CanadianSolar

SparkleLight

MODIFICATIONS DOCUMENT

MAY 2014

DILLON CONSULTING

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1. Introduction

Canadian Solar Solutions Inc. ("Canadian Solar"), acting on behalf of SparkleLight LP, is developing a 10-megawatt (MW) solar photovoltaic project to be known as SparkleLight. The project is located on approximately 38.86 hectares of land on the north half of Lot 1, Concession 6, in the Township of Brock. For further clarity, the project is located approximately 11 kilometres from the community of Beaverton at B29530 Simcoe Street. A Renewable Energy Approval (REA) application was submitted to the Ontario Ministry of the Environment (MOE) in August 2012 in accordance with the requirements of *Ontario Regulation 359/09*.[1]

On August 15, 2013 an REA was issued for the construction of the SparkleLight project (see **Appendix A**). Since that time, White Construction Inc. has completed detailed design of the solar facility. Together, Canadian Solar and White Construction Inc. have discovered some areas to increase technical efficiency that could only be identified during the detailed design phase of the project. Primarily, the availability of more efficient equipment that allows for the reduction of the number of inverter locations has required a redesign of the overall layout of the project. As such, the proponent is proposing some technical changes to the preliminary design. Since the REA is based on the preliminary design, the proponent is also seeking a technical change to the REA. This report outlines the proposed amendments and any potential impacts that may be anticipated to the natural environment and neighbouring landowners.

To avoid confusion, this report focuses on the final design as prepared by White Construction Inc. To review the preliminary design as submitted to the MOE as part of the REA application, please visit: http://www.sparklelightsolar.com/.

[1] It should be noted that the Proposal to Engage for this project was issued prior to January 1, 2011, and as such, the proponent is permitted to continue under the 2009/2010 pre-submission rules. For clarity, this report has been prepared in accordance with the 2011 pre-submission rules and fulfills the requirements of *Ontario Regulation 359/09*, as amended on November 2, 2012.

2. Overview of the Minor Amendment

The basis for this technical change is the availability of more efficient equipment that allows for the reduction of the number inverter locations, each consisting of two DC to AC power inverters and a step up transformer. Based on this, detailed engineering designs for the SparkleLight project have been undertaken and the proponent identified the need to amend the original REA. Through consultation with the MOE in January 2014, it is expected that the proposed modification detailed within this amendment report are insignificant in nature and represent a reduction in overall environmental effects of the project (see **Appendix C** for agency correspondence). As such, the proposed changes constitute a technical change amendment.

This Modifications Document focuses on the following proposed changes:

- Reduction to the overall project area
- Change in solar panel model and energy output;
- Change in access road locations and decreased road length and coverage;
- Change in location and manufacturer of the substation;
- Change in location of Point of Common Coupling (PCC) and communications tower;
- Change in the location and a slight reduction in the laydown area;
- Reduction in the number of inverter stations and transformers from 10 to 7, resulting in a revised *Noise Study Report*; and
- Other technical changes within the approved project location, if necessary.

3. Proponent Contact Information

Should there be any questions about these amendments or the project, please contact:

Full Name of Company:	*SparkleLight LP*
Address:	*545 Speedvale Avenue West, Guelph, ON. N1K 1E6*
Telephone:	*519-837-1881 ext. 2293*
Fax:	*519-837-2550*
Prime Contact:	*Grace Pasceri, Permitting Manager – Solar Farms*
Email:	*grace.pasceri@canadiansolar.com*

4. Project Size and Layout

The nameplate capacity of the project as outlined in the REA application has been maintained at 10 MW alternating current (AC). As a result of these changes, the project area within the fence line has been reduced slightly from approximately 38.86 hectares to approximately 35 hectares. The internal access roads have been reconfigured to accommodate efficiencies in the design, and the total length of the access roads has been reduced from approximately 4.8 km to approximately 2.1 km. As outlined in the project comparison figure in **Appendix B**, the perimeter fence differs from what was presented in the preliminary design as the project area is reduced. In addition, the laydown area has been relocated and slightly decreased from 0.69 ha to 0.59 ha, the PCC has been relocated, the communications tower has shifted slightly to the northwest, and the substation location and manufacturer have changed. As mentioned in **Section 2**, additional minor changes as determined through consultation with interested parties and regulators may occur within the permitted project location boundary. Note that these potential changes will not include the movement of noise components greater than 10 m from the locations indicated in **Appendix G** of this report. Any additional technical changes that may occur will accommodate any applicable setbacks required from natural features. All areas in the final project area are within the original perimeter fence line that represented the project location boundary. A comparison of the preliminary design and final design layouts is provided in **Appendix B**.

4.1 Ministry of Natural Resources

Further consultation with the Ministry of Natural Resources was not warranted for the proposed technical changes. As the final design for the project does not exceed the original project location boundary, no amendments to the Natural Heritage Assessment are required. However, the Ministry of Natural Resources has been circulated as part of the stakeholder notification that there are proposed technical amendments proposed to this project. Any correspondence received in response from the Ministry of Natural Resources will be subsequently forward to the MOE.

