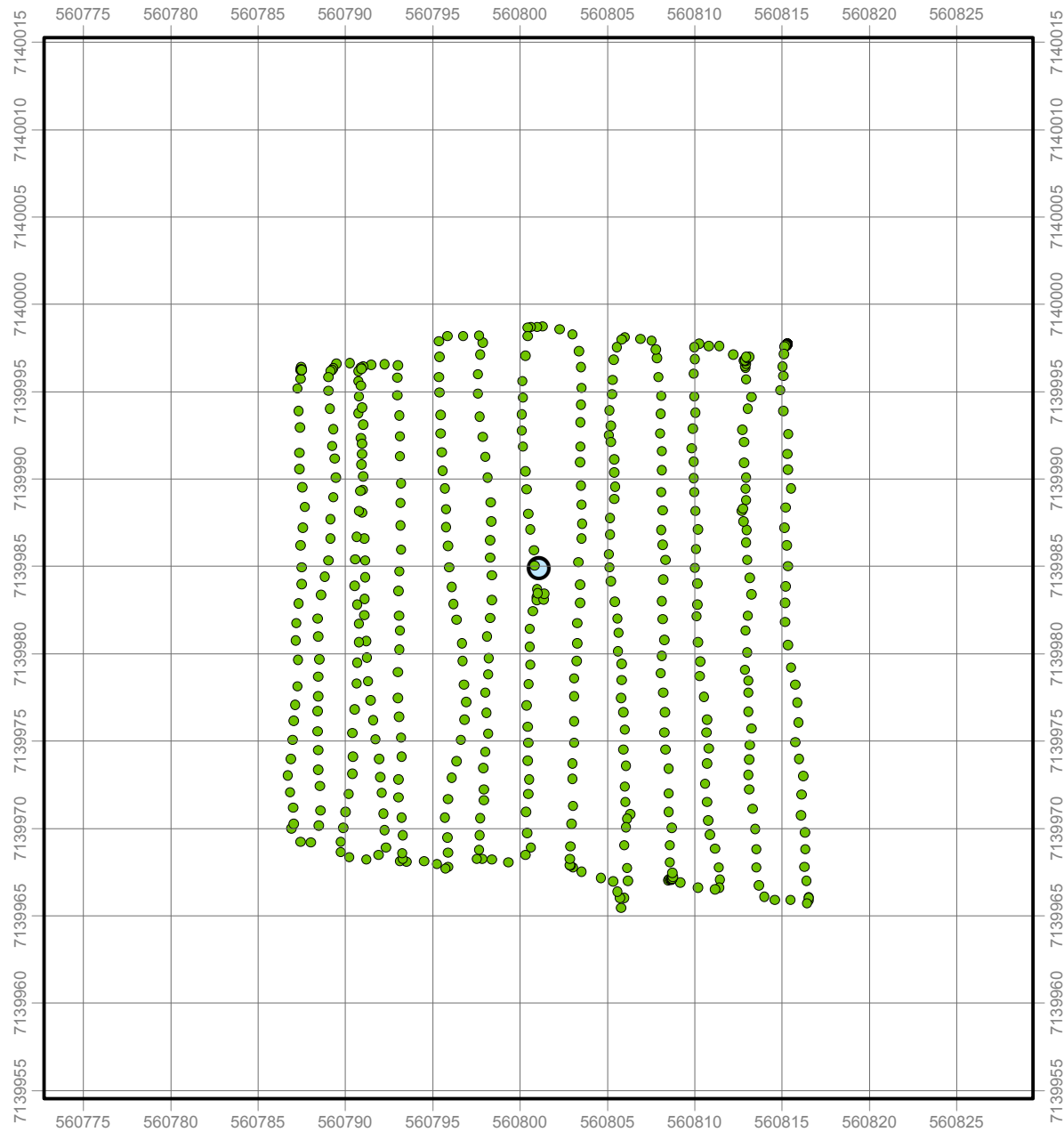
0.0 - 0.3 μSv

0.3 - 0.6 μSv

0.6 - 1.0 μSv

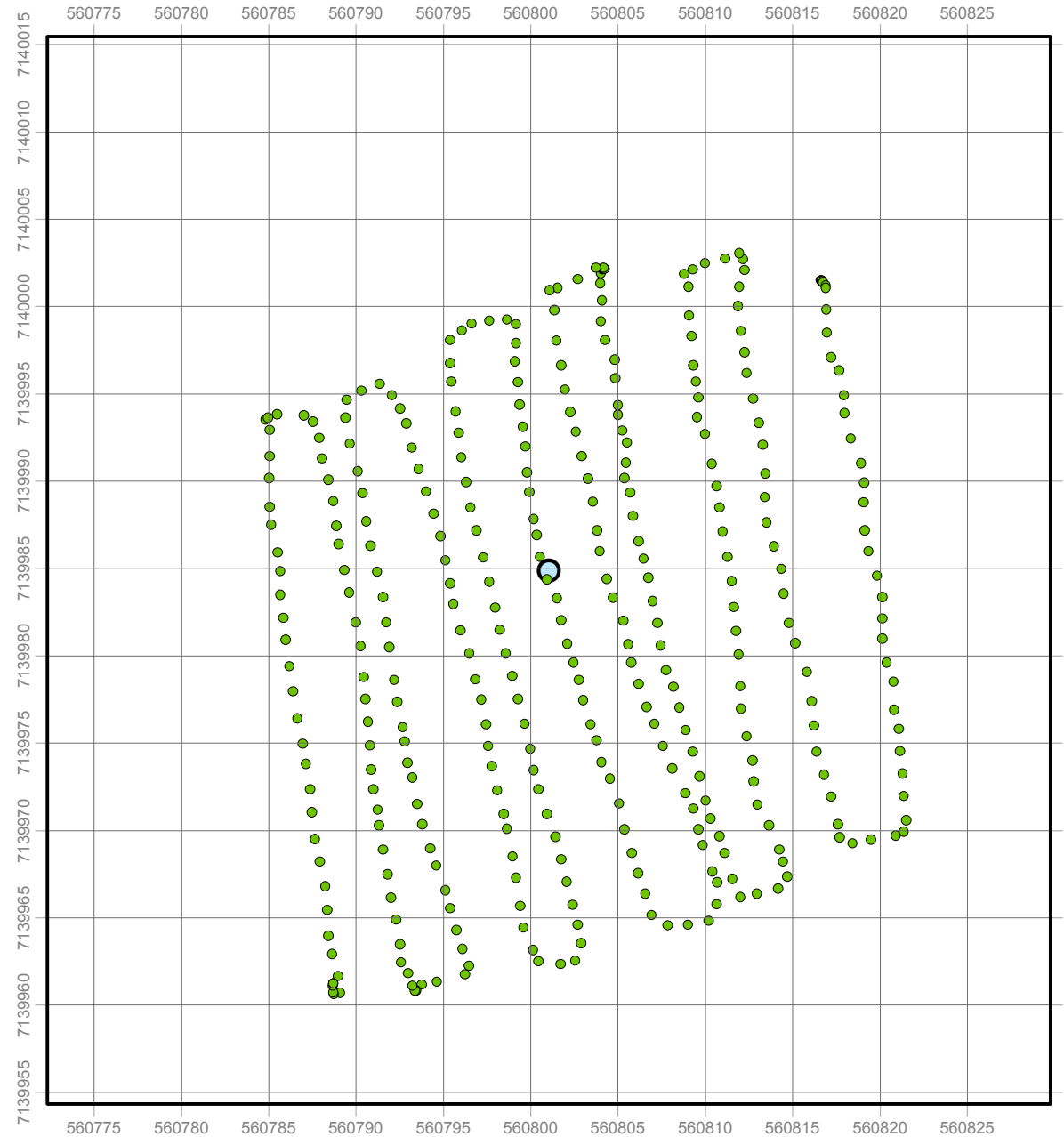
1.0 - 2.5 μSv

> 2.5 μSv



RHL D 05
Pre Gamma Survey







Point Count: 520
Min-Max: 0.038 - 0.066 μSv

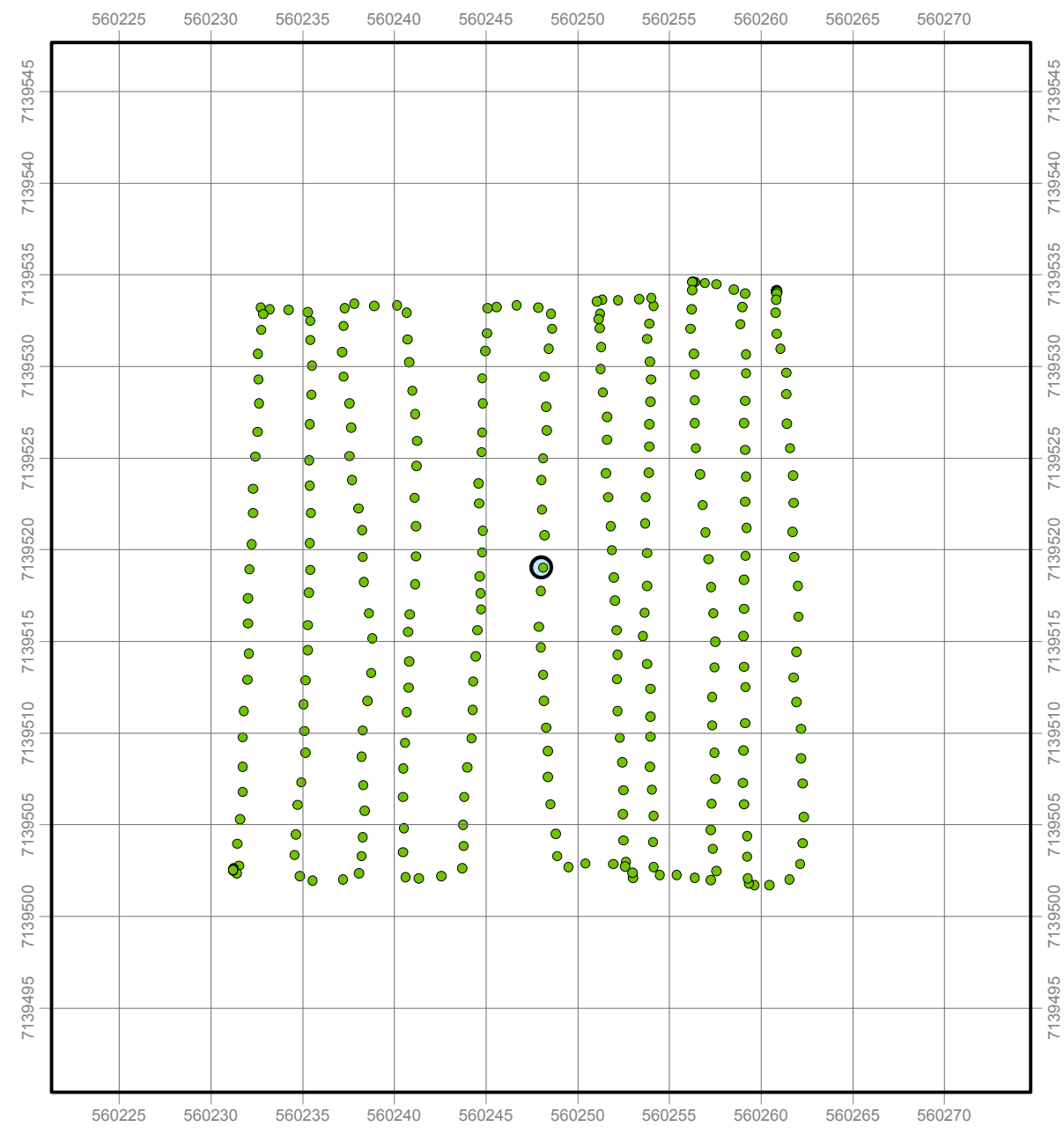


RHL D 05
Post Gamma Survey

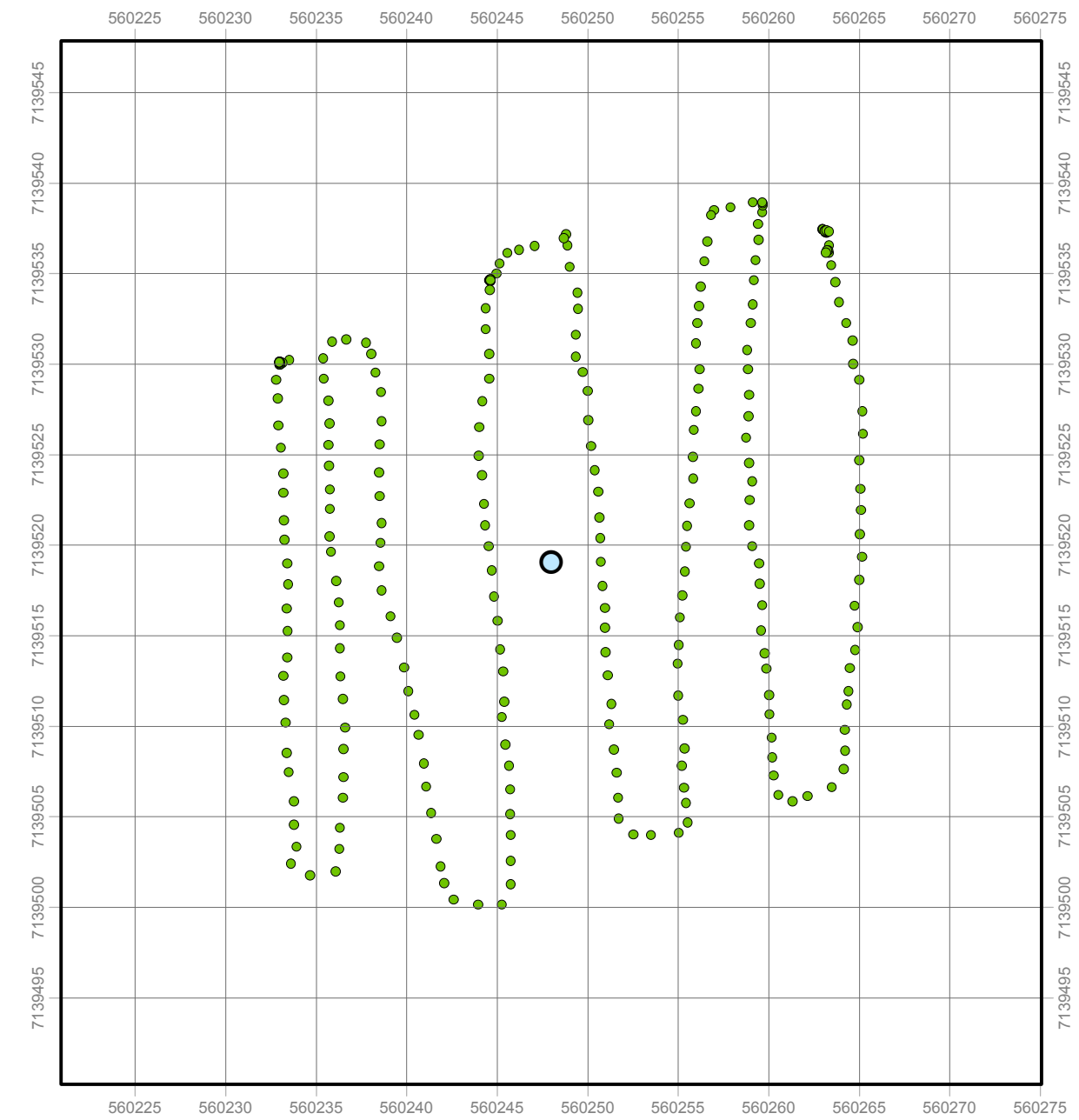
Point Count: 366
Min-Max: 0.042 - 0.075 μSv

Legend

-  Drill Hole
-  0.0 - 0.3 µSv
-  0.3 - 0.6 µSv
-  0.6 - 1.0 µSv
-  1.0 - 2.5 µSv
-  > 2.5 µSv



RHLD 06
Pre Gamma Survey
 Point Count: 429
 Min-Max: 0.041 - 0.076 µSv



RHLD 06
Post Gamma Survey
 Point Count: 280
 Min-Max: 0.040 - 0.075 µSv

Legend

Drill Hole

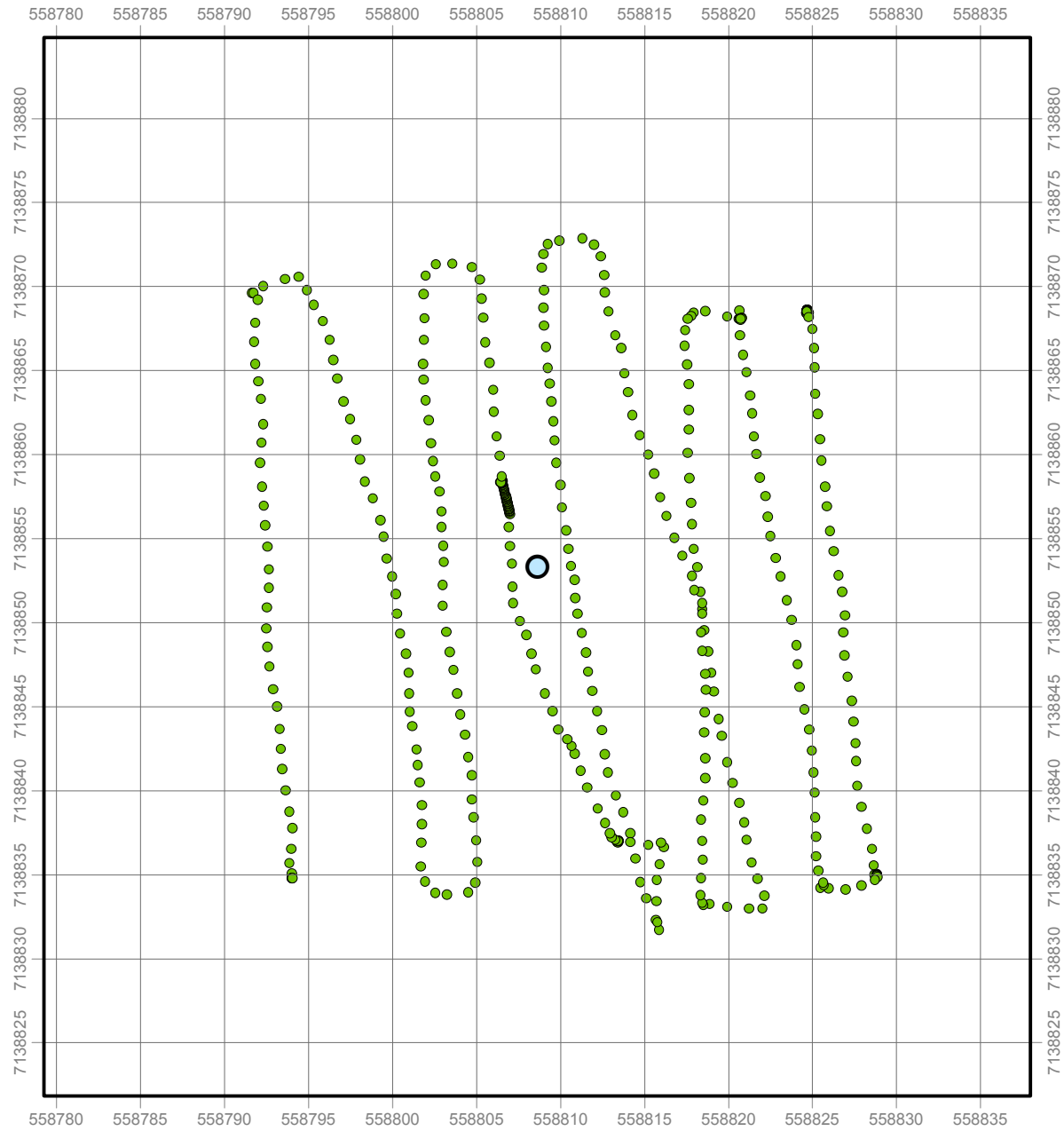
0.0 - 0.3 μ Sv

0.3 - 0.6 μ Sv

0.6 - 1.0 μ Sv

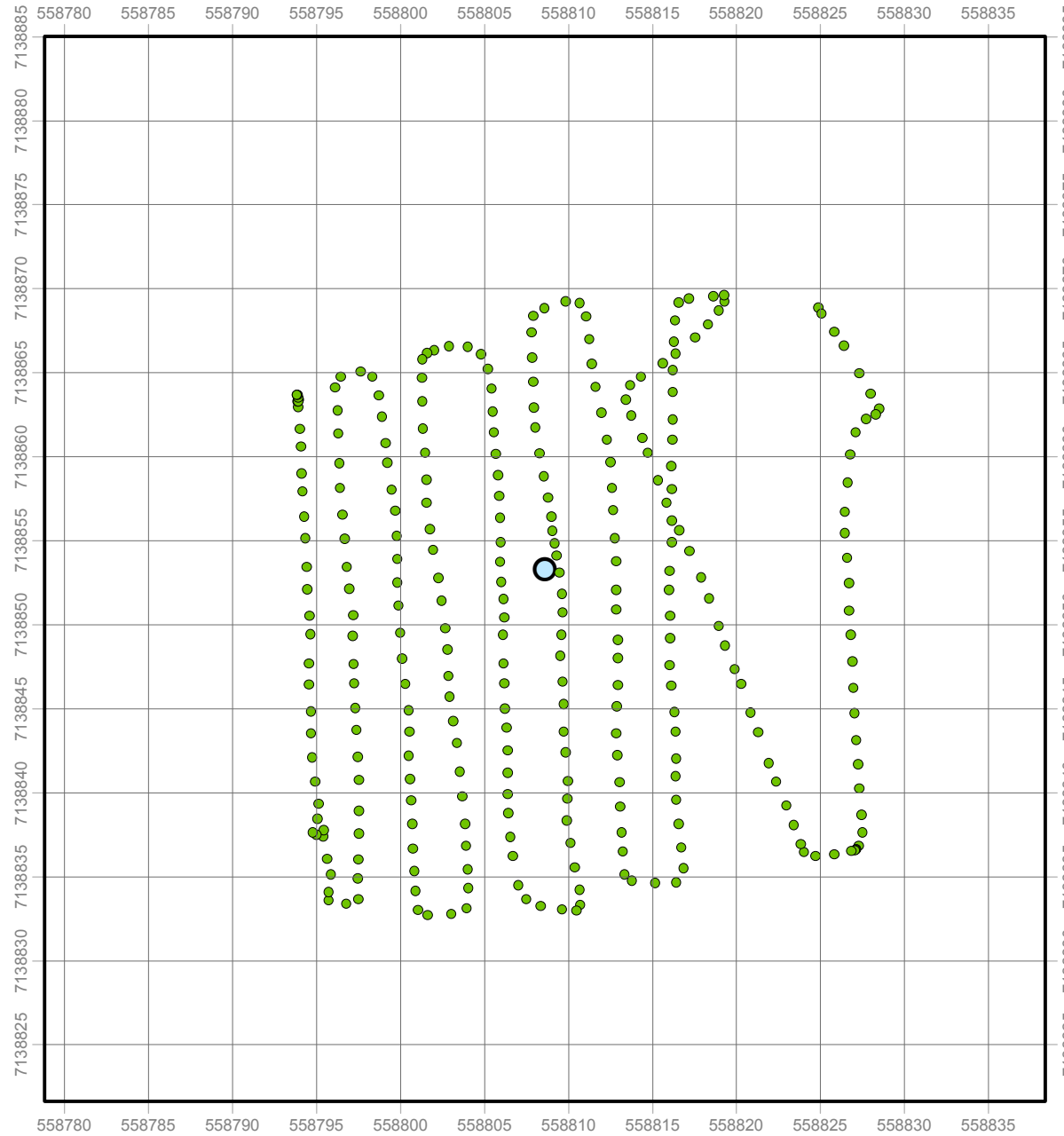
1.0 - 2.5 μ Sv

> 2.5 μ Sv



RHL D 07
Pre Gamma Survey

Point Count: 441
Min-Max: 0.050 - 0.088 μ Sv

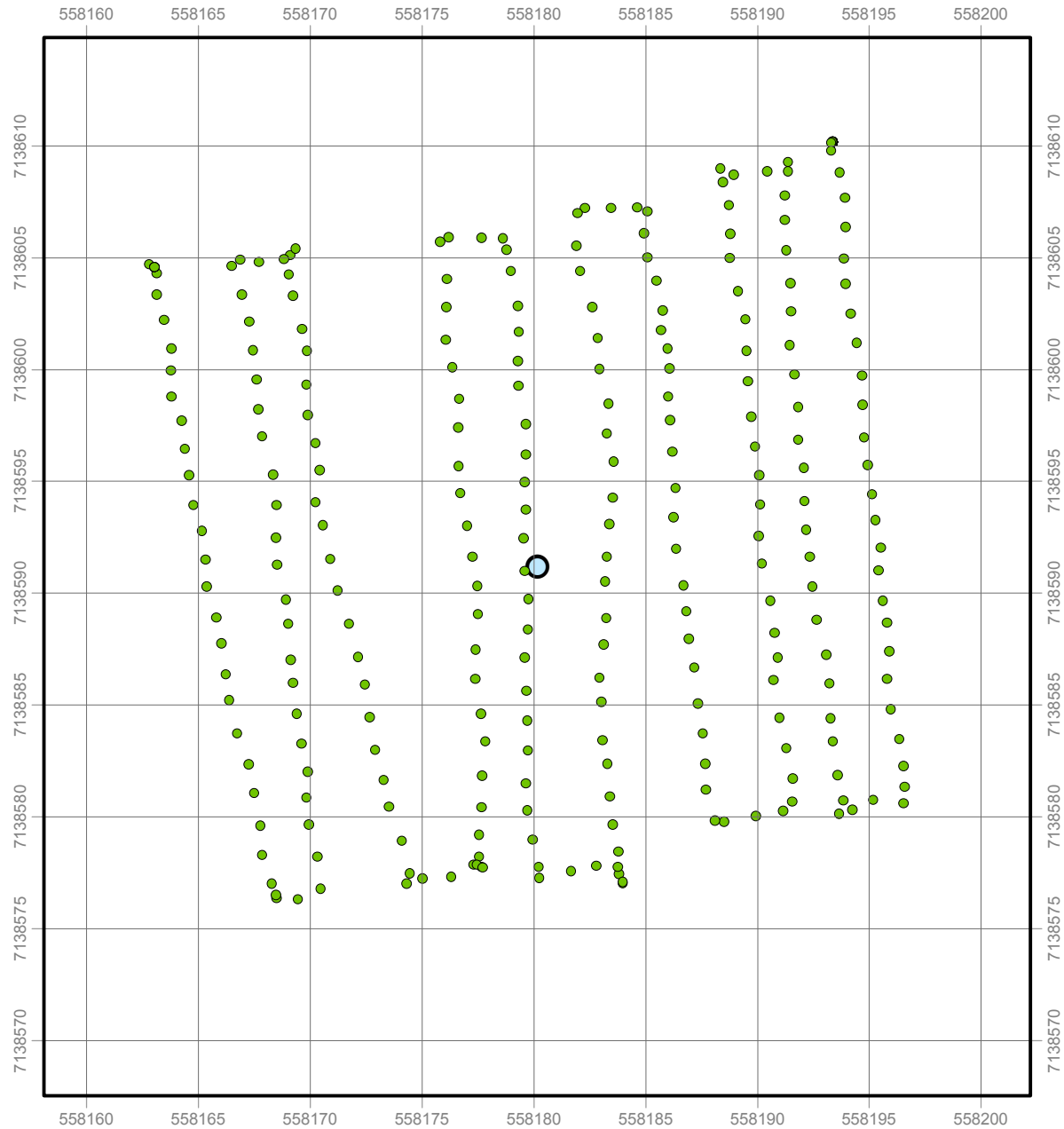


RHL D 07
Post Gamma Survey

Point Count: 295
Min-Max: 0.048 - 0.081 μ Sv

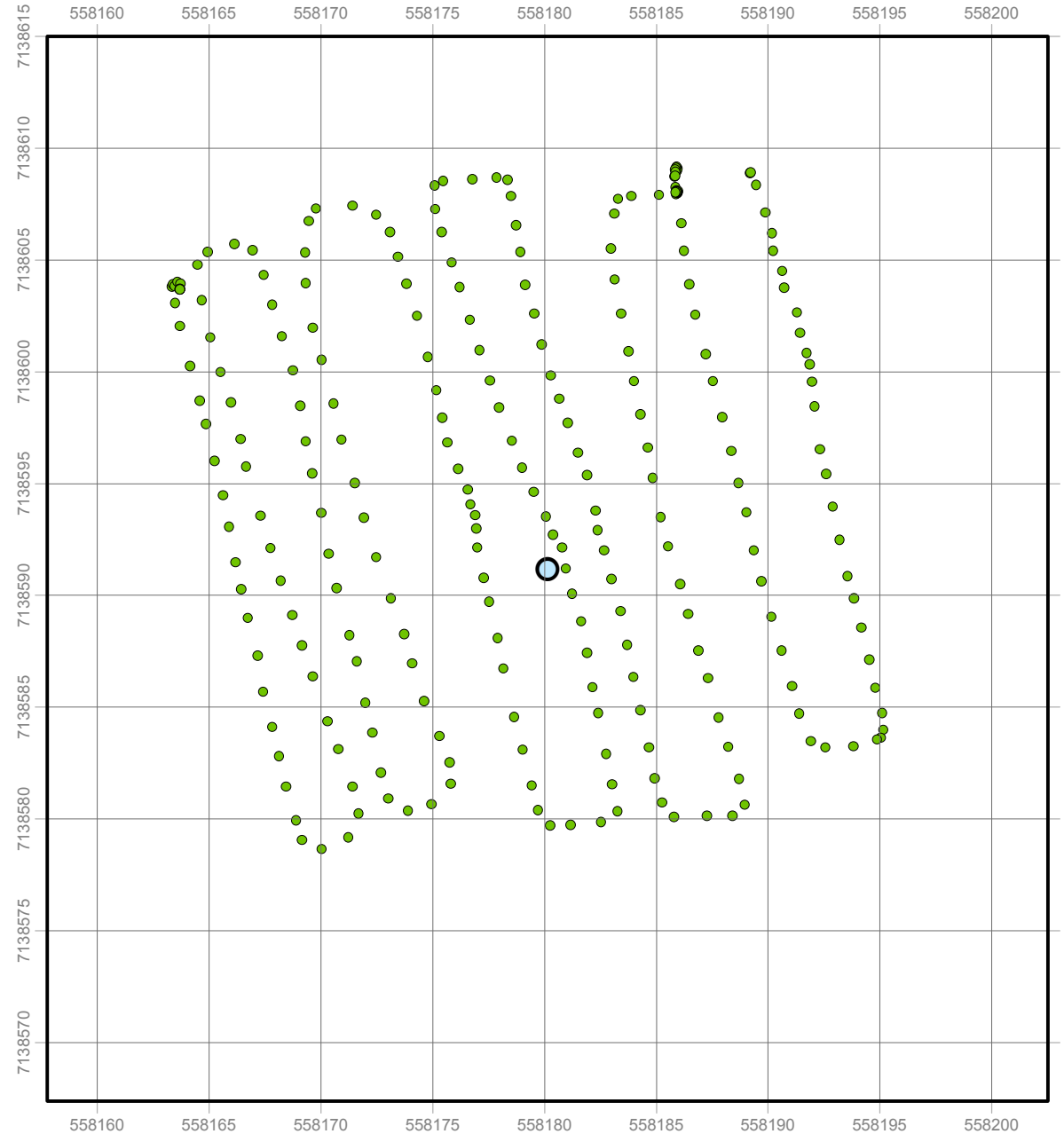
Legend

- Drill Hole
- 0.0 - 0.3 μSv
- 0.3 - 0.6 μSv
- 0.6 - 1.0 μSv
- 1.0 - 2.5 μSv
- > 2.5 μSv



RHLD 08
Pre Gamma Survey

Point Count: 326
Min-Max: 0.040 - 0.102 μSv



RHLD 08
Post Gamma Survey

Point Count: 261
Min-Max: 0.041 - 0.080 μSv

Legend

Drill Hole

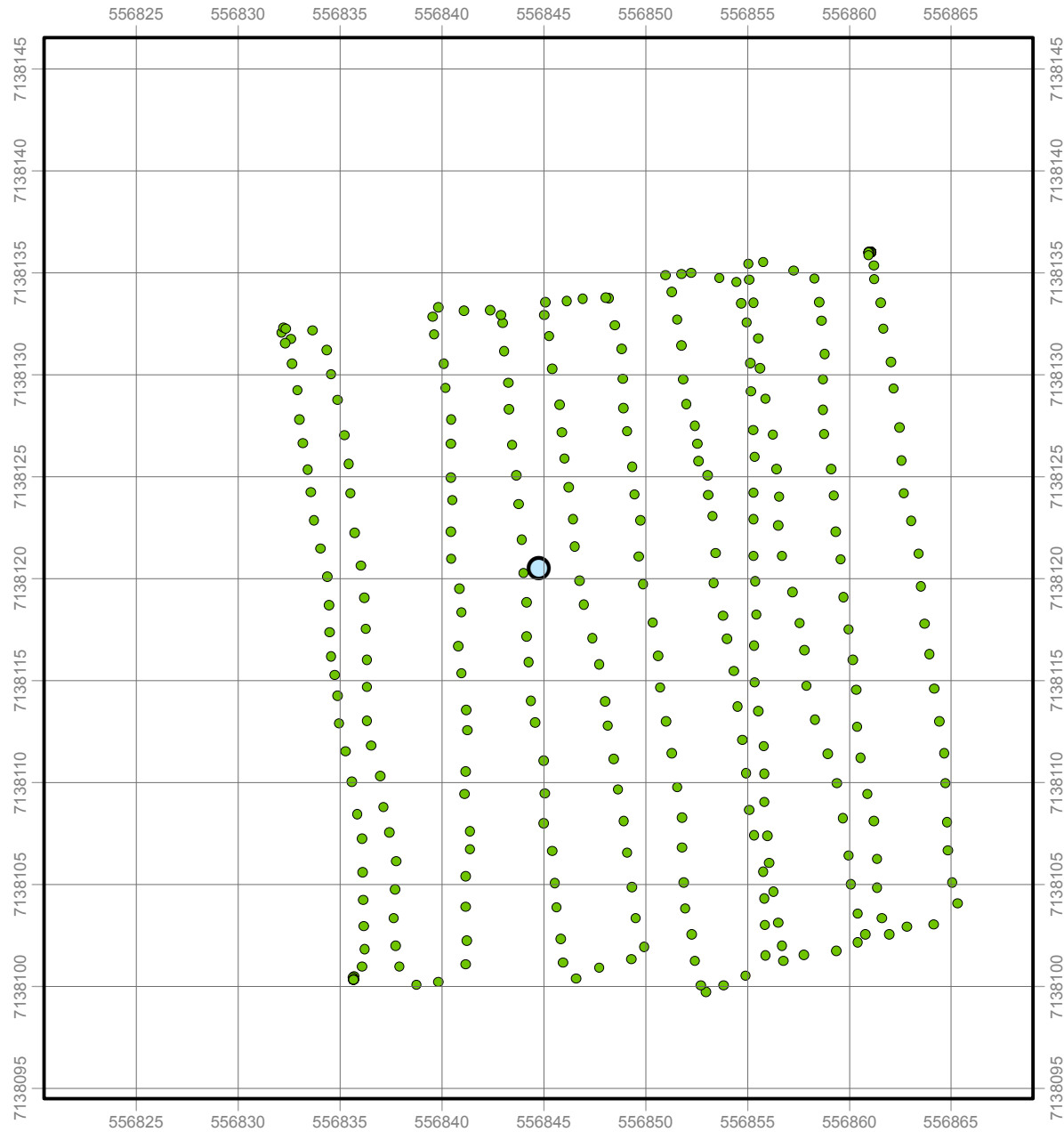
0.0 - 0.3 μSv

0.3 - 0.6 μSv

0.6 - 1.0 μSv

1.0 - 2.5 μSv

> 2.5 μSv

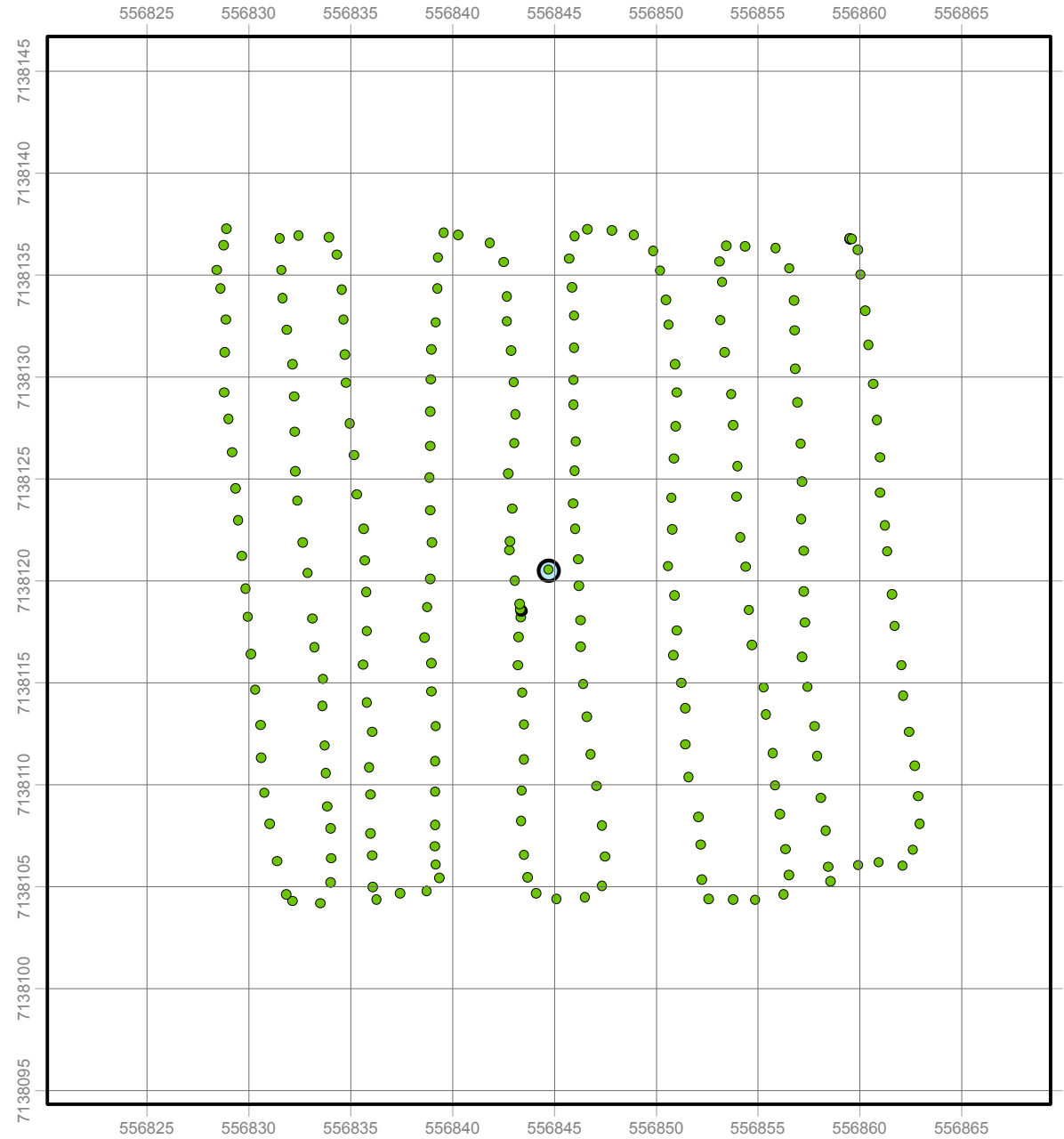


SLEK 17

Pre Gamma Survey

Point Count: 324

Min-Max: 0.048 - 0.080 μSv









SLEK 17

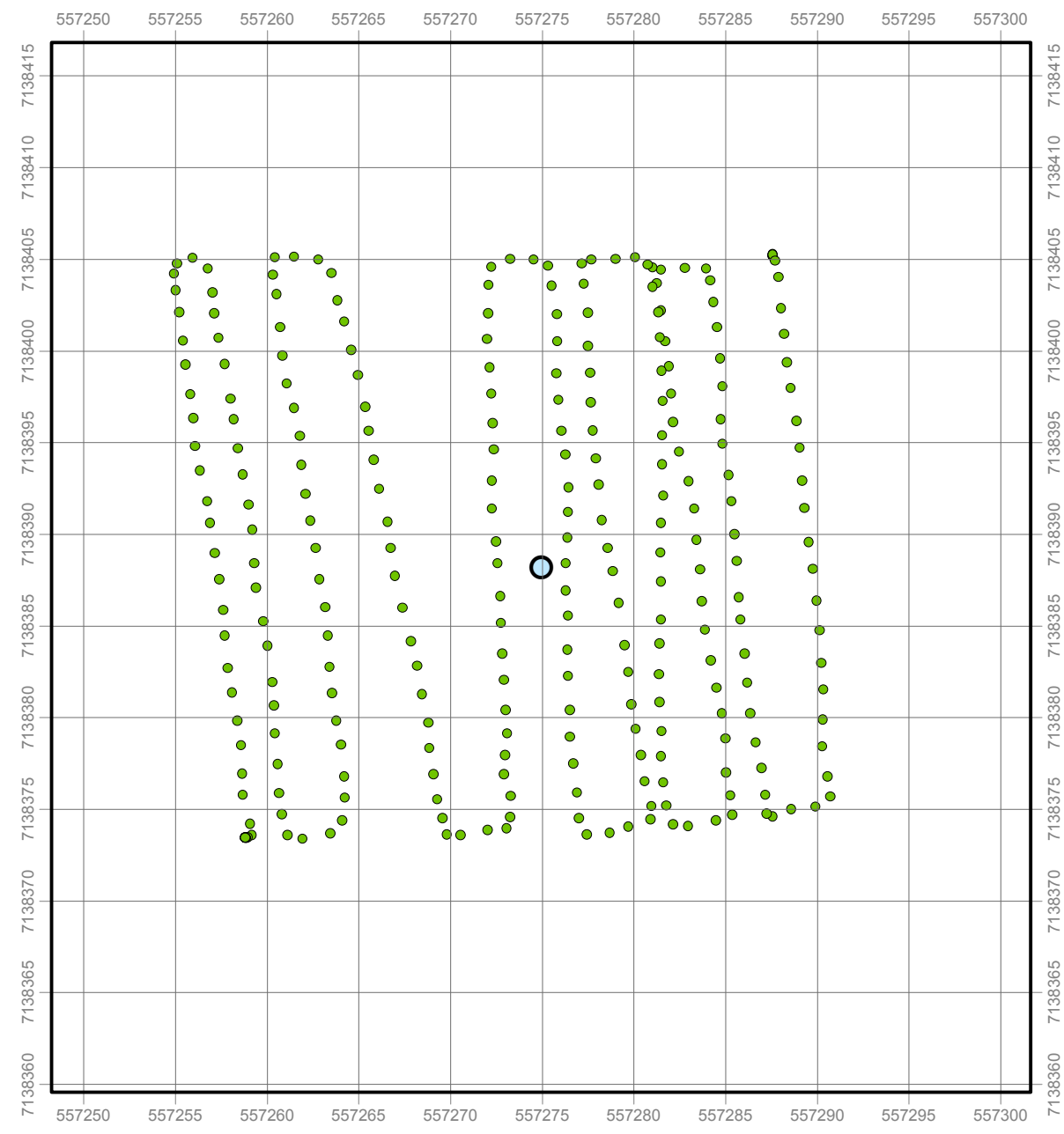
Post Gamma Survey

Point Count: 259

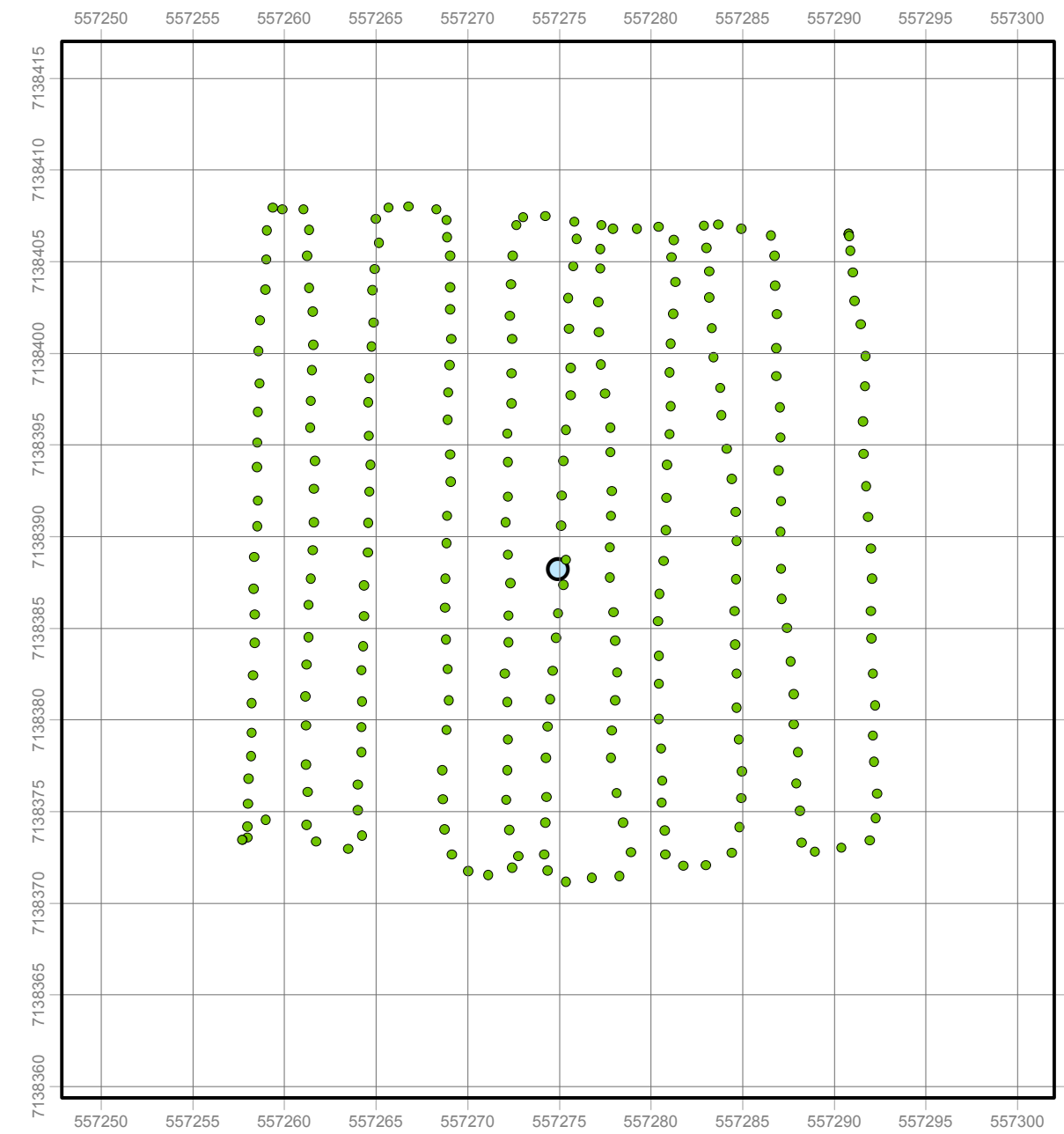
Min-Max: 0.047 - 0.086 μSv

Legend

-  Drill Hole
-  0.0 - 0.3 μSv
-  0.3 - 0.6 μSv
-  0.6 - 1.0 μSv
-  1.0 - 2.5 μSv
-  > 2.5 μSv



SLEK 18
Pre Gamma Survey
 Point Count: 284
 Min-Max: 0.030 - 0.056 μSv



SLEK 18
Post Gamma Survey
 Point Count: 276
 Min-Max: 0.031 - 0.060 μSv

Legend

Drill Hole

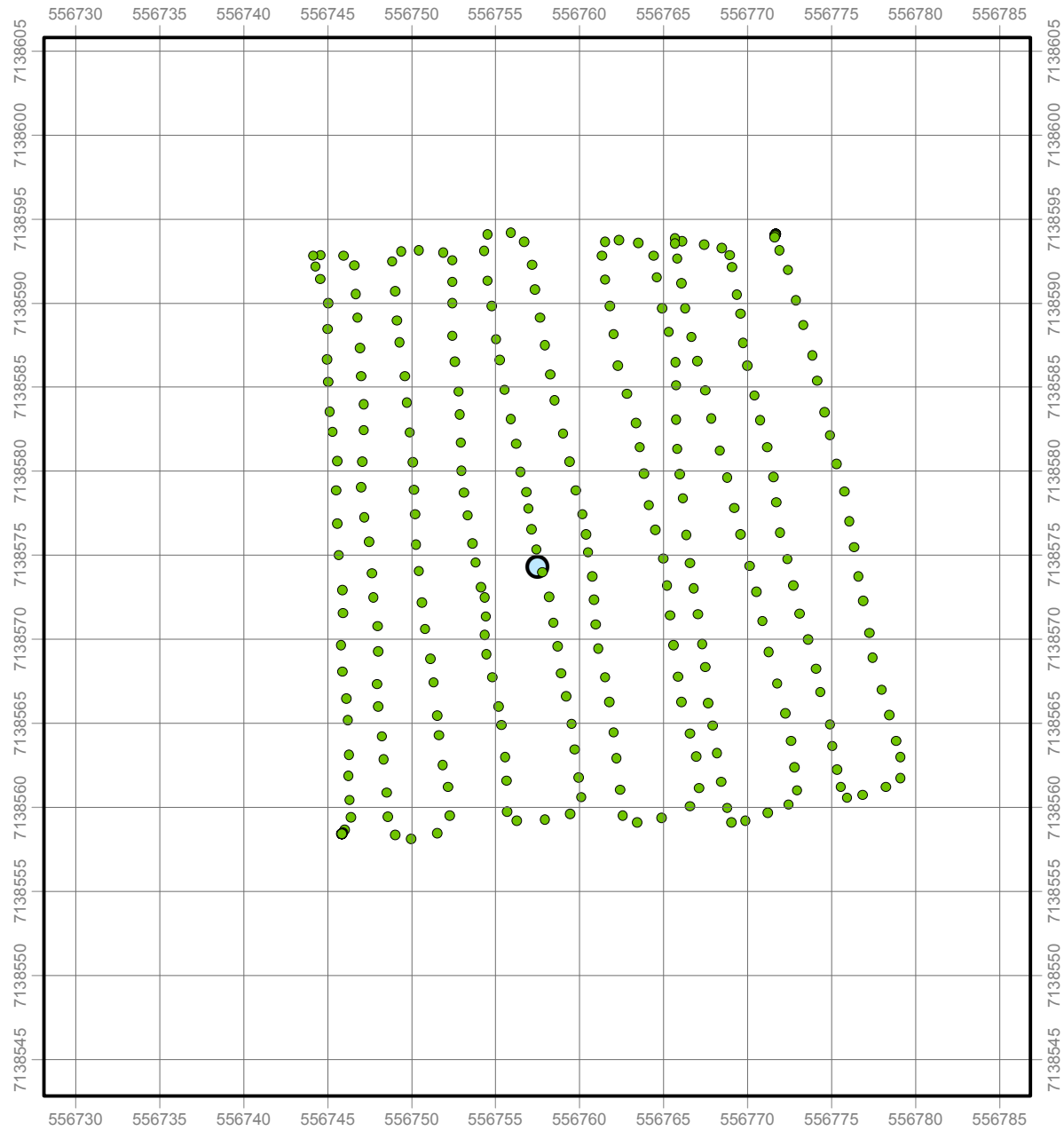
0.0 - 0.3 μ Sv

0.3 - 0.6 μ Sv

0.6 - 1.0 μ Sv

1.0 - 2.5 μ Sv

> 2.5 μ Sv

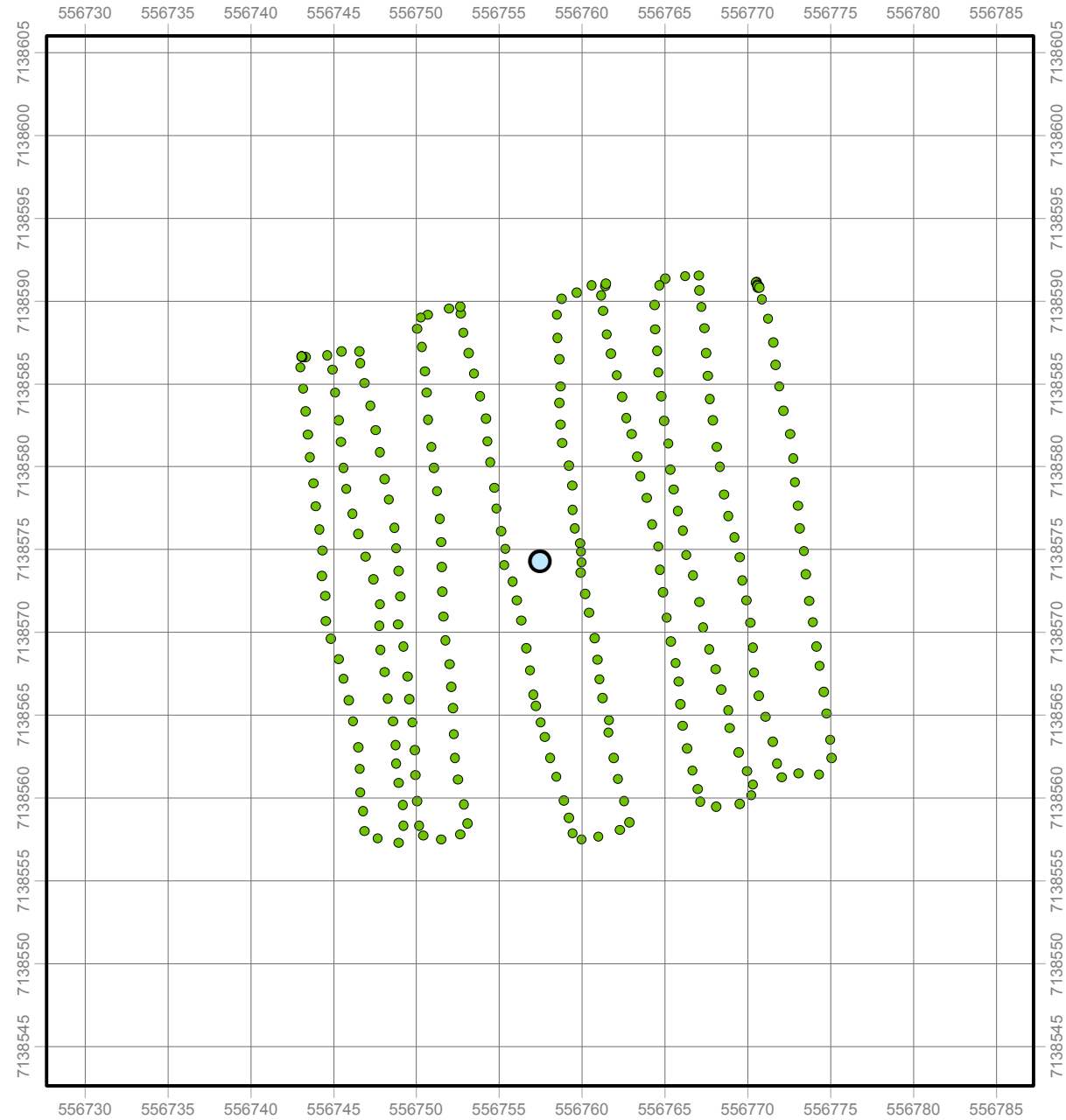


SLEK 19

Pre Gamma Survey

Point Count: 315

Min-Max: 0.051 - 0.083 μ Sv



SLEK 19

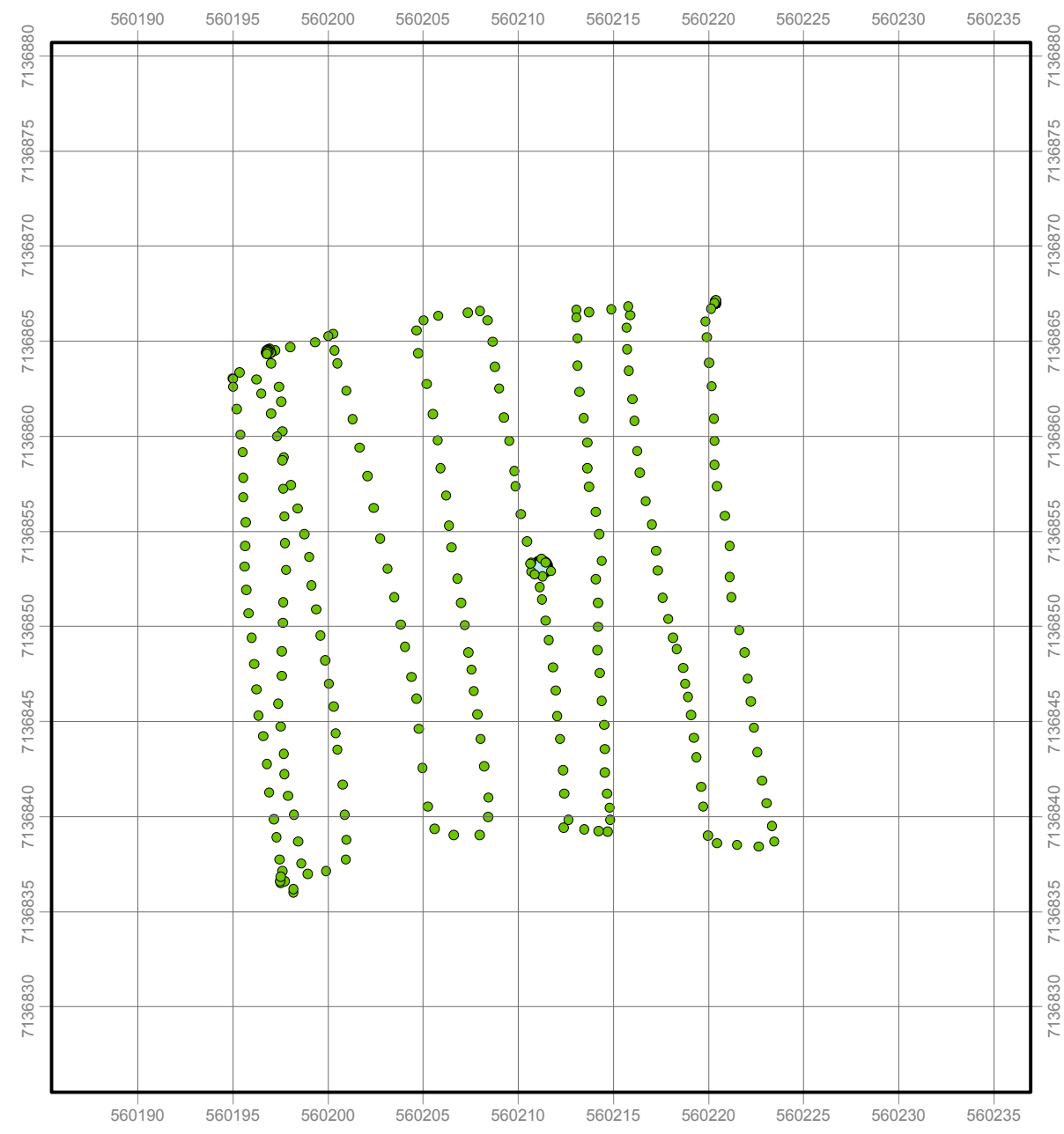
Post Gamma Survey

Point Count: 276

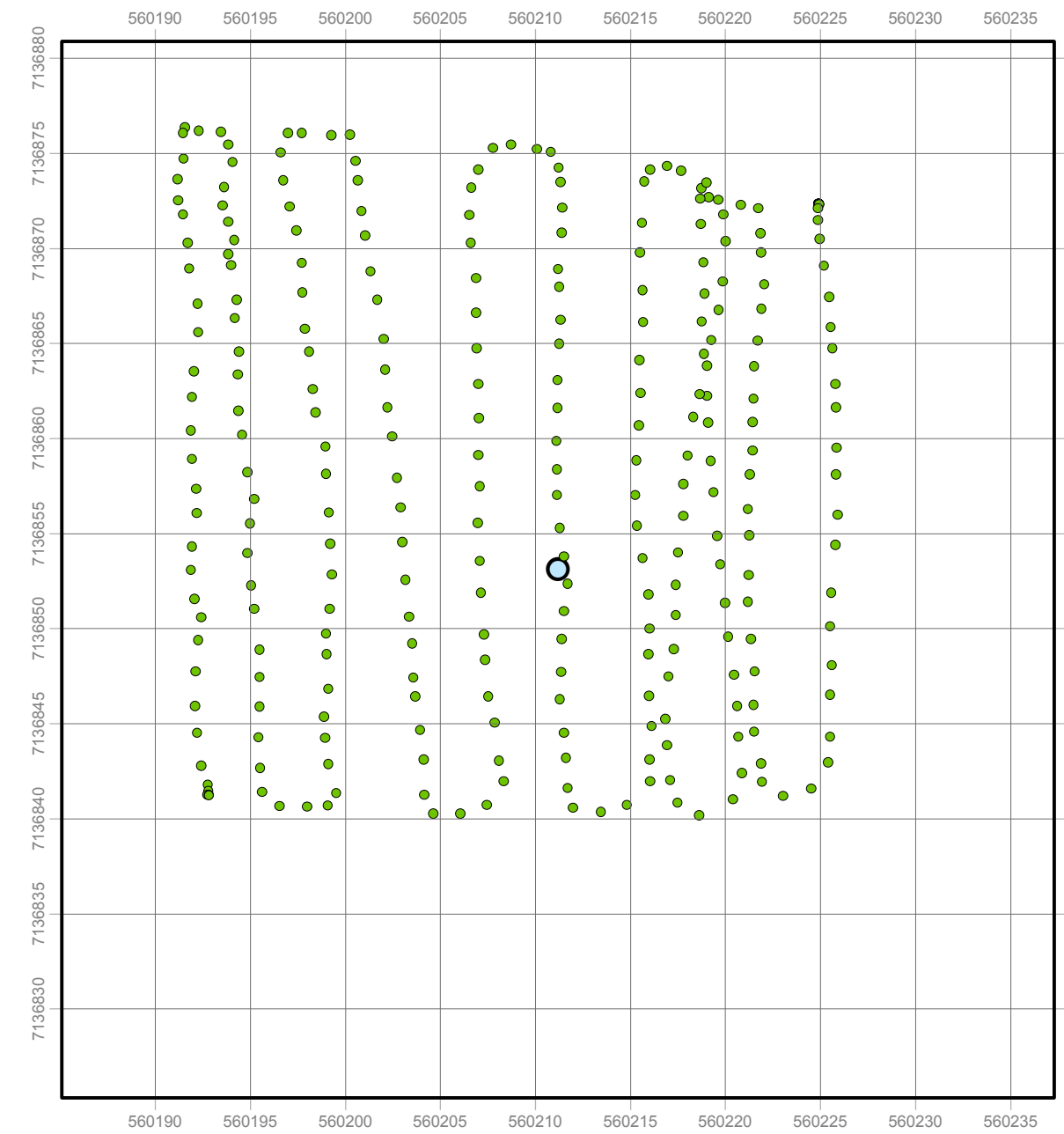
Min-Max: 0.053 - 0.087 μ Sv

Legend

- Drill Hole
- 0.0 - 0.3 μSv
- 0.3 - 0.6 μSv
- 0.6 - 1.0 μSv
- 1.0 - 2.5 μSv
- > 2.5 μSv



IW 01
Pre Gamma Survey
 Point Count: 409
 Min-Max: 0.053 - 0.092 μSv



IW 01
Post Gamma Survey
 Point Count: 282
 Min-Max: 0.045 - 0.096 μSv



Legend

Drill Hole

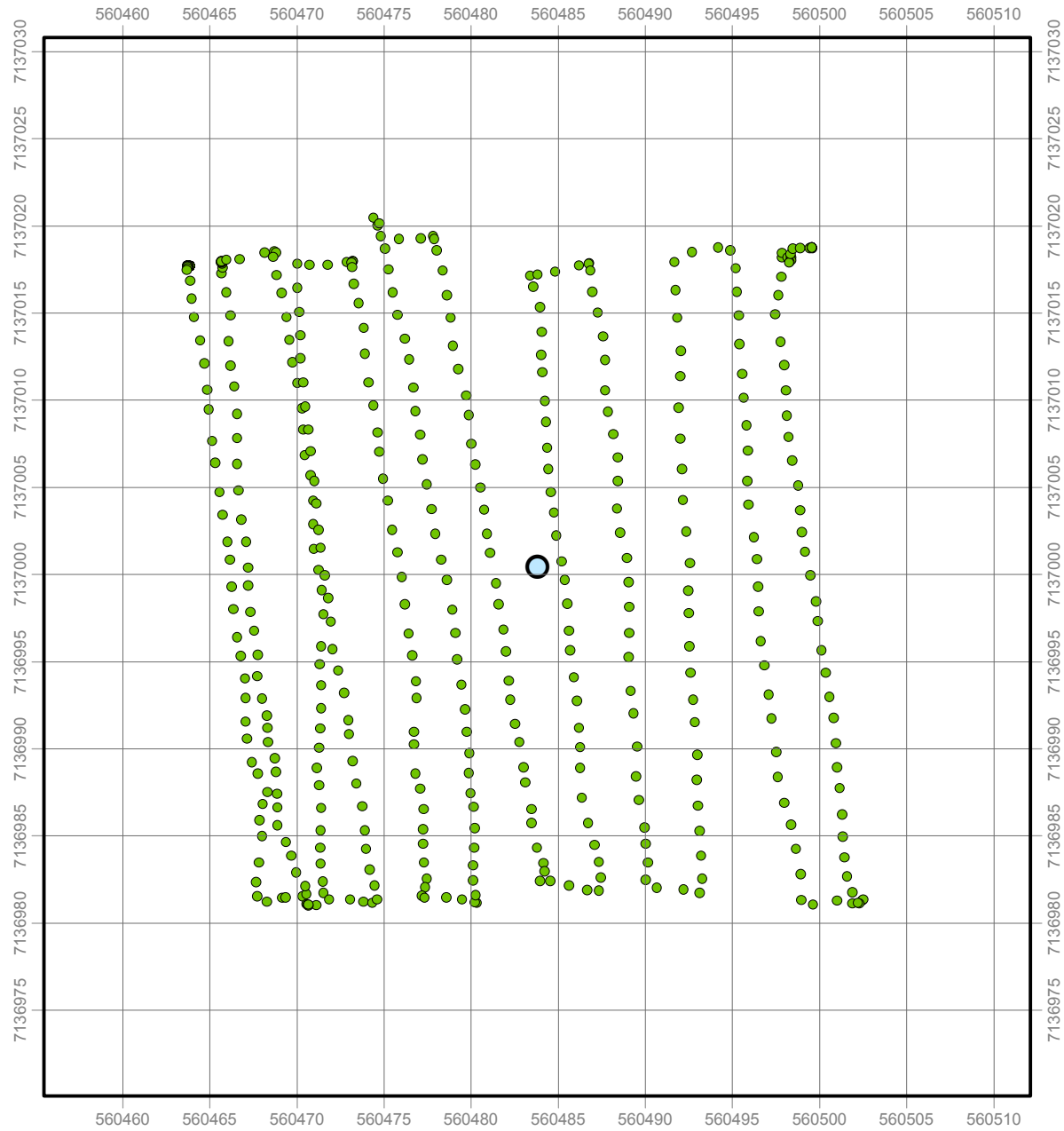
0.0 - 0.3 μSv

0.3 - 0.6 μSv

0.6 - 1.0 μSv

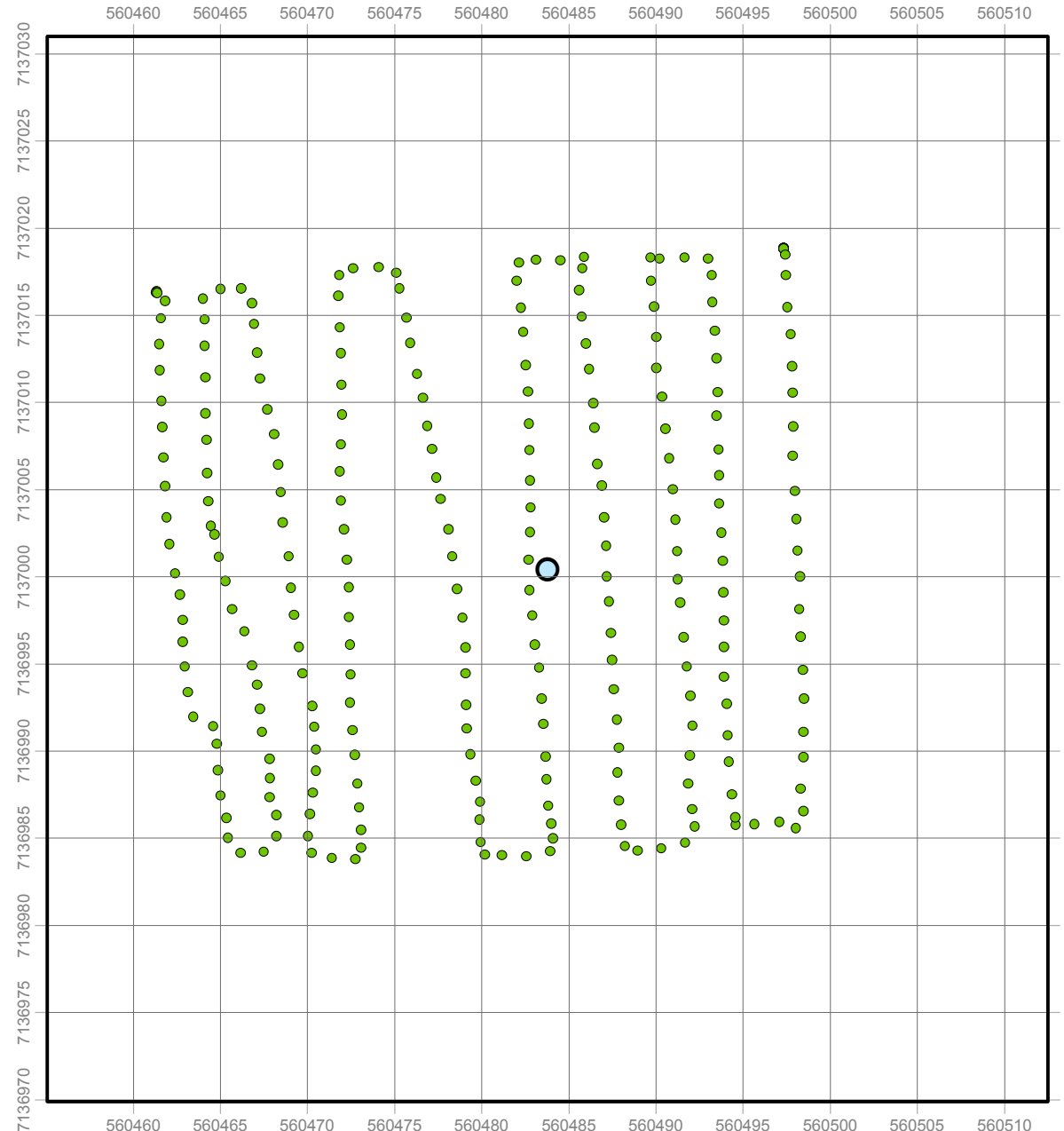
1.0 - 2.5 μSv

> 2.5 μSv



IW 02
Pre Gamma Survey

Point Count: 534
Min-Max: 0.048 - 0.078 μSv



IW 02
Post Gamma Survey

Point Count: 254
Min-Max: 0.053 - 0.090 μSv

Legend

Drill Hole

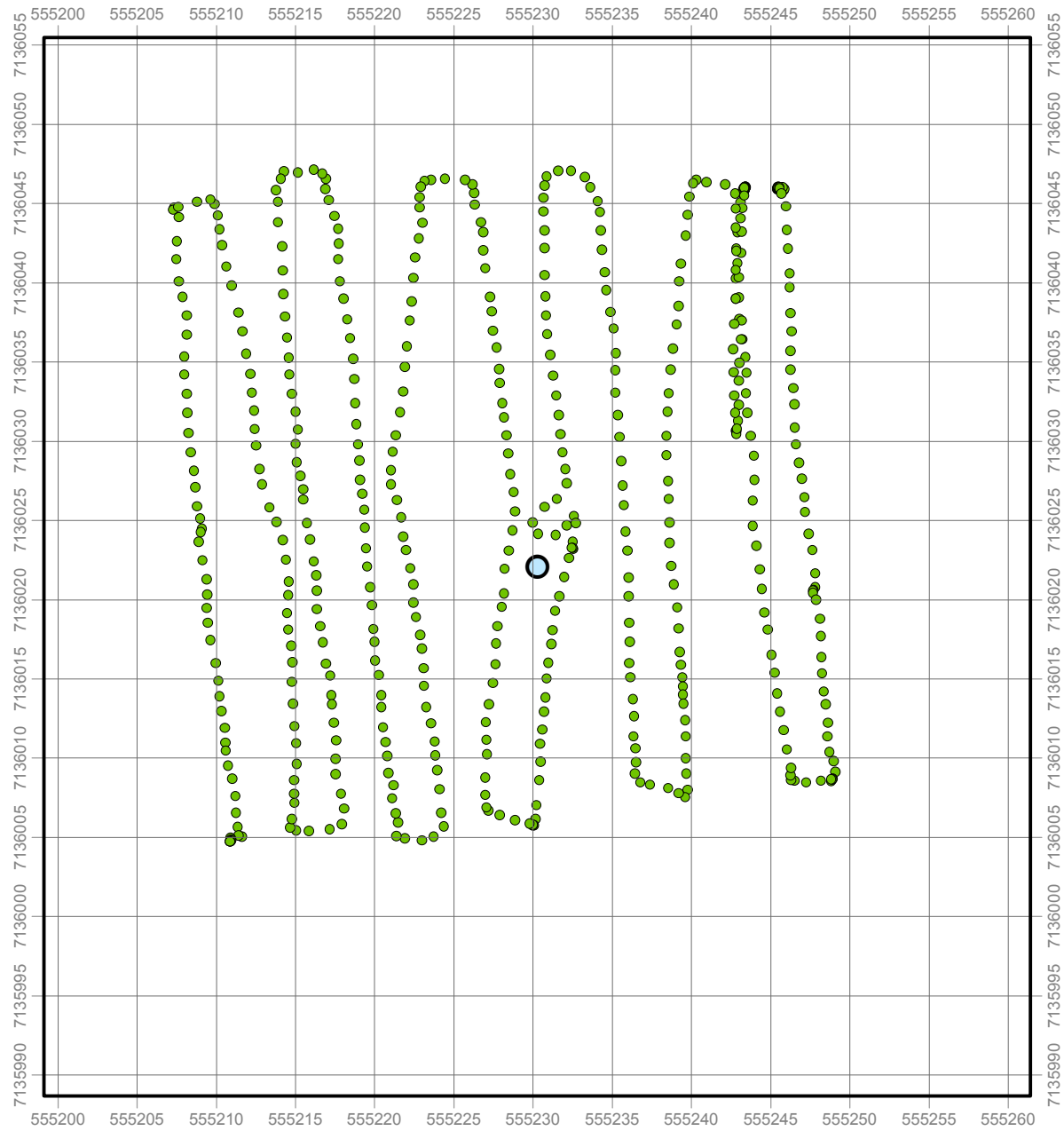
0.0 - 0.3 μSv

0.3 - 0.6 μSv

0.6 - 1.0 μSv

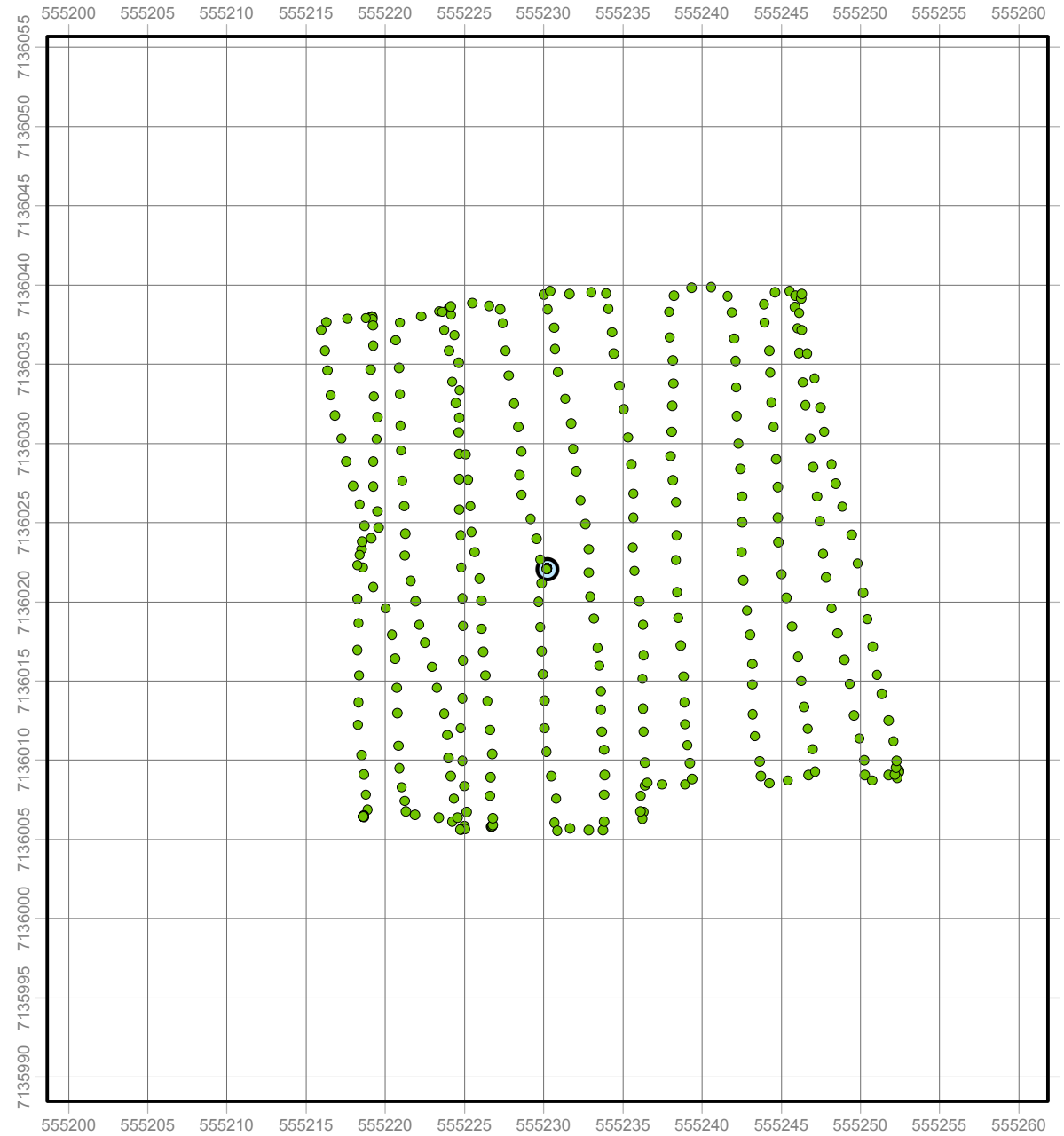
1.0 - 2.5 μSv

> 2.5 μSv



EE 01 and EE 01A
Pre Gamma Survey

Point Count: 573
Min-Max: 0.048 - 0.090 μSv



EE 01 and EE 01A
Post Gamma Survey

Point Count: 387
Min-Max: 0.053 - 0.087 μSv

Legend

Drill Hole

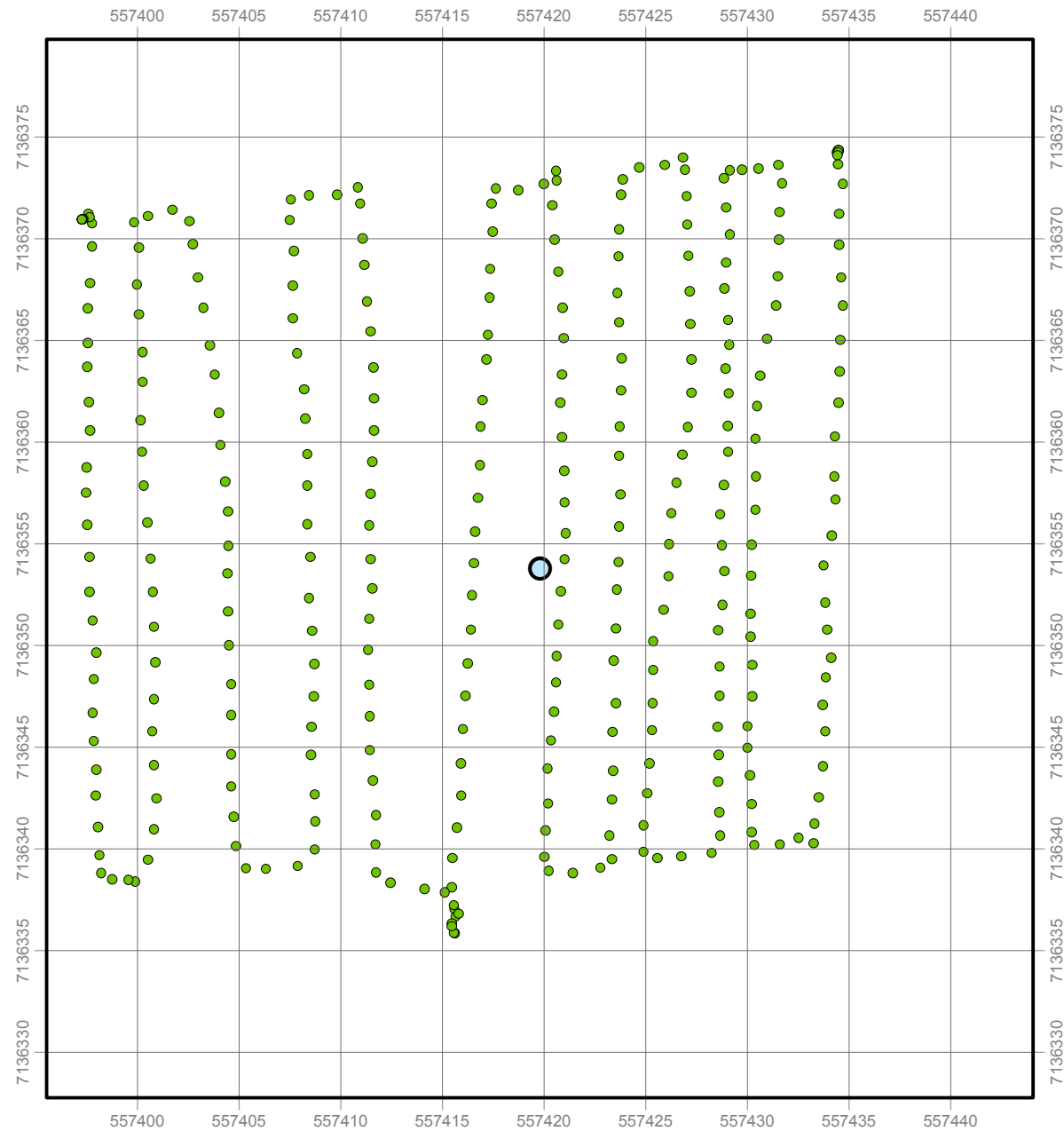
0.0 - 0.3 μSv

0.3 - 0.6 μSv

0.6 - 1.0 μSv

1.0 - 2.5 μSv

> 2.5 μSv

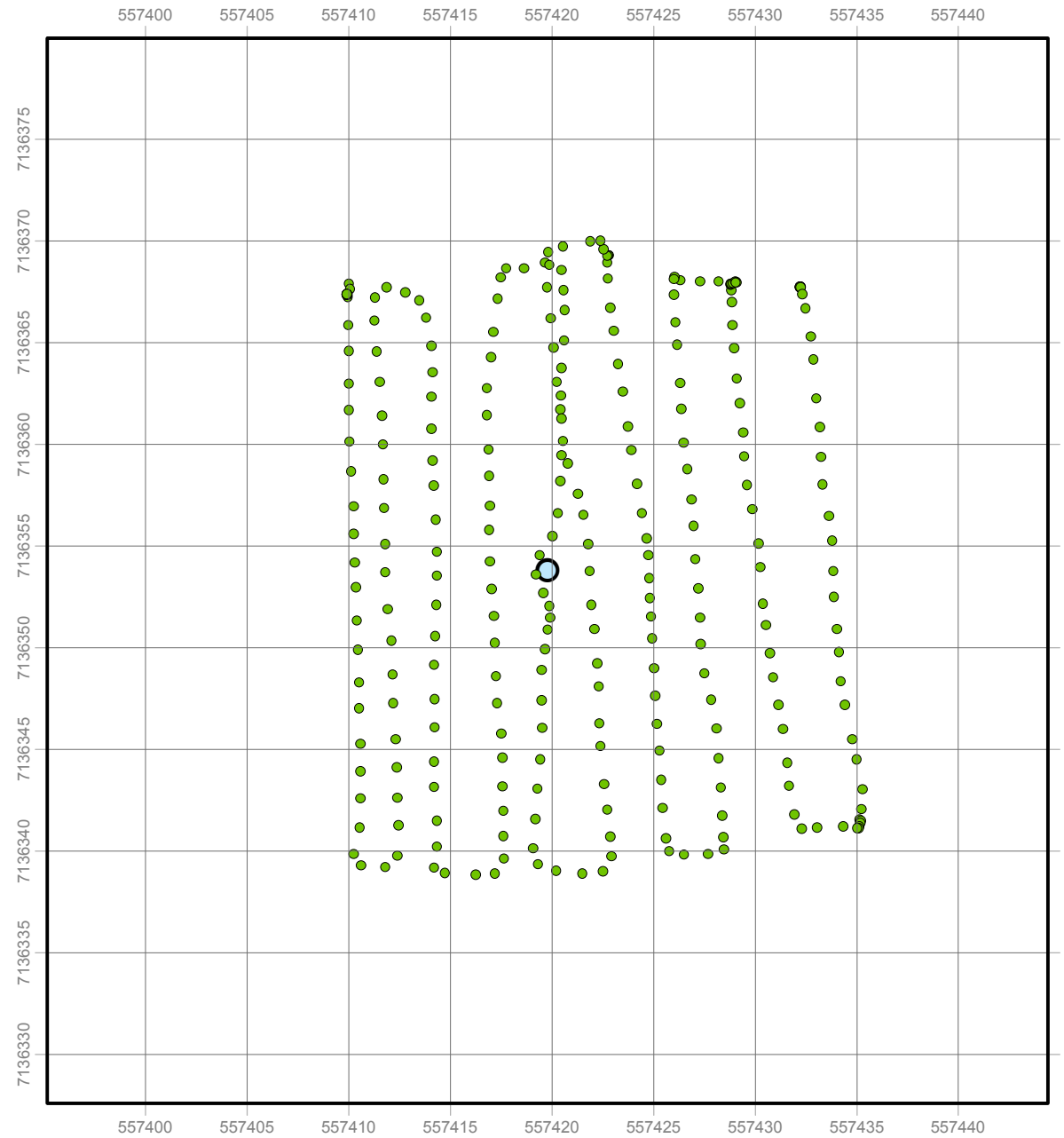


EE 03

Pre Gamma Survey

Point Count: 326

Min-Max: 0.040 - 0.073 μSv



EE 03

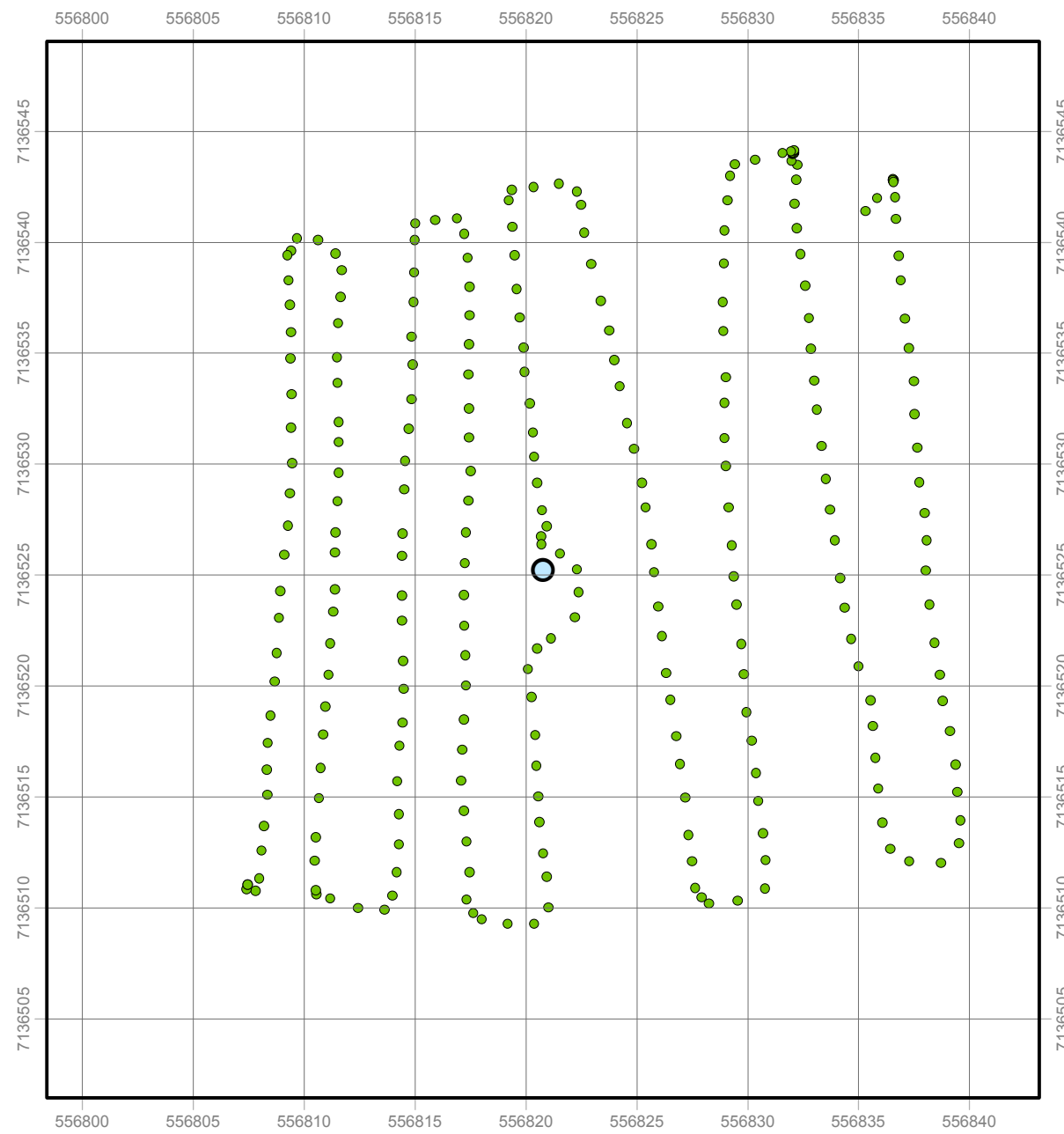
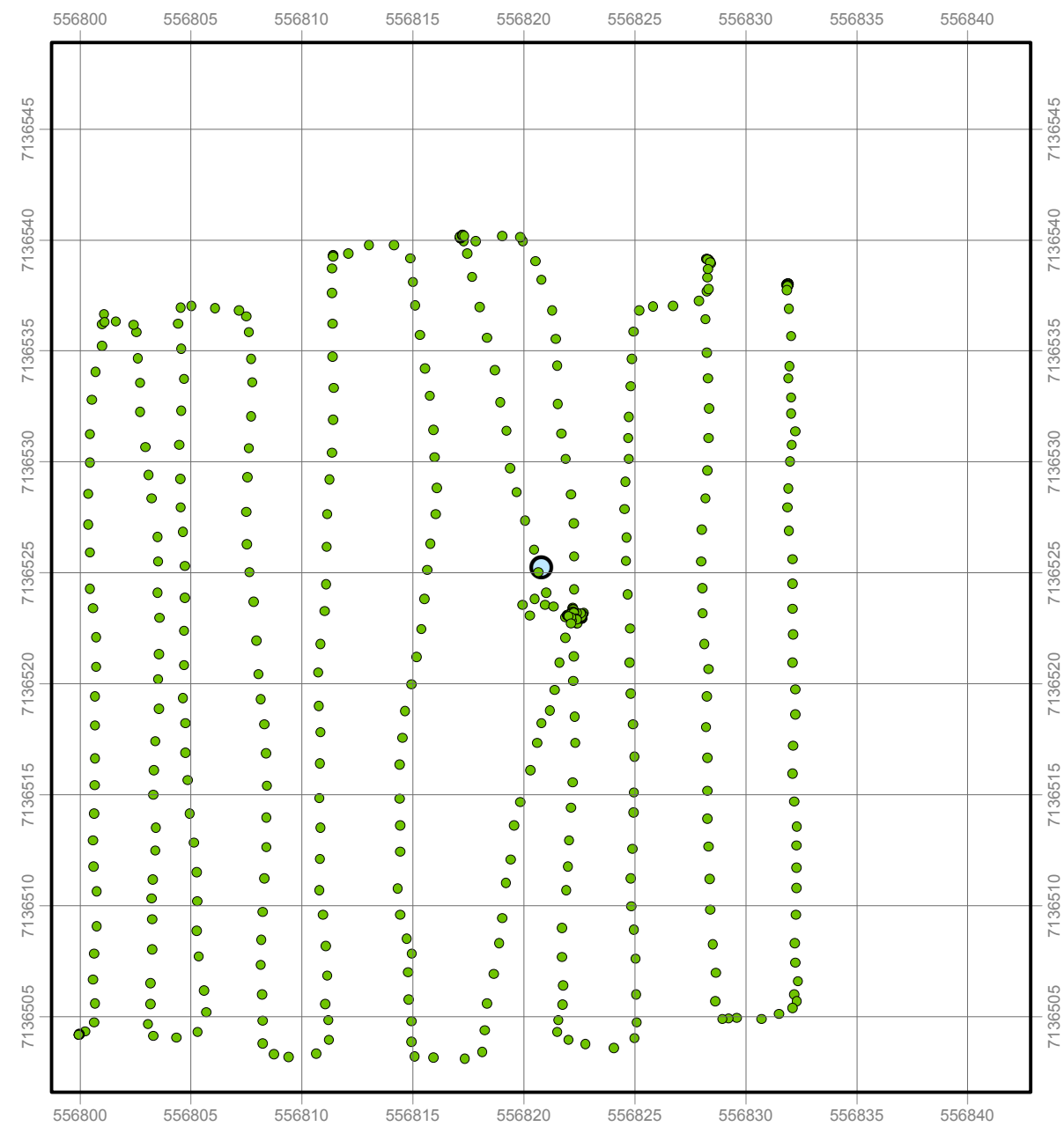
Post Gamma Survey