4.2 Ministry of Tourism, Culture and Sport

This reduction in the project area does not require amendments to either the Cultural Heritage or Archaeological Assessments completed and reviewed by the Ministry of Tourism, Culture and Sport. The extent of the project location did not increase and the project area was studied and commented on in the original REA submission. The locations of the project components, installation methods or equipment specifications would not change the results or information presented related to cultural heritage or archaeological resources for this project. The Ministry of Tourism, Culture and Sport has been circulated as part of the stakeholder notification that there are proposed technical amendments proposed to this project. Any correspondence received in response from the Ministry of Tourism, Culture and Sport will be subsequently forward to the MOE.

5. Solar Panels

Following the reduction of the project area inside the perimeter fence, the module mix has been adjusted from between 30,000 and 100,000 – 60 to 300 W modules to approximately 47,160 – 285 to 305 W modules. The proponent has also opted to use a CS6X 285/290/295/300/305 model, rather than a Trina TSM-DA05 or Canadian Solar CSA model for the solar modules. The new modules are more efficient and as a result, fewer modules are needed than was indicated in the preliminary design. More detailed information pertaining to solar panels can be found in **Appendix D**. No negative environmental effects are anticipated as a result of the reduction in the number of solar modules.

6. Inverter Stations

It has been decided that the SMA Sunny Central 800CP-CA inverter station will be used, rather than the SMA Sunny Central 500 HE inverter station indicated in the *Design and Operations Report*. This change in inverter station model requires the following changes to the original REA submission:

- The nameplate capacity of the new inverter station is higher than was indicated in the *Design and Operations Report*;
- The total number of inverter stations has been reduced from 10 to 7;
- The locations of the inverter stations have changed; and
- An updated *Noise Study Report* has been prepared. Further details regarding the *Noise Study Report* are in **Section 8.1** and the full revised report is in **Appendix G**.

The revised *Noise Study Report* concludes that this component can be installed and meet the noise standards of the Ministry of the Environment. To review details about the inverter station, please refer to the manufacturer's specification in **Appendix E**. Please see **Appendix E** for a table with updated UTM coordinates of each inverter station. It is not anticipated that the change in the location of the inverter stations will affect project visibility from neighbouring residences or result in additional negative environmental effects.

7. Substation

The proponent has opted to use a substation transformer manufactured by Virginia Transformer, rather than the SMA Sunny Central 1000 MV substation indicated in the preliminary design. The transformer is a 7500/10000 MVA fluid-filled step-up transformer, which will use Envirotemp FR3 dielectric fluid. As specified in the REA approval, spill containment provisions will be provided at the substation transformer. Please refer to **Appendix F** for more detailed information on the substation. As indicated in **Section 8.1**, below, the use of this substation transformer model will not result in an exceedence of the 40 dBA requirement for noise, and the facility will remain in compliance with the MOE standards.

8. Supporting Documentation

8.1 Noise Study Report

The proponent has prepared a revised *Noise Study Report* based on the technical changes discussed above. The revised *Noise Study Report* indicates that the SparkleLight project will be in compliance with the MOE's noise standards provided that all inverter stations are contained within secondary enclosures. Three of the inverter enclosures will also require acoustic louvers for the ventilation openings. Figures from both the preliminary and revised *Noise Study Reports* that show the overall 40dBA contour has been reduced as a result of the more efficient equipment. These figures are presented in **Appendix B.** The complete revised *Noise Study Report* is presented in **Appendix G.**

9. Environmental Effects

There are no additional potential environmental effects as a result of the proposed technical change amendments that were not previously anticipated in the *Project Description Report*, *Design and Operations Report*, *Construction Plan Report, Natural Heritage Assessment Reports, Water Body Report* and *Decommissioning Plan Report* that were submitted as part of the original REA application. Mitigation measures proposed to reduce or eliminate potential negative effects to the natural and human environments are documented in the *Construction Plan Report, Design and Operations Report, Water Body Report* and *Natural Heritage Assessment Reports* provided with the original application.

10. Amendments to the Original REA Submission Package

Based on the original REA submission to the MOE approved on August 15, 2013, the following table outlines which reports in the original REA submission would be affected by the proposed minor changes. For each proposed change, the report and section(s) affected are listed where the proposed changes as outlined in this REA Amendment Report would replace the text in the original report where the details are related to the SparkleLight solar project. Changes to the *Noise Assessment Report* are addressed above.