Point Count: 281

Min-Max: 0.044 - 0.076 μSv

Legend

- Drill Hole
- 0.0 - 0.3 μSv
- 0.3 - 0.6 μSv
- 0.6 - 1.0 μSv
- 1.0 - 2.5 μSv
- > 2.5 μSv



Legend

Drill Hole

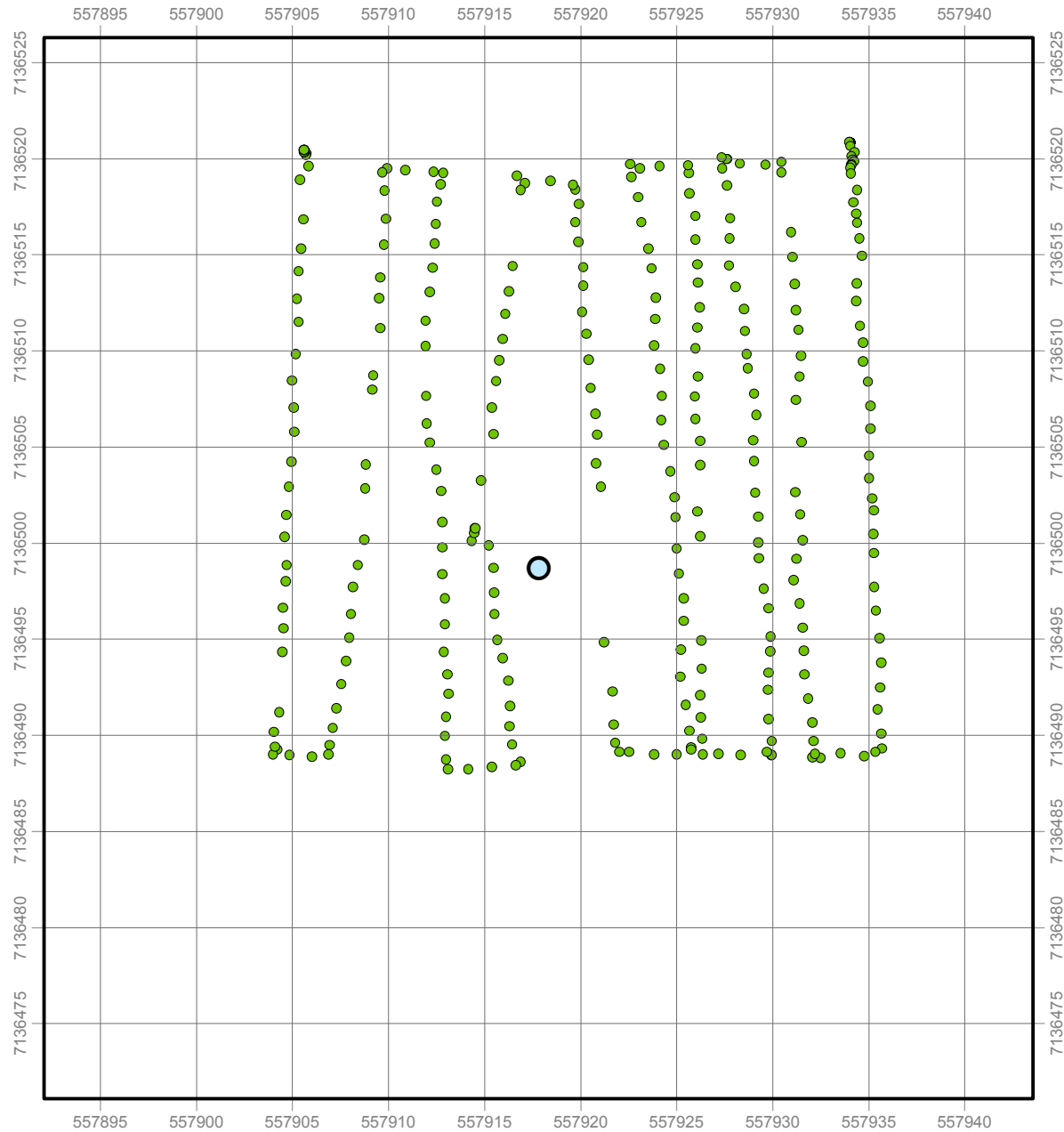
0.0 - 0.3 μSv

0.3 - 0.6 μSv

0.6 - 1.0 μSv

1.0 - 2.5 μSv

> 2.5 μSv

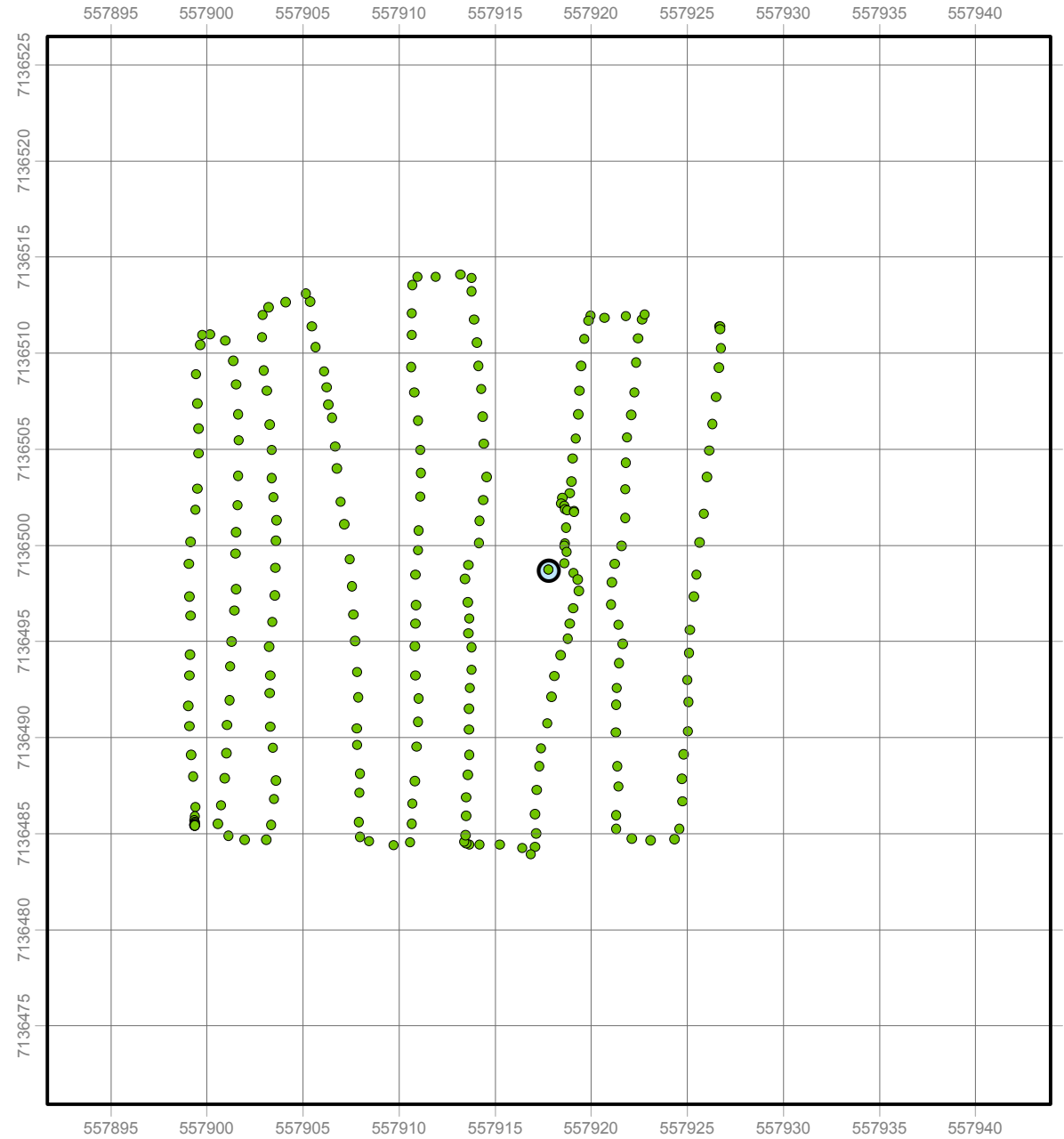


EE 04

Pre Gamma Survey

Point Count: 399

Min-Max: 0.042 - 0.080 μSv



EE 04

Post Gamma Survey

Point Count: 254

Min-Max: 0.041 - 0.075 μSv

Legend

Drill Hole

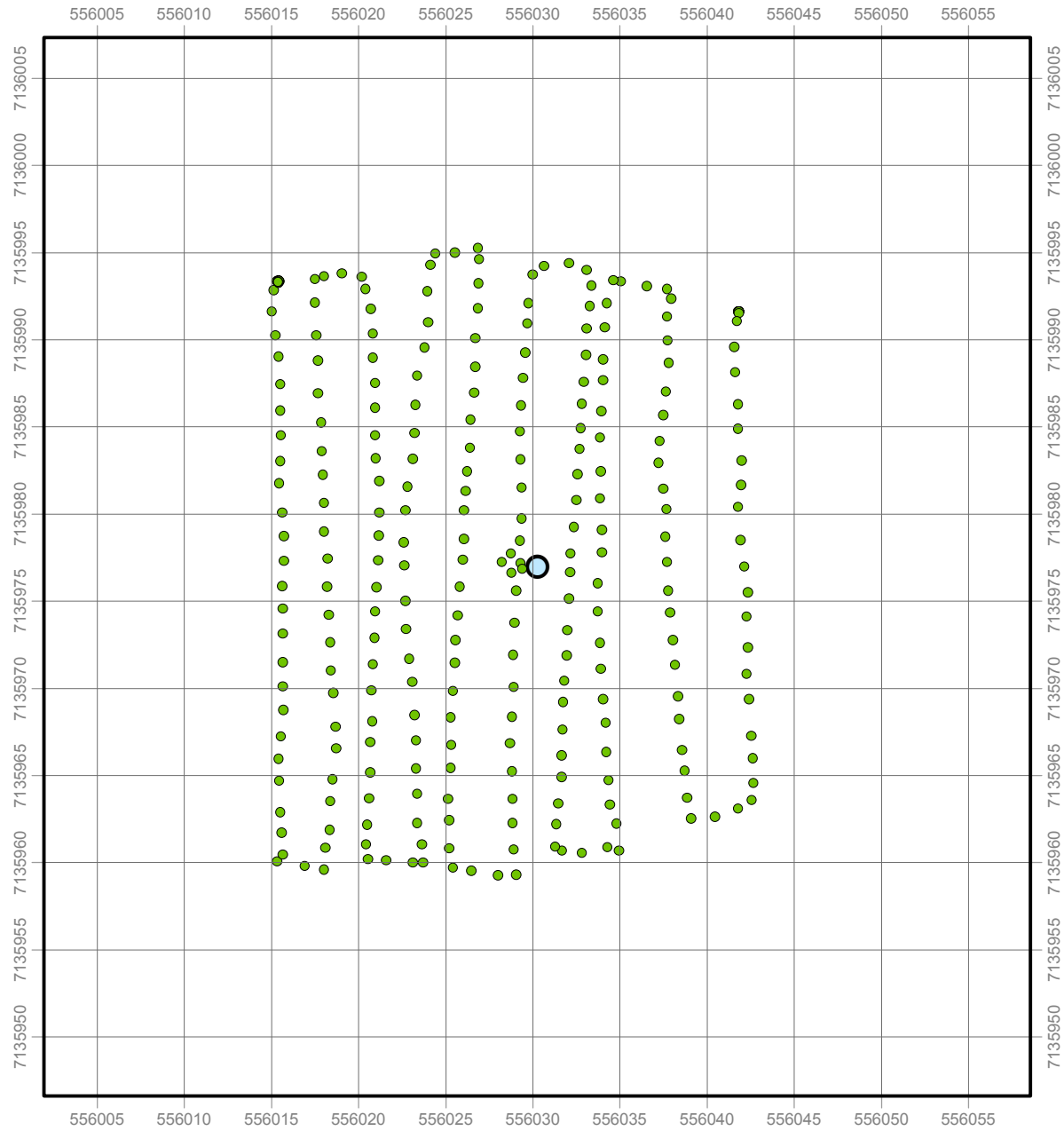
0.0 - 0.3 μ Sv

0.3 - 0.6 μ Sv

0.6 - 1.0 μ Sv

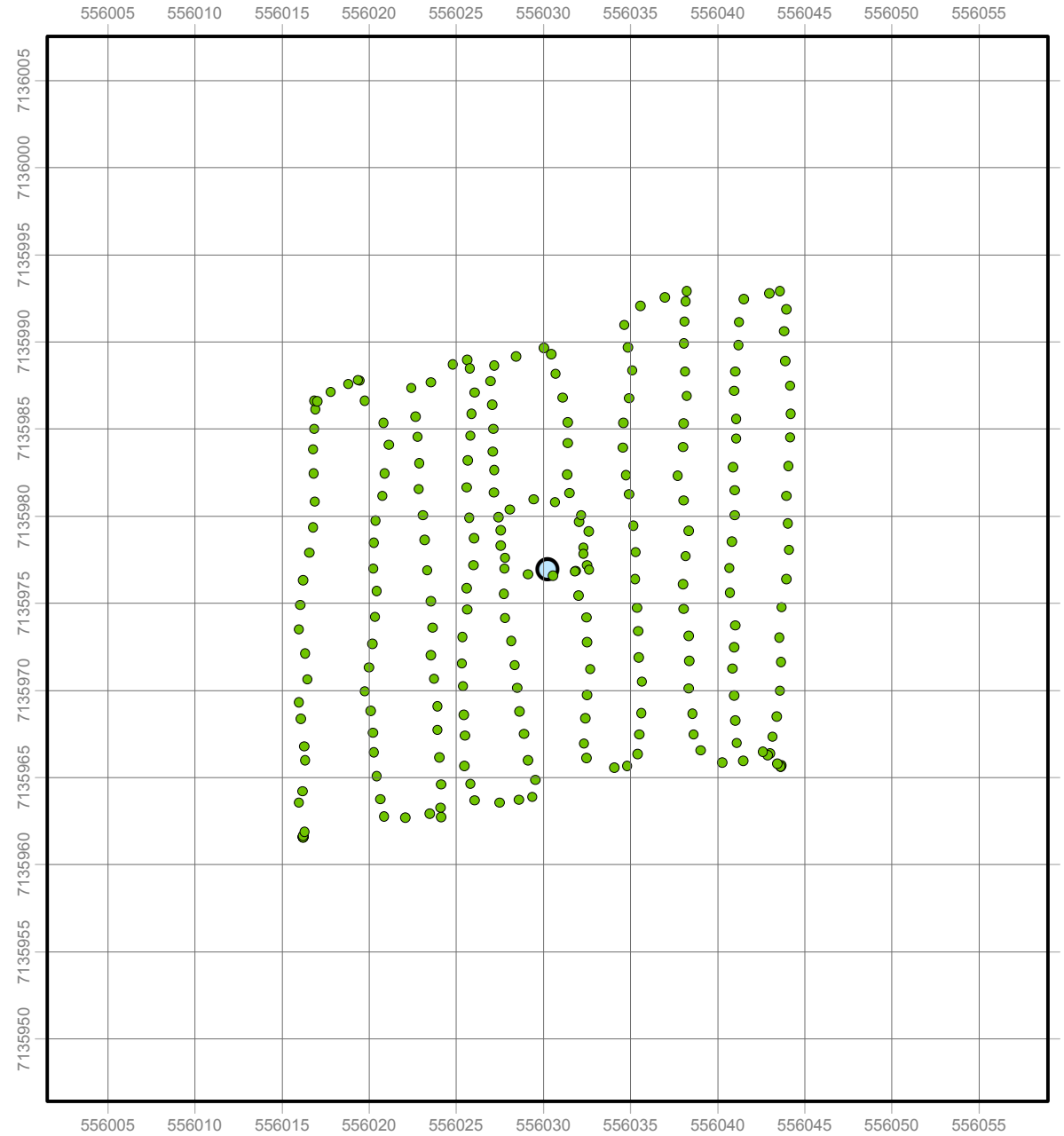
1.0 - 2.5 μ Sv

> 2.5 μ Sv



EE 05
Pre Gamma Survey

Point Count: 290
Min-Max: 0.044 - 0.075 μ Sv



EE 05
Post Gamma Survey

Point Count: 240
Min-Max: 0.045 - 0.074 μ Sv

Legend

Drill Hole

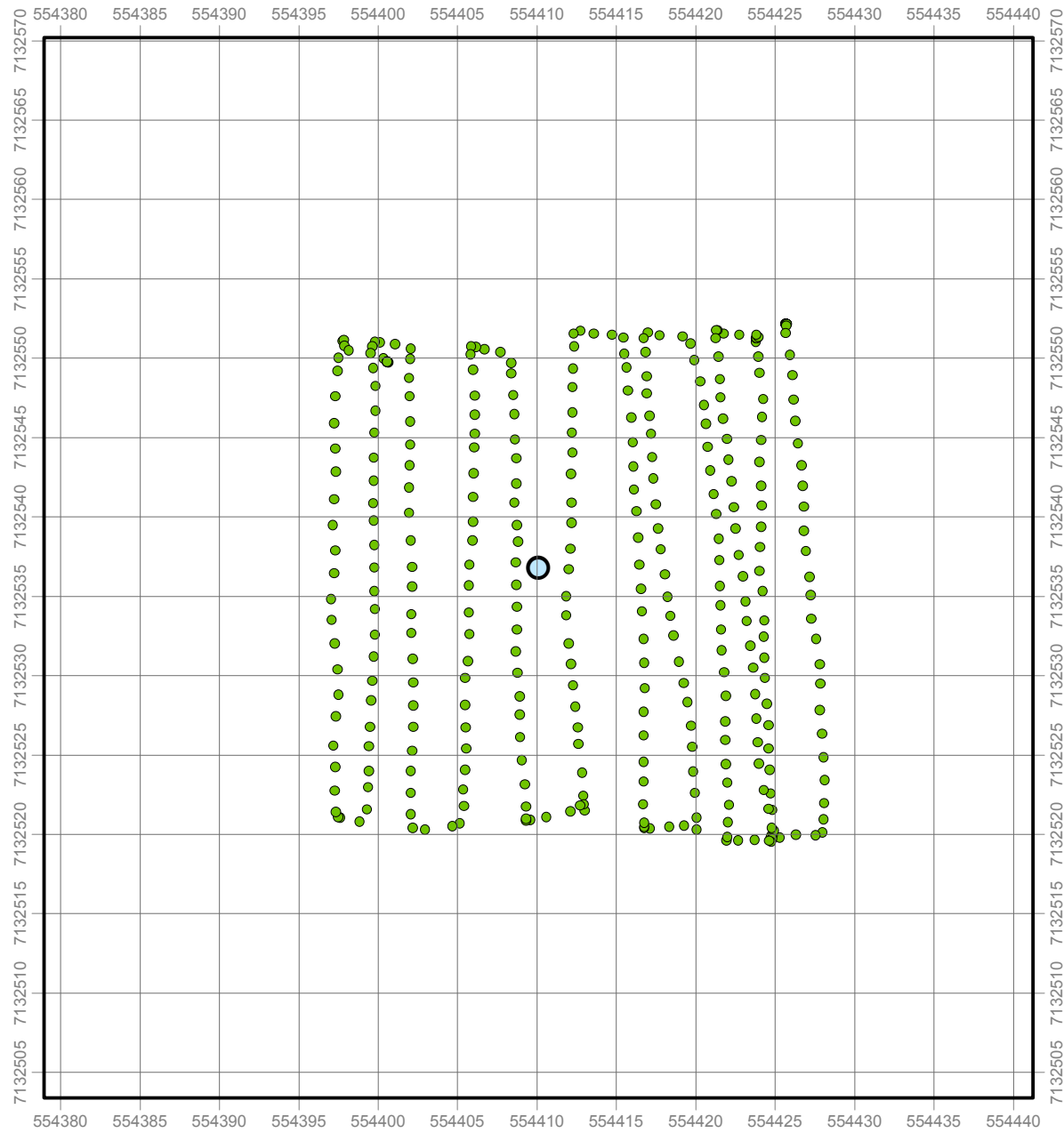
0.0 - 0.3 μSv

0.3 - 0.6 μSv

0.6 - 1.0 μSv

1.0 - 2.5 μSv

> 2.5 μSv

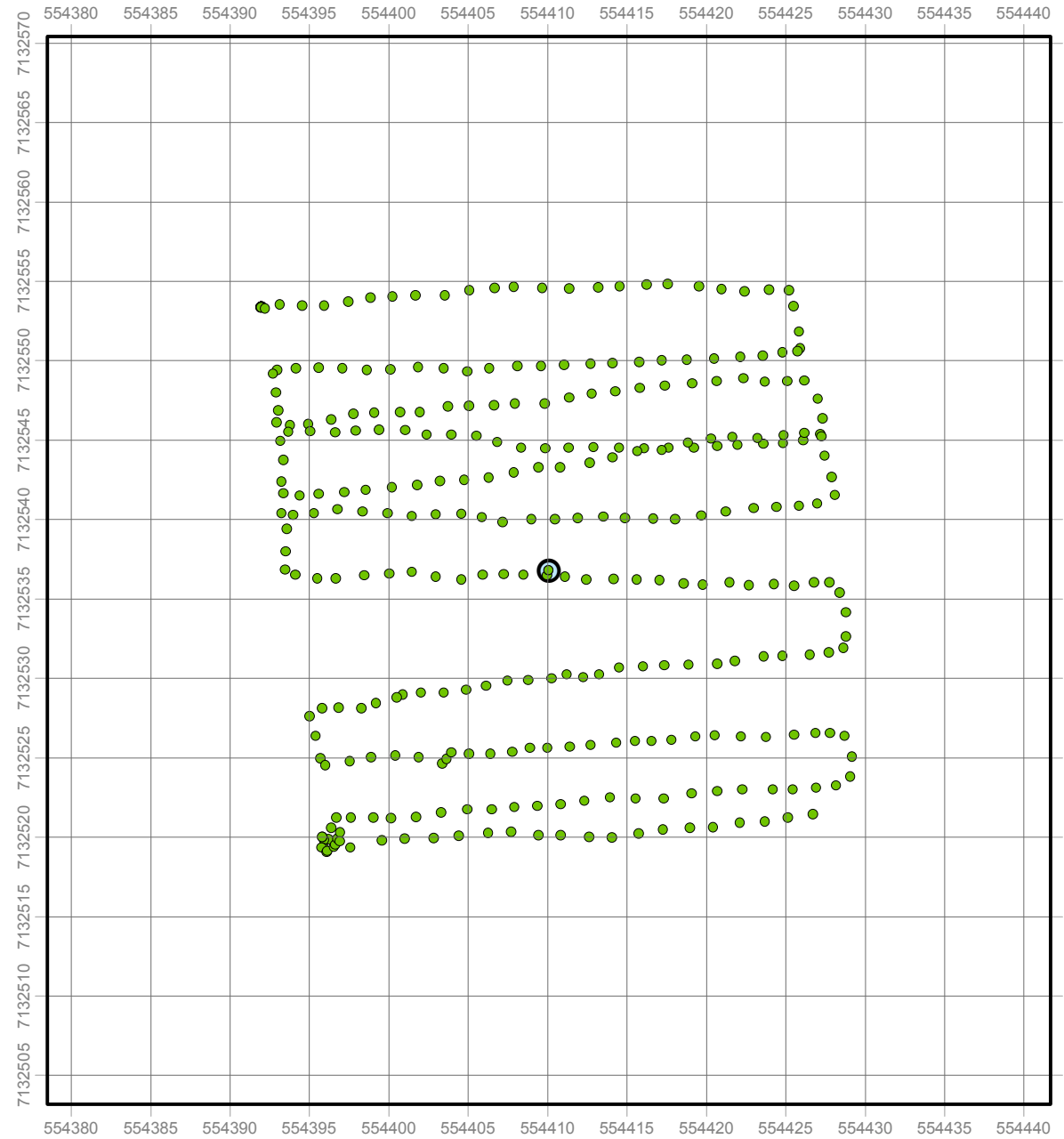


JE 01

Pre Gamma Survey

Point Count: 421

Min-Max: 0.042 - 0.076 μSv



JE 01

Post Gamma Survey

Point Count: 352

Min-Max: 0.040 - 0.079 μSv

Legend

Drill Hole

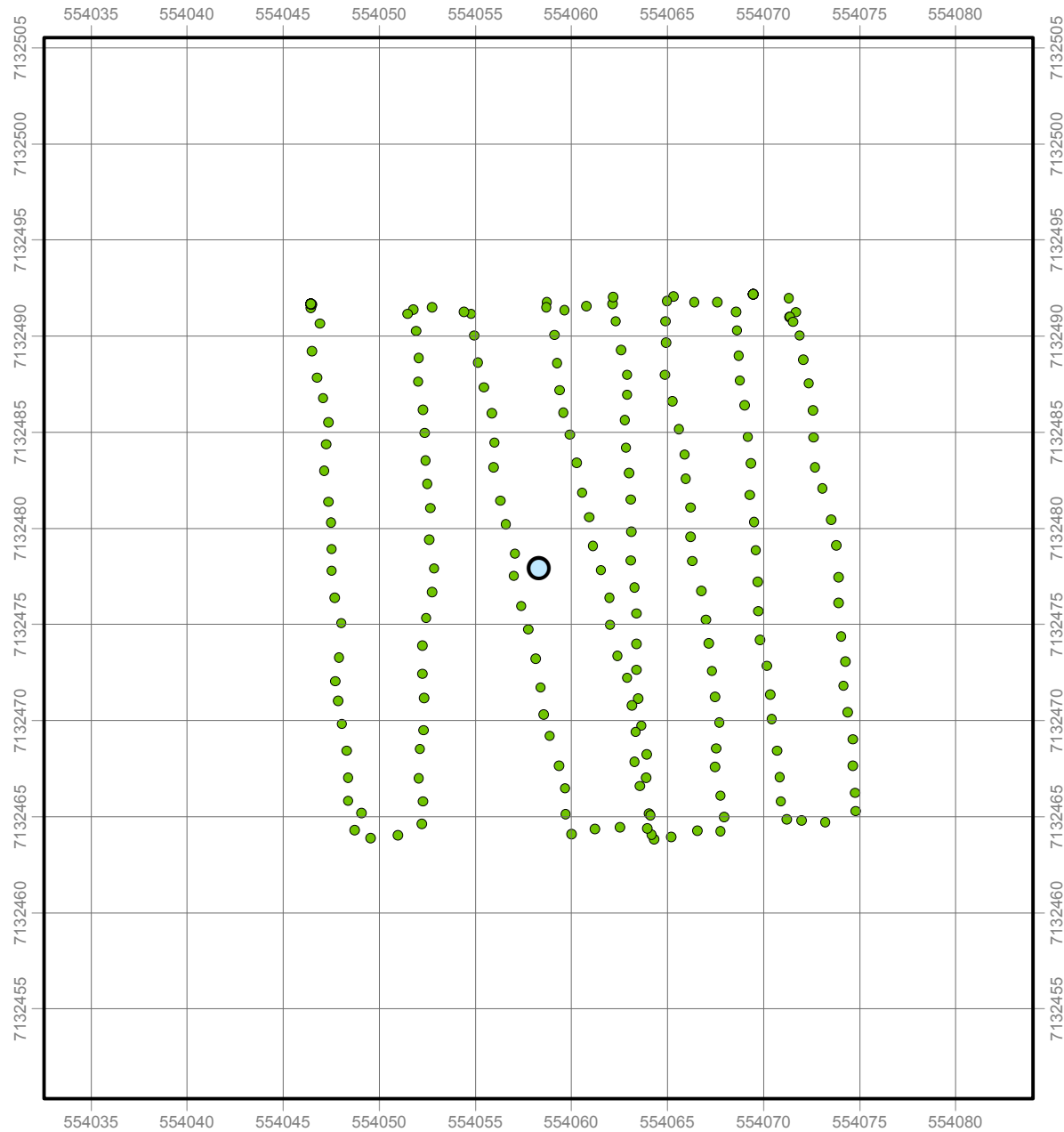
0.0 - 0.3 μSv

0.3 - 0.6 μSv

0.6 - 1.0 μSv

1.0 - 2.5 μSv

> 2.5 μSv

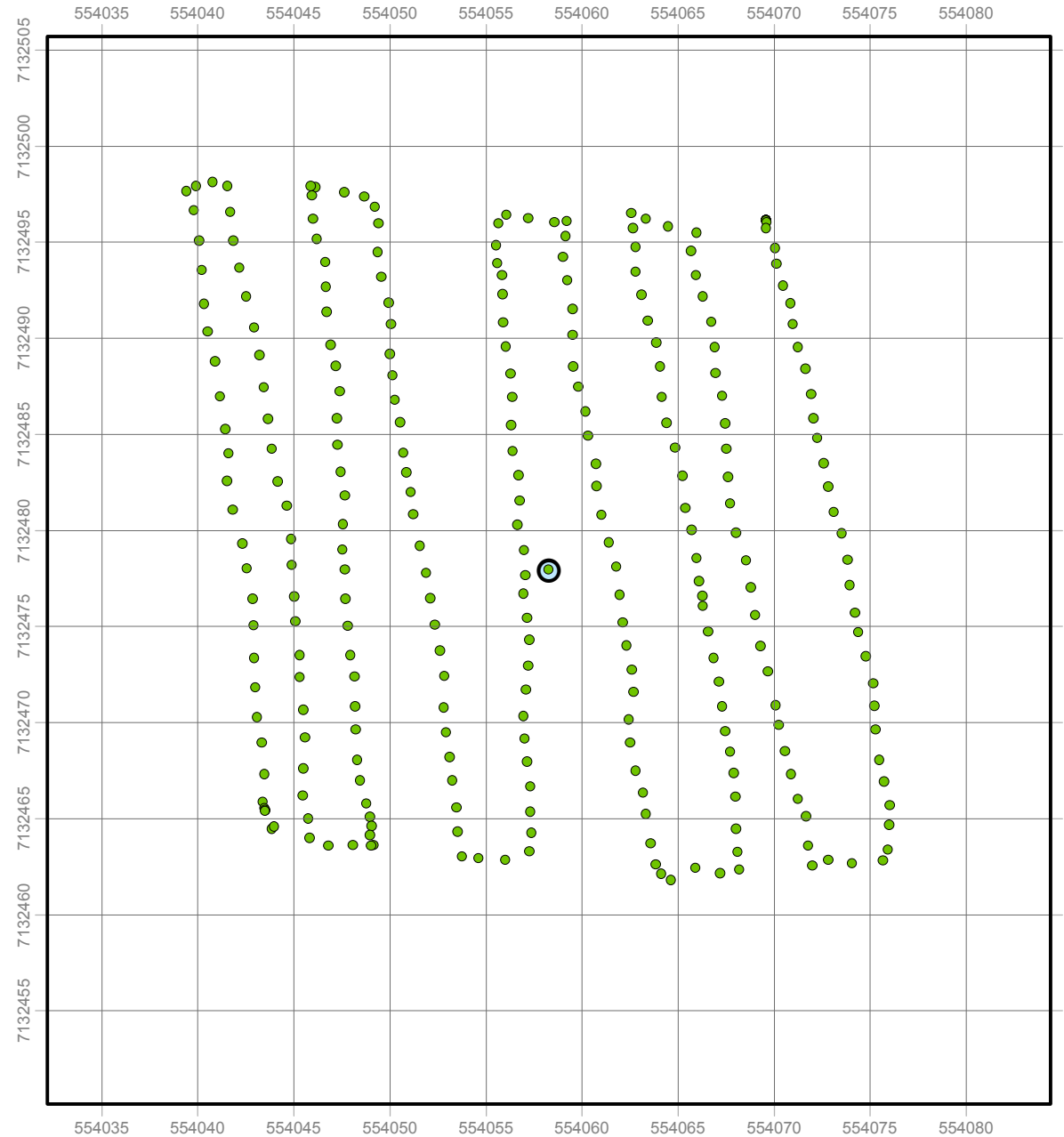


JE 02

Pre Gamma Survey

Point Count: 224

Min-Max: 0.063 - 0.099 μSv



JE 02

Post Gamma Survey

Point Count: 278

Min-Max: 0.057 - 0.090 μSv

Legend

Drill Hole

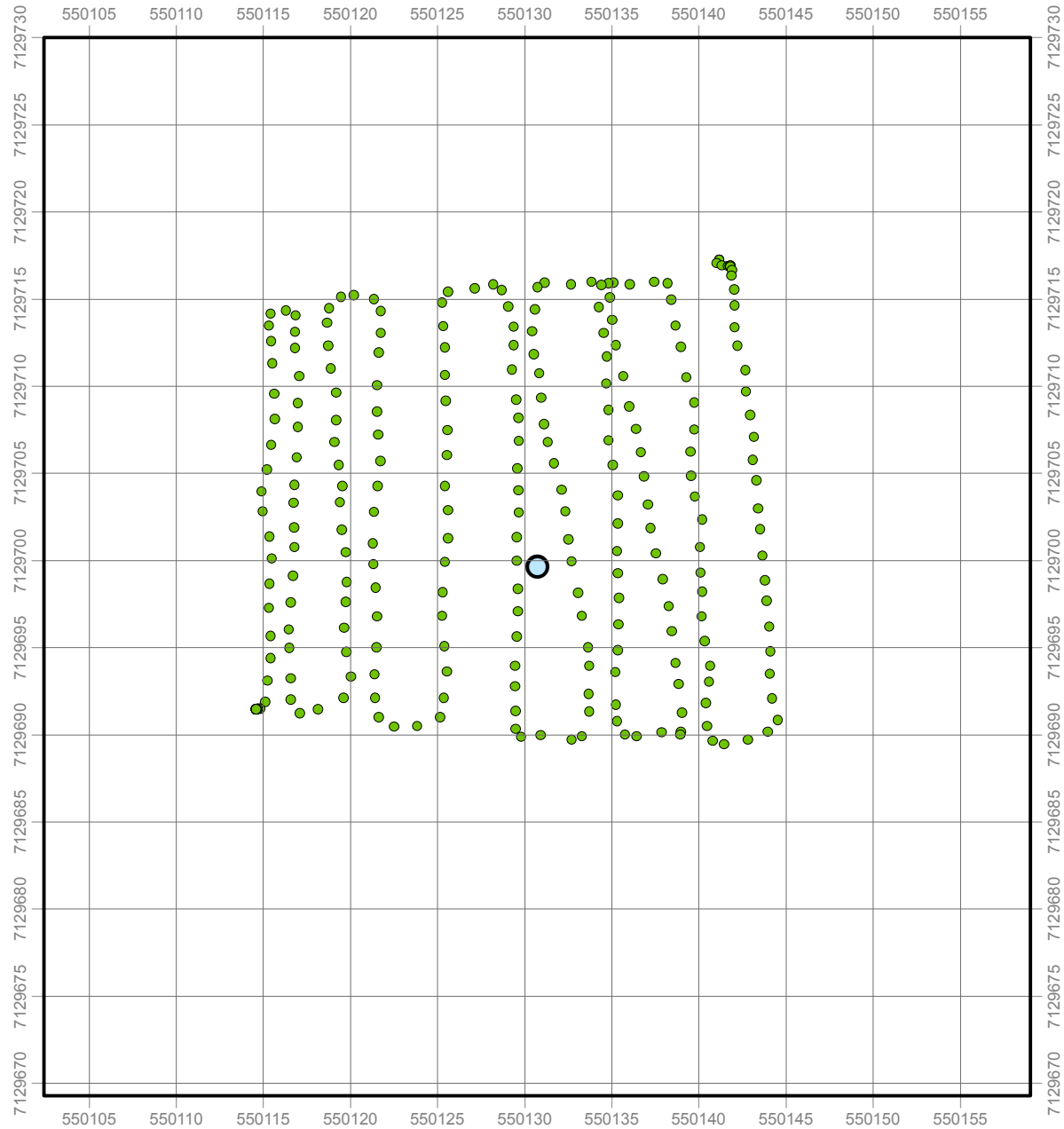
0.0 - 0.3 μSv

0.3 - 0.6 μSv

0.6 - 1.0 μSv

1.0 - 2.5 μSv

> 2.5 μSv

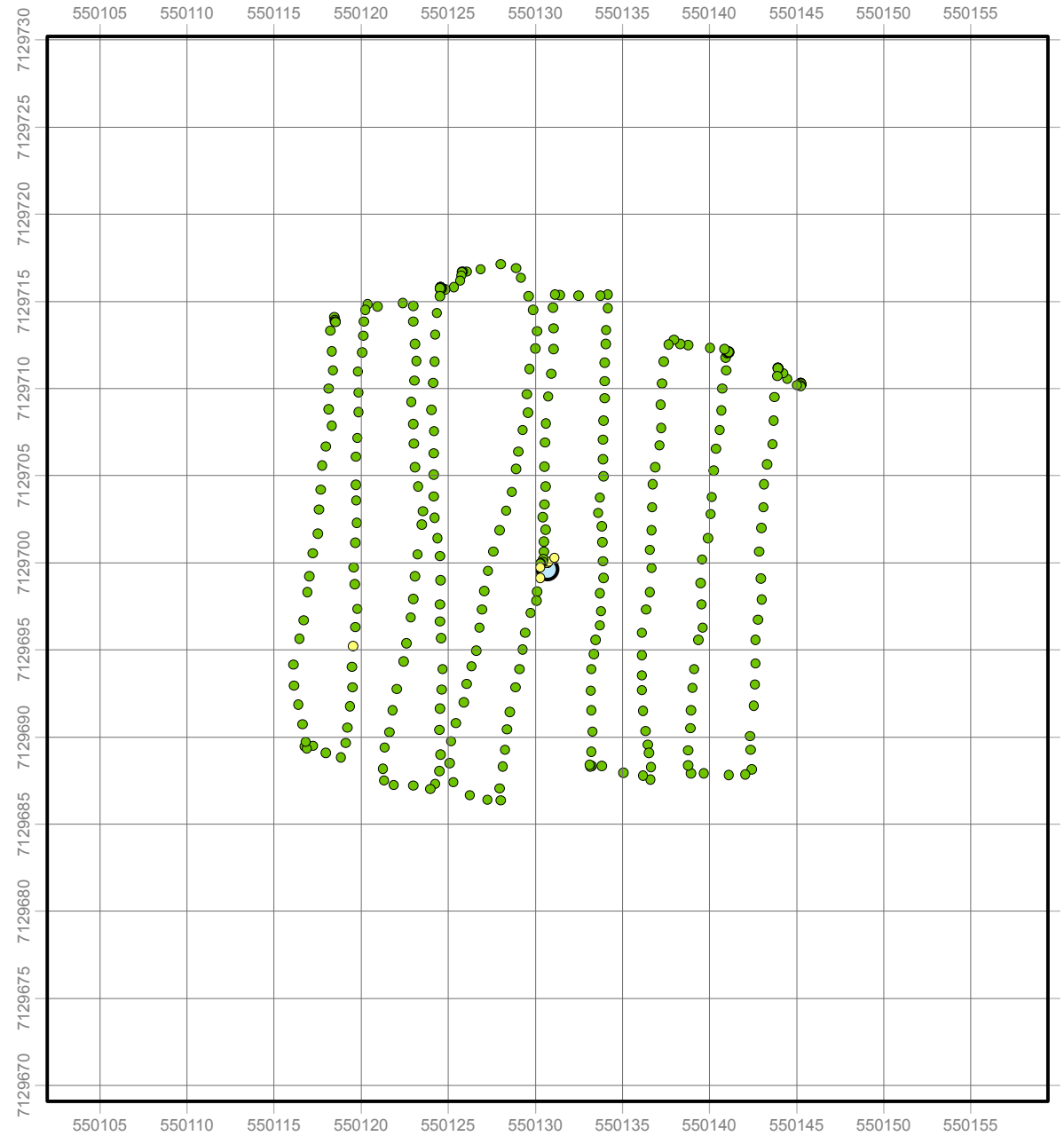


CONT 06

Pre Gamma Survey

Point Count: 262

Min-Max: 0.068 - 0.117 μSv



CONT 06

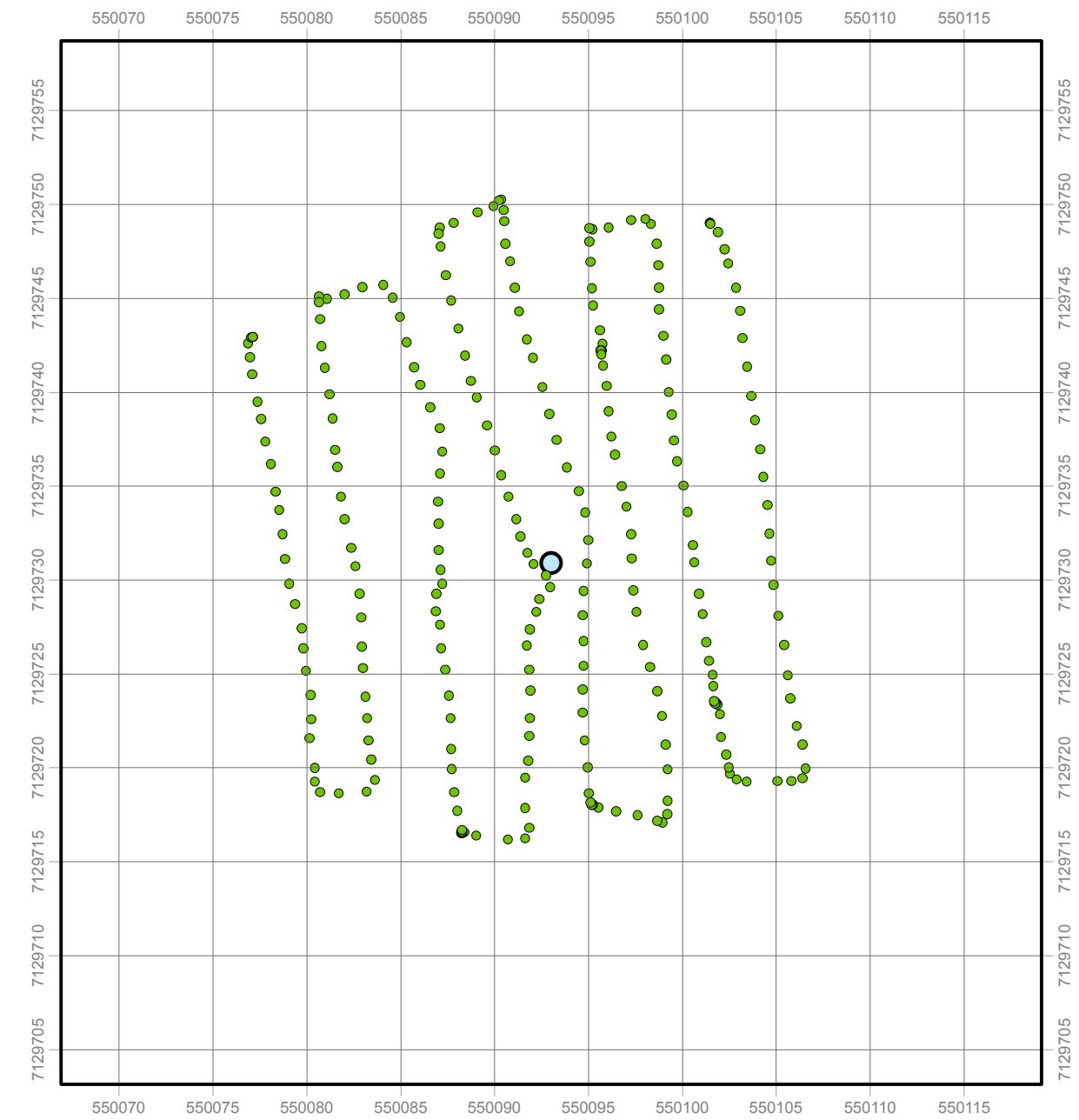
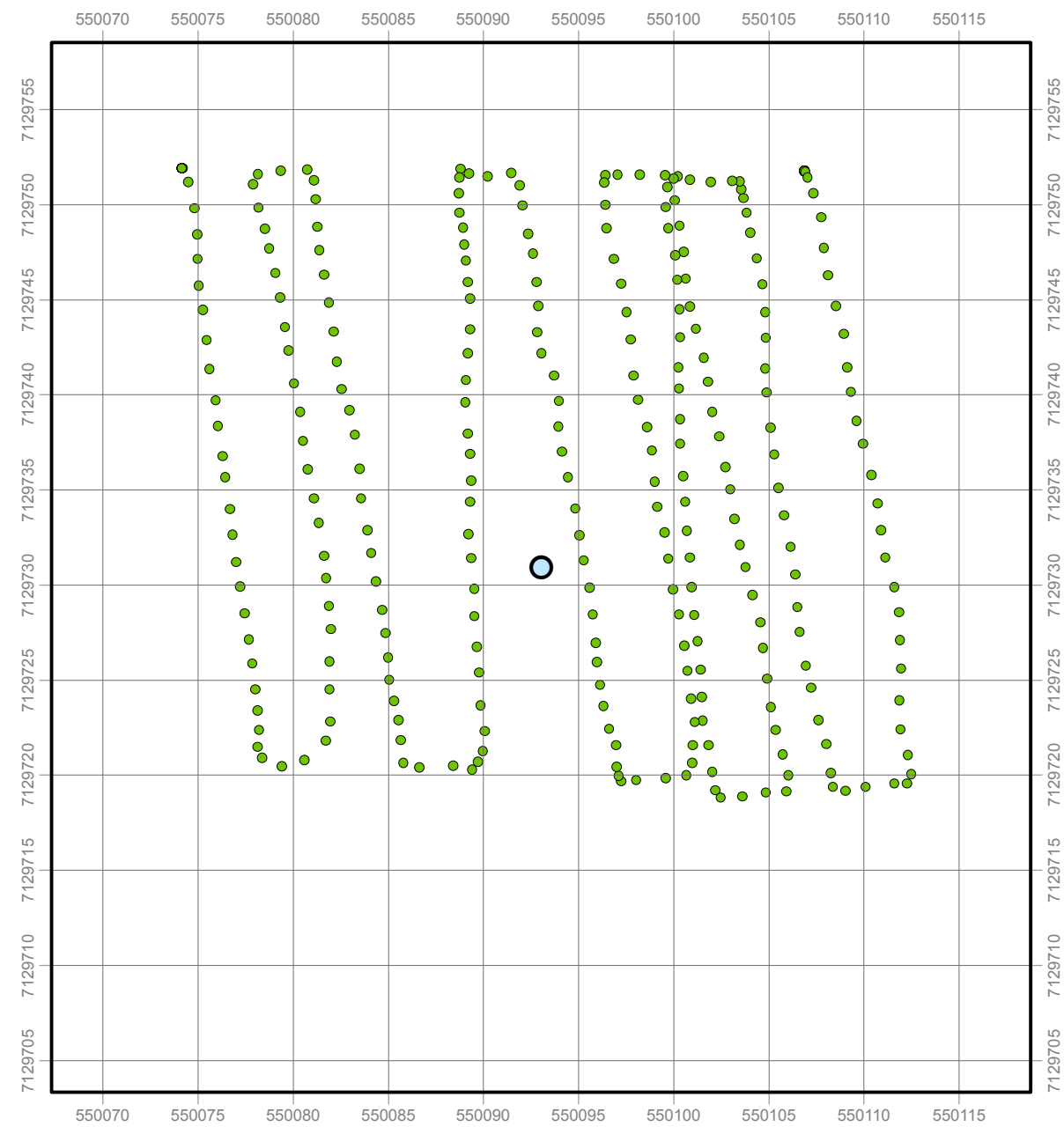
Post Gamma Survey

Point Count: 364

Min-Max: 0.065 - 0.340 μSv

Legend

- Drill Hole
- 0.0 - 0.3 μSv
- 0.3 - 0.6 μSv
- 0.6 - 1.0 μSv
- 1.0 - 2.5 μSv
- > 2.5 μSv



Legend

Drill Hole

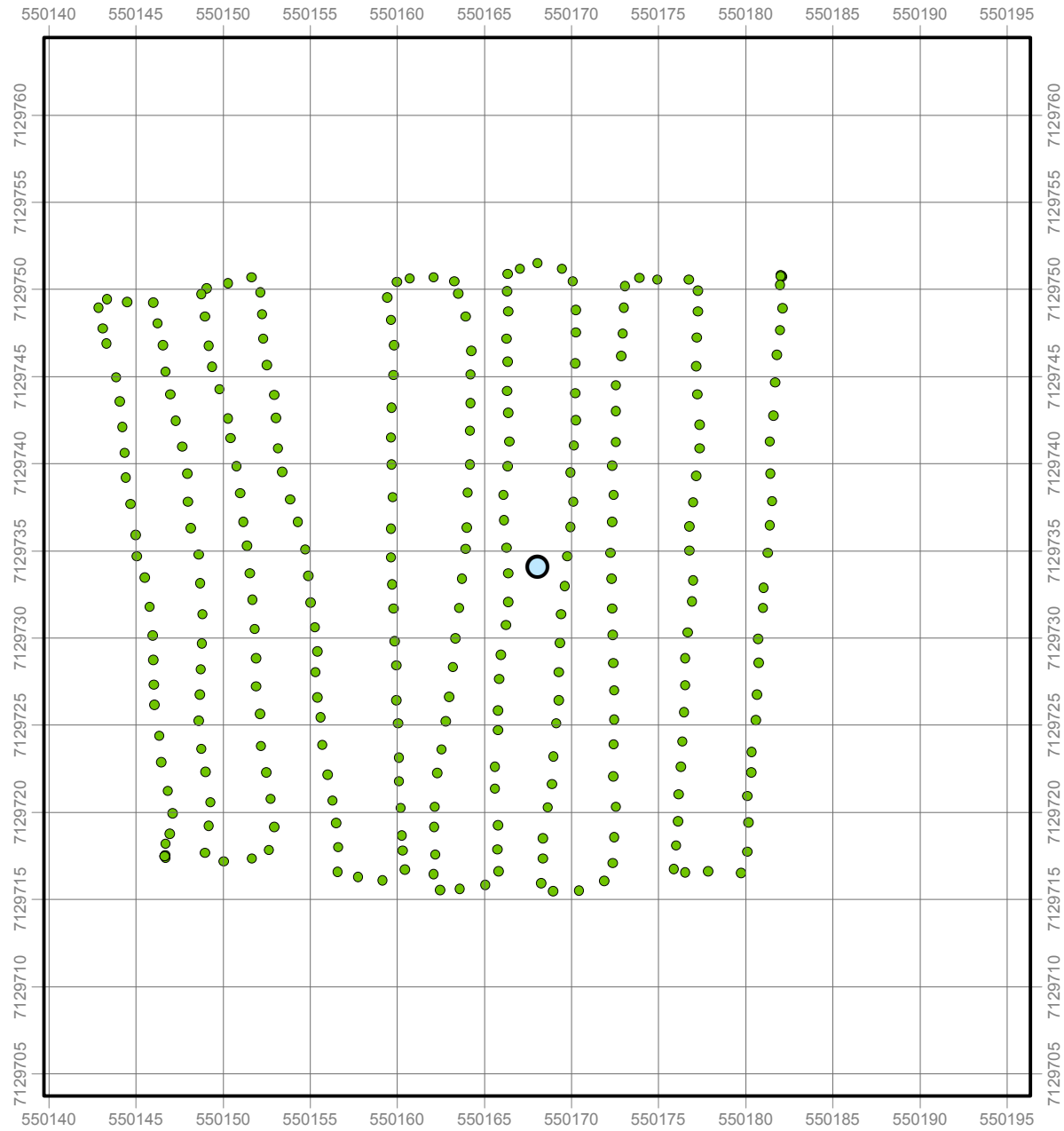
0.0 - 0.3 μSv

0.3 - 0.6 μSv

0.6 - 1.0 μSv

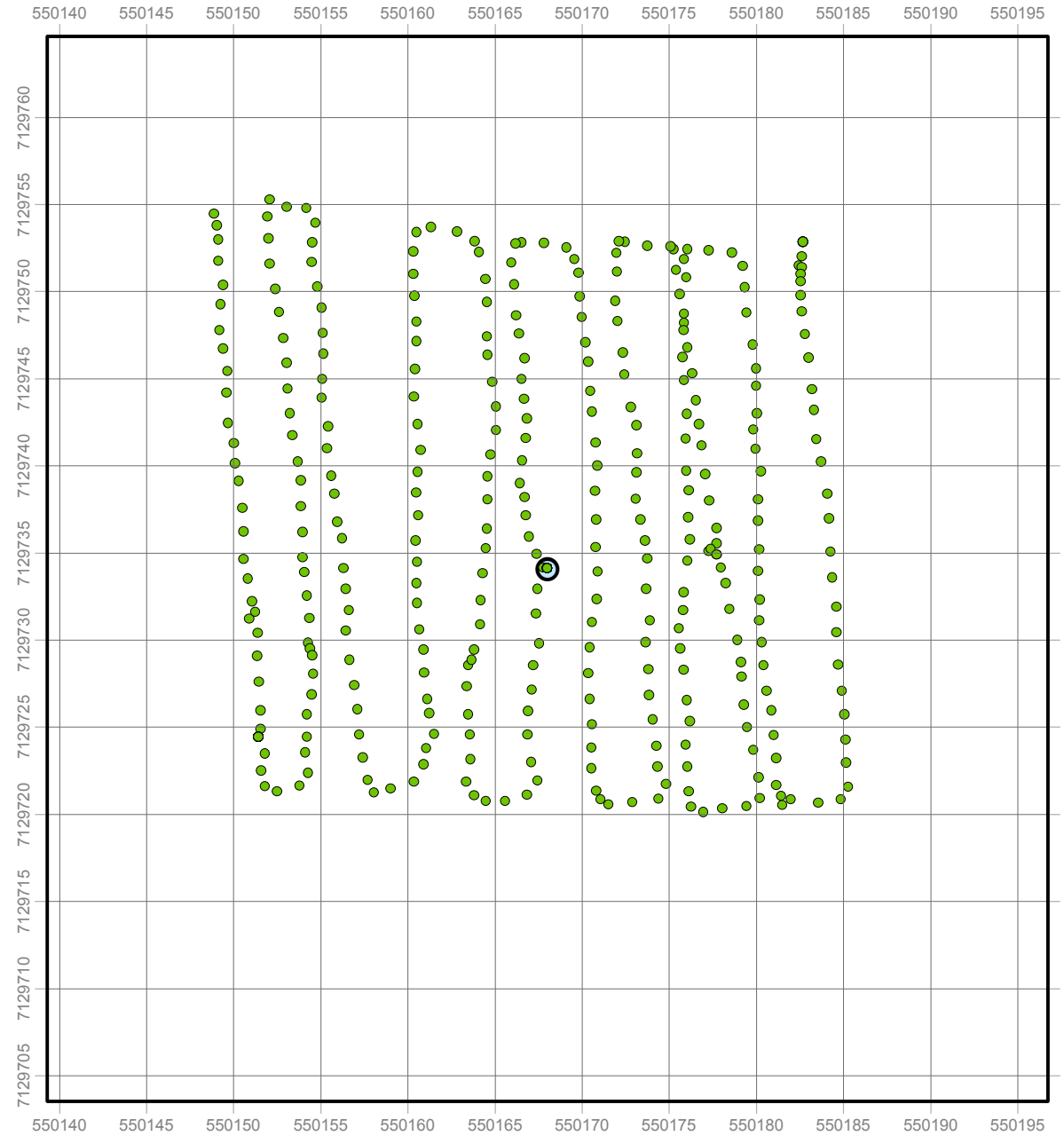
1.0 - 2.5 μSv

> 2.5 μSv



CONT 08
Pre Gamma Survey

Point Count: 285
Min-Max: 0.074 - 0.108 μSv

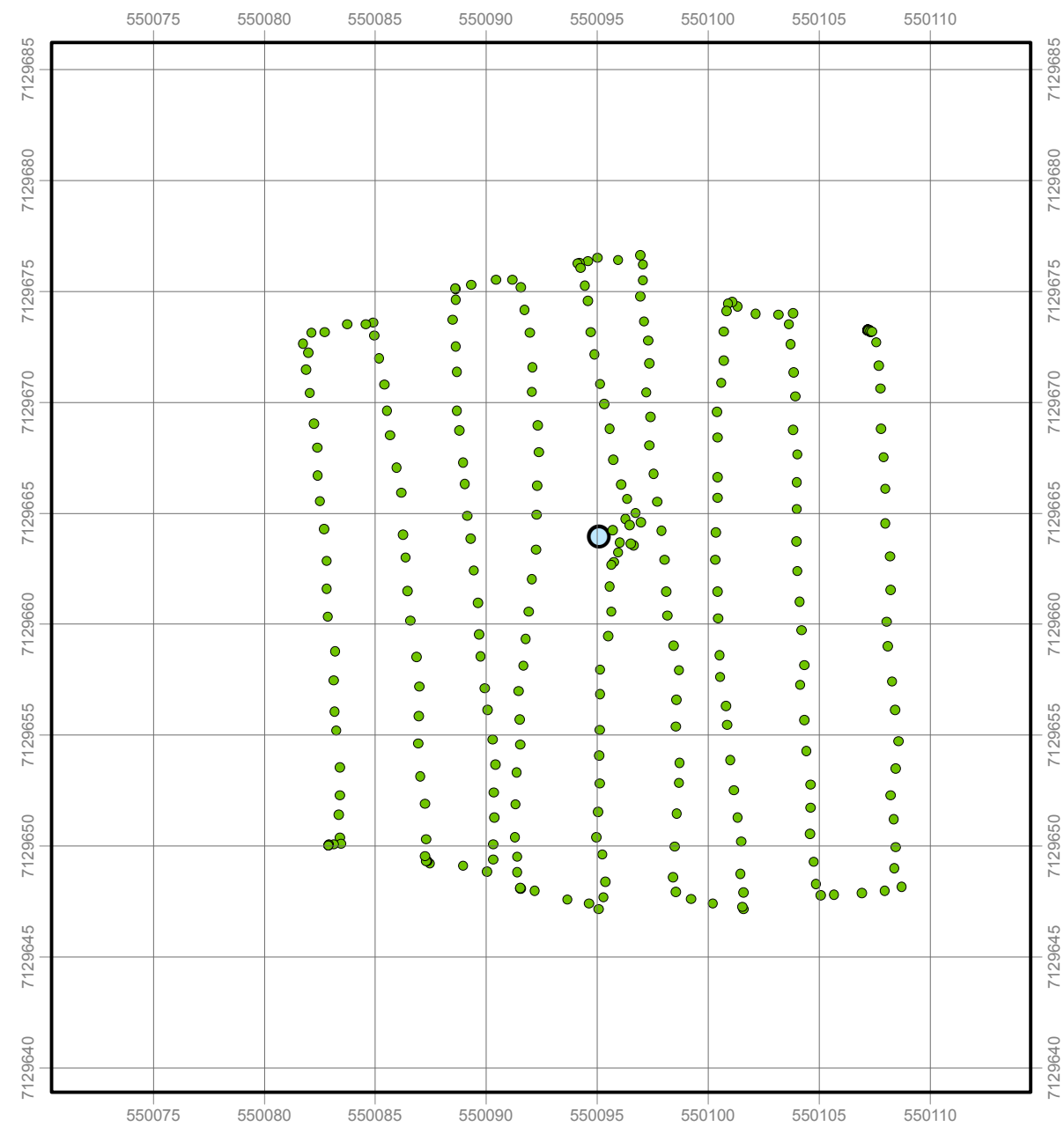


CONT 08
Post Gamma Survey

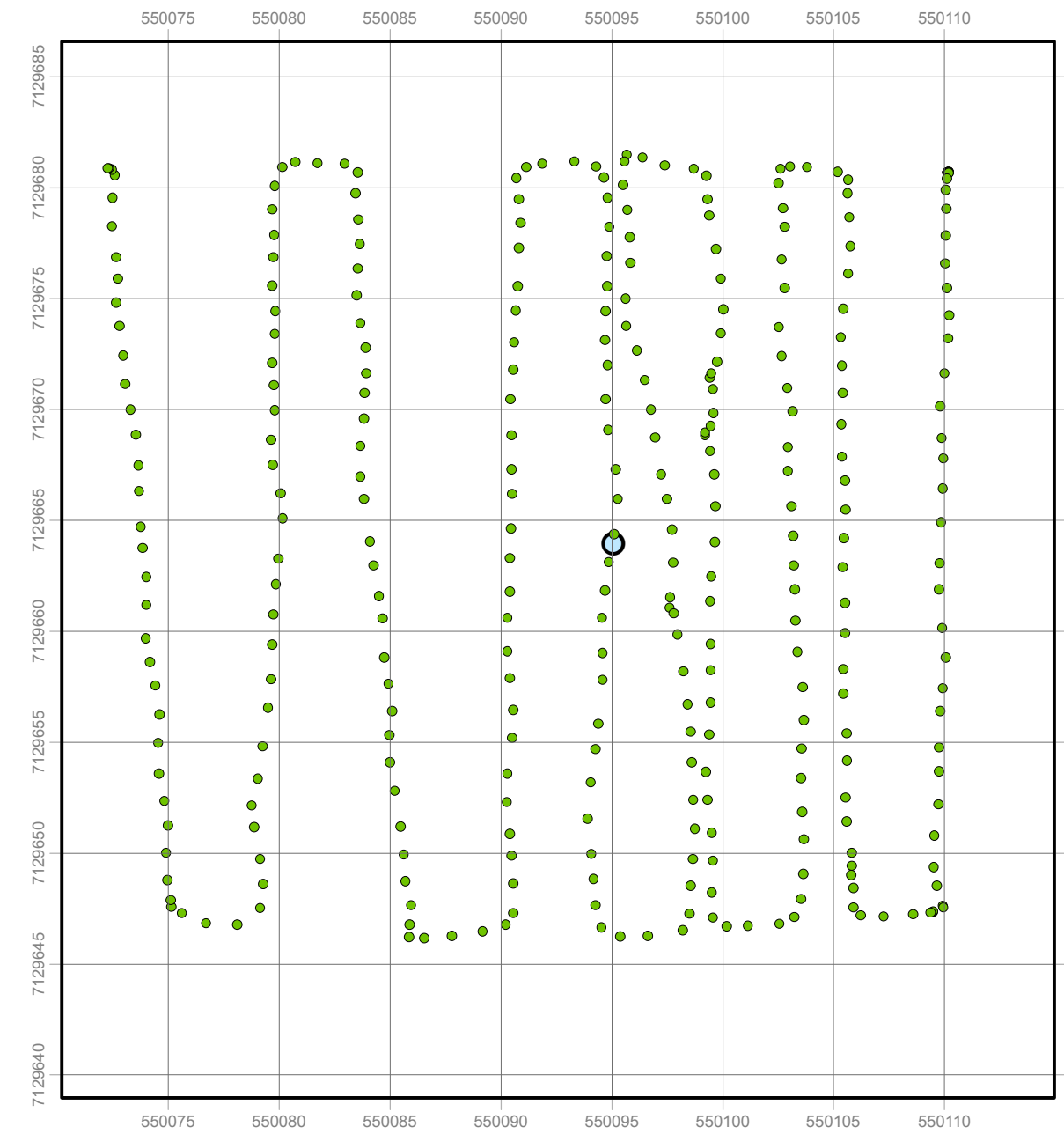
Point Count: 437
Min-Max: 0.063 - 0.109 μSv

Legend

- Drill Hole
- 0.0 - 0.3 μSv
- 0.3 - 0.6 μSv
- 0.6 - 1.0 μSv
- 1.0 - 2.5 μSv
- > 2.5 μSv



CONT 10
Pre Gamma Survey
 Point Count: 337
 Min-Max: 0.070 - 0.124 μSv

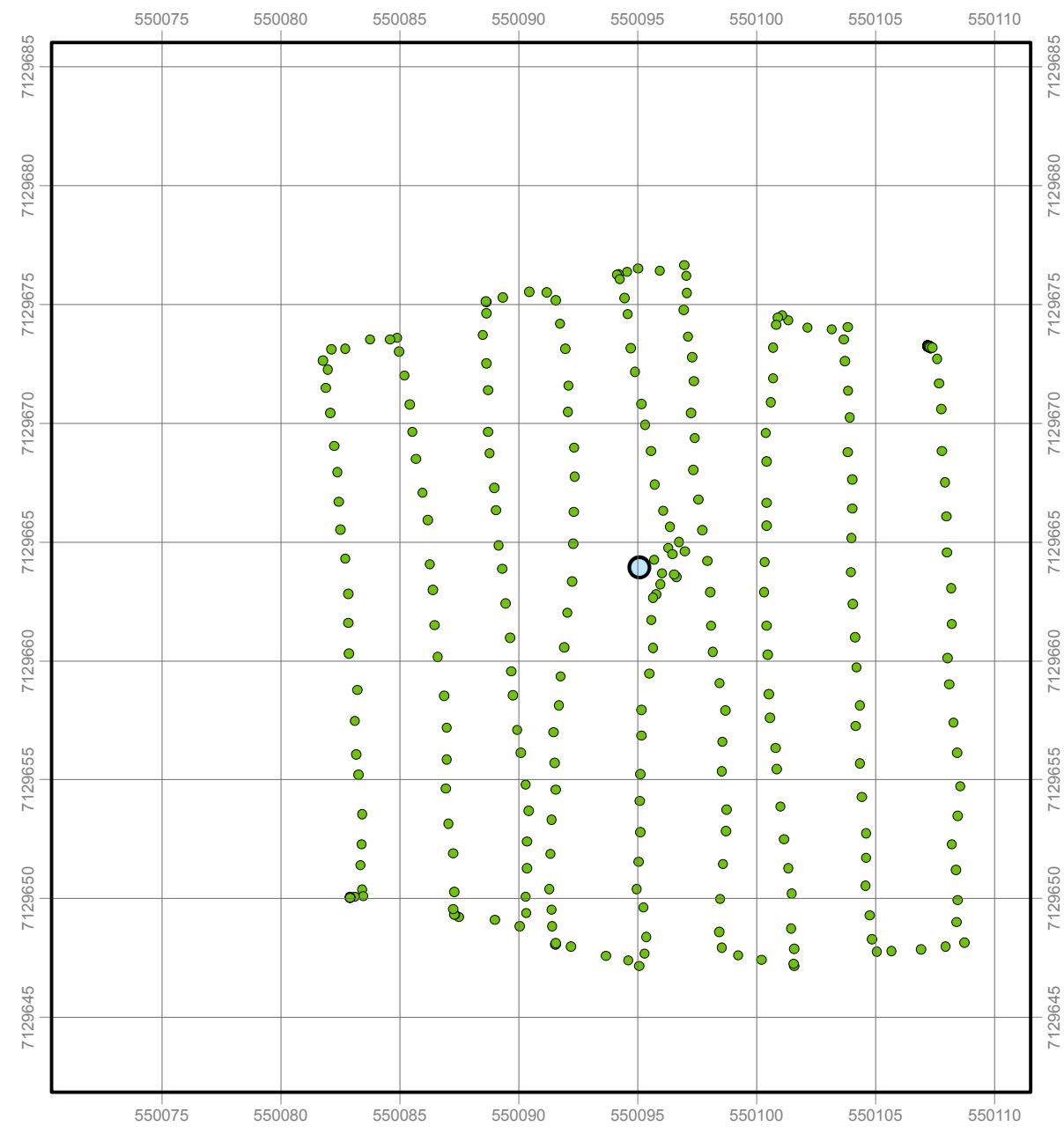


CONT 10
Post Gamma Survey
 Point Count: 328
 Min-Max: 0.058 - 0.119 μSv

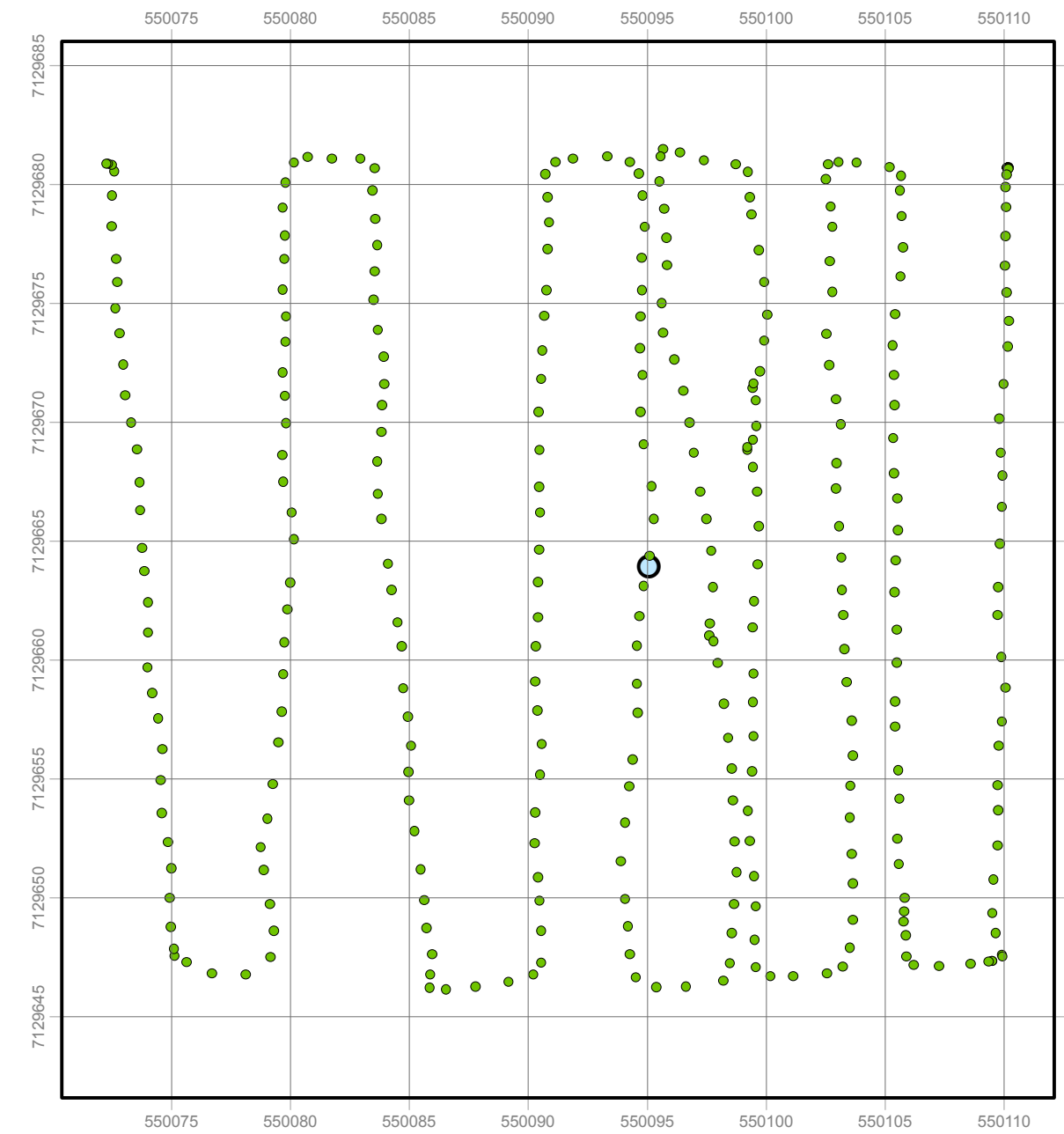


Legend

- Drill Hole
- 0.0 - 0.3 μSv
- 0.3 - 0.6 μSv
- 0.6 - 1.0 μSv
- 1.0 - 2.5 μSv
- > 2.5 μSv



CONT 11
Pre Gamma Survey
 Point Count: 337
 Min-Max: 0.070 - 0.124 μSv

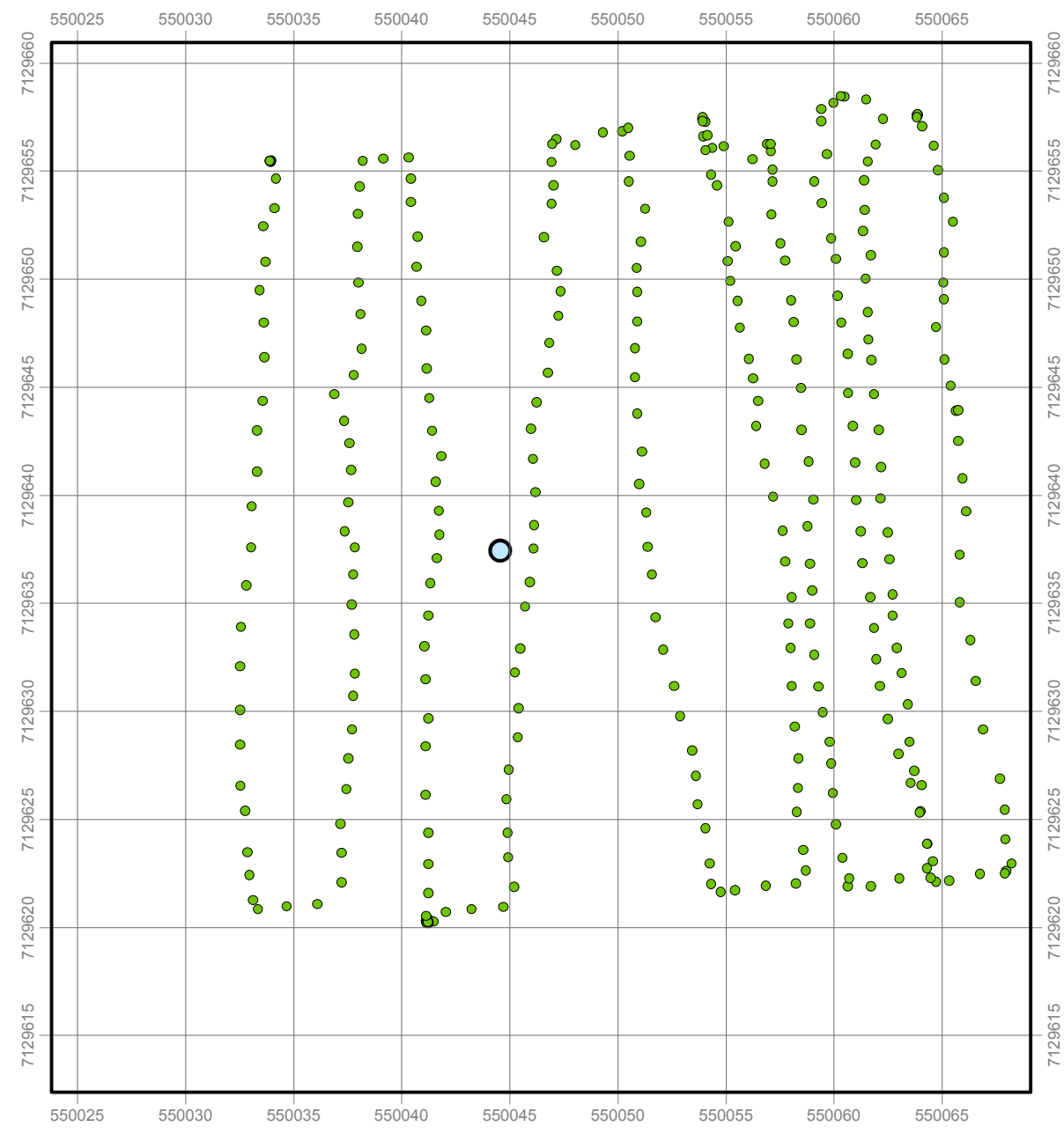


CONT 11
Post Gamma Survey
 Point Count: 328
 Min-Max: 0.058 - 0.119 μSv

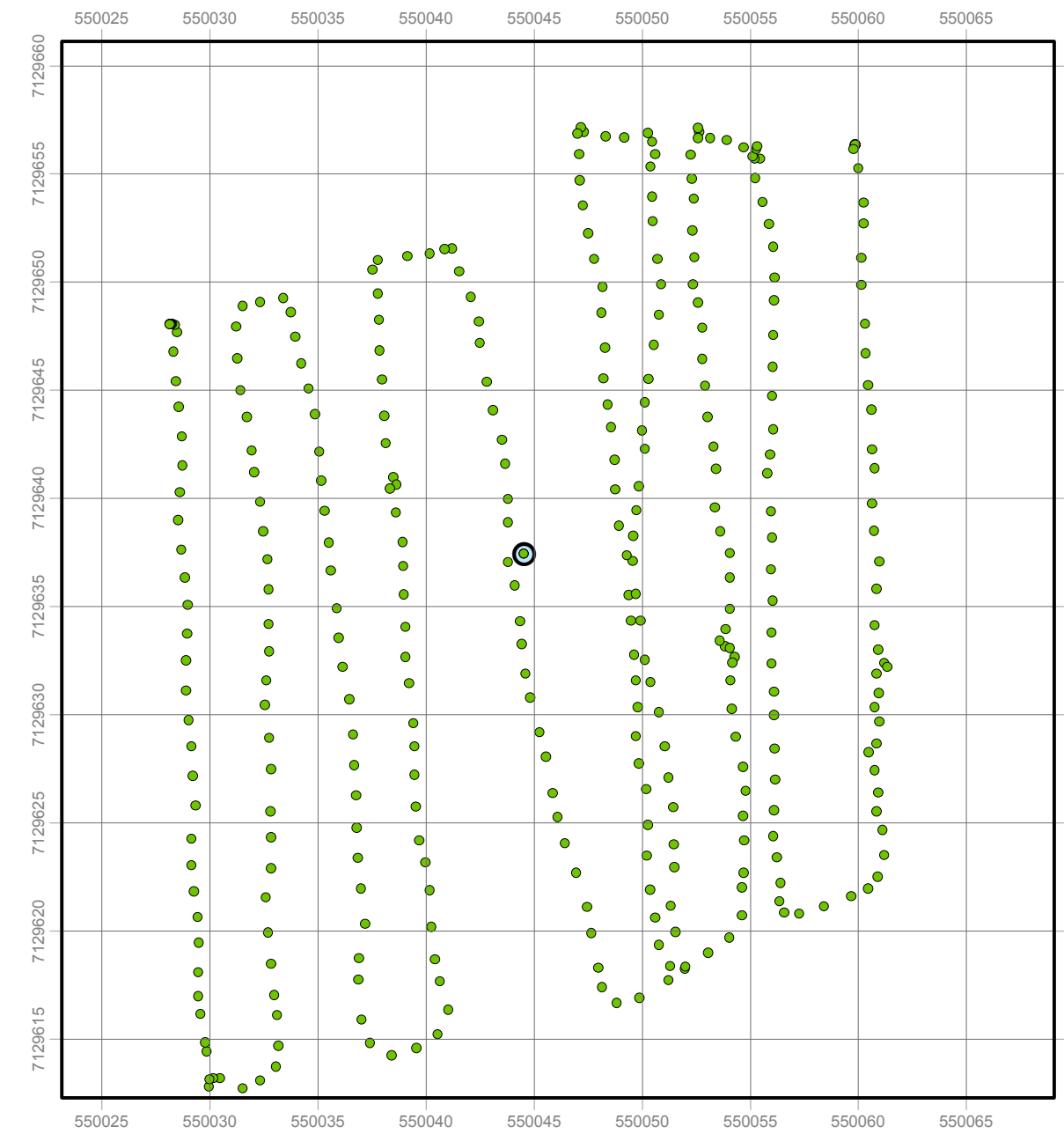


Legend

- Drill Hole
- 0.0 - 0.3 μSv
- 0.3 - 0.6 μSv
- 0.6 - 1.0 μSv
- 1.0 - 2.5 μSv
- > 2.5 μSv



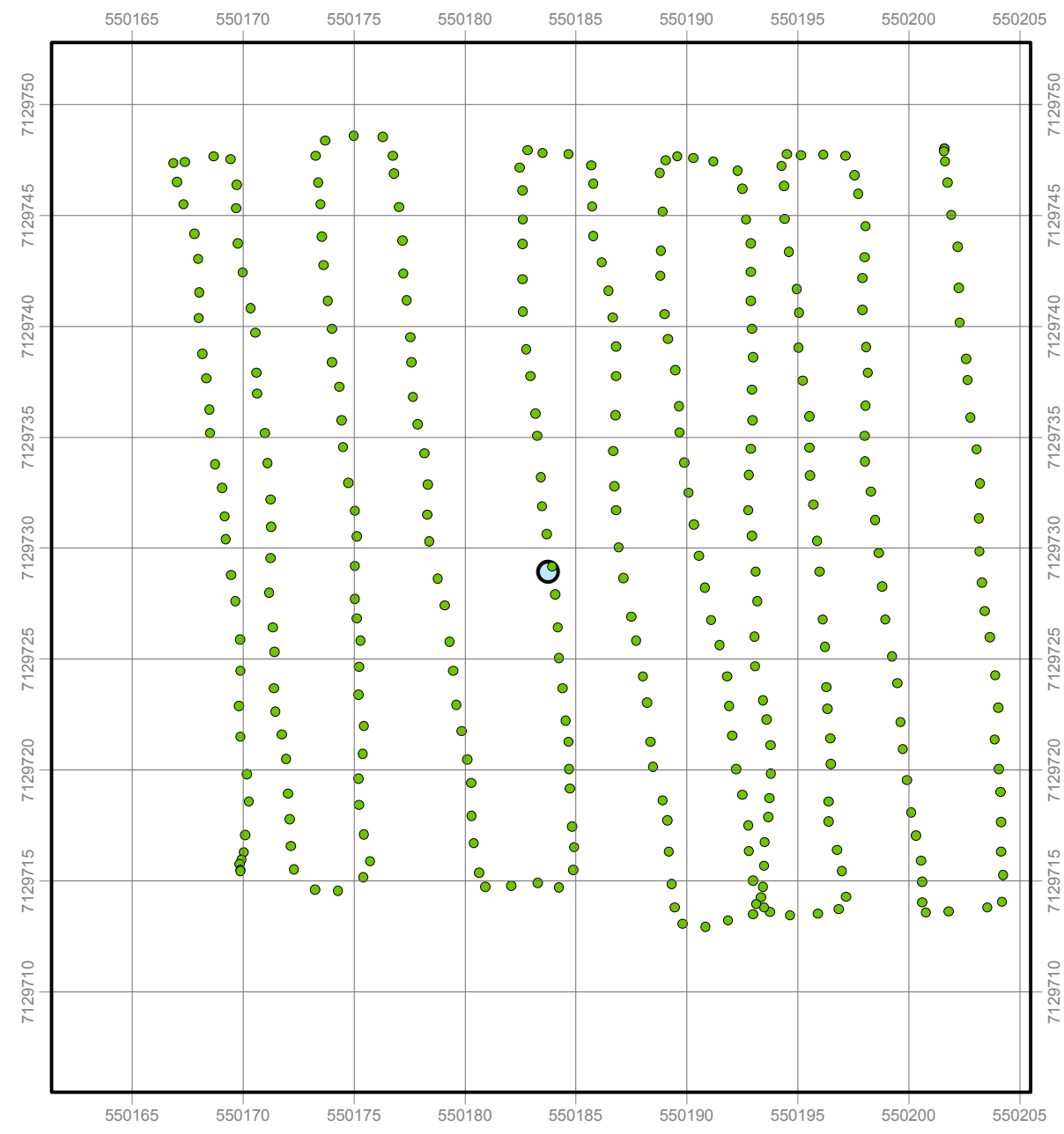
CONT 12
Pre Gamma Survey
 Point Count: 754
 Min-Max: 0.063 - 0.105 μSv



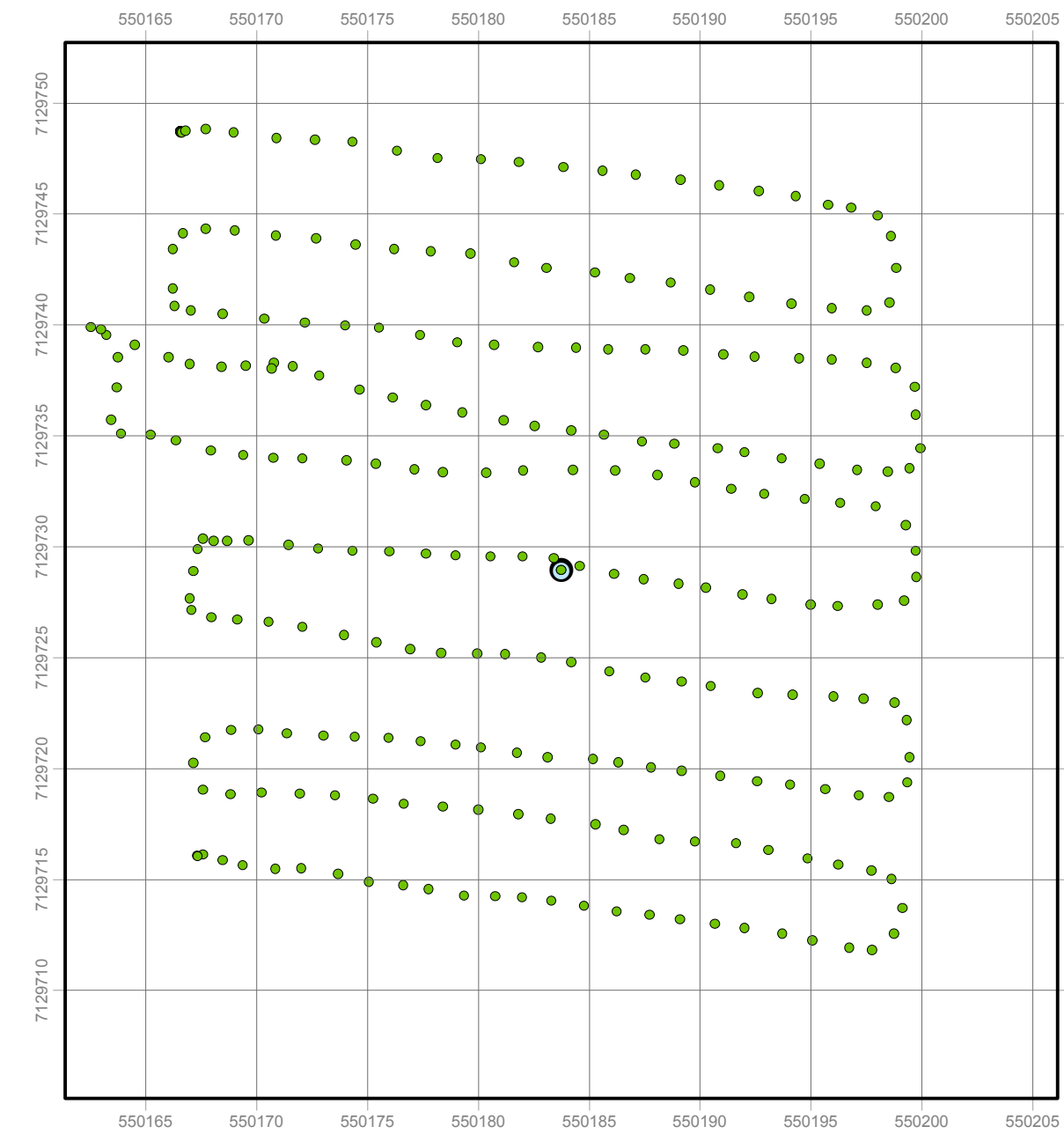
CONT 12
Post Gamma Survey
 Point Count: 351
 Min-Max: 0.066 - 0.118 μSv

Legend

- Drill Hole
- 0.0 - 0.3 μSv
- 0.3 - 0.6 μSv
- 0.6 - 1.0 μSv
- 1.0 - 2.5 μSv
- > 2.5 μSv