Proposed Change	Report	Section Affected
Reduction of the project area inside the perimeter fence	Project Description Report	Section 3, Figure 2, Figure 3
	Construction Plan Report	Section 3, Figure 2, Figure 3, Figure 4

Proposed Change	Report	Section Affected
	Design and Operations Report	Section 3, Figure 2, Figure 3, Figure 4
	Decommissioning Plan Report	Section 3, Figure 2
	NHA Records Review	Figure 2, Figure 3
	NHA Site Investigation	Figure 2, 3, 4, 5, 6, 7, 8, Appendix A2
	NHA Evaluation of Significance	Figure 2, 3, 4, 5, 6, 7, 8, 9, Appendix A2
	NHA Environmental Impact Study	Figure 2, Figure 3
Change in access road locations and coverage	Project Description Report	Figure 3
	Construction Plan Report	Section 4.2, Figure 2
	Design and Operations Report	Figure 3
	NHA Records Review	Figure 2
	NHA Site Investigation	Figure 2, Appendix A2
	NHA Evaluation of Significance	Figure 2, Appendix A2
	NHA Environmental Impact Study	Figure 2
Alternate panel model, manufacturer, and energy output	Project Description Report	Section 5.4.1
	Construction Plan Report	Section 4.2, Section 5.9, Figure 2
	Design and Operations Report	Section 5.3.1, Figure 3
	Decommissioning Plan Report	Section 5.4
	NHA Environmental Impact Study	Section 7.1
Change in location of communications tower	Design and Operations Report	Figure 3
Change in Point of Common Coupling (PCC)	Design and Operations Report	Figure 3
Change in location, model and number of inverter units (from 10 to 7).	Project Description Report	Section 5.4.2, Figure 3
	Construction Plan Report	Section 5.10, Figure 2
	Design and Operations Report	Section 5.3.2, Figure 3, Appendix A
	NHA Records Review	Figure 2
	NHA Site Investigation	Figure 2, Appendix A2
	NHA Evaluation of Significance	Figure 2, Appendix A2
	NHA Environmental Impact Study	Figure 2
Change in location and	Project Description Report	Figure 3

Proposed Change	Report	Section Affected
manufacturer of main substation	Design and Operations Report	Figure 3, Appendix A
	NHA Records Review	Figure 2
	NHA Site Investigation	Figure 2, Appendix A2
	NHA Evaluation of Significance	Figure 2, Appendix A2
	NHA Environmental Impact Study	Figure 2

11. Summary

The view of the proponent is that the above-listed amendments to the SparkleLight project are improvements for the neighbouring residents and the environment. None of the amendments will create any potential negative environmental effects to natural features, water bodies or neighbouring residents for which mitigation was not already proposed in the preliminary design. A Notice of REA Amendment and covering letter outlining the proposed technical changes were distributed to all project stakeholders on May 30, 2014. The Notice of REA Amendment will be published in the "*Brock Citizen* "on May 29, 2014. A copy of the letter and notice sent are included in **Appendix H**.

Appendix A

REA NUMBER 0399-99ESCE

Ontario

Ministry of the Environment
Ministère de l'Environnement

RENEWABLE ENERGY APPROVAL

NUMBER 0399-99ESCE
Issue Date: August 15, 2013

2241665 Ontario Corp. operating as SparkleLight LP
545 Speedvale Ave W
Guelph, Ontario
N1K 1E6

Project Location: B29530 Simcoe Street, R.R. 2
Lot 1, Concession 1
Brock Township, Regional Municipality of Durham

You have applied in accordance with Section 47.4 of the Environmental Protection Act for approval to engage in a renewable energy project in respect of a Class 3 solar facility consisting of the following:

-- the construction, installation, operation, use and retiring of a Class 3 solar facility with a total name plate capacity of up to approximately 10 megawatts (AC).

For the purpose of this renewable energy approval, the following definitions apply:

1. "Acoustic Assessment Report" means the report included in the Application and entitled SparkleLight Revised Noise Study Report, dated July 2013 prepared by Dillon Consulting Limited and signed by Amir A. Iravani, Associate, Dillon Consulting, July 2013;

2. "Acoustic Audit" means an investigative procedure consisting of measurements and/or acoustic modelling of all sources of noise emissions due to the operation of the Equipment, assessed to determine compliance with the Noise Performance Limits set out in this Approval;

3. "Acoustic Audit Report" means a report presenting the results of an Acoustic Audit;

4. "Acoustical Consultant" means a person currently active in the field of environmental acoustics and noise/vibration control, who is knowledgeable about Ministry noise guidelines and procedures and has a combination of formal university education, training and experience necessary to assess noise emissions from solar facilities;

5. "Act" means the *Environmental Protection Act* , R.S.O 1990, c.E.19, as amended;

6. "Adverse Effect" has the same meaning as in the Act;

7. "Application" means the application for a Renewable Energy Approval dated August 21, 2012, and signed by Colin Parkin, General Manager, SparkleLight LP, and all supporting documentation submitted with the application, including amended documentation submitted up to the date this Approval is issued;

8. "Approval" means this Renewable Energy Approval issued in accordance with Section 47.4 of the Act, including any schedules to it;

9. "A-weighting" means the frequency weighting characteristic as specified in the International Electrotechnical Commission (IEC) Standard 61672, and intended to approximate the relative sensitivity of the normal human ear to different frequencies (pitches) of sound. It is denoted as "A";

10. "A-weighted Sound Pressure Level" means the Sound Pressure Level modified by application of an A-weighting network. It is measured in decibels, A-weighted, and denoted "dBA";

11. "Class 1 Area" means an area with an acoustical environment typical of a major population centre, where the background sound level is dominated by the activities of people, usually road traffic, often referred to as "urban hum";

12. "Class 2 Area" means an area with an acoustical environment that has qualities representative of both Class 1 and Class 3 Areas:

    (a) sound levels characteristic of Class 1 during daytime (07:00 to 19:00 or to 23:00 hours);

    (b) low evening and night background sound level defined by natural environment and infrequent human activity starting as early as 19:00 hours (19:00 or 23:00 to 07:00 hours);

    (c) no clearly audible sound from stationary sources other than from those under impact assessment.