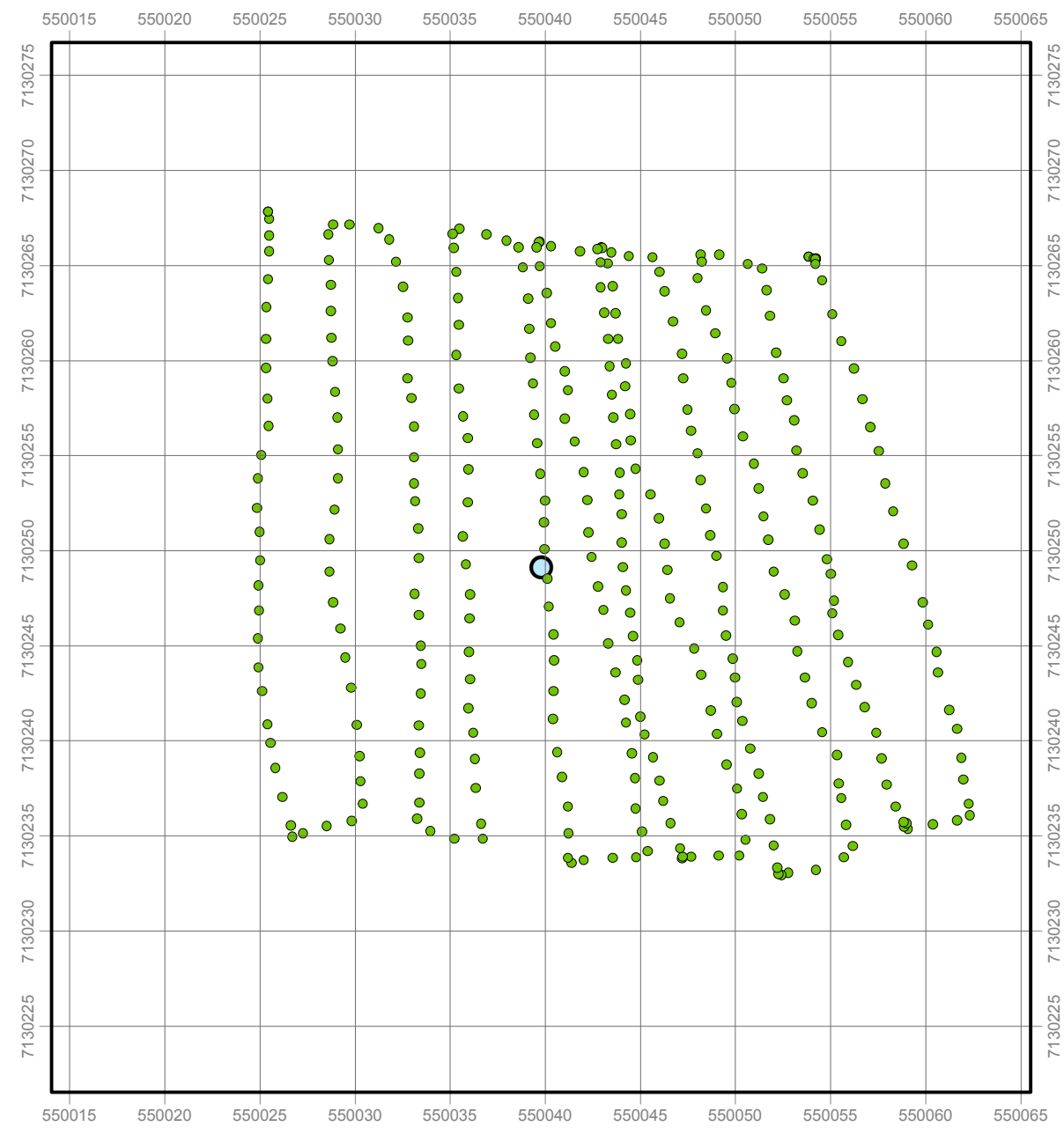
CONT 13
Pre Gamma Survey
 Point Count: 328
 Min-Max: 0.070 - 0.107 μSv



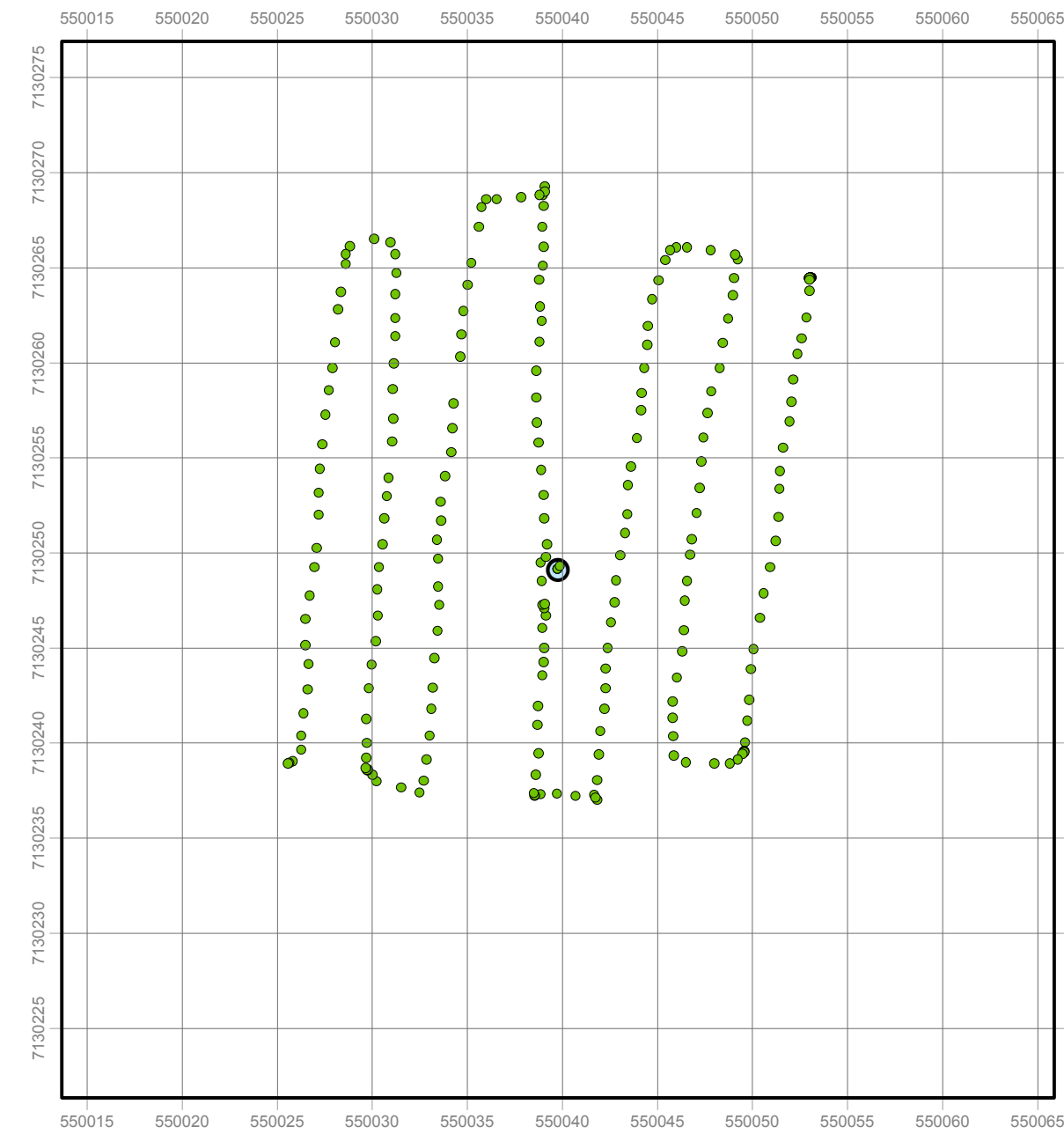
CONT 13
Post Gamma Survey
 Point Count: 258
 Min-Max: 0.075 - 0.143 μSv

Legend

- Drill Hole
- 0.0 - 0.3 μSv
- 0.3 - 0.6 μSv
- 0.6 - 1.0 μSv
- 1.0 - 2.5 μSv
- > 2.5 μSv



CONT 14
Pre Gamma Survey
 Point Count: 335
 Min-Max: 0.063 - 0.105 μSv



CONT 14
Post Gamma Survey
 Point Count: 236
 Min-Max: 0.068 - 0.114 μSv



Legend

Drill Hole

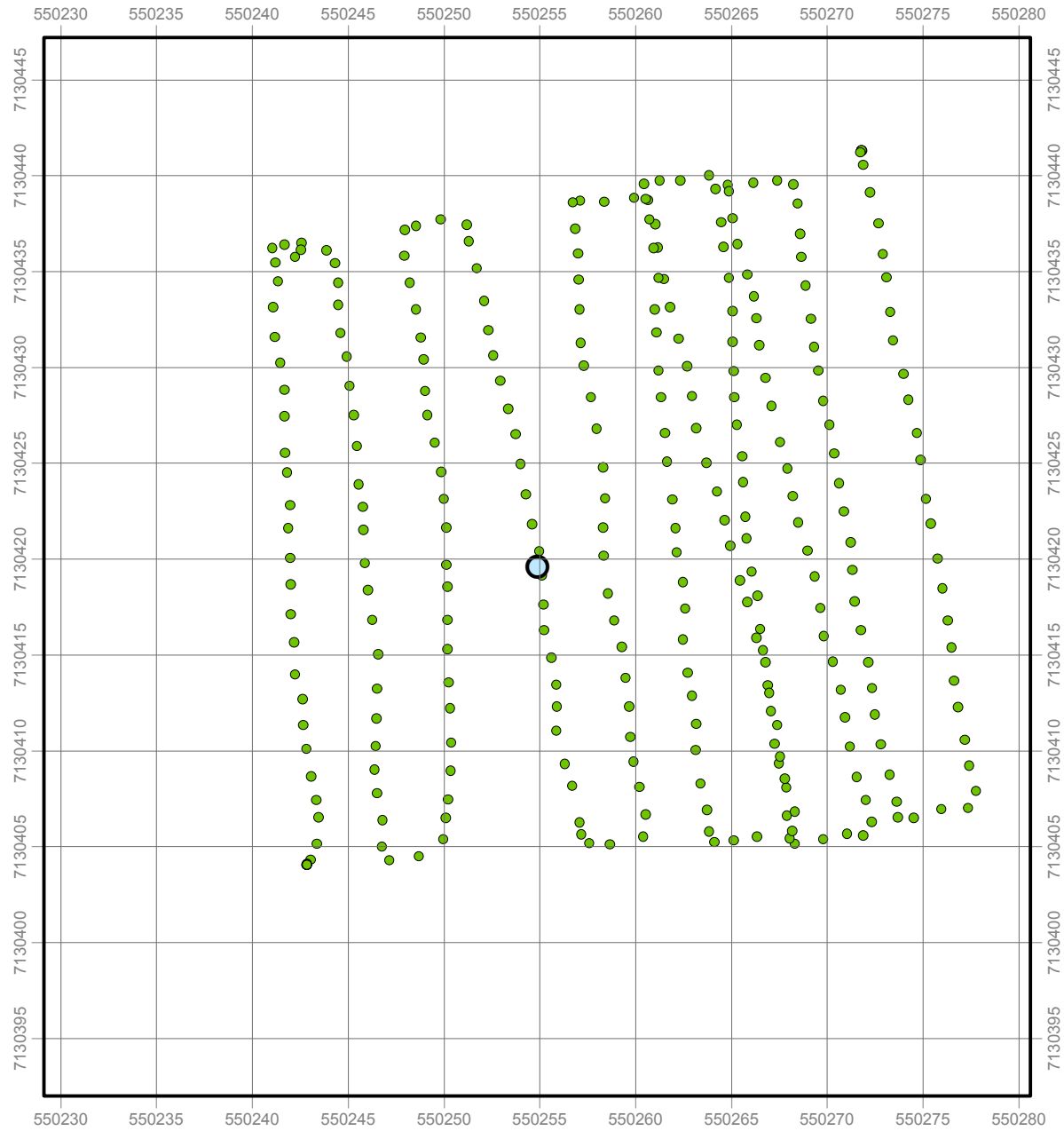
0.0 - 0.3 μSv

0.3 - 0.6 μSv

0.6 - 1.0 μSv

1.0 - 2.5 μSv

> 2.5 μSv

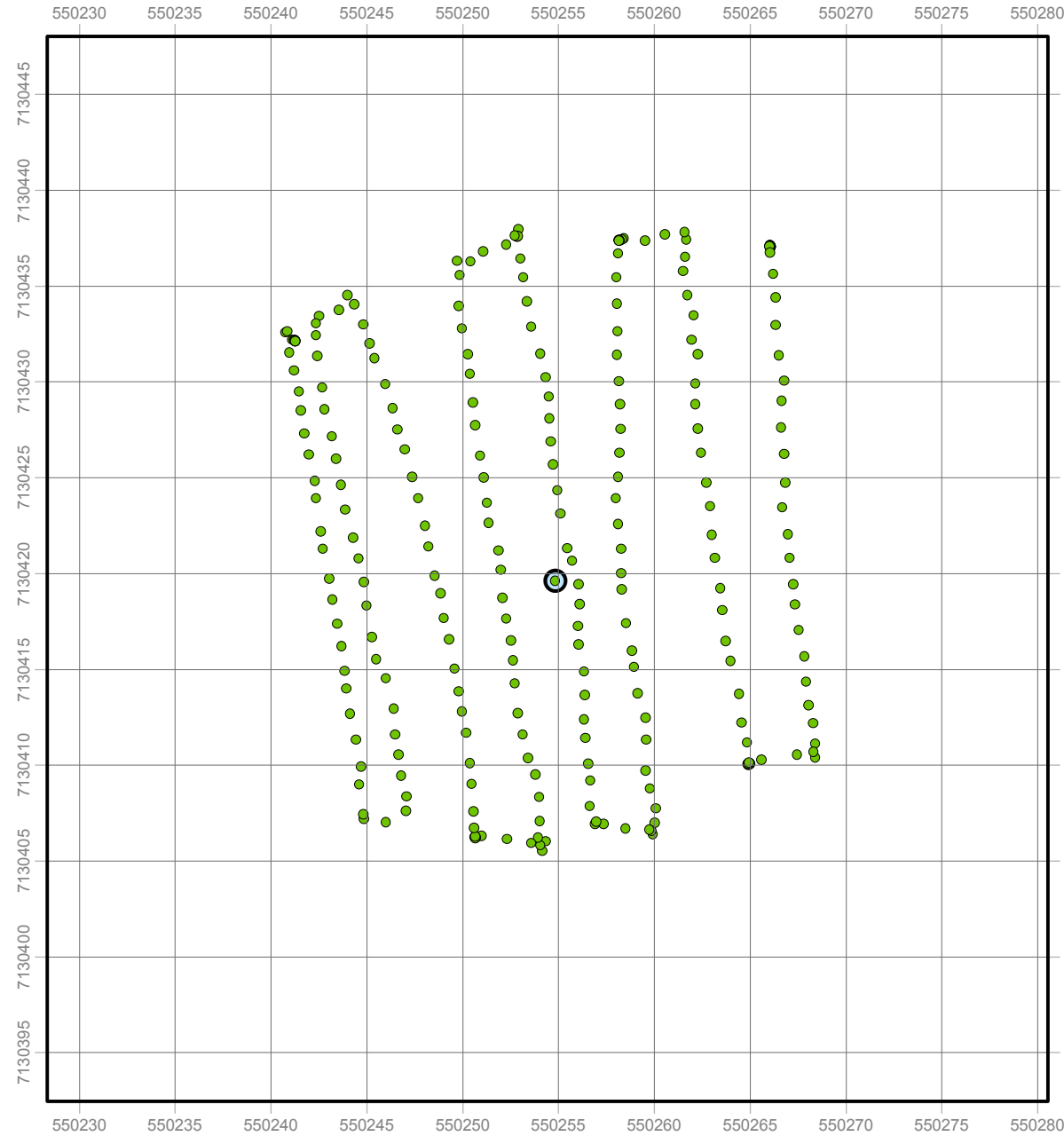


CONT 15

Pre Gamma Survey

Point Count: 314

Min-Max: 0.063 - 0.105 μSv



CONT 15

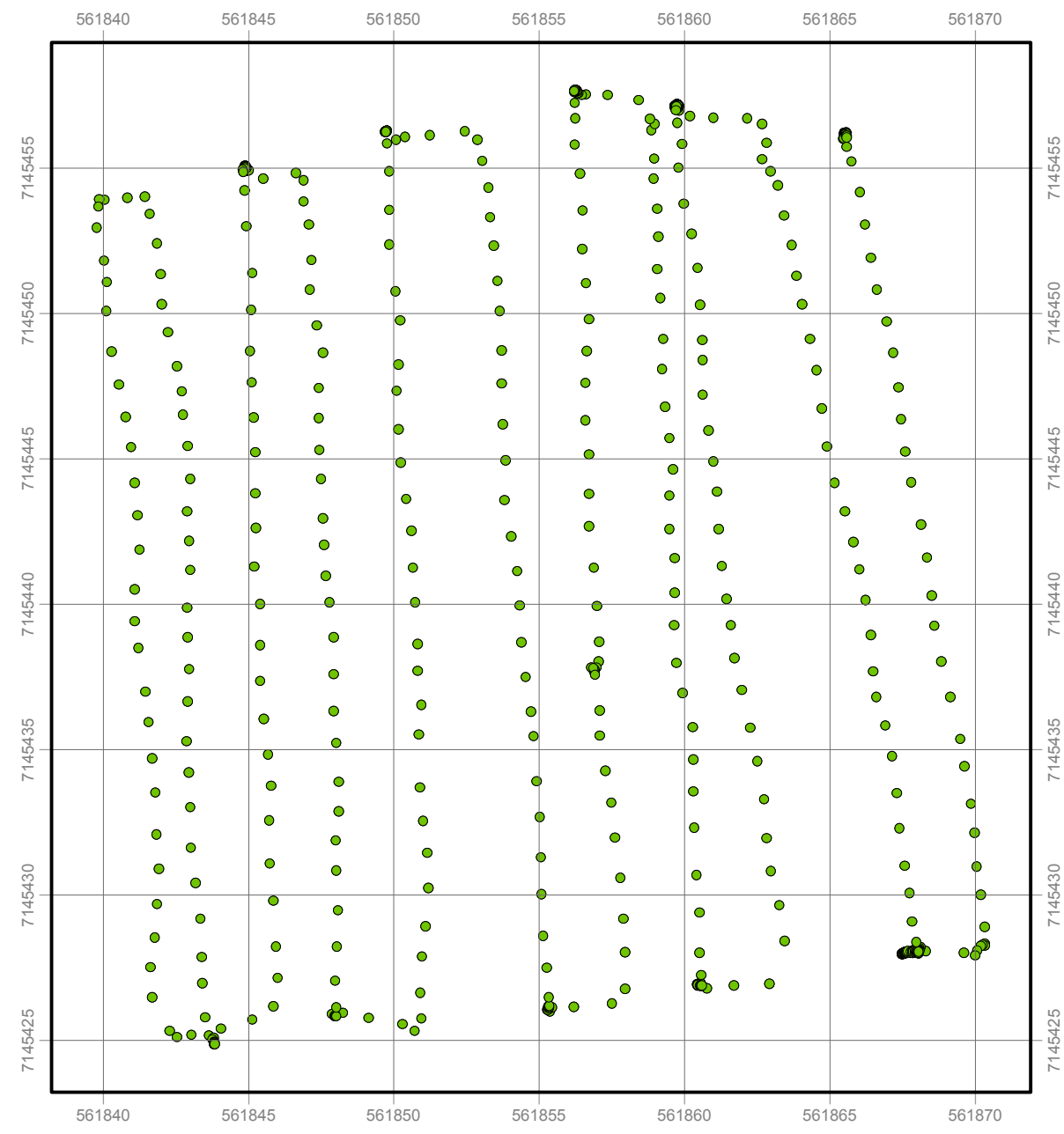
Post Gamma Survey

Point Count: 262

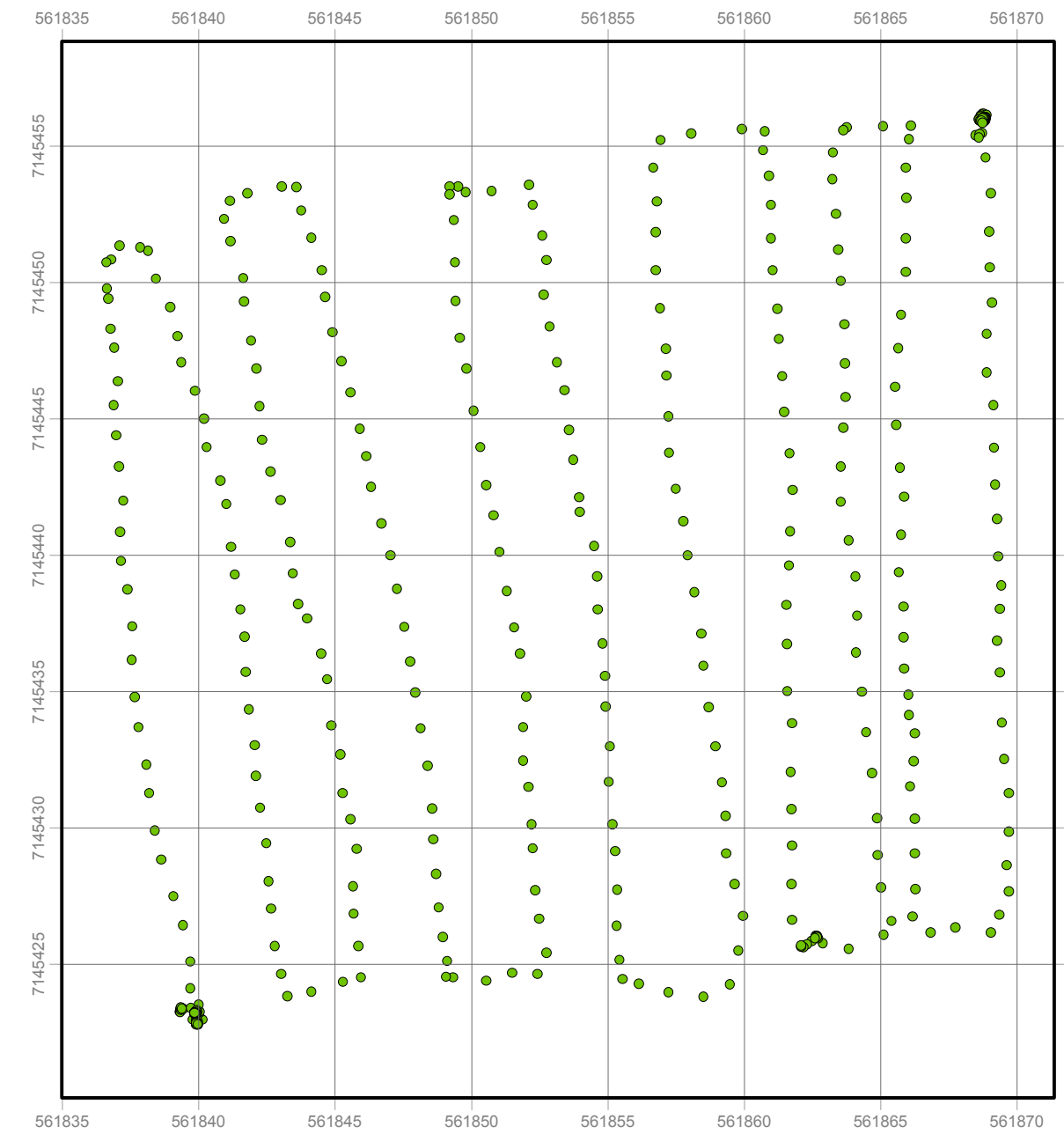
Min-Max: 0.065 - 0.102 μSv

Legend

- Drill Hole
- 0.0 - 0.3 μSv
- 0.3 - 0.6 μSv
- 0.6 - 1.0 μSv
- 1.0 - 2.5 μSv
- > 2.5 μSv



BN-03
Pre Gamma Survey
 Point Count: 1208
 Min-Max: 0.029 - 0.058 μSv



BN-03
Post Gamma Survey
 Point Count: 525
 Min-Max: 0.025 - 0.052 μSv



Legend

Drill Hole

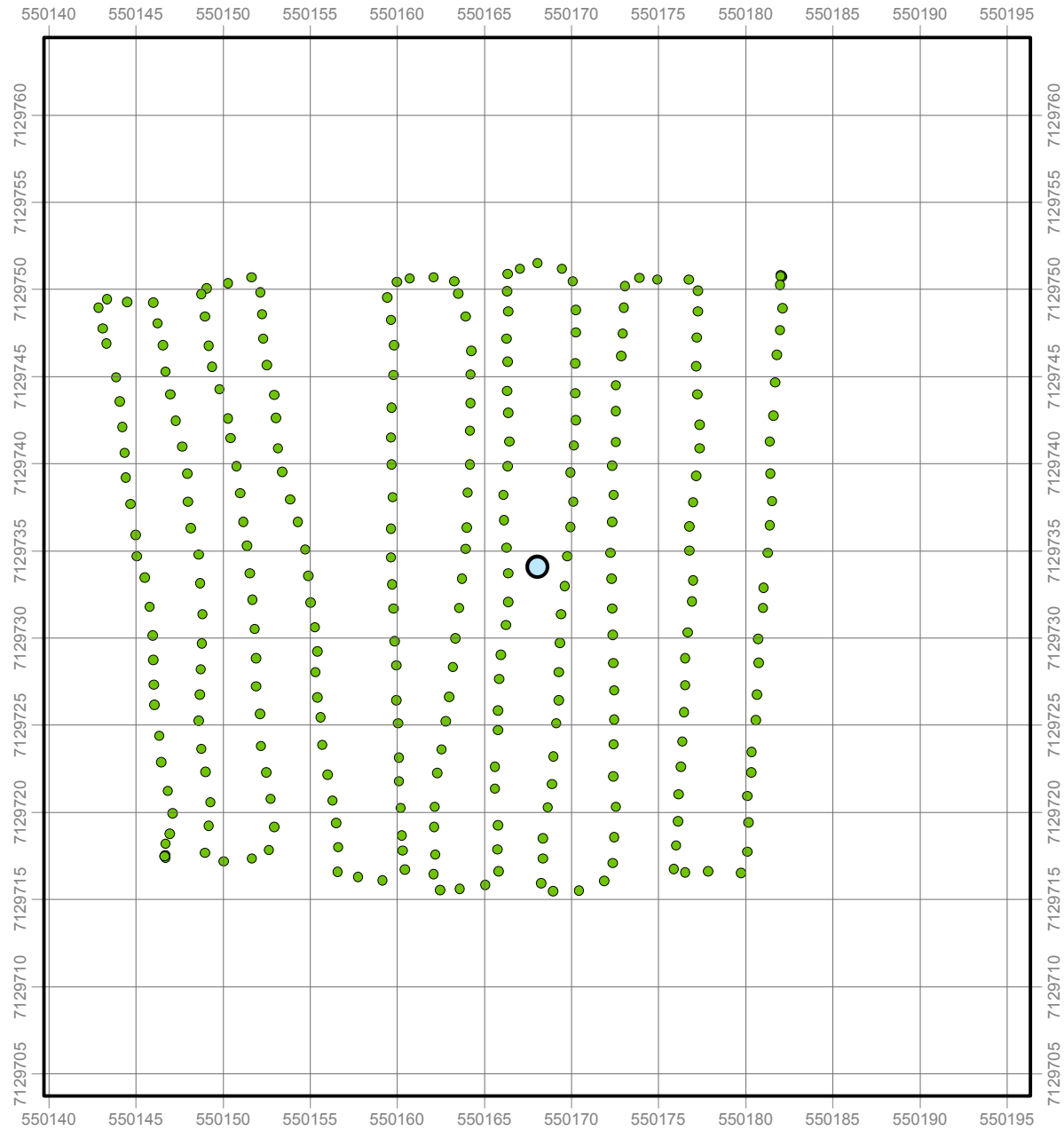
0.0 - 0.3 μSv

0.3 - 0.6 μSv

0.6 - 1.0 μSv

1.0 - 2.5 μSv

> 2.5 μSv

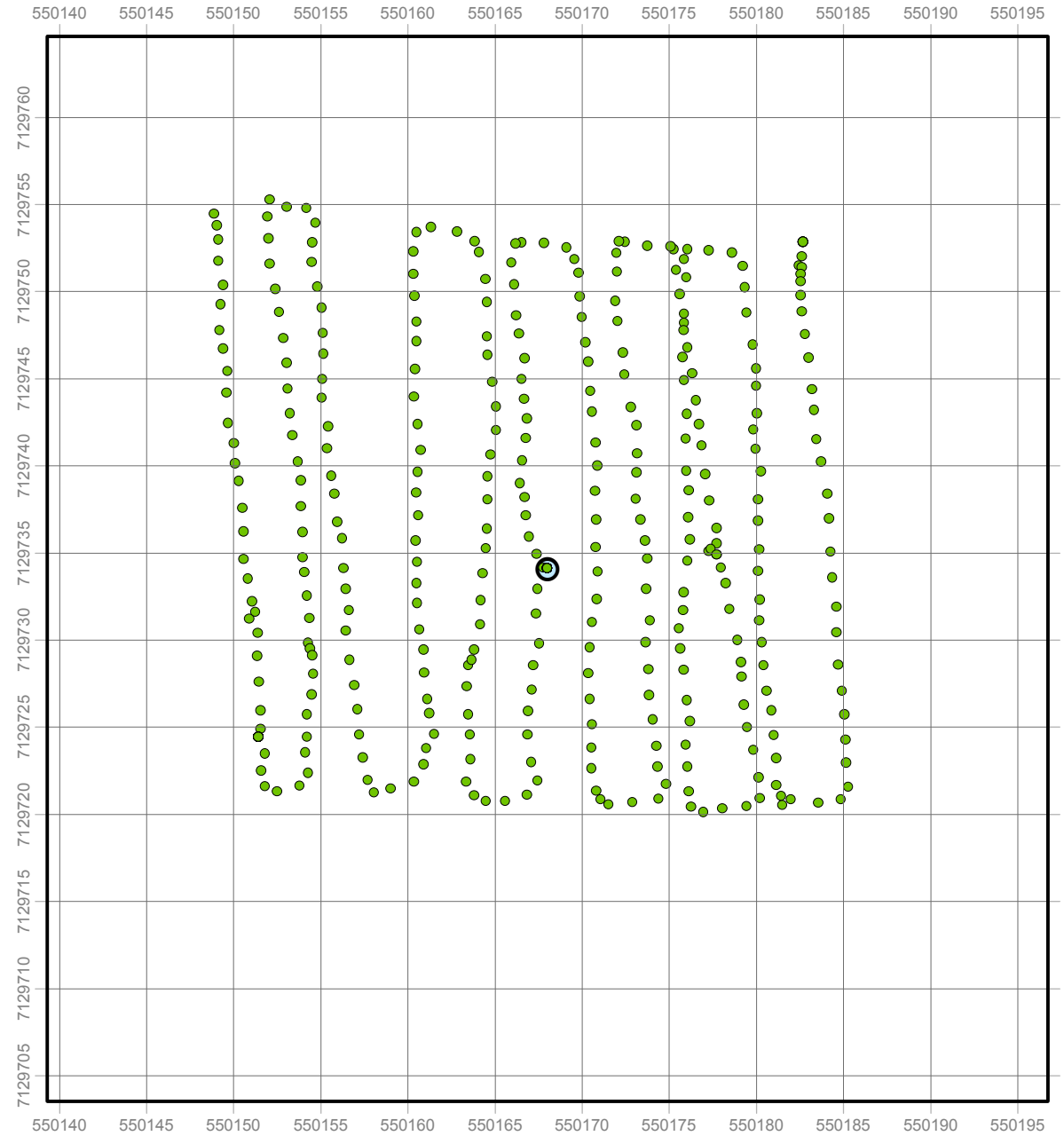


CONT 09

Pre Gamma Survey

Point Count: 285

Min-Max: 0.074 - 0.108 μSv



CONT 09

Post Gamma Survey

Point Count: 437

Min-Max: 0.063 - 0.109 μSv

Appendix C Management Plans

Abandonment and Restoration Plan

Noise Abatement Plan

Radiation Protection Plan

Spill Contingency Plan

Uranium Exploration Plan

Waste Management Plan

Wildlife Mitigation and Monitoring Plan



AREVA Resources Canada Inc.

Abandonment and Restoration Plan

Exploration Department

Kiggavik Project

Version 5


PIGA Unrestricted

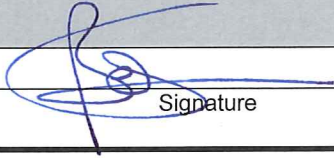
January 2015

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Editor:		
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Title	Name	Signature

Approver:		
Vice President, Exploration	Patrick Ledru	
Title	Name	Signature

History of Revisions

Version	Revision	Date	Details of Revision
1	0	March 2007	Original submission
2	0	October 2007	Updated to reflect changes in field activities/capabilities and areas of continual improvement
2	1	May 2008	Updated to reflect comments and conditions received by the Nunavut Water Board associated with the issuance of water licence no. 2BE-KIG0812
3	0	January 2009	Updated to reflect changes in field activities/capabilities and areas of continual improvement
4	0	January 2010	Updated to reflect changes in infrastructure
4	1	May 2011	Updated personnel titles and grammatical changes
4	2	May 2012	Updated to reflect personnel changes.
4	3	May 2013	Updated to reflect personnel title changes, update land ownership details, and input coordinates
4	4	May 2014	Updated infrastructure list and surface land administration
5	0	January 2015	Inclusion of greater detail for reclamation practices, waste disposal, and long-term drill core management. Reformatted to new template

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Acronyms and Abbreviations

Term	Definition
AANDC	Aboriginal Affairs and Northern Development Canada
AREVA	AREVA Resources Canada Inc.
A&R Plan	Abandonment and Restoration Plan
CLARC	Community, Land and Resources Committee
HTO	Hunters and Trappers Organization
KIA	Kivalliq Inuit Association
NWB	Nunavut Water Board
SHEQ	Safety Health Environment and Quality

1 Preamble

The AREVA Resources Canada Inc. (AREVA) Abandonment and Restoration Plan (A&R Plan) is in effect from the time licences and permits are issued to the expiry date. The A&R Plan applies to the Kiggavik Project located approximately 80 km west of Baker Lake, Nunavut.

1.1 Purpose and Scope

Abandonment and restoration considerations are on-going during the life of the project. Progressive reclamation provides an opportunity to reduce the extent of disturbed land over the life of the project.

The objectives of the A&R Plan are to:

- Protect public health and safety by using safe and responsible reclamation practices;
- Reduce or eliminate environmental effects, such as ground disturbance;
- Following cessation of project activities, re-establish conditions which permit the land to return to a similar pre-exploration land use; and
- Reduce the need for long term monitoring and maintenance by establishing physical and chemical stability of disturbed areas.

The A&R Plan complies with the conditions of permits, licences, regulations and industry standards. The following principles have been established to guide the development of the overall A&R Plan:

- Plan and implement in accordance with regulations;
- Apply cost effective and appropriate abandonment and reclamation practices to reduce environmental risks and allow for traditional use of the land;
- Implement progressive abandonment and reclamation as an integral part of the project; and,
- Incorporate new abandonment/reclamation methods and procedures, when applicable.

1.2 Revisions to Plan

The Abandonment and Restoration Plan is reviewed regularly and updated as required to keep the information current and consistent with regulatory and procedural changes. A History of Revisions can be found at the front of this Plan.

1.3 Responsibilities

The District Geologist, Nunavut is responsible to ensure that this plan is implemented, and the implementation may be completed by:

- Project Geologist
- Safety Health Environment and Quality (SHEQ) Supervisor or designate

The Vice President, Exploration is ultimately responsible for any activity being carried out by Kiggavik Project personnel.

2 Introduction

This A&R Plan applies to the Kiggavik Project which includes advanced exploration activities and occasional environmental work to support the environmental assessment process. AREVA is the operator of the Kiggavik Project with the head office located at the following address:

AREVA Resources Canada Inc.
P.O. Box 9204
817 – 45th Street West
Saskatoon, Saskatchewan S7K 3X5

2.1 Location

The Kiggavik Project includes 37 mineral leases covering 45,639 acres located in the Kivalliq Region of Nunavut. The surface rights for 31 mineral leases on Inuit Owned Land (IOL) are administered by the Kivalliq Inuit Association (KIA) while the remaining six mineral leases are on Crown land. The Crown land covers 3,794 acres of the Jane prospect of the south-west portion of the Project with surface rights administered by Aboriginal Affairs and Northern Development Canada (AANDC).

The St. Tropez area, wholly owned and operated by AREVA, is composed of 18 mineral claims covering 41,223 acres which will soon be converted to mineral leases. The surface rights are administered by the KIA.

There is a temporary exploration camp at the Kiggavik site which can accommodate approximately 60 people. The Kiggavik camp is located at the following coordinates:

- UTM 14W 564530 E 7146879 N
 - Latitude: 64° 26' 29" N
 - Longitude: 97° 39' 34" W

2.2 Schedule

The Kiggavik Camp is seasonally occupied, and supplies are brought to site by a local contractor on a winter road. The project site is secured and prepared for each seasonal shutdown following completion of exploration field program activities. Final restoration will commence once the exploration/feasibility programs have ceased.

No buildings, equipment or waste will remain beyond the expiration date of permits or licences (i.e., KIA Land Use Licence; AANDC Land Use Permit; NWB Water Licence), unless approvals have been obtained permitting the camp to remain. If unforeseen delays in permitting renewals occur, AREVA will consult with the agencies to arrange for an agreement regarding site infrastructure pending a permitting decision.

2.3 Infrastructure

The temporary camp was initially capable of accommodating approximately 32 persons in 2007, but was later expanded in 2008 and again in 2009 to accommodate approximately 60 people. Should it be required, further camp expansion and increased personnel would be discussed in permit applications prior to the field season. The camp currently consists of the following:

- One storage shed/back-up generator/shop
- One generator building (housing current generator)
- Helicopter storage/shop
- Three helicopter pads
- One washroom/dry building constructed with separate male/female facilities
- One kitchen with storage
- One wooden office
- 15 wooden sleeping units (one is a first aid shack)
- Wooden boardwalk throughout camp
- Five prospector tents (core logging tents)
- Three weather havens (2 for sleeping units, 1 for office)
- One mechanical services room
- Grey water collection area
- Industrial incinerator
- Core storage
- Radioactive materials storage compound
- Eight bulk fuel storage tanks (50,000 L capacity per tank)

There is a fuel esker containing two sheds and eight bulk fuel tanks. Three bulk tanks are for Jet-B fuel and five are for diesel fuel. Occasionally fuel drums within secondary containment may be stored at the esker.

Currently there is one shed and core storage located near Andrew Lake, and there is core storage at the Kiggavik site and Pointer Lake.

Future additions may include the following:

- New sleeping units
- Additional office space
- Additional core storage racks
- Small core logging sheds/tents

3 Seasonal Shutdown

3.1 Buildings, Contents and Equipment

Following the completion of each field program, equipment is either removed from site, or stored within buildings or sea containers to ensure they can withstand the winter season. Canvas tents are secured and braced internally so they can withstand snow and wind. All wooden buildings are secured with plywood over the windows and doors to prevent inadvertent opening. Pumps and hoses from the water system are drained and dismantled. Pumps may be removed from site for servicing or put into storage along with the hoses.

3.2 Fuel Cache and Chemical Storage

An inventory is conducted prior to leaving at the end of the field season to track the items that are removed or remain at site. A thorough inspection of all fuel caches is completed, and chemicals are removed from site for storage and or disposal. If any chemical products (CaCl_2) remain on site they are stored in secure buildings or sea containers.

3.3 Waste

The Waste Management Plan and Radiation Protection Plan detail waste handling and are in effect from the time the exploration licence is issued to the time it expires.

Combustible waste includes non-hazardous material and is burned in a Single Chamber Cyclonator Incinerator (Series CY1000) which remains on site for use each year. Incinerator ash is collected in drums and stored until shipped off-site to an approved handling facility.

The grey water from the kitchen and washroom facilities is diverted to the grey water collection sump area that is regularly inspected. The grey water sump consists of a barrel that was punctured with drainage holes and buried to allow drainage and filtration of the water.

3.4 Drill Equipment and Drill Sites

The drill is dismantled into its main components as per the drilling contractor procedure, packaged and secured along with its ancillary equipment and rods. The drill components may winter at site, be removed via the winter road or may be flown out by the drilling contractor. Any remaining waste is taken to camp to be burned or if required, flown off-site to an approved disposal location.

Where possible, residual radioactive materials accumulated during drilling are disposed of down the drill hole; however, where this is not practicable, radioactive drill cuttings are collected and stored in the existing radioactive storage compound for future handling, which may include transfer to an operating mine site. Where collected cuttings are non-mineralized, they are used to re-establish the physical stability of drill sites by levelling depressions that may have formed from permafrost thaw. Drill holes that encounter uranium mineralization with a uranium content greater than 1.0% over a length of more than 1 m with a meter percent concentration greater than 5% are sealed by cementing over the entire mineralization zone; this should be at least 10 m above and below each mineralization zone. Drill holes are sealed by cementing/grouting the upper 30 m of bedrock or the entire depth of the hole, whichever is less or otherwise approved of by the Nunavut Water Board (NWB) in writing.

Drill sites are inspected for fuel stained soil and undergo a radiation survey for radioactive contamination. Should contamination be encountered, the material will be collected and stored for disposal at a licensed facility. To achieve radioactive clearance for each drill site, the gamma dose at 1 m above ground must remain less than 1 micro-Sievert per hour ($\mu\text{Sv/h}$) above background radiation levels. Gamma radiation levels at 1 m from the surface of the core storage area should be reduced to 1 $\mu\text{Sv/h}$ above background and in no instances exceed 2.5 $\mu\text{Sv/h}$. Should the levels be exceeded, contact the AANDC Land Use Inspector for review and approval of handling procedures. If necessary, residual radioactive material may be transported to the McClean Lake Operation for storage and/or disposal.

It is AREVA's intention to reclaim disturbed sites in an adequate and acceptable manner. Proper reclamation techniques are currently being investigated and will be implemented under the direction and approval of experienced consultants, community members and regulatory agencies. Restoration work will be completed prior to the expiry of the land use licence. This will include but is not limited to reclaiming surface disturbance to promote the growth of vegetation. Further detail is provided in section 4.3.

3.5 Contamination Clean up

Any soil around camp that has become contaminated and was previously unnoticed is treated as per the Spill Contingency Plan. Before and after photos are taken to document the contamination and the clean-up. Clean-up will be conducted in accordance with Government of Nunavut's Department of Environment - Environmental Guideline for Site Remediation.

3.6 Inspection and Documentation

A full inventory and complete inspection of all areas are conducted prior to seasonal closure. Photos are taken to document the conditions prior to leaving the site for the winter. These photos are included in the annual report submitted to the NWB, AANDC and KIA and included in any required spill reporting.

4 Final Abandonment and Restoration

Unless further activities or development are anticipated, final abandonment and restoration will be completed upon cessation of the current exploration/feasibility program. The camp site, fuel caches, and drill sites will be reclaimed to a similar pre-exploration state with all wastes removed from site and any contamination treated as per the Spill Contingency Plan. Following completion of restoration, photos will be taken for submission in the final report.

4.1 Buildings, Contents and Equipment

As per the Waste Management Plan, non-treated wood products will be incinerated while the treated wood will be shipped off-site for proper disposal. Buildings in good structural condition will be offered to the community of Baker Lake or the Baker Lake Hunters and Trappers Organization (HTO). Those buildings that are not donated will be dismantled and removed or incinerated. All wooden helicopter pads will be burned or taken off site to an approved disposal facility. The soil around the helicopter pads and buildings will be inspected for contamination, and where the ground has not been altered, scarification will not be necessary. All equipment, including pumps, generators, etc. will be dismantled and removed from site. All wastes that are not incinerated will be removed from site and taken to an approved disposal facility. Shipping containers from site will be transported by winter road to Baker Lake before shipment to a licensed facility during the open water shipping season. A final inspection of the camp site area will be conducted to ensure that there is no waste left behind.

Where sumps were used, they will be properly back-filled at the end of the project and inspected to ensure that there is no leaching, run-off, or radiological and hydrocarbon contamination. Any contaminated material found will be treated as per the Spill Contingency Plan. Sumps will be back-filled and levelled as required and final photos will be taken.

4.2 Fuel Caches and Chemical Storage

The fuel drums, slip tanks, and 50,000 L EnviroTanks will be removed during final abandonment, and all areas used for caching fuel will be thoroughly inspected. Any contamination at fuel cache sites will be cleaned up as well as any debris removed. All chemicals will be removed from site. Areas where chemicals have been stored will be inspected to ensure that there has been no contamination. Should there be any soil contamination the soils will be tested for petroleum hydrocarbons (fraction F1 through F4) as per Canada-Wide Standards for Petroleum Hydrocarbons (PHC) in Soil (2001) and benzene, ethylbenzene, toluene and xylene as per Canadian Soil quality Guidelines for the Protection of Environmental and Human Health (2004). Any contaminated soil will be handled as prescribed by the Spill Contingency Plan. Final photos will be taken of all fuel caches for inclusion in the final report.

4.2.1 Fuel Cache Landing Esker

The esker located at the fuel cache has been used as a landing strip and will be inspected for surface disruption. If necessary, the landing strip will be restored to pre-use conditions to ensure site stability. This will be done using the skidder on site to re-level any areas of disruption. As there was no vegetation present, the area will be similar to pre-use condition following the leveling of the esker.

4.3 Drill Equipment and Drill Site Abandonment

The drill will be dismantled into its main components as per the drilling contractor procedure, packaged and secured along with its ancillary equipment and rods. The drill may be flown out by the drilling contractor or taken out overland during the winter.

During the course of drilling operations, all drill sites are inspected for radioactive or hydrocarbon contamination with any contaminated material being treated as per the Spill Contingency Plan. The remaining wastes will be incinerated if possible or transported to an approved disposal location.

To re-establish physical stability where drill sites show evidence of permafrost thaw, clean non-mineralized cuttings are used to level depressions. Where inadequate fill material is available, excess material from clean discharge areas or gravel may be used to fill depressions. AREVA personnel conduct regular inspections, and prior to final abandonment, AREVA will ensure that all drill sites are/have been restored and sumps have been covered and levelled. AREVA will implement progressive reclamation practices and incorporate new abandonment and/or reclamation methods and procedures, where applicable. To ensure site stability, AREVA is currently investigating reclamation techniques to return lands to a state similar to pre-exploration use.