13. "Class 3 Area" means a rural area with an acoustical environment that is dominated by natural sounds having little or no road traffic, such as the following:

    (a) a small community with less than 1000 population;

    (b) agricultural area;

    (c) a rural recreational area such as a cottage or a resort area; or

    (d) a wilderness area.

14. "Company" means 2241665 Ontario Corp., as general partner for and on behalf of SparkleLight LP, the partnership under the laws of Ontario, and includes its successors and assignees;

15. "Decibel" means a dimensionless measure of Sound Level or Sound Pressure Level, denoted as dB;

16. "Director" means a person appointed in writing by the Minister of the Environment pursuant to section 5 of the Act as a Director for the purposes of section 47.5 of the Act;

17. "District Manager" means the District Manager of the appropriate local district office of the Ministry where the Facility is geographically located;

18. "Equipment" means the inverters, transformers, and one (1) transformer substation, and associated ancillary equipment identified in this Approval and as further described in the Application, to the extent approved by this Approval;

19. "Equivalent Sound Level" is the value of the constant sound level which would result in exposure to the same total A-weighted energy as would the specified time-varying sound, if the constant sound level persisted over an equal time interval. It is denoted L_{eq} and is measured in dB A-weighting (dBA);

20. "Facility" means the renewable energy generation facility, including the Equipment, as described in this Approval and as further described in the Application, to the extent approved by this Approval;

21. "Independent Acoustical Consultant" means an Acoustical Consultant who is not representing the Company and was not involved in preparing the Acoustic Assessment Report. The Independent Acoustical Consultant shall not be retained by the Acoustical Consultant involved in the noise impact assessment;

22. "Ministry" means the ministry of the government of Ontario responsible for the Act and includes all officials, employees or other persons acting on its behalf;

23. "Noise Control Measures" means measures to reduce the noise emissions from the Facility and/or Equipment including, but not limited to, barriers, silencers, acoustical louvres, hoods and acoustical treatment, described in the Acoustic Assessment Report and Schedule C of this Approval;

24. "Noise Receptor" has the same meaning as in O. Reg. 359/09;

25. "O. Reg. 359/09" means Ontario Regulation 359/09 "Renewable Energy Approvals under Part V.0.1 of the Act" made under the Act;

26. "Point of Reception" has the same meaning as in Publication NPC-205 or Publication NPC-232, as applicable, and is subject to the same qualifications described in those documents;

27. "Publication NPC-103" means the Ministry Publication NPC-103, "Procedures", August 1978;

28. "Publication NPC-104" means the Ministry Publication NPC-104, "Sound Level Adjustments", August 1978;

29. "Publication NPC-205" means the Ministry Publication NPC-205, "Sound Level Limits for Stationary Sources in Class 1 & 2 Areas (Urban)", October 1995;

30. "Publication NPC-232" means the Ministry Publication NPC-232, "Sound Level Limits for Stationary Sources in Class 3 Areas (Rural)", October 1995;

31. "Publication NPC-233" means the Ministry Publication NPC-233, "Information to be Submitted for Approval of Stationary Sources of Sound", October 1995;

32. "Sound Level" means the A-weighted Sound Pressure Level;

33. "Sound Level Limit" is the limiting value described in terms of the one hour A-weighted Equivalent Sound Level L_{eq};

34. "Sound Power Level" means is ten times the logarithm to the base of 10 of the ratio of the sound power (Watts) of a noise source to standard reference power of 10^{-12} Watts;

35. "Sound Pressure" means the instantaneous difference between the actual pressure and the average or barometric pressure at a given location. The unit of measurement is the micro pascal (μPa);

36. "Sound Pressure Level" means twenty times the logarithm to the base 10 of the ratio of the effective pressure (μPa) of a sound to the reference pressure of 20 μPa;

37. "UTM" means Universal Transverse Mercator coordinate system.

You are hereby notified that this approval is issued to you subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

A - GENERAL

A1. The Company shall construct, install, use, operate, maintain and retire the Facility in accordance with the terms and conditions of this Approval and the Application and in accordance with the following schedules attached hereto:

(a) Schedule A - Facility Description
(b) Schedule B - Coordinates of the Equipment and Noise Specifications
(c) Schedule C – Noise Control Measures

A2. Where there is a conflict between a provision of this Approval and any document submitted by the Company, the conditions in this Approval shall take precedence. Where there is a conflict between one or more of the documents submitted by the Company, the document bearing the most recent date shall take precedence.

A3. The Company shall ensure a copy of this Approval is:

(1) accessible, at all times, by Company staff operating the Facility and;

(2) submitted to the clerk of each local municipality and upper-tier municipality in which the Facility is situated.

A4. If the Company has a publicly accessible website, the Company shall ensure that the Approval and the Application are posted on the Company's publicly accessible website within five (5) business days of receiving this Approval.

A5. The Company shall, at least six (6) months prior to the anticipated retirement date of the entire Facility, or part of the Facility, review its Decommissioning Plan Report to ensure that it is still accurate. If the Company determines that the Facility cannot be decommissioned in accordance with the Decommissioning Plan Report, the Company shall provide the Director and District Manager a written description of plans for the decommissioning of the Facility.

A6. The Facility shall be retired in accordance with the Decommissioning Plan Report and any directions provided by the Director or District Manager.

A7. The Company shall provide the District Manager and the Director at least ten (10) days written notice of the following:

(1) the commencement of any construction or installation activities at the project location; and

(2) the commencement of the operation of the Facility.

A8. The Company shall, at least six (6) months prior to the anticipated retirement date of the entire Facility, or part of the Facility, contact the Ministry of Agriculture and Food to discuss its plans for the decommissioning of the Facility, and follow any directions provided by that ministry in respect of the Company's plans to restore the project location to its previous agricultural capacity.

B - EXPIRY OF APPROVAL

B1. Construction and installation of the Facility must be completed within three (3) years of the later of:

(1) the date this Approval is issued; or

(2) if there is a hearing or other litigation in respect of the issuance of this Approval, the date that this hearing or litigation is disposed of, including all appeals.

B2. This Approval ceases to apply in respect of any portion of the Facility not constructed or installed before the later of the dates identified in Condition B1.

C - NOISE PERFORMANCE LIMITS

C1. The Company shall ensure that:

(1) the Sound Levels from the Equipment, at the Points of Reception identified in the Acoustic Assessment Report, comply with the Sound Level Limit of 40 dBA as described in Publication NPC-232, subject to adjustment for tonality as described in Publication NPC-104;

(2) the Equipment is constructed and installed at either of the following locations:

(a) at the locations identified in Schedule B of this Approval; or

(b) at a location that does not vary by more than 10 metres from the locations identified in Schedule B of this Approval and provided that,

i) the Equipment will comply with Condition C1 (1), and

ii) all setback prohibitions established under O. Reg. 359/09 are complied with.

(3) the Equipment complies with the noise specifications set out in Schedule B of this Approval; and

(4) all of the Noise Control Measures are fully implemented prior to the commencement of the operation of the Facility.

C2. If the Company determines that some or all of the Equipment cannot be constructed in accordance with Condition C1 (2), prior to the construction and installation of the Equipment in question, the Company shall apply to the Director for an amendment to the terms and conditions of the Approval.

C3. Within three (3) months of the completion of the construction of the Facility, the Company shall submit to the Director a written confirmation signed by an individual who has the authority to bind the Company that the UTM coordinates of the "as constructed" Equipment comply with the requirements of Condition C1 (2).

D - ACOUSTIC AUDIT

D1. The Company shall carry out an Acoustic Audit in accordance with the procedures set out in Publication NPC-103, and shall submit to the District Manager and the Director an Acoustic Audit Report prepared by an Independent Acoustical Consultant in accordance with the requirements of Publication NPC-233, no later than six (6) months after the commencement of the operation of the Facility.

E - GROUNDWATER MONITORING

E1. Prior to the construction and installation of the Facility, the Company shall develop, and implement for a minimum period of two (2) years after it is developed, a pre- and post-construction ground water monitoring program, which shall include, as a minimum, the following information:

(1) Identification of ground water monitoring wells to be established at appropriate up and down gradient boundary locations of the project location.

(2) Identification of ground water monitoring parameters, monitoring frequency, and trigger concentrations based on appropriate information as deemed necessary for the monitoring wells as described in Condition E1 (1).

E2. The Company shall report the summary of the results of the pre- and post-construction ground water monitoring program on an annual basis to the District Manager.

F - STORMWATER MANAGEMENT

F1. The Company shall employ best management practices for stormwater management and sediment and erosion control during construction, installation, use, operation, maintenance and retiring of the Facility, as described in the Application.

F2. The Company shall not commence construction of the Facility until detailed design drawings, specifications and an engineer's report containing detailed design calculations for a stormwater management facility have been submitted to, and approved in writing, by the Director.

G - WATER TAKING ACTIVITIES

G1. The Company shall not take more than 50,000 litres of water on any day by any means during the construction, installation, use, operation, maintenance and retiring of the Facility.