Challenges surrounding physical reclamation of disturbed surfaces include lack of local knowledge or available information. To minimize the affected footprint and therefore the amount of required physical reclamation there is a focused effort on proper planning of infrastructure placement and drill sites. It was noted by some members of the Baker Lake Community, Land and Resources Committee (CLARC) that natural re-vegetation is the preferred reclamation method.

4.4 Drill Core Management

At the discretion of the surface holder, AREVA proposes to retain all drill core on site as the core represents a signature for the land and significant scientific value for the future title holder. This proposal is consistent with the *Saskatchewan Mineral Tenure Registry Regulations* and the *Territorial Land Use Regulations* which permit the retention of drill core at a drill site or

centralized core storage facility. The core represents decades of investment and holds the value of the land for development.

4.5 Inspection and Documentation

A complete inspection will be conducted of all areas prior to permanent closure and a final report prepared for all agencies. Photos will be taken to document the conditions prior to leaving the site and to document any contamination and resulting clean up. These photos will make up part of the final report to be submitted to the Water Resource Inspector; the annual report submitted to the NWB, AANDC and KIA and will be included in any required spill reporting. All agencies will be contacted and notified once the final cleanup has been completed. Agency contact information can be found in the Exploration Government Contact List of Appendix A (accessible for AREVA personnel at: [Q:\Exploration\IMS\006_Contacts](#)).

Appendix A Exploration Government Contacts

NUNAVUT/ NWT: LIST OF CONTACTS

Organization	Address	Contact	Position	Phone/Fax	Email	Website	Comment
Nunavut Tunngavik Incorporated (NTI)	Land and Resource Department Attention: Administrative Geologist Box 76	Keith Morrison Wayne Johnson	Administrative Geologist Senior Advisor, Minerals/Oil/Gas			www.tunngavik.com	***ADMINISTERS MINERAL DISPOSITIONS ON INUIT-OWNED SUBSURFACE LANDS IN NUNAVUT (includes some CRI lands but are grandfathered under DIAND)
Aboriginal Affairs and Northern Development Canada (AANDC)	Mining Recorder's Office/Land Administration Box 1500 4914 50TH ST, 5th Floor Yellowknife NT X1A 2R3			Phone (867) 669-2691 / 2692 (Mining Recorder) (867) 669-2671/73 (Surface Section: For maps showing surface rights) Fax: (867) 669-2714		www.aadnc-aadnc.gc.ca	***ADMINISTERS MINERAL DISPOSITIONS IN NWT (I.E. KRISTIN)
	Mining Recorder's Office Building 918 Box 100 Iqaluit, NU X0A 0H0			Phone (867) 975-4275 Fax (867) 979-6445			***EFFECTIVE 1 APRIL 2001, THIS OFFICE REPLACED THE YELLOWKNIFE OFFICE AS ADMINISTRATOR OF MINERAL DISPOSITIONS IN NUNAVUT (I.E. SISSONS / KIGGAVIK); ALSO HANDLES ALL PROSPECTOR LICENCES
	Land Administration Box 100 Iqaluit, NU X0A 0H0	Tracey McCaie	Manager, Land Administration	Phone (867) 975-4280 Fax (867) 979-6445	Tracey.McCaie@aadnc-aadnc.gc.ca		***EFFECTIVE 1 APRIL 2001, THIS OFFICE REPLACED THE YELLOWKNIFE OFFICE AS ADMINISTRATOR OF DIAND LAND USE PERMITS IN NUNAVUT (I.E. KIGGAVIK / SISSONS NON-DEPOSIT AREAS)
		Christine Wilson	Water Resources Officer	Phone 867-975-4296 Fax 867-979-6445	Christine.Wilson@aadnc-aadnc.gc.ca		For Spills of oil, fuel or other deleterious materials contact AANDC Water Resources Inspector (867) 979-4298 and the 24-Hour Spill Line (867) 920-8130
		Nicholas Kavanagh	Land Administrator Specialist	Phone (867)975-4283 Fax (867)975-4286	Nicholas.Kavanagh@aadnc.gc.ca		
		Rory MacDonald	Water Resources Technician	Phone (867) 975-4568	Rory.MacDonald@aadnc-aadnc.gc.ca		
		Henry Kablalik	Resource Management Officer III	Phone 867-645-2831	Henry.Kablalik@aadnc-aadnc.gc.ca		
Kivalliq Inuit Association (KIA)	Land Administration Box 340 Rankin Inlet, NU X0C 0G0	Luis Manzo	Director of Lands	Phone (867) 645-5731 Toll Free 1-800-220-6581 Luis emergency cell (204) 793-2944 Fax (867) 645-2348	Imanzo@kivalliqinuit.ca	www.kivalliqinuit.ca	
		Jeff Hart	Water & Marine Environment Specialist	Phone (867) 793-4468 Cell (902) 448-2821	landsbaker@kivalliqinuit.ca		
		Veronica Tattuinee	Lands Administrator	Phone (867) 645-5734	vtattuinee@kivalliqinuit.ca		
Nunavut Water Board (NWB)	BOX 119 Gjoa Haven, NU, X0B 1J0	Phyllis Beaulieu Sean Joseph	Manager of Licensing Technical Advisor	Phone (867) 360-6338 Fax (867) 360-6369	licensing@nunavutwaterboard.org sjoseph@nunavutwaterboard.org	www.nunavutwaterboard.org	***LICENCE INSPECTOR IS A WATER RESOURCES OFFICER FROM AANDC (NUNAVUT DISTRICT,
Nunavut Impact Review Board (NIRB)	P.O. Box 1360 (29 Mitik) Cambridge Bay NU, X0E 0C0	Sophia Granchinho Tara Arko Natasha Lear	Senior Technical Advisor Technical Advisor, A/Manager	Phone (867) 793-4633 867-983-4600 Phone: 867-983-4600 Fax (867) 983-2594	sgranchinho@nirb.ca Tara.Arko@nirb.ca info@nirb.ca	www.nirb.ca	*WILL SCREEN LAND USE LICENCE/PERMIT AND WATER LICENCE APPLICATIONS
Nunavut Planning Commission (NPC)	Keewatin Region Box 419 Arviat, NU X0C 0E0			Phone (867) 857-2242 Fax (867) 857-2243		www.npc.nunavut.ca	*WILL DETERMINE IF LAND USE LICENCE/PERMIT AND WATER LICENCE APPLICATIONS CONFORM WITH THE REGIONAL LAND USE PLANS
Environment Canada (EC)	NWT Division Environmental Protection Branch Yellowknife NT			Phone (867) 920-6060 Fax (867) 873-8185		http://www.ec.gc.ca	
Workers' Safety & Compensation Commission (WSCC)	Qamutiq Building, 2nd Floor Box 669 611 Queen Elizabeth Way Iqaluit NU X0A 0H0	Martin van Rooy	Mine Inspector / Engineer	(867) 979-8527 Toll Free (866) 979-8501 24/7 1-800-661-0792 Fax (867) 979-8501	Martin.vanRooy@wscc.nu.ca	www.wscc.nt.ca	*FOR COMPLIANCE CERTIFICATE RE BUSINESS LICENCES; OUR ACCOUNT # 15642
Government of Nunavut (GN)	Department of Environment - Wildlife Management Division Kivalliq Region Box 9 Baker Lake, NU X0C 0A0	Rob Harmer	Conservation Officer III	Phone (867) 793-2940/ 793-2944 Cell Phone (867) 222-0067 Fax (867) 793-2514	RHarmer@GOV.NU.CA	www.gov.nu.ca	(available 24/7 for emergencies/callouts) Require notification for fires
	Department of Environment Wildlife Management Division Government of Nunavut P.O. Box 9 Baker Lake, NU X0C 0A0	Russell Toolooktook	Conservation Officer II	Phone 867-793-2944	rtoolooktook@gov.nu.ca		(available 24/7 for emergencies/callouts) Require notification for fires
	Department of Environment PO Box 1000 Station 1310 Iqaluit, NU X0A 0H0	Conor Mallory	Project Manager, Impact Assessment	867-975-7749	cmallory1@gov.nu.ca		
	Department of Environment	Kristi Lowe	Environmental Compliance Manager	Phone (867) 975-7748 Cell (867) 222-0304	KLowe@GOV.NU.CA		Kristi Lowe is the primary contact for fires in camp. Fires should continue to be reported to the Wildlife Office in Baker Lake (CO) as well.

NUNAVUT/ NWT: LIST OF CONTACTS

Organization	Address	Contact	Position	Phone/Fax	Email	Website	Comment
	Department of Community and Government Services The Registrar Business Licensing Consumer Affairs Box 440 Baker Lake, NU X0C 0A0			Phone (867) 793-3303 Toll Free Phone: 1-866-223-8139 Fax (867) 793-3321			
NWT and NU Chamber of Mines	Box 2818 Suite 103, 5102 50 Ave Yellowknife NT X1A 2R1			Phone (867) 873-5281 Fax (780) 669-5681	info@miningnorth.com	www.miningnorth.com	
	Nunavut Office Box 1019 Unit 116, Tukturnuk Tower (8-Story) Astro Hill Complex Iqaluit, NU X0A 0H0			Phone (867) 979-5291 Fax (780) 669-5681			
NAPEGG: Association of Professional Engineers, Geologists & Geophysicists of the N.W.T.	#201, 4817 - 49TH ST. Yellowknife NT X1A 3S7			Phone (867) 920-4055 Fax (867) 873-4058		www.napegg.nt.ca	
Mackenzie Valley Land and Water Board	7th Floor - 4910 50th Avenue Box 2130 Yellowknife NT X1A 2P6			Phones (867) 669-0506 Fax (867) 873-6610		www.mvlwb.com	(in force, as at 1 february 2001) ***FOR KRISTIN PROJECT; LAND USE PERMIT, WATER LICENCE
Mackenzie Valley Environmental Impact Review Board	200 Floor, Scotia Centre 5102 50th Ave. Box 938 Yellowknife NT X1A 2N7			Phone (867) 766-7050 Fax (867) 920-4761		www.mveirb.nt.ca	
Government of Northwest Territories	Department of Municipal and Community Affairs The Registrar Business Licensing Directorate/Corporate Affairs 600, 5201 50th Ave Box 1320 Yellowknife NT X1A 3S9			Phone (867) 920-8059 Fax (867) 873-0152		www.maca.gov.nt.ca	



AREVA Resources Canada Inc.

Noise Abatement Plan

Exploration Department

Kiggavik Project

Version 4


PIGA Unrestricted


January 2015

Controlled Distribution List

Recipient	Copy No.
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Approval for Use

Editor:		
Exploration Safety Health Environment and Quality Supervisor	Naomi Stumborg	
Title	Name	Signature

Approver:		
Vice President, Exploration	Patrick Ledru	
Title	Name	Signature

History of Revisions

Version	Revision	Date	Details of Revision
1	0	March 2007	Original submission
2	0	October 2007	Updated to reflect changes in field activities/capabilities and areas of continual improvement
3	0	January 2009	Updated to reflect changes in field activities/capabilities and areas of continual improvement
3	1	May 2010	Updated to reflect changes in field activities/capabilities and areas of continual improvement
3	2	May 2012	Updated to reflect personnel changes. Made consistent with other Plans.
3	3	May 2013	Updated to reflect personnel titles
4	0	January 2015	Revisions for increased clarity and updated template

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 - 1.2 Responsibilities..... 1-1
- 2 Activities Requiring Noise Reduction..... 2-1**

Acronyms and Abbreviations

Term	Definition
AREVA	AREVA Resources Canada Inc.
SHEQ	Safety Health Environment and Quality
WMMP	Wildlife Mitigation and Monitoring Plan

1 Introduction

This Noise Abatement Plan will be in effect for the duration of the Kiggavik Project and associated activities. The Project is located approximately 80 km west of Baker Lake and is operated by AREVA Resources Canada Inc. (AREVA).

The Kiggavik camp is a temporary fly-in camp that is seasonally occupied. Exploration activities and occasional environmental studies take place during the summer months. Supplies to operate the camp and field program are moved overland in the winter months. Mobilization of personnel and camp opening typically takes place the end of May or early June, with the site closed and personnel demobilized by September of each year. Noise generation is expected during camp opening and close, throughout exploration operations, and during the winter road use.

Noise controls and abatement serve a combination of environmental and occupational health and safety purposes. The focus of this abatement plan is on control of environmental noise for the protection of wildlife.

1.1 Revision to Plan

The Kiggavik Noise Abatement Plan is reviewed regularly and updated as required to keep the information current and consistent with regulatory and procedural changes. A History of Revisions can be found at the front of this plan.

1.2 Responsibilities

The District Geologist, Nunavut is responsible to ensure that this plan is implemented. Implementation may be completed by:

- Project Geologist
- Safety Health Environment and Quality (SHEQ) Supervisor
- Or designate

The Vice President, Exploration is ultimately responsible for any activity being carried out by Kiggavik Project personnel.

2 Activities Requiring Noise Reduction

Small amounts of noise are generated during regular camp activities; however this plan has been developed specifically for drilling rigs, generators, vehicles and aircraft (fixed-wing and helicopters) which are the main contributors of noise during exploration operations. To decrease the amount of noise, the following are implemented:

- Drilling rigs are equipped with mufflers or other appropriate noise abatement equipment;
- Generators are equipped with mufflers; and
- ATVs are equipped with mufflers

To reduce aircraft noise, altitude restrictions are put in place as described in the Wildlife Mitigation and Monitoring Plan (WMMP). During long range flights (i.e., Baker Lake to Kiggavik site) aircraft fly at a minimum of 610 m above ground level, except during take-off and landing, when ceiling conditions do not permit or when safety risks arise. For relatively shorter transportation flights (e.g., movement of staff and equipment between camp and work areas) aircraft fly at a minimum of 300 m above ground level, except during take-off and landing, when ceiling conditions do not permit, or when safety risks arise. Low-flying flights may need to be conducted at lower altitudes for geophysical surveys, but these surveys are preceded by reconnaissance survey as described in the WMMP. As per the WMMP, all activities are suspended if 50 or more caribou are within 2 km of the activity and aircraft do not land within 1 km of a herd.



AREVA Resources Canada Inc.

Radiation Protection Plan

Exploration Department

Kiggavik Project

Version 6 Revision 3


PIGA Unrestricted

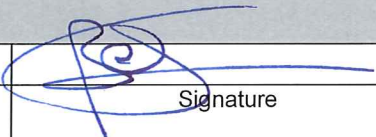
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History of Revisions

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1	0	March 2007	Original submission
2	0	October 2007	Update to reflect changes in field activities/capabilities and goals of continual improvement
3	0	August 2008	Update to reflect changes in field activities/capabilities and goals of continual improvement
4	0	January 2009	Update to reflect changes in field activities/capabilities and goals of continual improvement
5	0	January 2010	Update to reflect changes in field activities/capabilities and goals of continual improvement
5	1	May 2011	Updated to reflect changes in personnel position titles.
6	0	June 2012	Updated to reflect changes in personnel titles and positions. Grammatical corrections.
6	1	May 2013	Updated to reflect changes in personnel titles
6	2	May 2014	Updated to align with the Exploration IMS Manual
6	3	January 2015	Improved formatting and minor edits for clarity

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Acronyms and Abbreviations

Term	Definition
ALARA	As Low as Reasonably Achievable
AREVA	AREVA Resources Canada Inc.
CNSC	Canadian Nuclear Safety Commission
IMS	Integrated Management System
NORM	Naturally Occurring Radioactive Materials
SHEQ	Safety Health Environment and Quality
TDG	Transportation of Dangerous Goods
WSCC	Workers' Safety and Compensation Commission

1 Introduction

This AREVA Resources Canada Inc. (AREVA) Radiation Protection Plan will be in effect for the duration of the Kiggavik Project located about 80 km west of Baker Lake. The Radiation Protection Program has been prepared to meet the requirements of the Nunavut Occupational Health and Safety Regulations, Mineral Exploration best practices, and the AREVA Corporate Integrated Management System (IMS). Although current activities are not regulated by the Canadian Nuclear Safety Commission (CNSC), the Radiation Protection Plan is designed in accordance with the CNSC Regulations.

The Radiation Protection Plan includes the following administrative elements:

- Program documentation
- Training
- Designation of Occupational Workers
- Dose limits and dose levels
- Obligations of Occupational Workers
- Pregnant Occupational Workers

The Radiation Protection Plan includes the following program elements:

- Exposure As Low as Reasonably Achievable (ALARA)
- Radiological monitoring
- Dosimetry monitoring
- Management of radioactive materials
- Shipping of radioactive materials
- Site abandonment and restoration
- Emergency response

1.1 Revisions to Plan

The Kiggavik Radiation Protection Plan is reviewed regularly and is updated as required to keep the information current and consistent with regulatory and procedural changes. A History of Revisions can be found at the front of this plan.

1.2 Responsibilities

The District Geologist, Nunavut is responsible to ensure that this plan is implemented. Implementation may be completed by:

- Project Geologist
- Safety, Health, Environment and Quality (SHEQ) Supervisor
- Or designate

The Vice President, Exploration is ultimately responsible for any activity being carried out by Kiggavik Project personnel.

2 Administrative Elements

2.1 Program Documentation

The Radiation Protection Program is comprised of a series of key documents, which include the Routine Radiological Monitoring Schedule and procedures for Shipping Radioactive Material. The Radiation Protection Program includes comprehensive work instructions for worker dosimetry, radiological monitoring and the safe handling of radioactive materials.

To ensure occupational exposures are managed in accordance with the ALARA principle, radiological parameters are monitored against defined Action and Administrative levels. The Action and Administrative levels define values of radiological parameters above which intervention may be required and the corresponding mitigative measures to be followed.

2.2 Training

AREVA provides necessary training to all its employees and contractors to ensure worker safety and protection of the environment during exploration activities. The training programs provided are designed to meet the requirements of the CNSC *Uranium Mines and Mills Regulations*, Workers' Safety and Compensation Commission (WSCC) requirements under the *Mine Health and Safety Act and Regulations*, *ISO 14001:2004 and OHSAS 18001:2007*.

All new employees, including contractors, receive appropriate radiation protection training prior to beginning work. This includes instruction on the origins of ionizing radiation, the types of radiation, health risks, and the principles of radiation safety, protection and regulatory compliance. Training also includes the safe handling, management and disposition of radioactive materials such as drill muds, cuttings, and radioactive core. Training may be in the form of a PowerPoint presentation or interactive display.

All visitors at the Kiggavik site for more than 72 hours, or who will be left without an escort will receive radiation protection training. Visitors who have not received training must be escorted on site at all times.

Personnel supervising the shipment of radioactive materials must possess a valid TDG certificate in accordance with Transport Canada *Transportation of Dangerous Goods Regulations*. If radioactive materials are to be transported by aircraft, TDG training is to include the necessary aviation components for Class 7 materials. If contractors have their own training program they must submit their documentation. Support personnel providing assistance during

preparation and shipment of radioactive material do not require TDG training as long as they are working under the direct supervision of trained individuals.

AREVA field personnel and contractors establishing temporary work camps and/or handle fuel, lubricants and radioactive material require spill response training. If the contractors have their own training program they must submit evidence of the training program as per *EXP-820, Training, Awareness and Competence*. Training for AREVA employees is provided in accordance with the Spill Contingency Plan. The Spill Contingency Plan is provided to Contractors, and should the contractors not have an acceptable training program in place, AREVA will supply the training material and/or provide the training as required.

2.3 Occupational Workers

Workers exposed to Naturally Occurring Radioactive Materials (NORM) as a result of their regular duties are designated as occupationally exposed workers for exploration projects. The designation of a person as an Occupational (NORM) Worker is conducted in accordance with *EXP-740-01, Occupational Worker Assessment*.

2.3.1 Dose Limits and Dose Levels

An Occupational Worker is informed of the risks associated with radiation to which the worker may be exposed in the course of their work, and the applicable dose limits, during radiation protection training. Occupational Workers are limited to a maximum annual effective dose of 50 mSv in a one year dosimetry period, not to exceed 100 mSv in a five year dosimetry period (or 20 mSv/year over five years). Administrative control levels have been defined in *EXP-740-03, DRD Usage/Action and Administrative Levels for Gamma Radiation* to limit dose. Administrative levels are set to less than 0.01 mSv per day and less than 0.05 mSv per week. An Action level is set to 5 mSv per quarter. In the event of an emergency and the consequent immediate and urgent remedial work, the effective dose shall not exceed 500 mSv. A pregnant Occupational Worker is limited to 4 mSv for the balance of the pregnancy once notification has been made to the employer. The relaxation of normal dose limits in emergency situations does not apply to pregnant workers. Occupational Workers are informed of their radiation dose levels in writing, annually.

2.3.2 Obligations of Occupational Workers

AREVA Exploration workers deemed to be Occupational Workers are obligated to provide information required to identify them to the National Dose Registry (i.e. given name, surname, previous surname, SIN, gender, date and province and country of birth) by completing *EXP-740-01-01, Employee Information Form*.

2.3.3 Pregnant Occupational Workers

Occupational Workers are informed during training of the risks associated with radiation to which the worker may be exposed in the course of their work during orientation training. Occupational Workers are informed of their obligation to inform their employer when they become pregnant and are informed of the applicable effective dose limit of 4 mSv for the balance of the pregnancy.

3 Program Elements

3.1 ALARA

Radiation protection has its foundation in the As Low As Reasonably Achievable (ALARA) principle. The commitment to maintain worker doses ALARA is established through AREVA's Radiation Protection policy. This policy is established by senior management and is approved by the President and Chief Executive Officer. This Plan and the Radiation Protection Procedures follow the ALARA principle.

3.2 Radiological Monitoring

Routine radiological monitoring consists of dosimetry monitoring and contamination control. Dosimetry monitoring is conducted to determine and document worker exposures to radiological components which include gamma radiation, radon progeny (RnP) and long-lived radioactive dusts (LLRD). Contamination control measures are in place to minimize the spread of radioactive materials into unintended locations. Radiological monitoring is conducted in accordance with the *EXP-740, Routine Radiological Monitoring Schedule* and associated work instructions.

3.3 Management of Radioactive Materials

3.3.1 Radioisotopes

Nuclear materials and radiation devices are used for exploration and instrument calibration. The possession, use, storage, and disposal of nuclear materials and radiation devices are carried out in strict accordance with *CNSC Nuclear Substances and Radiation Devices Regulations* and *EXP-752-02 Safe Handling and Use of Exploration Sources*. The radioisotopes are licensed under the McClean Lake Operating Licence.

3.3.2 Core Storage

In the absence of territorial mineral exploration regulations, the storage and disposal of radioactive materials arising from project activities are to be carried out in accordance with Saskatchewan *Mineral Industry Environmental Protection Regulations, 1996*.

Permanent and long-term storage areas of radioactive material must be located at least 30 m from the main camp and at least 100 m from the high water mark of all water bodies.

As required by Aboriginal Affairs and Northern Development Canada (AANDC), the gamma radiation dose rates at 1 m from the surface of a storage area should be reduced to 1 $\mu\text{Sv/h}$ and in no instances exceed 2.5 $\mu\text{Sv/h}$. Should the levels be exceeded, the Land Use Inspector must be contacted. Radioactive storage areas must be appropriately labelled with radiation warning signs and fenced.

3.3.3 Disposition of Drill Cuttings

During drilling activities, drill mud solids or cuttings in non-mineralized zones are deposited on the ground, in a selected natural low-lying depression. This natural depression must be located, at a minimum, 31 m beyond the ordinary high level water mark of any nearby water bodies, and where direct flow into the water body is not possible. A radiological survey is conducted before and after drilling to ensure elevated readings are not occurring. If necessary, depressions are backfilled and contoured, as much as possible, back to natural pre-existing conditions.

When mineralized core is intercepted, drill mud and cuttings are collected in appropriate containers and categorized as radioactive through appropriate radiation measurements. Drill mud or cuttings with uranium content greater than 0.05% will be collected and stored at the radioactive storage compound with an appropriate containment system in place. Down hole disposal of cuttings is not often practical at Kiggavik. Drill holes are sealed by cementing/grouting the upper 30 m of bedrock or the entire depth of the hole, depending on the presence of mineralization or otherwise approved of by the appropriate regulatory agencies in writing.

3.4 Shipping of Radioactive Materials

Shipping and receiving radioactive material is carried out in accordance with the CNSC *Packaging and Transport of Nuclear Substances Regulations*, the Transport Canada *Transportation of Dangerous Goods Regulations*, and the AREVA EXP-752 *Shipping Radioactive Material procedure* and work instructions. Kiggavik personnel trained in the International Air Transport Association (IATA) *Dangerous Goods Regulations* complete the packaging and shipment of radioactive materials.

3.5 Site Abandonment and Restoration

Site abandonment and restoration is carried out in accordance with the Abandonment and Restoration Plan. Gamma radiation surveys are conducted at each site prior to drilling and prior to final abandonment. Contaminated soil or cuttings are collected in appropriate containers and stored in the radioactive storage compound for future handling, which may include transfer to an operating mine site. Drill sites are cleaned to ensure that the gamma dose rate at a height of 1 m from surface is less than 1 $\mu\text{Sv/h}$ above ambient background.

Materials and equipment leaving the Kiggavik site are monitored for contamination in accordance with the *EXP-740, Routine Radiological Monitoring Schedule*. Materials or equipment that cannot be decontaminated to meet unrestricted release criteria are either stored in the radioactive storage compound or shipped to a licensed facility such as the McClean Lake Operation in accordance with the CNSC *Packaging and Transport of Nuclear Substances Regulations*, the Transport Canada *Transportation of Dangerous Goods Regulations*, and the AREVA *EXP-752 Shipping Radioactive Materials* procedure and work instructions.

3.6 Emergency Response

Emergencies could include such incidents as spills, lost or damaged radioactive sources and transportation incidents. Emergencies involving radioactive materials are responded to in accordance with the Emergency Response Manual. In the event of an incident involving radioactive material, immediate actions are taken to minimize worker exposures. In the event of any incident involving radioactive material, the SHEQ Supervisor or designate is notified immediately, and the incident is reported to the Vice President, Exploration within 24 hours and appropriately investigated. Emergency response is co-ordinated through the corporate Emergency Response and Assistance Plan (ERAP) that details the organization, responsibilities, procedures and mitigative measures to be followed in the event of an offsite emergency involving the transport of radioactive material. Environmental emergencies are secondary to the safety of personnel. In the event of any incident involving a radiation source, federal and territorial agencies are notified in accordance with applicable regulations.

The uncontrolled or accidental release of any radioactive materials including drill mud solids and cuttings is considered a spill. Spills of radioactive material are appropriately reported and responded to in accordance with the Spill Contingency Plan. In the event of a spill, radioactive materials are collected and necessary site remediation undertaken to meet the site abandonment criteria of less than 1 $\mu\text{Sv/h}$ above background at a height of 1 m. In accordance with the Spill Contingency Plan, in the event of a spill involving radioactive material, actions are taken to contain the spill, limit the spread of contamination and to control access to the spill area. Appropriate radiological and dosimetry monitoring is performed to ensure worker doses remain ALARA. Mitigation measures to be followed include recovery of radioactive material and decontamination of affected areas. Material collected during the clean-up is stored in appropriate containers in the radioactive storage compound for future handling.

In the event a radiation source is damaged, it is removed from service immediately and stored in a secure location. The removal of a damaged source from site is coordinated with the SHEQ Supervisor, Safety and Radiation Coordinator and the McClean Lake Operation Radiation Protection Group as per *EXP-752-02 Safe Handling and Use of Exploration Sources*. If at any time it appears that a radiation source has been lost, misplaced or stolen, the Project Geologist or designate, the SHEQ Supervisor, the Vice President, Exploration, the McClean Lake Radiation Protection Group, and the Safety and Radiation Coordinator are notified immediately.

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AREVA Resources Canada Inc.

Spill Contingency Plan

Exploration Department

Kiggavik Project

Version 7 Revision 3


PIGA Unrestricted

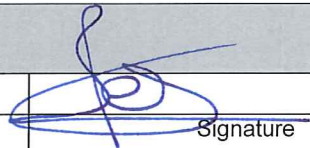
January 2015

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Approval for Use

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History of Revisions

Version	Revision	Date	Details of Revision
1	0	March 2007	Original submission
2	0	October 2007	Update to reflect changes in field activities/capabilities and goals of continual improvement
2	1	May 2008	Updated to reflect comments and conditions received by the Nunavut Water Board associated with the issuance of water licence no. 2BE-KIG0812
3	0	January 2009	Update to reflect changes in field activities/capabilities and goals of continual improvement
4	0	March 2009	Updated to reflect changes in field activities/capabilities and goals of continual improvement
5	0	January 2010	Updated to reflect changes in field activities/capabilities and goals of continual improvement
6	0	May 2011	Updated to reflect personnel titles, grammatical changes, reorganized information and clarified responsibilities. Made consistent with other Plans and Manual and updated to reflect changes in fuel storage and equipment.
7		May 2012	Updated to reflect personnel changes, grammatical changes, reorganized information and clarified responsibilities. Made consistent with other Plans.
7	1	May 2013	Updated to reflect personnel changes, and correction of grammatical errors.
7	2	May 2014	Updated infrastructure list, surface land administration, and proximity to water mark
7	3	January 2015	Minor edits for improved clarity and incorporation of new template

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Acronyms and Abbreviations

Term	Definition
AANDC	Aboriginal Affairs and Northern Development Canada
AREVA	AREVA Resources Canada Inc.
CCME	Canadian Council of Ministers of the Environment
CEPA	Canadian Environmental Protection Act
ECOP	Environmental Code of Practice
EC	Environment Canada
FIRSTS	Federal Identification Registry for Storage Tank Systems
GN-DoE	Government of Nunavut, Department of Environment
IOL	Inuit Owned Land
KIA	Kivalliq Inuit Association
NWB	Nunavut Water Board
SHEQ	Safety Health Environment and Quality

1 Introduction

This Spill Contingency Plan (Plan) applies to the Kiggavik Project located approximately 80 km west of Baker Lake, Nunavut. The Plan is made available at the Kiggavik Site and the AREVA Resources Canada Inc. (AREVA) Baker Lake Office.

1.1 Purpose and Scope

The primary objective of the Plan is to help prevent or reduce the potential of spills of pollutants and prevent, reduce or eliminate any adverse effects that may result. As such, the Plan provides information and guidance on actions important for the prevention of spills and procedures to detect and respond to spills if they occur. The Plan evokes a risk management approach when considering potential spill events. By implementing effective spill prevention, the risk of spills can be reduced in magnitude and perhaps avoided.

Furthermore, the purpose of this plan is to identify safe, effective and efficient response methods. This Plan is intended to satisfy Nunavut R-068-93 *Spill Contingency Planning and Reporting Regulations*. As per the regulations, “spill” is defined as “...a discharge of a contaminant in contravention of the Act or regulations made under the Act or a permit or license issued under the Act or regulations made under the Act.” AREVA’s working definition of a spill is defined as any accidental discharge of a hazardous material to the environment.

1.2 Revision to Plan

The Plan is reviewed regularly and updated as required to keep the information current and consistent with regulatory and procedural changes. A History of Revisions can be found at the front of this Plan.

1.3 Responsibilities

The District Geologist, Nunavut is responsible to ensure this plan is implemented with the assistance of the following personnel:

- Project Geologist
- Facility and Logistics Coordinator, Kiggavik
- Safety Health Environment and Quality (SHEQ) Supervisor
- Or designates

The Vice President, Exploration is ultimately responsible for any activity being carried out by Kiggavik Project personnel.

2 Site Information

2.1 Location

The Kiggavik site, located in the Kivalliq Region of Nunavut, supports the exploration of the Kiggavik mineral leases and the St. Tropez claims which will be converted to lease in 2015.

Exploration of the Kiggavik mineral leases is a joint venture between AREVA, Japan-Canada Uranium Company Limited and Daewoo International Corporation, with AREVA being the operator. The surface rights for 31 mineral leases on Inuit Owned Land (IOL) are administered by the Kivalliq Inuit Association (KIA) while six mineral leases remain on Crown land. The Crown land covers the Jane prospect on the south-west portion of the Project with surface rights administered by Aboriginal Affairs and Northern Development Canada (AANDC).

The St. Tropez area, which is north-east of the Kiggavik site, is encompassed within the IOL surface parcel BL-19 with surface rights administered by the KIA. The St. Tropez area is wholly owned and operated by AREVA out of the Kiggavik site.

There is an existing temporary exploration camp at the Kiggavik site which can accommodate approximately 60 people. The Kiggavik camp is located at the following coordinates:

- UTM 14W 564530 E 7146879 N
 - Latitude: 64° 26' 29" N
 - Longitude: 97° 39' 34" W

In 2007, the temporary camp accommodated approximately 32 persons, was expanded to accommodate approximately 50 persons in 2008 and 60 in 2009. Currently there is one shed and core storage located at the Andrew Lake drill site, as well as core storage at the Kiggavik site and Pointer Lake. Detailed site maps showing topography can be found in Appendix III. The camp currently consists of the following:

- One storage shed/back-up generator/shop
- One generator building (housing current generator)
- Helicopter storage/shop
- Three helicopter pads
- One washroom/dry building constructed with separate male/female facilities
- One kitchen with storage
- One wooden office
- 15 wooden sleeping units (one is a first aid shack)
- Wooden boardwalk throughout camp
- Five prospector tents (core logging tents)

- Three weather havens (2 for sleeping units, 1 for office)
- One mechanical services room
- Grey water collection area
- Industrial incinerator
- Core storage
- Radioactive materials storage compound
- Eight bulk fuel storage tanks (50,000 L capacity per tank)

There is a fuel esker containing one shed and eight bulk fuel tanks. Three bulk tanks are for Jet A-1 aviation fuel and five are for diesel fuel. Additional fuel drums within secondary containment may also be temporarily stored at the esker.

2.2 Petroleum and Chemical Product Storage and Inventory

The table below provides a list of products used, along with the maximum amount stored and type of storage. AREVA maintains an inventory of all petroleum and chemical products on site.

Table 2-1 Petroleum and Chemical Storage

Chemical/Material	Amount	Storage Type
Diesel Fuel	250,000 L	EnviroTanks
Jet B Fuel	150,000 L	EnviroTanks
Diesel Fuel	4 x 205 L (820 L)	Secondary Containment
Gasoline	1,025 L	Secondary Containment
Generator Oil	20 x 20L (400 L)	Secondary Containment
Hydraulic Oil	20 x 20L (400 L)	Secondary Containment
Engine Oil	20 x 20L (400 L)	Secondary Containment
Propane	75 x 100 lb (7500 lb)	Secondary Containment
Grease (for grease gun)	5 cases x 12 tubes (60 tubes)	Secondary Containment
Salt	50,000 lbs	Secondary Containment
Cement	15,000 lbs	Secondary Containment

2.2.1 Fuel Storage

To accommodate increased fuel demand and reduce the potential of fuel spills, bulk fuel storage tanks were installed. The eight double-walled steel EnviroTanks, each with a capacity of 50,000 L were installed at the esker located west of the Kiggavik camp. Three tanks on the north side of the esker are for the storage of Jet A-1 fuel, and five tanks on the south side of the esker are for the storage of diesel fuel as shown in Figure 2.1. The coordinates for the fuel cache are 14W 561512 7145240.



Figure 2.1 Kiggavik Fuel Cache

The site layout and tanks were designed by a professional engineer and were installed by a registered company/petroleum contractor to ensure compliance with the Canadian Council of Ministers of the Environment (CCME) *Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products* (CCME COP, 2003). In 2007, Golder Associates (Golder) conducted an engineering assessment to identify potential issues with the installation of storage tanks. Recommendations were provided for the foundation support for the storage tanks. To mitigate the potential issues described in the report, Golder recommended that the tanks be placed on timbers located under each saddle to provide an increased bearing area. The use of timbers is a deviation from the CCME COP, however it should be noted that this is common practice in the area and AREVA received permission from the Fire Marshal, Tim Hinds with the Government of Nunavut-Community and Government Services.

The design basis, operation and maintenance requirements for all petroleum storage and handling on site are based on the CCME ECOP for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products and in compliance with the *Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations*, under the *Canadian Environmental Protection Act, 1999* (CEPA 1999). The fuel storage system at the Kiggavik site has been registered with Environment Canada (EC) through an online database, the Federal Identification Registry for Storage Tank Systems (FIRSTS).

Double walled steel EnviroTanks and associated pump meet the requirements of secondary containment within their own structure. For further secondary containment, rubberized berms or other suitable lined structures may be used during fuel transfer to minimize the potential for spills. Absorbent

padding may be used to control dripping fuel. Further protection against spills is provided by high level alarms, overfill preventers, and catch basins around each fill pipe.

The fuel is transported to the Kiggavik fuel cache during the winter via ground transport using tundra trucks such as cat challengers, case 4-track units, and delta foremosts (See Figure 2.2). With the exception of the deltas, the fuel is hauled with steel sleighs loaded with 10,000 to 15,000 litre fuel tanks containing P-50 diesel or Jet A-1 fuel respectively. The deltas do not pull sleighs, but instead have a deck with crane installed for offloading materials. Fuels are then transferred from the tanks to the EnviroTanks located at the Kiggavik fuel cache. Unleaded gasoline and propane cylinders may be brought to the Kiggavik site during the winter haul or by aircraft from Baker Lake.



Figure 2.2 Winter Haul of Materials and Fuel

Diesel fuel is transferred from the EnviroTanks to double-walled fuel tanks for use in camp and/or drill sites. There is also a fuel cache located at the Kiggavik Camp (14W 564464, 7146782). This fuel cache includes double walled fuel tanks used to supply the generators. All fuel containers are labelled, identifying the contents and the name "AREVA". Should fuel drums be used, the 205 L drums are stored within secondary containment. Secondary containment is used for all liquid fuels, and lubricants, and drill additives are stored in sea containers to avoid adverse weather conditions. All secondary containment systems being used are capable of containing 110% capacity of the petroleum products and other hazardous materials and hazardous waste products (See Figure 2.3).



Figure 2.3 Fuel berms

Absorbent matting and/or drip pans must be placed under all areas where fuel leaks are likely to occur (e.g. fuel line hose connections, fuelling stations, generators, water pump), and these areas must be inspected regularly.

Waste oil, waste filters, and cleaned-up spill materials are contained in ring top barrels within secondary containment. Degreasing agents used for maintenance of equipment parts and grease are also contained in ring top barrels within secondary containment. These hazardous wastes are stored in the storage shed during the season, and later transferred to a sea container until they are removed from site during the winter haul. The materials are then disposed of at an approved facility.

2.3 Petroleum Product Transfer

To minimize fuel spillage associated with dispensing of product, all dispensing and tank filling operations are attended and involve the use of manually controlled nozzles equipped with automatic shut off mechanisms. Smoking, sparks or open flames are prohibited in fuel storage and fuelling areas at all times. Petroleum transfer operations will be carried out by trained personnel.

2.4 Location and Content of Spill Kits

Spill kits can vary in size and content depending on supplier and manufacturer however to remain consistent and provide adequate spill supplies, AREVA has chosen two types of spill kits which are considered to be standard. The kits generally include the following contents, or similar products:

1. Universal Emergency Response Kit 30Gallon/135L

- Sorbant capacity of 96L
- 4 socks (3" X 10')
- 75 pads
- 1 drain cover
- 1 caution tape
- 2 pairs nitrile gloves
- 2 pairs safety goggles
- 2 protective coveralls
- 5 disposable bags
- 1 instruction book

2. Universal Overpack Kits 95 US Gallon Drums

- Sorbant capacity of 275L
- 4 socks (3" x 10')
- 5 socks (3" x 4')
- 50 pads
- 5 pillows
- 1 roll
- 1 drain cover
- 1 caution tape
- 2 pairs nitrile gloves
- 2 pairs safety goggles
- 2 protective coveralls
- 10 disposable bags
- 1 instruction book

A variety of spill kits are available and other kits than those listed above may be purchased for a variety of reasons (availability, intended use, etc.). All spill kits contain an itemized list of its contents and an inventory must be conducted following use and may be completed each season if deemed necessary.



Figure 2.4 Example of Spill Kits available at Project site

In addition, the following spill response material is also readily available in the generator building for spill response:

- Plugging compound
- Bulk supplies of oil absorbent pads and socks
- Aluminium or brass shovels or tools
- Bonding cables

Due to the volume of fuel being stored in the fuel tank storage system and the remote nature of the sites, at least one of the Bulk Storage Site Spill Kits 95 US Gallon Spill Kits will be present for each 100,000L of fuel being stored.

In addition, at least one empty fuel drum and a pump will be located at each fuel cache and tank storage system in the event of damaged or leaking drums. Fire extinguishers of the proper type, size and number will be stationed in each building, at the fuel tank storage system and near each site where equipment is normally serviced and anywhere else it is deemed advisable. A supply of sealable 20-litre steel pails or 205-litre drums will be available for the collection and storage of used absorbent materials.

2.5 Orientation

All personnel at camp (AREVA employees, contractors, and long term visitors) are given formal orientation upon arrival at camp. The Spill Contingency Plan is reviewed during orientation which includes the location of the Material Safety Data Sheets, location of spill kits and additional supplies or tools. Personnel are trained to be watchful for any leaks or spills. Where leaks or spills are most likely to occur, personnel are instructed in the proper use of equipment and materials. They are also trained in the onsite spill response and reporting, and how to collect, store and dispose of spilled product.

3 Potential Hazards, Mitigation and Preventative Measures

3.1 Potential Hazards

Potential sources for spills have been identified as follows:

- Drums of P-50 diesel (four drums), gasoline, waste fuel, and waste oil may leak or rupture
- Overfilling of tank(s) at the fuel cache of Jet A-1 or P-50 diesel
- Transfer of fuel between EnviroTanks, drums and fuel tanks
- Transportation of fuel during winter haul
- Fire at the fuel cache
- Collision at the cache
- Vandalism of the fuel cache
- Propane cylinders: propane leaks may occur at the valves
- Refuelling equipment such as diamond drill equipment, helicopters, camp generator, stoves, incinerator, wheeled vehicles, snowmobiles and pumps
- Incidents involving leaking or dripping fuels and oils may occur due to malfunctions, impact damage, lack of regular maintenance, improper storage, or faulty operation
- Damaged lead/acid batteries causing spills of acid
- Improper drilling or transport of cuttings bags causing a spill of radiologically contaminated drill cuttings or drill return water

3.2 Mitigation and Preventative Measures

The Environmental Code of Practice discusses how to conduct activities so as to minimize the risk of spills. In addition, the following measures will further minimize the potential for spills during fuel handling, transfer and storage:

- Fuel transfer hoses with cam lock mechanisms used when transferring bulk fuel deliveries into the bulk storage tanks
- Carefully monitor fuel content in the receiving vessel during transfer
- Always have additional absorbent pads on hand while transferring fuel
- Clean up drips and minor leaks immediately
- Regularly inspect drums, tanks and hoses for leaks or potential to leak and for proper storage
- Create fuel caches that are located at least 31 m from the normal high-water mark of any water body
- Inventory and reconciliation procedures developed to ensure tanks are not overtopped and to ensure that tank leakage is not occurring
- Overfill protection on tanks include visual and audible alarms; catch basins around fill pipe
- Additional secondary containment at transfer locations; corrosion protection

- Train personnel, especially those who will be operators, in proper fuel handling and spill response procedures. This training is to include a “mock” spill, review of spill kit contents and their use and reporting.

3.2.1 Spill of Fuel from Metal Drums on Tundra

Should drums be used, the metal drums are stored in such a manner that they are not susceptible to tipping over, rolling or otherwise being unstable. Care is exercised so that nothing can cause damage to metal fuel drums by falling or rolling onto or into them. The use of a ramp or a cushion (e.g. automotive tire) while unloading metal fuel drums from aircrafts lessens the possibility of damage.

3.2.2 Spill of Fuel from Fuel Cache

To prevent spillage during the filling of the fuel cache system, the following items will be in place:

- Visible and audible high level alarm
- Automatic high liquid shut off device
- Manual dips are conducted in conjunction with the inventory and reconciliation procedures by fuel delivery personnel and site personnel
- Site personnel log all deliveries and fuel dips to coordinate the filling of the Envirotanks with the contractor delivery personnel
- All tanks are double-walled
- Spill/Overfill protection – catch basins around the fill pipe will collect any liquid spilled during connecting or disconnecting of the fill hose
- Corrosion Protection – provided by painting of the tanks
- Where drums are used, the drums will be placed in appropriated lined structures for fuel transfer from tank to drum

Personnel conducting fuel transfers are to be adequately trained in the procedure and spill contingency. Most releases at a fuel tank storage system are due to piping and line failure. This system of tanks are independent of each other and do not require any piping. Spills or leaks are known to occur due to improper management of tanks prior to installation. All tanks located at the Kiggavik site have been inspected by a qualified person prior to filling and again prior to initial use.

3.2.3 Winter Fuel Hauling

Refer to Winter Road Plan for further details regarding transport, safety and training requirements used to minimize hazards generated during the winter haul.

3.2.4 Leak of Liquid Fuel from Distribution Lines

Stability of all storage tanks and distribution assemblies is of utmost importance to ensure that the risk of damage is minimized. All stands for reservoir tanks and fuel tanks are constructed to strength

standards beyond those required. Distribution lines from reservoir tanks and fuel tanks are fitted with appropriate shut-off valves immediately downstream from the tank. All valves are closed when the tank is not in use. All associated distribution lines are installed in such a way to prevent being chafed in the wind, chewed on by animals or tripped on by humans. This is done by securing it to rigid structures, encasing it in armour or any other effective manner. These measures apply broadly to oil, jet fuel, gasoline, and propane set-ups.