H - SEWAGE WORKS OF THE TRANSFORMER SUBSTATION SPILL CONTAINMENT FACILITY

H1. The Company shall design and construct a transformer/substation spill containment facility which meets the following requirements:

(1) the spill containment area serving the transformer substation shall have a minimum volume equal to the volume of transformer oil and lubricants plus the volume equivalent to providing a minimum 24-hour duration, 50-year return storm capacity for the stormwater drainage area around the transformer under normal operating conditions;

(2) the containment facility shall have an impervious concrete floor and walls or impervious plastic liner on floor and walls, sloped toward an outlet, maintaining a freeboard of approximately 0.25 metres terminating approximately 0.30 metres above grade, and a minimum 300mm layer of crushed stoned (19mm to 38mm in diameter) within, all as needed in accordance to site specific conditions and final design parameters;

(3) the containment facility shall drain to an oil control device, such as an oil/water separator, a pump-out sump, an oil absorbing material in a canister or a blind sump; and

(4) the oil control device shall be equipped with an oil detection system and appropriate sewage appurtenances, such as, but not limited to: sump, oil/grit separator, pumpout manhole, level controllers, floating oil sensors, etc., that allows for batch discharges or direct discharges and for proper implementation of the monitoring program described in Condition H4.

H2. The Company shall:

(1) prior to the construction of the transformer substation spill containment facility, provide the District Manager and Director a report and drawings issued for construction signed and stamped by an independent Professional Engineer licensed in Ontario and competent in electrical engineering;

(2) within six (6) months of the completion of the construction of the transformer substation spill containment facility, provide the District Manager and Director a report and drawings issued for construction signed and stamped by an independent Professional Engineer licensed in Ontario which includes the following:

(a) as-built drawings of the sewage works;
(b) confirmation that the transformer substation spill containment facility has been designed and installed according to appropriate specifications; and
(c) confirmation of the adequacy of the operating procedures and the emergency procedures manuals as it pertains to the installed sewage works.

(3) as a minimum, check the oil detection system on a monthly basis and create a written record of the inspections;

(4) ensure that the effluent is essentially free of floating and settle-able solids and does not contain oil or any other substance in amounts sufficient to create a visible film, sheen or foam on the receiving waters;

(5) immediately identify and clean-up all losses of oil from the transformer;

(6) upon identification of oil in the effluent pumpout, take immediate action to prevent the further occurrence of such loss; and

(7) ensure that equipment and material for the containment, clean-up and disposal of oil and materials contaminated with oil are kept within easy access and in good repair for immediate use in the event of:

(a) loss of oil from the transformer,
(b) a spill within the meaning of Part X of the Act, or
(c) the identification of an abnormal amount of oil in the effluent.

H3. The Company shall design, construct and operate the sewage works such that the concentration of the effluent parameter named in the table below does not exceed the maximum concentration objective shown for that parameter in the effluent, and shall comply with the following requirements:

Effluent Parameters	Maximum Concentration Objective
Oil and Grease	15mg/L

(1) notify the District Manager as soon as reasonably possible of any exceedance of the maximum concentration objective set out in the table above;

(2) take immediate action to identify the cause of the exceedance; and

(3) take immediate action to prevent further exceedances.

H4. Upon commencement of the operation of the Facility, the Company shall establish and carry out the following monitoring program for the sewage works:

(1) the Company shall collect and analyze the required set of samples at the sampling points listed in the table below in accordance with the measurement frequency and sample type specified for the effluent parameter, oil and grease, and create a written record of the monitoring:

Effluent Parameters	Measurement Frequency and Sample Points	Sample Type
Oil and Grease	B – Batch, i.e., for each discrete volume in the sewer appurtenance as per H1(4) prior to pumpout; or Q – Quarterly for direct effluent discharge, i.e., four times over a year, relatively evenly spaced.	Grab

(2) in the event of an exceedance of the maximum concentration objective set out in the table in Condition H3, the Company shall:

(a) increase the frequency of sampling to once per month, for each month that effluent discharge occurs, and

(b) provide the District Manager, on a monthly basis, with copies of the written record created for the monitoring until the District Manager provides written direction that monthly sampling and reporting is no longer required; and

(3) if over a period of twenty-four (24) months of effluent monitoring under Condition H4 (1), there are no exceedances of the maximum concentration set out in the table in Condition H3, the Company may reduce the measurement frequency of effluent monitoring to a frequency as the District Manager may specify in writing, provided that the new specified frequency is never less than annual.

H5. The Company shall comply with the following methods and protocols for any sampling, analysis and recording undertaken in accordance with Condition H4:

(1) Ministry of the Environment publication "Protocol for the Sampling and Analysis of Industrial/ Municipal Wastewater", January 1999, as amended from time to time by more recently published editions, and

(2) the publication "Standard Methods for the Examination of Water and Wastewater", 21st edition, 2005, as amended from time to time by more recently published editions.

I - TRAFFIC MANAGEMENT PLANNING

I1. Within three (3) months of receiving this Approval, the Company shall prepare a Traffic Management Plan and provide it to the Township of Brock and the Regional Municipality of Durham.

I2. Within three (3) months of having provided the Traffic Management Plan to the Township of Brock and the Regional Municipality of Durham, the Company shall make reasonable efforts to enter into a Road Users Agreement with the Township of Brock and the Regional Municipality of Durham.

I3. If a Road Users Agreement has not been signed with the Township of Brock and the Regional Municipality of Durham within three (3) months of having provided the Traffic Management Plan to the Township of Brock and the Regional Municipality of Durham, the Company shall provide a written explanation as to why this has not occurred.

J - ARCHAEOLOGICAL RESOURCES

J1. The Company shall implement all of the recommendations, if any, for further archaeological fieldwork and for the protection of archaeological sites found in the consultant archaeologist's report included in the Application, and which the Company submitted to the Ministry of Tourism, Culture and Sport in order to comply with clause 22 (2) (b) of O. Reg. 359/09.

J2. Should any previously undocumented archaeological resources be discovered, the Company shall:

(1) cease all alteration of the area in which the resources were discovered immediately;

(2) engage a consultant archaeologist to carry out the archaeological fieldwork necessary to further assess the area and to either protect and avoid or excavate any sites in the area in accordance with the *Ontario Heritage Act* , the regulations under that act and the Ministry of Tourism, Culture and Sport's *Standards and Guidelines for Consultant Archaeologists* ; and

(3) notify the Director as soon as reasonably possible.

K - OPERATION AND MAINTENANCE

K1. Prior to the commencement of the operation of the Facility, the Company shall prepare a written manual for use by Company staff outlining the operating procedures and a maintenance program for the Equipment that includes as a minimum the following:

(1) routine operating and maintenance procedures in accordance with good engineering practices and as recommended by the Equipment suppliers;

(2) emergency procedures;

(3) procedures for any record keeping activities relating to operation and maintenance of the Equipment; and

(4) all appropriate measures to minimize noise emissions from the Equipment.

K2. The Company shall;

(1) update, as required, the manual described in Condition K1; and

(2) make the manual described in Condition K1 available for review by the Ministry upon request.

K3. The Company shall ensure that the Facility is operated and maintained in accordance with the Approval and the manual described in Condition K1.

L - RECORD CREATION AND RETENTION

L1. The Company shall create written records consisting of the following:

(1) an operations log summarizing the operation and maintenance activities of the Facility;

(2) within the operations log, a summary of routine and Ministry inspections of the Facility; and

(3) a record of any complaint alleging an Adverse Effect caused by the construction, installation, use, operation, maintenance or retirement of the Facility.

L2. A record described under Condition L1 (3) shall include:

(1) a description of the complaint that includes as a minimum the following:

(a) the date and time the complaint was made;

(b) the name, address and contact information of the person who submitted the complaint;

(2) a description of each incident to which the complaint relates that includes as a minimum the following:

(a) the date and time of each incident;

(b) the duration of each incident;

(c) the wind speed and wind direction at the time of each incident;

(d) the ID of the Equipment involved in each incident and its output at the time of each incident;

(e) the location of the person who submitted the complaint at the time of each incident; and

(3) a description of the measures taken to address the cause of each incident to which the complaint relates and to prevent a similar occurrence in the future.

L3. The Company shall retain, for a minimum of five (5) years from the date of their creation, all records described in Condition L1, and make these records available for review by the Ministry upon request.

M - NOTIFICATION OF COMPLAINTS

M1. The Company shall notify the District Manager of each complaint within two (2) business days of the receipt of the complaint.

M2. The Company shall provide the District Manager with the written records created under Condition L2 within eight (8) business days of the receipt of the complaint.

M3. If the Company receives a complaint related to groundwater, the Company shall contact the District Manager within one (1) business day of the receipt of the complaint to discuss appropriate measures to manage any potential groundwater issues.

N - CHANGE OF OWNERSHIP

N1. The Company shall notify the Director in writing, and forward a copy of the notification to the District Manager, within thirty (30) days of the occurrence of any of the following changes:

(1) the ownership of the Facility;

(2) the operator of the Facility;

(3) the address of the Company;

(4) the partners, where the Company is or at any time becomes a partnership and a copy of the most recent declaration filed under the *Business Names Act* , R.S.O. 1990, c.B.17, as amended, shall be included in the notification; and

(5) the name of the corporation where the Company is or at any time becomes a corporation, other than a municipal corporation, and a copy of the most current information filed under the *Corporations Information Act* , R.S.O. 1990, c. C.39, as amended, shall be included in the notification.

SCHEDULE A

Facility Description

The Facility shall consist of the construction, installation, operation, use and retiring of the following:

(a) ten (10) arrays of photovoltaic (PV) modules or panels with a total name plate capacity of up to approximately ten (10) megawatts (AC), with each array containing one (1) cluster consisting of two (2) 500 kW inverters and one (1) 1-MVA transformer;

(b) associated ancillary equipment, systems and technologies including, but not limited to, one (1) 11.5 MVA transformer substation, and

(c) on-site access roads, below and above grade cabling, and below and above grade distribution lines,

all in accordance with the Application.