3.2.5 Spill of Liquid Fuel into Lake Water

Fuel must be at a minimum of 31 m from ordinary high water mark on stable and level ground unless approved by regulatory agencies. Refuelling must not take place below the high water mark of any water body under any circumstance.

3.2.6 Release of Propane

Propane is stored in certified containers and is inspected and monitored on a regular basis for any signs of deterioration or corrosion. Containers are secured and fastened in an upright position to ensure there is no risk of damage to the regulator in the event of a fall. In the event that larger propane tanks are introduced on site, only qualified gas fitters will connect or disconnect the piping.

3.2.7 Spill of Battery Acid

Acquisition of non-spillable batteries reduces the risk of a spill of this type. These batteries can be shipped by air as they are exempt from UN2800 classification. All batteries are protected from damage by proper securing during transport and safe storage when not in use.

3.2.8 Fire at the Fuel Cache

Grounding cables minimize the potential of static discharge and potential fire, and are available during all transfers of bulk diesel or jet fuel.

3.2.9 Crash at Fuel Storage Tanks

To reduce the risk of a crash at the fuel cache, there is clear communication between aircraft (fixed wing and helicopters), wind socks are used, and further crash protection will be in place should additional vehicles be introduced to the operation.

3.2.10 Spill of Radiologically Contaminated Drill Cuttings

During drilling activities, non-mineralized drill mud solids or cuttings are deposited in low-lying areas. When mineralized core is intercepted, all drill mud and cuttings are collected in appropriate containers and categorized as radioactive through appropriate radiation measurements in accordance with work

instructions. A gamma survey is also conducted before and after drilling activities at each hole to ensure there is no radiologically contaminated material at the site.

3.2.11 Spill of Potentially Contaminated Drill Return Water

Return water from drilling activities, including general drainage from the drill footprint, are diverted into low-lying areas to keep these waters from directly entering lakes and streams. Low lying depressions where non-mineralized drill cuttings and drill return water are deposited are monitored while in use.

4 Spill Response

4.1 Response to a Spill – Containment and Clean-Up

In the case of any spill or other environmental emergency, it is necessary to immediately react in the most safe and environmentally responsible manner. No spill or incident is so minor that it can be ignored. The basic steps of the response plan are as follows:

Ensure the safety of all persons at all times

The safety of yourself and others is the most important consideration when responding to a spill. As such, all actions that you perform as part of your spill response must only be undertaken if they can be undertaken in a safe manner. If an action cannot be undertaken in a safe manner, or if you do not feel that you are adequately trained or equipped to respond to a spill, you must evacuate all personnel to a safe area upwind from the spill. You will then request assistance from trained emergency responders with the appropriate resources to manage the spill safely and effectively.

Your responsibilities when responding to a spill are as follows:

- Act safely, using appropriate personal protective equipment and work practice
- Respect the safety of others in the area
- Refuse to perform activities that you feel are unsafe
- Inform those involved or in the area if you believe that their actions, or proposed actions, are unsafe. This includes colleagues, first responders, contractors, members of the public, etc.

Identify and find the spill substance and its source

Individual discovering the spill shall:

- Move upwind of the material
- Call for help – contact direct Supervisor and Facility and Logistics Coordinator, Kiggavik
- Attempt to stop leak if safe to do so
- Attempt to contain spilled material if safe to do so

Facility and Logistics Coordinator, Kiggavik (or designate) shall:

- Designate responders and proceed to the scene of the spill
- The responders (including the Facility and Logistics Coordinator, Kiggavik if necessary) shall attempt to stop further spillage and contain the spilled material

- Complete documentation of the spill using the Spill Report Form, and contact the NT-NU 24-Hour Spill Report Line immediately as well as the appropriate regulatory agencies (see Section 5 for Spill Reporting requirements).

SHEQ Supervisor shall:

- Provide assistance and expertise in the response to a spill
- Once under control, shall interview the individual who discovered the spill. Noting name, time discovered, and details on how the spill occurred, any actions taken by the individual to stop the spill
- Submit Spill Report to regulatory agencies within seven calendar days of the incident
- Submit Detailed Spill Report to regulatory agencies within 30 days of the incident

Responders shall:

- Position themselves upwind of the spill
- Determine what has been spilled
- Consult the Material Safety Data Sheet (MSDS) for the product to determine the appropriate personal protective equipment and to understand the physical properties of what was spilled
- If the spilled substance is flammable (Gasoline or Jet Fuel), eliminate all ignition sources and shut off machinery in the area
- Take actions to ensure the leak or spill has been stopped at the source (i.e. shut off valves, reconnect hoses, etc.)
- Contain spill with appropriate material and equipment (i.e. spill response kit, etc.). Refer to the MSDS if this is a controlled substance. Pump large spills into barrels or other suitable container as available
- **Ensure that grounding or bonding cables are used for all flammable product transfers**
- Control access to the spill area and keep all bystanders away. If necessary, barricade the spill area. Do not use flares unless you are certain the spilled material and its vapours are not flammable or explosive.
- Keep spilled material out of waterways. Use aluminium/non-sparking shovels to dig trenches or make soil and sand barriers or use the placement of absorbent socks as barriers
- For fuel or oil spills, place contaminated absorbent and associated materials into steel pails or drums for storage in a sea container for removal from site to an approved facility
- For radioactive material, place material into appropriate container (i.e. cuttings bag or IP3 pail) to be stored in radioactive storage compound
- If a spill has entered flowing water, take a water sample immediately upstream of the spill and downstream (e.g., 50 m, 150 m and 500 m from spill)

The following table outlines spill supplies and their use during spill response. Items not stored in spill kits are available with replacement items in the back-up generator building, more commonly referred to as the Lonegull.

Table 4-1 Spill Response Supplies

Incident	Spill Supplies	Use
Wet Spill	Drums with removable lids that contain bailers	For manual removal of large liquid spills Empty drums
	Folded sweeps and white rolls	Skimming of gas or diesel from water body
	Socks, peat moss	Containment of wet spill on land
	Pads, rolls, bags of dry absorbent	Cleanup of wet spills
Punctured Drum	Overpack (plastic drum) Plug 'n Dyke	Place overpack overtop of leaking drum, lay overpack and drum on its side, then flip upright, or use Plug 'n Dyke or other plugging compounds to seal and stop leak
Dry Spill	Plastic sheet (roll), mallet, spikes, knife	Covering dry spills to protect from wind and rain

If necessary ask for help and wait for others with the appropriate training and/or equipment to arrive. Acting inappropriately can often be dangerous to you, to others, and to the environment.

Implement any necessary cleanup and/or remedial action in a safe manner; this may be coordinated and or conducted by a third party consultant, if necessary.

Report the spill as per Section 5 of this Plan once it is safe to do so. Do not delay reporting as there are legal requirements in this regard.

4.2 Examples of Spill Scenarios

4.2.1 Fuel Spill from Metal Drums or Fuel Tanks

Report the spill to the Facility and SHEQ Supervisor or designates immediately. A puncture or rupture of containers containing liquid fuels should initially be assessed for risk of ignition. Sources of ignition will be extinguished or isolated from the spill area if safe to do so. While using appropriate personal protective equipment as described in the MSDS, efforts should be undertaken to plug punctures with appropriate material from the spill kit (plugging compound or other improvised materials). Ruptures or holes should be high-centered to stop further spillage of fuel. Absorbent materials should be used to absorb spilled fuel. A containment berm should be built using available materials such as soil, snow, absorbent socks, portable berms and/or tarps to contain a large spill.

Remove the spilled products using absorbent material and place all recovered waste material into appropriate containers (metal cans, pails or drums in good condition). All containers will be stored in a

sea container until the material can be transported to an approved facility. High-centered ruptures will be used as a point of entry for manually-operated fuel transfer pump suction tubes, and remaining fuel is removed to a sound drum. Small amounts of contaminated soil, vegetation or gravel is removed and placed into sealable steel drums or pail and then disposed of appropriately. Large areas of spilled product on the ground are only to be remediated after consultation with AREVA SHEQ personnel and regulators to avoid unnecessary damage to the environment. Before commencing removal of soil or vegetation regulatory agencies will be contacted. If spill of significant volume occurs at one of the fuel storage tanks, attempt to prevent the spread of the fuel and immediately and contact AREVA personnel to provide assistance with the spill response and clean-up.

4.2.2 Leak of Liquid Fuel from Distribution Lines

A detected leak from a distribution line assembly is to be initially assessed for risk of ignition. If safe to do so, sources of ignition are to be extinguished or isolated from the leak and the shut-off valve on the tank and/or distribution line is to be turned off. Report the spill to the Facility and SHEQ Supervisor or designates immediately. Absorbent material is placed on the spilled fuel; if spilled onto snow or ice it is scooped up with an aluminum (non-sparking) shovel and stored in an appropriate sealable steel container. Final disposal of these materials is done after consultation with the SHEQ group and the appropriate regulatory agencies.

4.2.3 Spill of Liquid Fuel into Lake Water

Identify the source of the spill and prevent further release of fuel. Report the spill to the Facility and SHEQ Supervisor or designates immediately. Never attempt to contain or clean up a spill of gasoline on water, the risk of fire is simply too high. Confinement needs to occur as close to the release point as possible. Prior to attempting any clean up on water, a site specific safety plan needs to be developed that factors in water safety aspects. After vapours have dissipated, the collection of liquid diesel or lubricating oil in lake water is attempted with floating booms of petroleum absorbent material. For larger spills of diesel or lubricating oil, raw liquid can often be removed by skimming. Absorbent pads can be used to collect small spills. All fuel skimmed or wicked off of the water surface as well as spent absorbent materials must be disposed of, in appropriate sealable steel containers. Ultimate disposal of these materials shall only be done after consultation with the SHEQ Group and the appropriate regulatory agencies.

4.2.4 Release of Propane

Where propane has been released, report the spill to the Facility and Logistics Coordinator, Kiggavik and SHEQ Supervisor or designates immediately. Personnel shall withdraw from the area immediately upon identifying a leak and shall not return until the leak is stopped and all the vapours have diffused. Contact will be made with the proper agency for disposal instructions of a defective container.

- No attempt should be made to contain a propane release
- Water spray can be used to knock down vapours and to reduce the risk of ignition
- Small fires can be extinguished with dry chemical or CO₂

4.2.5 Fire at Fuel Cache

In the event that a fire occurs at the fuel cache, it is AREVA's primary intentions to ensure the safety of the site personnel by allowing the fire to burn. Report the spill to the Facility and Logistics Coordinator, Kiggavik and SHEQ Supervisor or designates immediately. Appropriate third party personnel will be contacted to ensure proper response and clean-up occurs. In the event of a fire anywhere on site, the Government of Nunavut, Department of Environment (GN DoE) shall be contacted. This includes the local Conservation Officer in Baker Lake and the Environmental Compliance Manager.

4.2.6 Spill of Radiologically Contaminated Drill Cuttings

Should mineralized drill cuttings be spilled, report the spill to the Facility and Logistics Coordinator, Kiggavik and SHEQ Supervisor or designates immediately. Any amount of radioactive materials must be collected into appropriate storage containers (i.e. cuttings bag or IP3 pail). The site will be remediated as much as practical, meeting/exceeding the minimum necessary abandonment criteria of less than 1 $\mu\text{Sv/h}$ above background at a height of 1 m.

4.2.7 Spill of Drill Return Water or Cuttings into Water

In the event of a spill of any amount of potentially contaminated/drill return water or cuttings into a water body, any activities which are the possible cause will cease until a review of the incident has taken place. Report the spill to the Facility and Logistics Coordinator, Kiggavik and SHEQ Supervisor or designates immediately. Water and potentially sediment samples will be taken and gamma survey conducted on the affected area. Activities will continue once the District Geologist, Nunavut or designate is satisfied with the corrective measures taken.

5 Spill Reporting Requirements

This Plan is initiated by the Project Geologist or designate, which includes initiating response, documenting associated activities and reporting the spill within 24 hours to the NT-NU 24-HOUR SPILL REPORT LINE. All emergency contact phone numbers are located in Appendix I Contact List.

Based on Environment Canada's recommendation, all releases of harmful substances, regardless of quantity are immediately reportable where the release is:

- Near or into a water body
- Near or into a designated sensitive environment or sensitive wildlife habitat
- Poses an imminent threat to human health or safety
- Poses an imminent threat to listed species at risk or its critical habitat

The Government of Nunavut *Spill Contingency Planning and Reporting Regulations* consider any spill of flammable liquids greater than 100 L a reportable spill. In addition, any quantity of spilled radioactive material is reportable. The following table (Schedule B) is adapted from the *Spill Contingency Planning and Reporting Regulations* and outlines the quantities of spilled product that requires reporting to the Government of Nunavut-Department of Environment (GN-DoE).

SCHEDULE B

(Section 9)

<i>Item No.</i>	<i>TDGA Class</i>	<i>Description of Contaminant</i>	<i>Amount Spoiled</i>
1.	1	Explosives	Any amount
2.	2.1	Compressed gas (flammable)	Any amount of gas from containers with a capacity greater than 100 l.
3.	2.2	Compressed gas (non-corrosive, non flammable)	Any amount of gas from containers with a capacity greater than 100 l.
4.	2.3	Compressed gas (toxic)	Any amount
5.	2.4	Compressed gas (corrosive)	Any amount
6.	3.1, 3.2, 3.3	Flammable liquid	100 l
7.	4.1	Flammable solid	25 kg
8.	4.2	Spontaneously combustible solids	25 kg
9.	4.3	Water reactant solids	25 kg
10.	5.1	Oxidizing substances	50 l or 50 kg
11.	5.2	Organic Peroxides	1 l or 1 kg
12.	6.1	Poisonous substances	5 l or 5 kg
13.	6.2	Infectious substances	Any amount
14.	7	Radioactive	Any amount
15.	8	Corrosive substances	5 l or 5 kg
16.	9.1 (in part)	Miscellaneous products or substances, excluding PCB mixtures	50 l or 50 kg
17.	9.2	Environmentally hazardous	1 l or 1 kg
18.	9.3	Dangerous wastes	5 l or 5 kg
19.	9.1 (in part)	PCB mixtures of 5 or more parts per million	0.5 l or 0.5 kg
20.	None	Other contaminants	100 l or 100 kg

If you are in doubt as to whether or not a spill is reportable, it is best to report the spill.

5.1 Spill Response Contact List

The Exploration Emergency Contacts is available in Appendix I of this Plan. The list is also made available in drill rigs and field offices.

5.2 Reporting Requirements

1. Collect Required Information

During spill response, the following information should be generated and reported (complete the Spill Report Form found in Appendix II):

- Date and time of spill
- Location of spill
- Direction the spill is moving
- Name of contact person at location of spill, and phone number where applicable
- Type and quantity of contaminant
- Cause of spill
- Whether spill is contained or stopped
- Description of the existing contaminant
- Action taken to contain, recover, clean-up and dispose of spilled material

2. Report

It is the responsibility of the senior AREVA staff on site to report spills to regulatory agencies. Contractors are asked to report all spills to the Project Geologist or designate immediately who will notify the following agencies/people (See Appendix I Exploration Emergency Contacts).

- Project Geologist or designate (if not on site during incident)
- District Geologist, Nunavut
- Facility and Logistics Coordinator, Kiggavik
- SHEQ Supervisor (if not on site during incident)
- NT-NU 24-Hour Spill Report Line (within 24hours) by phone; use the information collected for the spill report form
- Coordinator, SHEQ Exploration
- Vice President, Exploration
- Manager, Nunavut Affairs and Baker Lake office
- The Nunavut Water Board (NWB) and AANDC request verbal notification as soon as possible, however they will also be notified by the spill report line
- A copy of the written Spill Report Form must be submitted to the GN-DoE, AANDC (Water Resources Office and Manager of Field Operations), NWB and Environment Canada (EC) within seven calendar days of the incident
- A detailed report must be submitted to the GN-DoE, AANDC, NWB and EC within 30 days
- Submit a copy of the Spill Report Form and detailed report to Kivalliq Inuit Association (KIA)

6 Training and Practice Drills

All employees and contractors must be familiar with the resources for spill response which include this Plan, MSDS sheets, and training for spill response. Involvement of other employees or third parties may occasionally be required. Annual refreshers are conducted to review the procedures within this plan. Practice drills are conducted to familiarize field-personnel with emergency response equipment and ensure awareness of product hazards.

7 References

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Canadian Council of Ministers of the Environment. *Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products*. 2003

Environment Canada. 2008. *Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations*. June 2008.

Fire Marshal, Tim Hinds with the Government of Nunavut-Community and Government Services via email (Trevor Carlson, AREVA) on November 20, 2007.

Government of Nunavut Environmental Protection Service Department of Sustainable Development. *Contingency Planning and Spill Reporting in Nunavut*.

Government of Nunavut. 2010. *Environmental Protection Act*. March 2010.

Government of Nunavut R-068-93. 1998. *Spill Contingency Planning and Reporting Regulations*. July 1998.

Indian and Northern Affairs Canada (INAC). 2007. *Guidelines for Spill Contingency Planning*. April 2007.

Northwest Territories-Nunavut Spill Report Form. Available at:

<http://env.gov.nu.ca/sites/default/files/NT%20NU%20Spill%20Report%20Form.pdf>

Appendix I **Exploration Emergency Contacts**

Available at:

Q:\Exploration\IMS\006_Contacts

EXPLORATION EMERGENCY CONTACTS

ARC Public Relations Office Vice President, Communications	866-99AREVA 306-343-4637
Vice President, Exploration – Patrick Ledru	306-343-4078 (Business) 306-291-3638 (Cell)
Director, Exploration Projects – Craig Cutts	306-343-4668 (Business) 306-244-6203 (Home)
Coordinator, SHEQ Exploration – Stephanie Forseille	306-343-4693 (Business) 306-467-4820 (Home)
District Geologist – West Athabasca – Dwayne Morrison	306-343-4669 (Business) 306-955-7636 (Home) 306-291-5780 (Cell)
District Geologist – Nunavut - John Robbins	306-343-4513 (Business) 306-955-7418 (Home) 306-361-4520 (Cell)

Saskatchewan

Police (RCMP) Regina-central dispatch	306-310-7276
Spill Control Center	800-667-7525
Fire	800-667-9660
Saskatchewan Ministry of Environment (SMOE) • Andrew Rempel, Ecological Protection Specialist • Ryan Mulligan, Senior Ecological Protection Specialist	306-236-7553 Meadow Lake Office 306-953-2400 Prince Albert Office
Injury (When in Vicinity of Saskatchewan Mine or Exploration Site)	
McClean Lake (Safety & Health)	306-633-2177 (Ext 405 or 403)
Points North (Paramedic)	306-361-6241
Key Lake	306-884-2100 (Ext 4545)
Cigar Lake	306-633-2072 (Ext 3206)
McArthur River	306-633-2001 (Ext 8888)
Air Ambulance (Saskatchewan)	888-782-8247
Saskatchewan Labour (LWRS)	800-667-5023

Nunavut

Police (RCMP) - Baker Lake	867-793-1111
Spill Control Center	867-920-8130
Fire – Baker Lake CO; GN DoE	867-793-2944; 867-975-7748
Nunavut Regulatory Contacts	
Kivalliq Inuit Association (KIA) • Jeff Hart, Water & Marine Environment Specialist	867-793-4468 Baker Lake
Aboriginal Affairs and Northern Development Canada (AANDC) • Henry Kablalik, Resource Management Officer III (Kivalliq Region) • Christine Wilson, Water Resource Officer – Kivalliq Region	867-645-2831 Rankin Inlet 867-975-4296 Iqaluit
Nunavut Water Board (NWB) • Sean Joseph, Technical Advisor • Phyllis Beaulieu, Manager Licensing	867-360-6369 Gjoa Haven 867-360-6338 Gjoa Haven
Injury (When in Vicinity of Nunavut Exploration Site)	
Baker Lake Office	867-793-2000
Nunavut (Kiggavik Project) Camp Phone	306-683-9562 or 306-683-7048
Air Ambulance (Nunavut)	867-645-4455 (Rankin Inlet)
Mine Inspector (Nunavut WSCC)	867-979-8527 and 1-800-661-0792

Alberta

Police (RCMP) - Fort Chipewyan	780-697-3665
Spill Control Center	800-222-6514
Fire	780-427-3473 or 310-3473-no area code
Injury (When in Vicinity of Alberta Exploration Site)	
Air Ambulance (Alberta)	800-661-3822

Appendix II **Spill Report Form**

Available at:

<http://env.gov.nu.ca/programareas/environmentprotection/forms-applications>

<http://env.gov.nu.ca/sites/default/files/NT%20NU%20Spill%20Report%20Form.pdf>



Canada

NT-NU SPILL REPORT

OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS

NT-NU 24-HOUR SPILL REPORT LINE

TEL: (867) 920-8130

FAX: (867) 873-6924

EMAIL: spills@gov.nt.ca

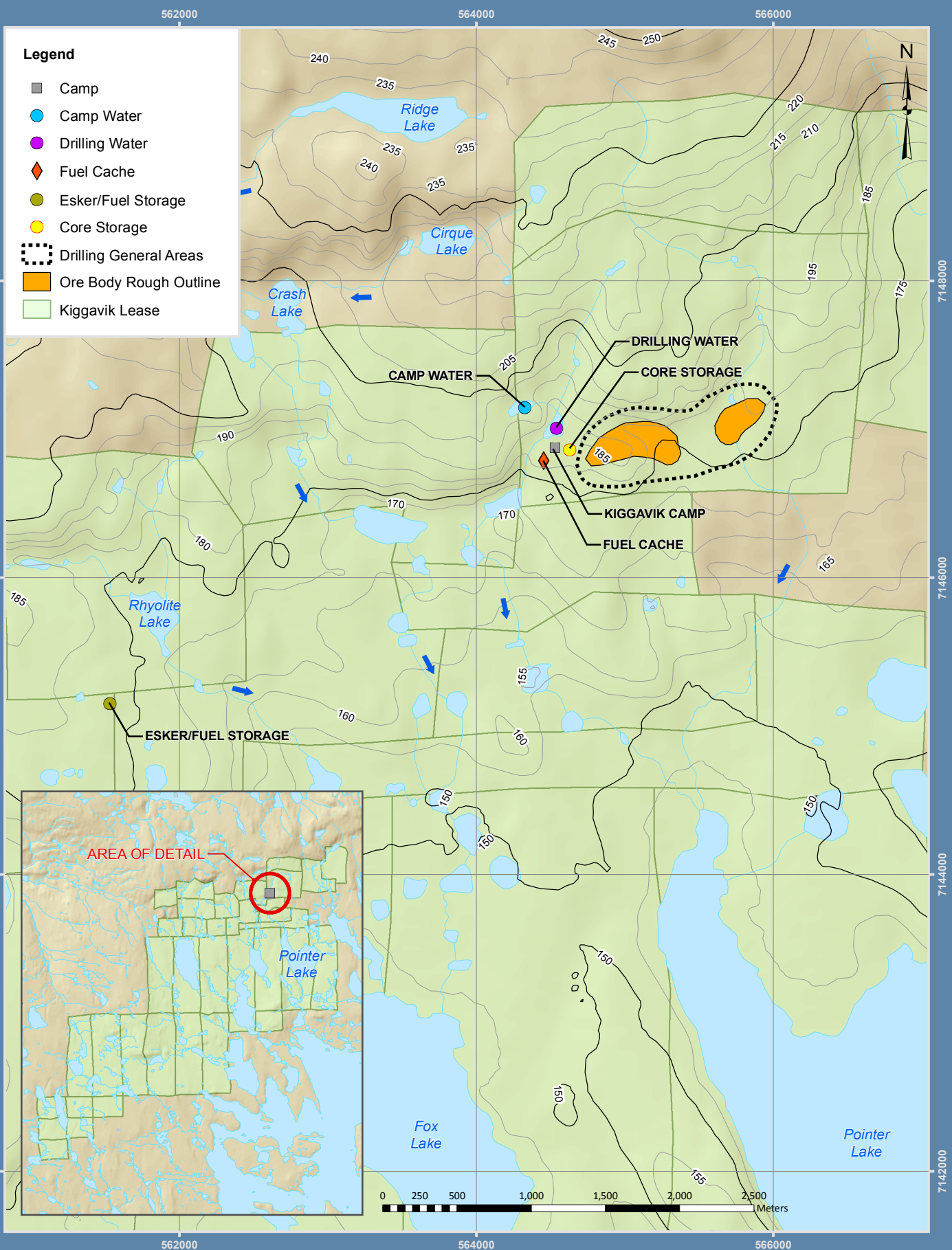
REPORT LINE USE ONLY

A	REPORT DATE: MONTH – DAY – YEAR		REPORT TIME	<input type="checkbox"/> ORIGINAL SPILL REPORT, OR <input type="checkbox"/> UPDATE # TO THE ORIGINAL SPILL REPORT	REPORT NUMBER -
	OCCURRENCE DATE: MONTH – DAY – YEAR		OCCURRENCE TIME		
C	LAND USE PERMIT NUMBER (IF APPLICABLE)		WATER LICENCE NUMBER (IF APPLICABLE)		
D	GEOGRAPHIC PLACE NAME OR DISTANCE AND DIRECTION FROM THE NAMED LOCATION			REGION <input type="checkbox"/> NWT <input type="checkbox"/> NUNAVUT <input type="checkbox"/> ADJACENT JURISDICTION OR	
E	LATITUDE DEGREES MINUTES SECONDS		LONGITUDE DEGREES MINUTES SECONDS		
F	RESPONSIBLE PARTY OR VESSEL NAME		RESPONSIBLE PARTY ADDRESS OR OFFICE LOCATION		
G	ANY CONTRACTOR INVOLVED		CONTRACTOR ADDRESS OR OFFICE LOCATION		
H	PRODUCT SPILLED		QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES	U.N. NUMBER	
	SECOND PRODUCT SPILLED (IF APPLICABLE)		QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES	U.N. NUMBER	
I	SPILL SOURCE		SPILL CAUSE	AREA OF CONTAMINATION IN SQUARE METRES	
J	FACTORS AFFECTING SPILL OR RECOVERY		DESCRIBE ANY ASSISTANCE REQUIRED	HAZARDS TO PERSONS, PROPERTY OR ENVIRONMENT	
K	ADDITIONAL INFORMATION, COMMENTS, ACTIONS PROPOSED OR TAKEN TO CONTAIN, RECOVER OR DISPOSE OF SPILLED PRODUCT AND CONTAMINATED MATERIALS				
L	REPORTED TO SPILL LINE BY	POSITION	EMPLOYER	LOCATION CALLING FROM	TELEPHONE
M	ANY ALTERNATE CONTACT	POSITION	EMPLOYER	ALTERNATE CONTACT LOCATION	ALTERNATE TELEPHONE

REPORT LINE USE ONLY

N	RECEIVED AT SPILL LINE BY	POSITION Station operator	EMPLOYER	LOCATION CALLED Yellowknife, NT	REPORT LINE NUMBER (867) 920-8130
LEAD AGENCY <input type="checkbox"/> EC <input type="checkbox"/> CCG <input type="checkbox"/> GNWT <input type="checkbox"/> GN <input type="checkbox"/> ILA <input type="checkbox"/> INAC <input type="checkbox"/> NEB <input type="checkbox"/> TC			SIGNIFICANCE <input type="checkbox"/> MINOR <input type="checkbox"/> MAJOR <input type="checkbox"/> UNKNOWN		FILE STATUS <input type="checkbox"/> OPEN <input type="checkbox"/> CLOSED
AGENCY		CONTACT NAME	CONTACT TIME	REMARKS	
LEAD AGENCY					
FIRST SUPPORT AGENCY					
SECOND SUPPORT AGENCY					
THIRD SUPPORT AGENCY					

Appendix III **Site Maps**



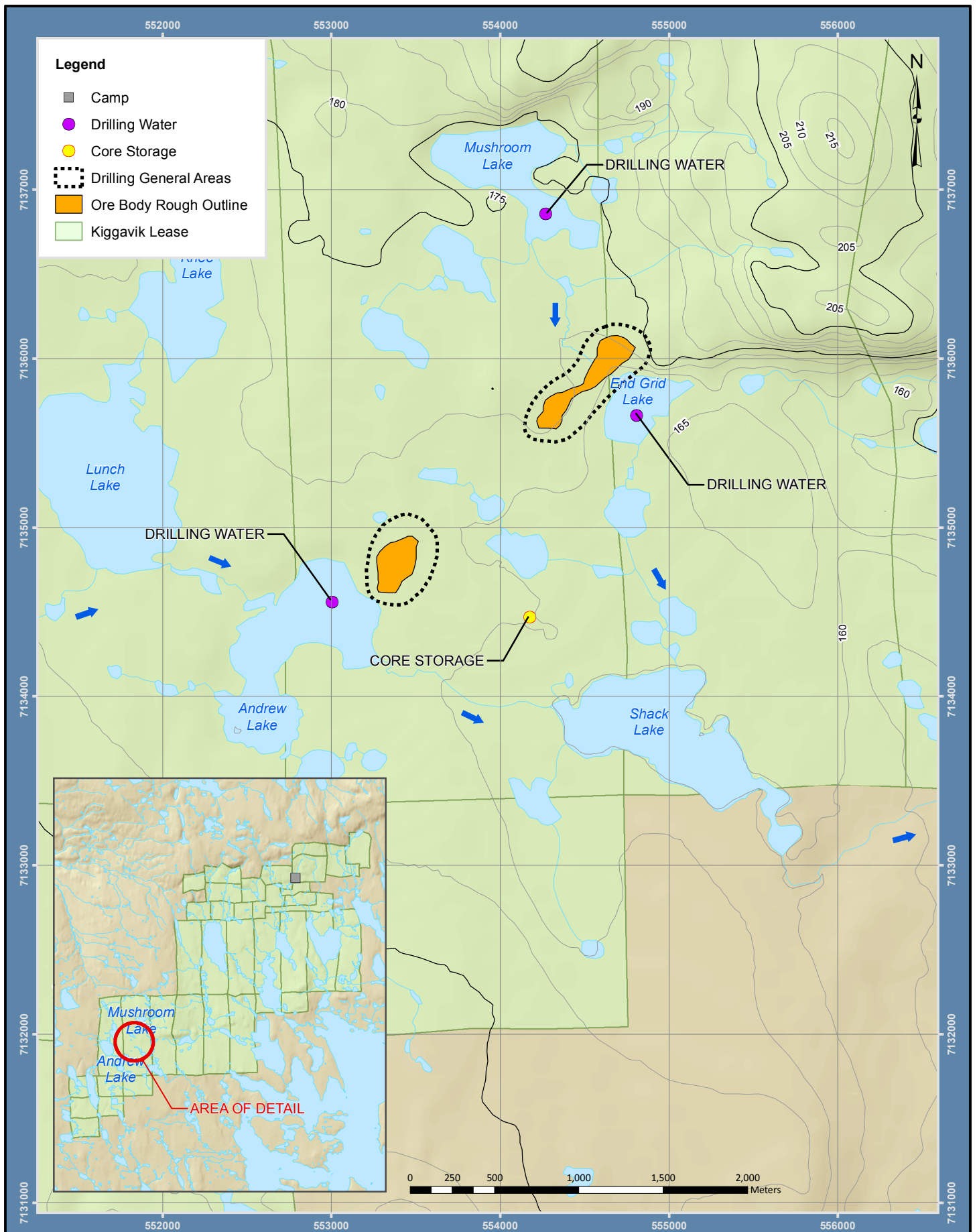
Projection: NAD 1983 UTM Zone 14N
 Creator: CDC
 Date: 05/18/2011 Scale: 1:35,000
 File: KI09A020
 Data Sources: Natural Resources Canada, Geobase®, Nation
 Topographic Database, AREVA Resources Canada Inc.

FIGURE 1.0-1
 KIGGAVIK MAIN AREA COMPONENTS

SPILL CONTINGENCY PLAN
 APPENDIX III

**Kiggavik
 Project**





Projection: NAD 1983 UTM Zone 14N
 Creator: CDC
 Date: 05/18/2011 Scale: 1:30,000
 File: KI09A021

Data Sources: Natural Resources Canada, Geobase®, Nation
 Topographic Database, AREVA Resources Canada Inc.

FIGURE 1.0-2
 SISSONS MAIN AREA COMPONENTS

SPILL CONTINGENCY PLAN
 APPENDIX III

**Kiggavik
 Project**



AREVA Resources Canada Inc - P.O. Box 9204 - 817 - 45th Street West - Saskatoon, SK - S7K 3X5



AREVA Resources Canada Inc.

Uranium Exploration Plan

Exploration Department

Kiggavik Project

Version 4


PIGA Unrestricted


January 2015

Controlled Distribution List

Recipient	Copy No.
Aboriginal Affairs and Northern Development Canada	1
Government of Nunavut – Department of Environment	1
Kivalliq Inuit Association	1
Nunavut Impact Review Board	1
Nunavut Water Board	1
Workers' Safety and Compensation Commission	1

Approval for Use

Editor:		
Exploration Safety Health Environment and Quality Supervisor	Naomi Stumborg	
Title	Name	Signature

Approver:		
Vice President, Exploration	Patrick Ledru	
Title	Name	Signature

History of Revisions

Version	Revision	Date	Details of Revision
1	0	March 2007	Original submission
2	0	October 2007	Updated to reflect opportunities for improvement
3	0	January 2009	Updated to reflect opportunities for improvement
3	1	May 2011	Updated to reflect personnel titles and grammatical changes.
3	2	May 2012	Updated to reflect personnel changes
3	3	May 2013	Updated to reflect personnel changes and grammatical errors
3	4	May 2014	Updated surface land administration
4	0	January 2015	Improved formatting and new template; updated site information and drilling operations

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Acronyms and Abbreviations

Term	Definition
AANDC	Aboriginal Affairs and Northern Development Canada
AREVA	AREVA Resources Canada Inc.
CNSC	Canadian Nuclear Safety Commission
IATA	International Air Transport Association
IOL	Inuit Owned Land
KIA	Kivalliq Inuit Association
NWB	Nunavut Water Board
SHEQ	Safety Health Environment and Quality
TDG	Transportation of Dangerous Goods

1 Introduction

The AREVA Resources Canada Inc. (AREVA) Uranium Exploration Plan applies to the Kiggavik Project located approximately 80 km west of Baker Lake. The Uranium Exploration Plan is designed to meet the requirements of the Water Use Licence issued by the Nunavut Water Board (NWB), the Saskatchewan Environment Mineral Exploration Guidelines (Best Management Practices), and the Canadian Nuclear Safety Commission (CNSC) Regulations; however CNSC does not regulate exploration activities.

1.1 Revision to Plan

The Uranium Exploration Plan is reviewed regularly and updated as required to keep the information current and consistent with regulatory and procedural changes. A History of Revisions can be found at the front of this plan.

1.2 Responsibilities

The District Geologist, Nunavut is responsible for the implementation of this plan with the assistance of the following personnel:

- Project Geologist
- Safety, Health, Environment, and Quality (SHEQ) Supervisor
- Or designates

The Vice President, Exploration is ultimately responsible for any activity being carried out by Kiggavik Project personnel.

2 Site Information

The Kiggavik site is located in the Kivalliq Region of Nunavut and supports the exploration of the Kiggavik mineral leases and the St. Tropez claims which will be converted to lease in 2015.

Exploration of the Kiggavik Project is a joint venture between AREVA, Japan-Canada Uranium Company Limited and Daewoo International Corporation, with AREVA being the operator. The 37 Kiggavik mineral leases cover 45,639 acres. The surface rights for 31 mineral leases on Inuit Owned Land (IOL) are administered by the Kivalliq Inuit Association (KIA) while six mineral leases remain on Crown land. The Crown land covers 3,794 acres of the Jane prospect on the south-west portion of the Project with surface rights administered by Aboriginal Affairs and Northern Development Canada (AANDC).

The St. Tropez area covers 16,562 ha (officially 40,894 acres) that are encompassed within the IOL surface parcel BL-19 with surface rights administered by the KIA. The St. Tropez area is wholly owned and operated by AREVA out of the Kiggavik site.

There is an existing temporary exploration camp at the Kiggavik site which can accommodate approximately 60 people. The Kiggavik camp is located at the following coordinates:

- UTM 14W 564530 E 7146879 N
 - Latitude: 64° 26' 29" N
 - Longitude: 97° 39' 34" W

3 Site Operations

3.1 Training

AREVA provides necessary training to all its employees and contractors to ensure worker safety and protection of the environment during exploration activities. The training programs provided are designed to meet the requirements of the Nunavut Mine Health and Safety Act and Regulations, and the *ISO14001:2004 and OHSAS18001:2007* international standards. Although exploration activities are not regulated by the CNSC, the training programs are designed to meet the requirements of the *Uranium Mines and Mills Regulations*.

All Kiggavik personnel receive appropriate radiation protection training prior to beginning work. This includes instruction on the origins of ionizing radiation, types of radiation, health risks, principles of radiation safety and regulatory compliance. Training also includes the safe handling, management and disposition of radioactive materials such as radioactive core, drill muds and cuttings. Visitors at the Kiggavik site for more than 72 hours, or who will be left without an escort will receive radiation protection training. Visitors who have not received training must be escorted on site at all times. If contractors for the project have their own training program they must submit evidence of the training program.

Personnel supervising the shipment of radioactive materials must possess a valid Transportation of Dangerous Goods (TDG) certificate in accordance with Transport Canada *Transportation of Dangerous Goods Regulations* and the International Air Transport Association (IATA) *Dangerous Goods Regulations*.

Kiggavik personnel who handle fuel, lubricants and/or radioactive material require spill response training. If the contractors have their own training program they must submit evidence of the training program. Training for AREVA employees is provided in accordance with the Spill Contingency Plan. If the contractors do not have an acceptable training program in place, AREVA will supply the training material and/or provide the spill response training as required.

3.2 Drilling Operations

Drilling operations are conducted in accordance with land authorizations from the NWB, AANDC, and the KIA. As required by the current water use licence issued by the NWB, all drill sites are located at a minimum of 31 m beyond the ordinary high water mark of any nearby water bodies, unless an exemption to this requirement has been granted. During drilling activities, drill mud solids or cuttings in non-mineralized zones are deposited on the ground, in a natural low-lying depression. This natural depression must also be located at a minimum of 31 m beyond the ordinary high water mark of any nearby water bodies where direct flow into the water body is not possible. Refilling of bore-hole

depressions and restoration of the natural low-lying depression will be carried out as per the Abandonment and Restoration Plan.

When mineralized core is intersected, all drill mud and cuttings are collected in appropriate containers and categorized as radioactive through appropriate radiation measurements. Drill mud or cuttings with uranium content greater than 0.05% will be collected and stored at the radioactive storage compound with an appropriate containment system in place. Down hole disposal of cuttings is often not practical at Kiggavik. Any drill hole that encounters mineralization with uranium content greater than 1.0% over a length of > 1.0 m and with a metre-per-cent concentration of > 5.0 is sealed by grouting over the entire length of the mineralization zone and not less than 10 m above or below each mineralization zone. The casing must be cut as close to the ground level as possible upon completion. A radiological survey is conducted before and after drilling to verify that radiation levels are not greater than 1 microsievert per hour ($\mu\text{Sv/h}$) above background at one metre above ground. GPS locations of all drill holes are recorded and submitted with the annual report.

3.3 Core Logging and Storage

Permanent and long-term storage areas of radioactive material, including core and drill cuttings, are located at least 31 m from the main camp and at least 100 m from the high water mark of all water bodies. Logging of core is primarily conducted in core logging tents located a few hundred metres away from the camp facilities. Geotechnical logging of core may also be conducted at the drill sites. Permanent on-site core storage areas are appropriately labelled with radiation warning signs. Gamma radiation levels at 1 m from the surface of a storage area should be reduced to 1 $\mu\text{Sv/h}$ and in no instances exceed 2.5 $\mu\text{Sv/h}$. If long-term off-site storage is required, AREVA intends to transport the material to be stored at an operating uranium mining facility.

3.4 Radioisotopes

Nuclear materials and radiation devices are used for exploration and instrument calibration. The possession, use, storage, and disposal of nuclear materials and radiation devices are carried out in accordance with Canadian Nuclear Safety Commission (CNSC) *Nuclear Substances and Radiation Devices Regulations* and *EXP-752-02 Safe Handling and Use of Exploration Sources*.

3.5 Spills

All spills of radioactive material are to be appropriately reported and responded to in accordance with the Spill Contingency Plan that was submitted to and approved by regulators during land use applications. The uncontrolled or accidental release of any radioactive materials, including drill mud solids and cuttings, is considered a spill. In the event of a spill, radioactive materials are collected and necessary site remediation undertaken to meet the site abandonment criteria of less than 1 $\mu\text{Sv/h}$ above background at a height of 1 m. Material collected during the clean-up is stored in appropriate containers and stored in the on-site long-term radioactive storage area for future handling.

3.6 Shipping of Radioactive Materials

Shipping and receiving radioactive material is carried out in accordance with the CNSC *Packaging and Transport of Nuclear Substances Regulations*, the Transport Canada *Transportation of Dangerous Goods Regulations*, and the IATA *Dangerous Goods Regulations*. All personnel responsible for the shipment of radioactive materials must possess a valid TDG certificates and provide supervision of support personnel providing assistance during the preparation and shipment of radioactive material.

3.7 Site Abandonment and Restoration

Site abandonment and restoration is carried out in accordance with the Abandonment and Restoration Plan. Gamma radiation surveys are conducted at each site prior to drilling and prior to final abandonment. Contaminated soil or cuttings are collected in appropriate containers and stored in the long-term core storage area for future handling, which may include transfer to an operating mine site. All drill sites are cleaned to ensure that the gamma dose rate at a height of 1 m is less than 1 $\mu\text{Sv/h}$ above ambient background. Materials and equipment leaving the drill site are monitored for contamination in accordance with procedure, *EXP-740, Routine Radiological Monitoring Schedule*. Materials or equipment that cannot be decontaminated to meet unrestricted release criteria are either stored in the long-term core storage area or shipped to a licensed facility such as the McClean Lake Operation in accordance with the CNSC *Packaging and Transport of Nuclear Substances Regulations* and the Transport Canada *Transportation of Dangerous Goods Regulations*.

4 References

AREVA Resources Canada Inc. 2015. Abandonment and Restoration Plan, Version 5. January 2015

AREVA Resources Canada Inc. 2015. Spill Contingency Plan, Version 7, Revision 3. January 2015

Canadian Nuclear Safety Commission. 2011. Packaging and Transport of Nuclear Substances Regulations. December 2011.

Canadian Nuclear Safety Commission. 2012. Uranium Mines and Mills Regulations. December 2012.

EXP-740, Routine Radiological Monitoring Schedule

EXP-752-02 Safe Handling and Use of Exploration Sources

Saskatchewan Mineral Exploration and Government Advisory Committee. 2012. Mineral Exploration Guidelines for Saskatchewan.

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AREVA Resources Canada Inc.

Waste Management Plan

Exploration Department

Kiggavik Project

Version 6

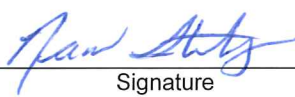
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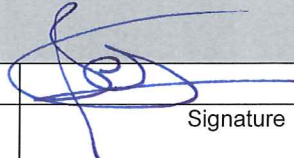
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Editor:		
Exploration Safety Health Environment and Quality Supervisor	Naomi Stumborg	
Title	Name	Signature

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History of Revisions

Version	Revision	Date	Details of Revision
1	0	March 2007	Original submission
2	0	October 2007	Update to reflect changes in field activities/capabilities and goals of continual improvement
3	0	January 2009	Update to reflect changes in field activities/capabilities and goals of continual improvement
4	0	January 2010	Update to reflect changes in field activities/capabilities and goals of continual improvement
5	0	May 2011	Update to reflect changes in field activities/capabilities and goals of continual improvement
5	1	May 2012	Updated to reflect personnel changes
5	2	May 2013	Updated to reflect personnel changes
6	0	January 2015	Updated references, formatting, and minor edits

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Acronyms and Abbreviations

Term	Definition
AREVA	AREVA Resources Canada Inc.
SHEQ	Safety Health Environment and Quality

1 Introduction

The AREVA Resources Canada Inc. (AREVA) Waste Management Plan applies to the Kiggavik Project (Project) located approximately 80 km west of Baker Lake, Nunavut. AREVA is committed to ensuring that all wastes generated by the Kiggavik Project are collected, stored, transported, and disposed of in a safe, efficient and compliant manner.

1.1 Purpose and Scope

The Waste Management Plan is fulfilled by using proven strategies and applying modern technologies to ensure materials are used efficiently and disposed of in an environmentally conscious manner. General strategies include the following:

- The implementation of a waste manifesting system to enable waste identification and tracking.
- The most environmentally suitable materials, equipment, and products are used where practical.
- Procurement procedures consider product substitution for materials that are hazardous to handle, generate hazardous wastes, or create an environmental liability.
- All site personnel attend an orientation, which addresses waste management and handling of hazardous goods, prior to being exposed to the worksite. The site orientation for short-term visitors includes a waste management component.
- Proper sorting, disposal, storage and handling of all waste streams.

1.2 Revision to Manual

The Kiggavik Waste Management Plan is reviewed regularly and is updated as required to keep the information current and consistent with regulatory and procedural changes. A History of Revisions can be found at the front of this plan.

1.3 Responsibilities

The District Geologist, Nunavut is responsible to ensure that this plan is implemented. Implementation may be completed by the following personnel or their designate:

- Project Geologist
- Safety, Health, Environment, and Quality (SHEQ) Supervisor

The Vice President, Exploration is ultimately responsible for any activity being carried out by Kiggavik Project personnel.

2 Waste Reduction, Reuse, and Recycling

2.1 Waste Reduction

Efforts to, wherever practical, reduce waste at source, for example:

- refillable pump bottles instead of aerosol cans;
- reduction of paper consumption by promoting the use of electronic mail, voice messaging, electronic transmittals, etc.;
- reduction of disposable cups and containers by encouraging use/re-use of refillable mugs for beverages; and
- storage of bulk liquids in large containers and dispensing the liquids into smaller, refillable bottles and containers, instead of several smaller containers.

Means of reducing the volume of waste generated continue to be developed as the project progresses.

2.2 Waste Reuse

Waste is reused to the furthest practical extent. Examples of waste reuse include but are not limited to the following:

- Reuse of packaging from shipping of materials and equipment
- 45 gallon drums for waste materials
- Sea containers for backhauling of wastes or equipment

2.3 Waste Recycling

Waste is recycled where practical. Materials that may offer recycling opportunities in the future are investigated on an on-going basis during operations to reduce waste. For example, AREVA may store materials such as tires, fluorescent lamp ballasts, batteries, used oils, and other chemicals on-site for future shipment off-site for recycling.

3 Waste Sources

The most common sources and types of wastes that are generated are presented in Table 3.1.

Table 3.1 Sources of Waste Generation

Source of Waste	Types of Waste
Chemical handling and storage operations	waste petroleum products, used chemicals
Sewage	biological sludge
Equipment maintenance	used batteries, engine oil, oil filters, tires, scrap metals, <i>etc.</i>
Building maintenance	used transformers, fluorescent lighting ballasts/tubes, glycol, construction scraps (wood, piping <i>etc.</i>)
Domestic waste from: - camp and drill sites - offices - kitchen facilities	domestic garbage, food wastes, paper, cardboard
Inert waste from camp and drill sites	cement, sand, used industrial materials, metals, pipe, glass, insulation <i>etc.</i>
Biological waste from first aid facility	biological waste, blood, gauze pads <i>etc.</i>
Drilling	clean or contaminated (mineralized) drill cuttings

4 Identification, Treatment and Disposal Plan

Table 4.1 presents treatment strategies and disposal plans for wastes during the exploration program.

Table 4.1 Treatment Strategies and Disposal

Waste Type	Treatment Strategy	Disposal Plan
Petroleum based		
Used oil	Dispose or recycle off-site	Collect in bunged drums. Store in lined/bermed storage area. Ship off-site
Used hydraulic fluid	Dispose or recycle off-site	Collect in bunged drums. Store in lined/bermed area. Ship off-site
Oil filters	Recycle/recover	Collect in ring lidded drums. Store in lined/bermed storage area. Store for shipment off-site.
Contaminated soils	Excavate	Store for shipment off-site or landfarming (upon approval)
Waste batteries	Recycle off-site	Drain (if required) and neutralize acid. Store for shipment off-site
Aerosol cans	Reduce/recycle	Puncture, drain, and collect in ringed drums for shipment off-site.
Paint	Dispose off-site	Collect and store cans in drums for shipment off-site
Chemicals		
Glycol	Dispose or recycle off-site	Collect in bunged drums. Store for shipment off-site
Solvents	Reduce/dispose off-site	Use non-toxic solvents where possible. Store in drums for shipment off-site
Domestic wastes		
Food	Incinerate	Collect and store in designated containers. Incinerate daily.
Paper/cardboard	Reuse/incinerate	Reuse where possible or incinerate
Plastics	reuse/dispose off-site	Reuse where possible
General camp wastes	Incinerate	Sort to retrieve non-burnable. Incinerate.
Inert Bulk Wastes		
Buildings/bulk debris	Reuse off-site/dispose off-site	Store for future shipment off-site
Wood	Incinerate, dispose	Sort wood, incinerate non-treated wood, ship treated wood off-site to approved disposal facility
Incinerator ash	Dispose off-site	Collect in drums for shipment off-site
Scrap metal	Dispose off-site	Store for shipment off-site
Organic Wastes		

Waste Type	Treatment Strategy	Disposal Plan
Sewage sludge	Incinerate	Bag and incinerate solid waste from pacto toilets; liquid waste is directed with greywater
Biological wastes	Incinerate/dispose off-site	Store in special waste receptacles. Incinerate/ship off-site
Clean drill cuttings		Disposed in a low lying area in the receiving environment; Potentially used for reclaiming sink holes
Contaminated drilling cuttings		Collected at the drill site in totes and stored in the radioactive storage compound for future handling, or shipped to an existing mining operation if the current exploration project does not proceed to development

5 Waste Management

5.1 Sorting

Waste must be sorted at the source before it can be disposed or transported to specific designated areas to ensure proper disposal. Measures that are implemented for sorting include, but are not be limited to, the following:

- Containers are available for the collection of burnable, non-burnable, and recyclable wastes, such as scrap metal, timber, unsalvageable equipment, etc. The contents of the containers are sorted and stored for future handling, which consists of incineration, off-site disposal, or recycling.
- Stored wastes are kept in a neat and tidy fashion and are transported off-site during the winter haul season in accordance with the Winter Road Plan.
- The waste manifest tracking will be updated upon removal of waste items from site.

5.2 Waste Storage

5.2.1 Containers

Containers used for storage of waste are selected based on physical and regulatory requirements prevention of wildlife attraction (i.e., steel or heavy duty plastic containers with positive clamping lids) and transport requirements (helicopter, truck, forklift, etc.). All containers are properly labelled to identify only those wastes for which the containers are being used to collect.

5.2.2 Waste Storage-Areas

All waste(s) collected in drums that are susceptible to damage which may lead to a leak or spill are stored in lined/bermed areas (arctic berms) for future handling and removal from site. The lined/bermed areas (arctic berms) have been identified as the location in which used or generated hazardous materials are to be stored prior to off-site shipment.

5.2.3 Incinerator

An incinerator is used on a daily basis for the incineration of non-hazardous, combustible waste materials, which includes paper, food waste, sewage and non-treated wood. Incinerator ash is collected regularly (frequency depending on ash loading) in sealed, wildlife resistant containers and transported off-site for disposal. Refer to *EXP-775, Operation of the Kiggavik Waste Incinerator* for proper handling instructions and operation of the incinerator. Proper waste segregation and incinerator operation ensures maximum combustion.

5.3 Food Waste Handling

Food wastes are collected from the camp, drills and other facilities as required, and immediately placed in plastic bags. The bagged waste is then transported directly to the incinerator which is

located within 50 m of the kitchen. Typically, food wastes are incinerated daily to avoid potential wildlife attraction. Food wastes are not stored outside the incinerator area.

To prevent wildlife attraction, food, beverages and their containers are not disposed of outdoors. Designated snack and break areas for personnel are provided to prevent food and wastes from being generated uncontrollably around the site.

5.4 Non-Food Waste Handling

5.4.1 Sewage

When pinto-toilets are used, the sewage removed from the washrooms is collected in bags and immediately incinerated. Liquid sewage from the urinals is currently mixed with the camp grey water for discharge into a designated low-lying area, which is at minimum 30 m south of camp. The grey water from the kitchen and washroom facilities is diverted to the grey water collection sump area. The grey water sump consists of a barrel that was punctured with drainage holes and buried to allow drainage and filtration of the water.

5.4.2 Chemicals

Chemicals are collected in appropriate containers, and stored in a lined/bermed area for future shipment off site for disposal or recycling at an approved facility.

5.4.3 Waste Oil

Waste oil is collected in bunged drums and stored in the lined/bermed area for future shipment off-site for handling at an approved facility.

5.4.4 Domestic Wastes

Non-toxic, non-food solid wastes is sorted into recyclable, reusable, combustible, and non-combustible categories. Combustible items are burned in the incinerator, while non-combustible items are stored until they are shipped off-site for recycling. Aerosol cans are punctured and drained prior to being shipped off-site. Toxic materials are to be stored in sealed, steel or plastic drums in a lined/bermed area and shipped off-site for proper disposal.

5.4.5 Inert Bulk Wastes

Inert bulk wastes that cannot be readily recycled or reused, such as chemically treated wood, general debris, incinerator ash, tires, etc. are stored and appropriately labelled prior to shipment off-site to an approved facility.

5.4.6 Hazardous Wastes

Other hazardous, non-combustible waste and contaminated materials not identified above are temporarily stored in appropriate containers and shipped off-site for disposal or recycling.

During normal operations, hazardous materials are stored in other various locations associated with their intended use to minimize site transport and handling requirements. These materials and locations are as follows:

- oils and greases are stored in drums, pails, and bottles in the maintenance shop or drill laydown area
- batteries of all types are stored in a storage area;
- ethylene glycol is stored in drums in the lined/bermed area

5.4.7 Drill Cuttings

When drilling in non-mineralized zones, drill mud solids or cuttings are deposited in designated low-lying areas. When mineralized core, greater than 0.05% uranium, is intercepted, all drill mud and cuttings are disposed of down hole where possible or collected in appropriate containers and stored in the radioactive storage area. This is in accordance with *EXP-740-05, Management and Disposition of Radioactive Drill Cuttings* and the Abandonment and Restoration Plan.

6 References

AREVA Resources Canada Inc. 2015. *Abandonment and Restoration Plan*. January 2015

AREVA Resources Canada Inc. 2011. *Winter Road Plan*. May 2011.

Canadian Council of Ministers of the Environment (CCME). 2001. *Canada-Wide Standards for Dioxins and Furans Emissions from Waste Incinerators and Coastal Pulp and Paper Boilers*. 2001.

Environment Canada. 2010. *Technical Document for Batch Waste Incineration*. January 2010.

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EXP-775, Operation of the Kiggavik Waste Incinerator

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Government of Nunavut Department of Environment. Environmental 2012. *Guideline for the Burning and Incineration of Solid Waste*. January 2012.



AREVA Resources Canada Inc.

Wildlife Mitigation and Monitoring Plan

Exploration Department

Kiggavik Project

Version 5 Revision 4


PIGA Unrestricted


January 2015

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1	0	March 2007	Original submission
2	0	January 2008	Updated to reflect changes in field activities/capabilities and areas of continual improvement
2	1	May 2008	Updated to reflect program changes initiated by new consulting biologist and to integrate comments received by Nunavut and NWT biologists
3	0	January 2009	Updated to reflect opportunities for improvement
4	0	January 2010	Updated to reflect opportunities for improvement
5	0	April 2011	Updated to reflect lessons learned throughout the 2010 field season. These changes include an appendix which outlines the appropriate responses to a variety of scenarios to ensure appropriate mitigative actions are carried out in a timely and effective manner.
5	1	May 2012	Updated to reflect change in personnel titles
5	2	May 2013	Updated to reflect changes in personnel
5	3	May 2014	Updated to include deterrence measures for safety intervention and wildlife monitor responsibilities
5	4	January 2015	Minor edits for improved clarity and updated to new template

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Acronyms and Abbreviations

Term	Definition
AANDC	Aboriginal Affairs and Northern Development Canada
AREVA	AREVA Resources Canada Inc.
BQCMB	Beverly and Qamanirjuaq Caribou Management Board
EC	Environment Canada
EIS	Environmental Impact Statement
GN	Government of Nunavut
GNWT	Government of Northwest Territories
GN-DoE	Government of Nunavut, Department of Environment
HTO	Hunters and Trappers Organization
KIA	Kivalliq Inuit Association
SHEQ	Safety Health Environment and Quality

1 Introduction

The Wildlife Mitigation and Monitoring Plan (Plan) described herein has been developed by AREVA Resources Canada Inc. (AREVA) for the Kiggavik Project (Project) located approximately 80 km west of Baker Lake, Nunavut. The Plan is implemented during the field season to monitor and reduce potential impacts on wildlife with particular emphasis on caribou. The Plan serves as a work instructional and internal best management practice and encompasses activities in Nunavut, including continued exploration and environmental studies for the environmental assessment process.

All AREVA personnel, contractors, subcontractors, helicopter contractors, and Wildlife Monitors have the responsibility to be familiar with and to follow this Plan. Implementation and enforcement is the responsibility of the Safety, Health, Environmental, and Quality (SHEQ) Supervisor or designate with support from the Wildlife Monitors. Kiggavik Project worksites and activities include the following:

- Camp Activities (including the fuel cache)
- Drilling Operations
- Airborne Geophysics
- Ground Geophysics and Exploration Activities
- Environmental Baseline Work and
- Environmental Monitoring

The Plan is reviewed and updated regularly, and was developed in consultation with a biologist knowledgeable in barren ground caribou. The Plan is reviewed to reflect lessons learned through AREVA's experience and the experience of other projects and to incorporate feedback and recommendations from regulators and community members.

The current Plan has evolved with lessons learned during the previous field seasons, community input, and regulatory commitments. AREVA is working closely with the Government of Nunavut Department of Environment (GN-DoE) to investigate options for collecting meaningful caribou population data using low invasive methodologies.

2 Monitoring Plan

2.1 Wildlife Monitoring

AREVA will employ an Independent Wildlife Monitor(s) to:

- Verify that this plan is carried out
- Independently report Kiggavik related wildlife and any concerns to external agencies
- Provide safety assistance regarding wildlife issues

The Wildlife Monitor must become familiar with their scope of work by discussing this plan with the SHEQ Supervisor or designate. The Wildlife Monitor will be responsible for observations surrounding the Kiggavik camp and must report wildlife sightings to the SHEQ Supervisor or designate. They may report to the local Conservation Officer and Hunters and Trappers Organization (HTO) at any time. Provided weather conditions are adequate, the camp observations should be conducted from the five height-of-land (HOL) locations surrounding camp. If collared caribou are identified as approaching the site activities, or caribou herds have been visually observed in the area, an aerial reconnaissance survey greater than 610 m (2,000 ft) may be conducted with the Wildlife Monitor to determine proximity to site activities. The Wildlife Monitor will be responsible for advising on the number and proximity of caribou to determine when to cease activity. Regular communication with the SHEQ Supervisor and Project Geologist is beneficial for adequate reporting and mitigation measures.

If requested, the Wildlife Monitor will be allowed to carry the firearm provided by AREVA during regular monitoring of the HOL locations and during wildlife deterrence for safety intervention. The firearm may be obtained following discussion with the Facility and Logistics Coordinator, Kiggavik and will be returned to the locked gun cabinet once work is complete. The AREVA General Standard Practice (GSP) Manual [Section 9.03 Firearms and Offensive Weapons](#) guides the storage and use of firearms.

2.2 Baseline Data to Support Environmental Assessment

Wildlife survey data collected to support development of the Environmental Impact Statement (EIS) may be used to support site monitoring and help inform appropriate mitigation actions as required. The environmental consultants communicate regularly with the SHEQ Supervisor or designate to ensure important wildlife observations are recorded and communicated to appropriate personnel at site.

2.3 Aerial Observations

Wildlife observations during daily transportation of field staff and contractors will be recorded to provide information about the presence of caribou and any other wildlife in the area. Refer to section 3.4 Flight Specific Mitigation for the required altitudes of the above mentioned flights.

2.4 Wildlife Logs

AREVA has provided Wildlife Sightings Forms for all site personnel and visitors to complete following the observation of any wildlife. Instructions regarding this form are provided during orientation. The Wildlife Monitor will communicate information obtained in the field to the SHEQ Supervisor or designate. All wildlife information will be transcribed to an electronic file which is included in the monthly wildlife reports.

2.5 Caribou Radio-Collaring Data

The study area will be monitored for approaching caribou with the use of satellite collar information provided by caribou biologists with the Government of Northwest Territories. In the future, the Government of Nunavut may provide collar data as well.

3 Mitigation and Protection Measures

Mitigation and protection measures are heavily based on compliance with permit/licence terms and conditions. Additional AREVA commitments were adopted from recommendations from the Government of Nunavut Department of Environment (GN-DoE), Environment Canada (EC), Beverly and Qamanirjuaq Caribou Management Board (BQCMB) and AREVA-led commitments. AREVA will implement the following mitigation and protection measures for caribou, and other wildlife that are seasonal or annual residents of the Project area.

3.1 General Protection Measures

Wildlife will have the “right-of-way” and will not be blocked or deterred from moving through the Project area. The camp layout and drilling area will be limited in size to reduce the Project footprint and the use of “good housekeeping” practices to reduce attractants limits the number of wildlife around work areas. Refer to the Noise Abatement Plan for measures taken to control noise.

Non-hazardous combustible garbage will be burned in an incinerator (see Waste Management Plan). Non-combustible waste and hazardous materials are stored in enclosed buildings and/or sea containers for future shipment to an approved facility. Wildlife safety will be discussed during orientation, and all predator interactions will be reported to the Baker Lake Conservation Officer. AREVA educates and enforces “no feeding or harassment of wildlife” and the appropriate response to animal encounters, specifically carnivores and muskoxen will be communicated. An AREVA representative will contact the Baker Lake Conservation Officer for appropriate protocols and actions if a need for deterrents or other wildlife management techniques are identified.

Hunting and trapping by AREVA employees and contractors is prohibited on the Kiggavik lease. AREVA employees and contractors must obtain a Sport Fishing Licence, and provide a copy to the SHEQ Supervisor or designate before commencing on a fishing trip leaving from site.

The use of firearms is strictly controlled. The Project Geologist or designate must approve any firearm coming on site. The only allowable use of firearms is for dangerous animal deterrence measures (e.g., firearms, bear bangers, bear spray, cracker shells and rubber bullets), and for safety kills to protect human life should a situation arise when other measures have failed. The Wildlife Monitor is permitted to carry a firearm. Refer to *GSP Section 9.03 Firearms and Offensive Weapons* regarding storage and use of firearms.

If there is a disturbance to caribou or if an incident occurs between a grizzly bear, wolverine, wolf, or fox and the field staff a Supervisor’s Investigation Report will be completed. An incident is defined as a disturbance to caribou, damage to camp facilities caused by wildlife, continued persistence of a carnivore(s) within the camp or work site, and/or interactions between humans and wildlife that lead to harm to either. In the case of a wildlife incident notify the Baker Lake Conservation Officer.

Materials, chemicals, and equipment will be removed from the drill sites and camp area at completion of the project as described in the Abandonment and Restoration Plan. The intent is to reclaim the area as close as possible to the natural state. Chemicals are stored in double-walled containers or in secondary containment. Diesel fuel, gasoline, and aviation fuel is contained within arctic berms or double-walled storage tanks (see Spill Contingency Plan). In the event of a spill, the Spill Contingency Plan will be implemented immediately. Used chemicals are stored for transportation off site for proper handling.

3.1.1 Safety Intervention

3.1.1.1 Field Personnel

In the event that there is potential for a human to wildlife conflict, safety intervention may be necessary. As recommended by the Conservation Officer, field personnel should use bear bangers as a deterrent first before requesting helicopter assistance or rubber bullets. The Wildlife Monitor is available for added deterrent support with firearms loaded with bear bangers and rubber bullets. Any such occurrence must be reported to the SHEQ Supervisor immediately who will then report to the local Conservation Officer.

3.1.1.2 Camp Personnel

Similar to the standard practice for field personnel, in the event there is potential for a human to wildlife conflict, the first priority for deterrence is the use of bear bangers. Where the helicopter is already in the air, the animal will likely be deterred without requiring the bear bangers. The camp also has two firearms available to the Wildlife Monitor. The 12 gauge bear bangers, rubber bullets, and lethal shot are available where safety is at risk. Any such occurrence must be reported to the SHEQ Supervisor immediately who will then report to the local Conservation Officer.

3.2 Raptor and Migratory Bird Protection Measures

To mitigate potential impacts to raptors and other migratory birds, AREVA will avoid disturbing known raptor nests from April 15 to September 1 by maintaining a 1.5 km buffer when in transit by aircraft and will avoid approaching known nests closely while on foot. Limited disturbance (e.g. raptor nest monitoring) within the aircraft buffer may occur infrequently prior to September to obtain necessary baseline data for the environmental assessment.

If a nest site is established on a man-made structure and eggs are present, the nest will be avoided as much as possible and monitored for nest success.

Prior to drilling in an area, a gamma survey is conducted. During this survey the area is surveyed for active bird nests during the breeding period of May 30 to July 31. All nests will be recorded and efforts to create appropriate buffers (dependent on species tolerance and protection level) around migratory birds and species at risk will be made. Nests will be monitored for hatch or termination.

3.3 Caribou Protection Measures

Caribou will have the “right-of-way”, and will not be blocked or deterred from moving through the Project area. Activities that may interfere with migration will cease during migration. The calving grounds for the Beverly and Qamanirjuaq herds are approximately 70 km and 200 km from the exploration areas, respectively. AREVA does not conduct any activity within the designated Caribou Protection Areas or within the larger known Caribou Calving Grounds. The distance between the Kiggavik camp and the nearest known caribou water crossings is 25 km. Figure 3.2 shows the caribou crossings and calving areas in relation to the Kiggavik Project Site. AREVA follows the DIAND Caribou Protection Measures (AANDC, 2010) as well as additional caribou protection and mitigation commitments. Refer to 3.4 Flight Specific Mitigation for altitudes over concentrations of caribou 50 or more within close proximity to one another.

No camp construction, caching of fuel, or blasting will occur within 10 km of a designated and/or recognized caribou crossing during periods of migration between May 15 and September 1. No diamond drilling activity will occur within 5 kilometres of any designated and/or recognized caribou crossing during periods of migration between May 15 and September 1. Operation of ground, air or water-based mobile equipment within 10 km of a caribou crossing is anticipated to happen infrequently and will only occur in the absence of caribou concentrations. Snowmobile and ATV use will be suspended if cows and calves are within 2 km of activities. Ground-based monitoring and/or aerial reconnaissance flights will be used to monitor caribou presence as required and appropriate prior to and during operations of mobile equipment (AANDC, 2010).

If a collared caribou is identified as approaching site activities, the SHEQ Supervisor or designate may determine what the collar represents by communicating with the Government of Nunavut (GN) or Government of Northwest Territories (GNWT), with environmental consultants, and exploration companies within the area. If required, verification may occur through an aerial reconnaissance survey with the Wildlife Monitor.

In the event that caribou cows calve outside the designated Caribou Protection Areas, AREVA will suspend operations within 10km¹ of any area occupied by cows and calves between May 15 and July 15 (AANDC, 2010). Water circulation in the drills will continue to ensure the rods do not freeze in the hole. Monitoring activities and visuals from the drill area will be used to identify when caribou are within 10 km of drilling activities. Through high altitude aerial reconnaissance or ground based monitoring, the Wildlife Monitor will determine when caribou cows and calves are outside the 10 km buffer and report the information to the SHEQ Supervisor or designate. Activities can resume when the caribou are outside the 10 km buffer following confirmation by the SHEQ Supervisor or designate. If a concentration of caribou remains within 10 km of drilling operations for more than two days, the SHEQ Supervisor or designate will contact the Conservation Officer in Baker Lake to determine the next appropriate course of action.

¹ The 10 km calving period buffer originated from comments by the BQCMB and GND OE (BQCMB, 2007, GN, 2007, GN 2008)

To avoid injuries to caribou and humans during June and July, drilling activities will be suspended if concentrations of caribou (50 or more) approach within 2 km² of drilling operations (NIRB, 2007a and GN-DoE, 2008). Water circulation within the drill will continue to keep the rods from freezing in the hole. Monitoring activities and visuals from the drill area will be used to identify when caribou are within 2 km of drilling activities. Through ground based monitoring, the Independent Wildlife Monitor will determine when caribou are outside the 2 km buffer, and report the information to the SHEQ Supervisor or designate. Activities can resume when caribou are outside the 2 km buffer following confirmation by the SHEQ Supervisor or designate. If a concentration of caribou remains within 2 km of drilling operations for more than 2 days the SHEQ Supervisor will contact the Conservation Officer in Baker Lake and the consulting biologist to determine the next appropriate course of action. AREVA will forward any direction from GN-DoE or KIA regarding caribou monitoring to NIRB (NIRB 2007).

² With respect to the recommendation for suspending activities when caribou are within 10 km of exploration activities (GN-DoE 2007, GN-DoE 2008), AREVA offers the following information and approach. Studies of woodland caribou have demonstrated avoidance of up to 1 km for well sites and 250 m for roads and seismic lines (Dyer et al. 2001). Data from the Ekati Diamond Mine suggests that the instantaneous negative response (alert, stop feeding) of barren-ground caribou to stressors (e.g., truck traffic) increases within 1 km of the source (BHPB 2004). Behaviour data also demonstrated that the amount of time spent feeding by females with calves was reduced when animals were within 5 km of Ekati mine footprint (BHPB 2004). The size and level of activity of the Kiggavik-Sissons project is much less than an operating diamond mine or road. Regardless, the BQCMB and GN-DoE comments have been considered and operations continue to abide by the more stringent 10 km buffer.

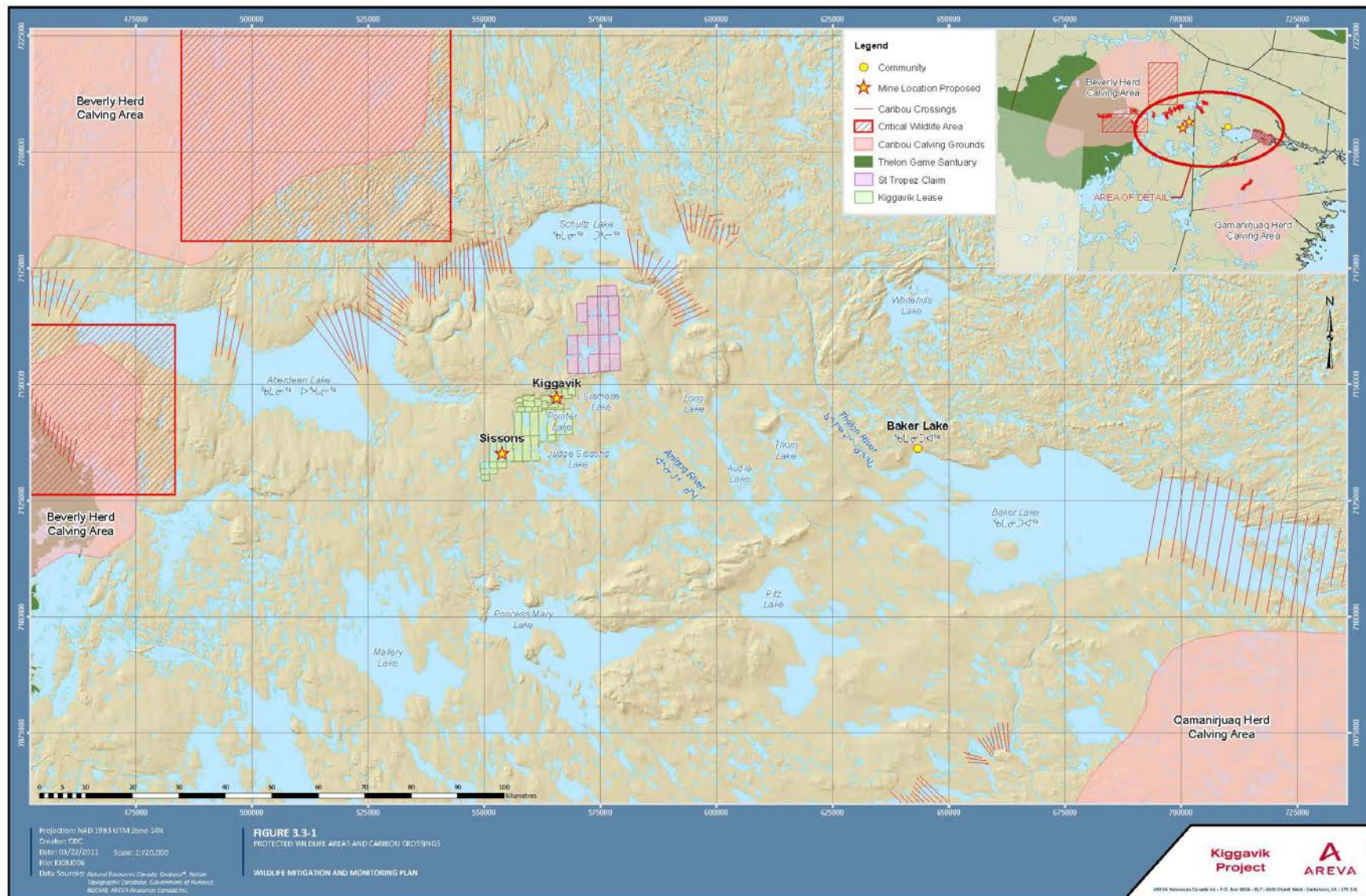


Figure 3.1 Beverly and Qamanirjuaq Calving Areas and Caribou Crossings in Relation to Kiggavik Project Site

3.4 Flight Specific Mitigation

AREVA will make efforts to avoid wildlife during flights and to avoid low-level flying to minimize impact of helicopter and airplane noise and presence. Although required flight altitudes are outlined below, some low-level flights are occasionally required for geological/environmental surveys, slinging operations, and during periods of poor weather. Geological or environmental surveys that will be flown below desired altitude must be pre-approved by the SHEQ Supervisor or designate. Unless otherwise approved by the SHEQ Supervisor or designate, personnel must adhere to the minimum flight altitudes listed below. If flying at lower altitudes is required, the SHEQ Supervisor must be notified and reasons documented. Any special requirements including the necessity for high level reconnaissance surveys will be determined by the SHEQ supervisor or designate.

Aircraft abide by strict altitude restrictions, and helicopter contractors must provide AREVA the capability of tracking all flight altitudes to ensure compliance with this Plan. Aircraft pilots are instructed not to fly over the Beverly calving grounds 70 km northwest of the Project area (as shown in Figure 3.2). For long-range transportation flights (>25 km), aircrafts are required to fly at a minimum of 610 m (2000 ft) above ground level. For shorter transportation flights (between 4-25 km), which are typically used for movement of staff and equipment between camp and work sites, the normal practice is to fly all aircraft at a minimum of 300 m (1000 ft) above ground level. Protection measures specific to low-level airborne surveys are given in the following section. Unless caribou are present, there are no altitude restrictions for flights less than 4 km. In the presence of 50 or more caribou, best practice is to avoid the caribou by a minimum distance of 610 m above or around the herd. Taking-off or landing of aircraft does not occur if 50 or more caribou are within 1 km of the landing area, except where safety is at risk (NIRB, 2007). From April 15 to September 1, AREVA will not fly within 1.5 km of nesting raptors when in air transit and will avoid disturbance in poor weather. A summary of altitude restrictions is provided in Table 2.1 below.

Table 2.1 Flying Altitudes and Related Activities

Activity	Flying Altitude (above ground) ³
Regular Long Distance Flights >25 km	> 610 m
Short Distance Flights between 4 and 25 km	> 300 m
Aerial Reconnaissance Surveys	> 300 m
Airborne Geophysical Surveys	≥ 120 m (as required by the survey protocol)
Flights in the vicinity of > 50 caribou	> 610 m (horizontal separation if vertical is not possible)

³ Normally the altitude above ground is estimated using the aircraft altimeter set to 29.92" of mercury and correcting for the ground elevation along the track. This causes uncertainties due to estimating the ground elevation and the difference between the barometric pressure at the time of the flight and standard pressure of 29.92".

3.5 Mitigation Specific to Geophysical Surveys

3.5.1 Survey Rationale

Aerial

Airborne geophysical techniques are used extensively in exploration to identify physical variations in the underlying geology which can be then used as a means of defining areas of interest. Different methods are employed such as Electromagnetics (EM), Gravity Gradiometry, Magnetism and Radiometrics which may be conducted in different years if required. Flying altitudes and line spacing's are the main factors that govern the resolution of the survey. To map the targets both a tight line spacing (~150 m) and a low altitude of (~50-200 m) following the topography is required.

Airborne geophysical surveys can gain access to remote areas quickly and reduce exploration time. In addition, where environmental issues may limit the amount of exploration possible with ground activities, airborne surveys offers a solution to these issues. If flying over concentrations of caribou is avoided, then this technique is a non-invasive passive technology and an environmentally friendly alternative that will help focus future ground-based activities while limiting or reducing impacts to the environment.

Ground Geophysical Surveys

Ground geophysical surveys are generally the second step in geophysical exploration. Mainly used to refine the areas of interest that result from the airborne surveys, they employ the same kind of techniques such as DC Resistivity, EM, Gravity, Magnetism, and Radiometrics. They are used to better understand the underlying geology with more detail and to help geologists to define their drill targets.

Ground geophysical surveys have a lower production rate compared to airborne surveys because they are generally realized by people on the ground but the accuracy is better. Techniques have almost no effects on the environment (walking on the ground) and instruments can be removed from the field if caribou are too close to the survey area.

3.5.2 Survey Specifications

Airborne Geophysical Survey Specifications

The chosen method is to mount survey instrumentation in a suitable aircraft. Instrumentation includes among others the data acquisition system (which records full tensor gravity gradiometry, triaxial magnetic gradiometry etc if any), digital video, and a complete digital terrain model from an inertially referenced laser (Lidar) altimeter system or a radar system. Specific requirements to complete a survey could be as follows:

- Nominal Flying Height: 120 - 200 m
- Flying Mode: Modified Drape
- Line Spacing: 150 m
- Tie Line Spacing: 750 m
- Ground Cover Restriction: Results are much more precise without snow cover
- Survey time: Dependant on weather conditions and the presence of caribou within the survey area)

Ground Geophysical Survey Specifications

The chosen method is to deploy in the field the adequate technique to realize, if any, a mapping of the apparent resistivity or gravity, to locate anomalous radioactivity, to define magnetic structures and to characterize targets in depth.

An example of requirements to complete a mapping survey includes the following:

- Line Spacing: 150 m
- Number of lines: 20
- Length of lines: 2000 m
- Surface covered: 6 km²
- Ground Cover Restriction: Results are much more precise without snow cover and frozen ground
- Survey time: Dependent on surface cover, contractor's crew size, quantity of equipment used, weather conditions and the presence of caribou within the survey areas

3.5.3 Protection Measures

There are caribou protection measures in place for airborne and ground geophysical surveys. The intent of these protection measures is to ensure surveys are only conducted when caribou disturbance can be minimized. The preferred window for conducting geophysical surveys is in June after the northern migration, and efforts will be made to avoid the migration and post calving periods from July 15 to July 31. The SHEQ Supervisor or designate is notified of the requested survey area and duration to confirm compliance with the Plan. A reconnaissance flight is flown at an altitude of 300 m over the initial line of the proposed area to determine the presence of caribou. If the ceiling is lower than the 300 m but at an altitude that permits safe flying, the reconnaissance flight will be flown at the maximum altitude possible.

Airborne Geophysical Surveys

- If a concentration of caribou (50 or more individuals in close proximity to one another) are within the survey area the aircraft will relocate to another part of the survey block and repeat the reconnaissance flight or the survey will be postponed until the caribou are at a distance of 2 km from the survey area.
- If caribou calves are present in the survey area between May 15 and July 15, the survey will be postponed until either the calves are gone or the survey can be conducted outside of this time period.

- If concentrations of caribou are not observed within the survey route, then the survey proceeds at the approved altitude
- A continuous watch is kept for caribou during the survey. If concentrations of caribou are observed in the survey area during the course of the work, the survey is aborted and another part of the block is selected.
- The contractor must notify the SHEQ Supervisor or designate of such caribou encounters and provide information pertaining to the location, time, and number of caribou.

Ground Geophysical Surveys

Ground geophysical surveys that exclude the use of wire abide by the protection measures outlined for regular operations (see section 3.3 Caribou Protection Measures). Where ground geophysical surveys include the use of wire, the following protection measures will be in place:

- Reconnaissance flights are flown daily during the survey to confirm the absence of caribou herds in proximity to the survey area
- If caribou herds (50 or more) or caribou cows with calves are absent (between May 15 and July 15) within 10 km of the study area, or are not expected to be within the study area during the survey, the survey can proceed. If caribou are within 10 km, the geophysical survey will be temporarily postponed until caribou are out of the area
- For concentrations of caribou the SHEQ Supervisor or designate and Wildlife Monitor will determine an adequate distance at which the geophysical wire is to be retrieved. The time required to retrieve wire and the speed in which the caribou are migrating will be considered. This distance will be determined prior to conducting each new survey
- If 50 or more caribou (in close proximity to one another) approach the survey area, within the minimum distance determined above, the geophysical wire would be retrieved to ensure they are protected

4 Reporting

All wildlife activities will be recorded and reported monthly during the field season. With the assistance of the independent Wildlife Monitor, reports will be submitted by the SHEQ Supervisor or designate on site to the Manager, Nunavut Affairs, the District Geologist, Nunavut, Baker Lake Hunters and Trappers Organization (HTO) the Baker Lake Conservation Officer, the GN Department of Environment (GN-DoE), Regional Biologist, Kivalliq Inuit Association (KIA) and Aboriginal Affairs and Northern Development Canada (AANDC). The monthly reports will be used to help construct a year-end overview to be included in the Kiggavik Project Annual Report.

5 References

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- NIRB, 2009. Screening Decision on Extension Request from AANDC and KIA - Additional Terms and Conditions for NIRB File No. 06AN085 (January 9, 2009)

Appendix A Events and Responses

Event	Contractors	Wildlife Monitor	SHEQ Supervisor or Designate
General Mitigation			
A disturbance to caribou	<ul style="list-style-type: none"> Notify the SHEQ Supervisor Assist with the completion of the Supervisor's Investigation Report where necessary 	<ul style="list-style-type: none"> May be required to assist in emergency situations such as using firearm for safety kills or notifying camp when danger (wildlife) is out of the area Assist with the completion of the Supervisor's Investigation Report where necessary 	<ul style="list-style-type: none"> Complete a Supervisor's Investigation Report Notify Project Geologist or designate and Manager of Nunavut Affairs of mitigating actions Note in monthly wildlife report
An incident occurs between grizzly bear, wolverine, wolf, fox and field staff	<ul style="list-style-type: none"> Notify the SHEQ Supervisor Assist with the completion of the Supervisor's Investigation Report where necessary 	<ul style="list-style-type: none"> May be required to assist in emergency situations such as using firearm for safety kills or notifying camp when danger (wildlife) is out of the area Assist with the completion of the Supervisor's Investigation Report where necessary 	<ul style="list-style-type: none"> Complete a Supervisor's Investigation Report Notify Project Geologist or designate and Manager of Nunavut Affairs of mitigating actions Notify the Baker Lake Conservation Officer Note in monthly wildlife report
If a need for deterrents or other wildlife management techniques are identified	<ul style="list-style-type: none"> No action required 	<ul style="list-style-type: none"> No action required 	<ul style="list-style-type: none"> Contact Baker Lake Conservation Officer
Caribou Mitigation			
Collared Caribou are identified as approaching site activities	<ul style="list-style-type: none"> No action required 	<ul style="list-style-type: none"> Assist SHEQ Supervisor with identifying what the collar represents and aerial reconnaissance surveys where necessary 	<ul style="list-style-type: none"> Determine what the collar represents by contacting the GN and/or GNWT or exploration companies in the area Notify Project Geologist or designate and Manager of Nunavut Affairs of mitigating actions Note in monthly wildlife report
If caribou with newborn calves approach drilling rig between May 15 and July 15	<ul style="list-style-type: none"> Notify the SHEQ Supervisor and Wildlife Monitor If caribou and calves are observed within 10 km of 	<ul style="list-style-type: none"> Station at a vantage point for observing proximity of herd and presence of calves Notify the SHEQ Supervisor of observations 	<ul style="list-style-type: none"> Advise Contractor to shut down drilling activity if Wildlife Monitor determines calves are present within 10 km Following verification from

Event	Contractors	Wildlife Monitor	SHEQ Supervisor or Designate
	drilling rig, shut down drilling activity (continue water circulation)	<ul style="list-style-type: none"> If drilling activity is suspended, continue monitoring and notify SHEQ Supervisor of caribou proximity to drill rig 	<p>Wildlife Monitor, advise Contractor to commence drilling when caribou are outside the 10 km range</p> <ul style="list-style-type: none"> If caribou remain within 10 km for >2 days, notify the Baker Lake Conservation Officer for further action Notify Project Geologist or designate and Manager of Nunavut Affairs of mitigating actions Note in monthly wildlife report
> 50 caribou approach drilling rig during June or July	<ul style="list-style-type: none"> Notify the SHEQ Supervisor and Wildlife Monitor If >50 caribou are observed within 2 km of drilling rig, shut down drilling activity (continue water circulation) 	<ul style="list-style-type: none"> Station at a vantage point for observing proximity of herd and presence of calves. Notify the SHEQ Supervisor of observations If drilling activity is suspended, continue monitoring and notify SHEQ Supervisor of caribou proximity to drill rig 	<ul style="list-style-type: none"> Advise Contractor to shut down drilling activity if Wildlife Monitor determines >50 caribou are present within 2 km Following verification from Wildlife Monitor, advise Contractor to commence drilling when caribou are outside the 2 km range If >50 caribou remain within 2 km for >2 days, notify the Baker Lake Conservation Officer for further action Notify Project Geologist or designate and Manager of Nunavut Affairs of mitigating actions Note in monthly wildlife report
Flight Mitigation			
>50 caribou are within 1 km of landing area	<ul style="list-style-type: none"> Pilot will not land or take off within 1 km of >50 caribou except for flight safety Flights must be 610 m above ground when flying over >50 caribou (horizontal separation of 610 m is acceptable if 610 m altitude is not possible) If possible, choose an alternate landing area > 1 km from the herd Notify the SHEQ Supervisor and Wildlife Monitor 	<ul style="list-style-type: none"> If landing area is within sight, monitor proximity of herd Notify the SHEQ Supervisor of observations 	<ul style="list-style-type: none"> Notify pilots when >50 caribou are within 1 km of their landing area as advised by the Wildlife Monitor Notify pilots when the caribou have moved outside the 1 km range of the landing area as advised by the Wildlife Monitor Notify Project Geologist or designate and Manager of Nunavut Affairs of mitigating actions Note in monthly wildlife report

Event	Contractors	Wildlife Monitor	SHEQ Supervisor or Designate
Aerial Geophysical Surveys			
During flight, 50 or more caribou are within the aerial survey route	<ul style="list-style-type: none"> Notify the SHEQ Supervisor The aircraft will relocate to another part of the block and repeat the reconnaissance flight or will be postponed until the animals are a distance of 2 km from the survey area 	<ul style="list-style-type: none"> No Action Required 	<ul style="list-style-type: none"> Notify Project Geologist or designate, Wildlife Monitor and Manager of Nunavut Affairs of mitigating actions Note in monthly wildlife report.
If calves are present between May 15 and July 15	<ul style="list-style-type: none"> Notify the SHEQ Supervisor The survey will be postponed until either the calves are gone or the survey can be conducted outside of this time period. 	<ul style="list-style-type: none"> No Action Required 	<ul style="list-style-type: none"> Notify Project Geologist or designate, Wildlife Monitor and Manager of Nunavut Affairs of mitigating actions
Ground Geophysical Surveys (include the use of wire)			
Caribou cows and calves are present within 10 kms between May 15 and July 15	<ul style="list-style-type: none"> Notify the SHEQ Supervisor and Wildlife Monitor Retrieve wire following verification from SHEQ Supervisor 	<ul style="list-style-type: none"> Station at a vantage point for observing proximity of herd and presence of calves Notify the SHEQ Supervisor of observations 	<ul style="list-style-type: none"> The SHEQ Supervisor in consultation with the Wildlife Monitor will notify the Contractor to retrieve the wire Notify Project Geologist or designate and Manager of Nunavut Affairs of mitigating actions Note in monthly wildlife report
> 50 caribou are within close proximity of the ground survey area during June/July	<ul style="list-style-type: none"> Notify the SHEQ Supervisor and Wildlife Monitor Retrieve wire following verification from SHEQ Supervisor 	<ul style="list-style-type: none"> Station at a vantage point for observing proximity of herd and presence of calves Notify the SHEQ Supervisor of observations 	<ul style="list-style-type: none"> The SHEQ Supervisor in consultation with the Wildlife Monitor will notify the contractor to retrieve the wire Notify Project Geologist or designate and Manager of Nunavut Affairs of mitigating actions Note in monthly wildlife report

Appendix D Community Rescues

AREVA Supports Kazan Helicopter Rescue

 kiggavik.ca/2014/07/10/areva-supports-kazan-helicopter-rescue/

A group of Baker Lake youth got out of a sticky situation last week thanks to AREVA with some help from a Kivallingmiut Aviation helicopter and Peter's Expediting Ltd.

On June 28, a group of young people left Baker Lake by boat for a day trip to the Kazan River. But when it was time to return, the wind shifted causing ice to block their way home and forcing them to spend the night waiting for the wind to change direction.

However, one member with a medical condition did not have the medical supplies for a long stay. The group called Baker Lake for help. After trying and failing to reach the group by boat, the boy's grandfather contacted William Noah, AREVA's representative in Baker Lake. He asked if AREVA could help by sending a helicopter.

William contacted AREVA's Kiggavik Project site and provided coordinates. Soon a helicopter from Kiggavik arrived with an employee from Peter's Expediting who was familiar with the area and some snacks for the group. The helicopter quickly found the group and transported the boy and two others back to Baker Lake. The rest of the group was happy to stay a bit longer fortified with some snacks from Kiggavik.



AREVA Provides Medical Assistance to Hunters

kiggavik.ca/2014/07/28/areva-provides-medical-assistance-to-hunters/

As a member of the community, AREVA employees are happy when they can lend a helping hand. A crew from AREVA's Kiggavik project exploration camp provided assistance to a member of a hunting party requiring medical assistance and brought the man back to Baker Lake on July 22. This is second helicopter assistance in the Baker Lake area AREVA has provided this month.

Victor Aningaak, who suffers from a medical condition, was on a six-day seal hunt with friends and family members when he became ill and discovered he did not have enough medication. John Etegoiak, who was on the trip and works at the Kiggavik site, saw his friend suffering and called the AREVA Baker Lake office to see if AREVA could help.

AREVA sent a helicopter with health and safety specialist Curtis Rhinas to find the hunters where they were camping near the Quolch River about halfway between Baker Lake and Chesterfield Inlet. But first they stopped and picked up some of Aningaak's medicine from the clinic in Baker Lake. After administering the medication to himself, he rested peacefully during the helicopter ride back to Baker Lake accompanied by his girlfriend and daughter.

In the picture below, Rhinas examines Aningaak near the Quolch River.