SCHEDULE B

Coordinates of the Equipment and Noise Specifications

Coordinates of the Equipment are listed below in UTM, Z17-NAD83 projection:

Source ID	Maximum Sound Power Level (dBA)	Easting (m)	Northing (m)	Source Description
S_TRS	89.8	653,810	4,925,148	Transformer Substation : See Table B2 below for more details
S_INV 1	89.8	653,810	4,925,148	Inverter / Transformer cluster: See Table B3 below for more details
S_INV 2	102.2	653,978	4,925,188	Inverter / Transformer cluster: See Table B3 below for more details
S_INV 3	102.2	654,162	4,925,178	Inverter / Transformer cluster: See Table B3 below for more details
S_INV 4	102.2	653,945	4,925,042	Inverter / Transformer cluster: See Table B3 below for more details
S_INV 5	102.2	653,971	4,925,040	Inverter / Transformer cluster: See Table B3 below for more details
S_INV 6	102.2	654,154	4,925,030	Inverter / Transformer cluster: See Table B3 below for more details
S_INV 7	102.2	654,337	4,925,020	Inverter / Transformer cluster: See Table B3 below for more details
S_INV 8	102.2	653,962	4,924,893	Inverter / Transformer cluster: See Table B3 below for more details
S_INV 9	102.2	654,146	4,924,883	Inverter / Transformer cluster: See Table B3 below for more details
S_INV 10	102.2	653,954	4,924,745	Inverter / Transformer cluster: See Table B3 below for more details

Table B2: Maximum Sound Power Spectrum (dB Lin) of Transformer Substation

Transformer Substation	Octave Band Centre Frequency (Hz)							
	63	125	250	500	1000	2000	4000	8000
Lw (dB Lin)	92.4	94.4	89.4	89.4	83.4	78.4	73.4	65.3

Table B3: Maximum Sound Power Spectrum (dB Lin) of Inverter / Transformer Cluster

Inverter / Transformer Clusters 1 - 10	Octave Band Centre Frequency (Hz)							
	63	125	250	500	1000	2000	4000	8000
Lw (dB Lin)	96.0	100.0	106.6	99.8	95.1	91.4	83.4	83.4

Note: Inverter Clusters:

The inverter cluster Sound Power Level values in the above tables corresponds to the combined output of all the identified equipment in each cluster, and includes the 5 decibel (dB) adjustment for tonality as prescribed in Publication NPC-104.

Transformer Substation:

The transformer substation Sound Power Level values in the above tables includes the 5 decibel (dB) adjustment for tonality as prescribed in Publication NPC-104.

SCHEDULE C

Noise Control Measures

Acoustic Enclosure

In accordance with Section 6.4 of the Acoustic Assessment Report, all ten (10) inverter clusters shall be encased in an acoustic enclosure with the enclosure shell, including composite effect of the wall/roof materials, doors and any openings, capable of providing the following values of Insertion/Transmission-Loss in 1/1 octave frequency bands:

Acoustic Enclosure Specifications, [dB]

Inverter clusters	Octave Band Centre Frequency (Hz)					
	63	125	250	500	1000	2000
Acoustic Enclosure	4	4	6	10	17	12

The reasons for the imposition of these terms and conditions are as follows:

1. Conditions A1 and A2 are included to ensure that the Facility is constructed, installed, used, operated, maintained and retired in the manner in which it was described for review and upon which Approval was granted. These conditions are also included to emphasize the precedence of conditions in the Approval and the practice that the Approval is based on the most current document, if several conflicting documents are submitted for review.

2. Conditions A3 and A4 are included to require the Company to provide information to the public and the local municipality.

3. Conditions A5, A6 and A8 are included to ensure that final retirement of the Facility is completed in an aesthetically pleasing manner, in accordance with Ministry standards, and to ensure long-term protection of the health and safety of the public and the environment.

4. Condition A7 is included to require the Company to inform the Ministry of the commencement of activities related to the construction, installation and operation of the Facility.

5. Condition B is intended to limit the time period of the Approval.

6. Condition C1 is included to provide the minimum performance requirement considered necessary to prevent an Adverse Effect resulting from the operation of the Equipment and to ensure that the noise emissions from the Equipment will be in compliance with applicable limits set in Publication NPC-232.

7. Conditions C2 and C3 are included to ensure that the Equipment is constructed, installed, used, operated, maintained and retired in a way that meets the regulatory setback prohibitions set out in O. Reg. 359/09.

8. Condition D is included to require the Company to gather accurate information so that the environmental noise impact and subsequent compliance with the Act, O. Reg. 359/09, Publication NPC-232 and this Approval can be verified.

9. Conditions E, F, G and I are included to ensure that the Facility is constructed, installed, used, operated, maintained and retired in a way that does not result in an Adverse Effect or hazard to the natural environment or any persons.

10. Condition H1 is included to ensure that the sewage works of the transformer spill containment facility are designed to have adequate capacity to provide spill control. This condition is also included to enable compliance with this Approval, such that the environment is protected and deterioration, loss, injury or damage to any person, property or the environment is minimized and/or prevented.

11. Condition H2 is included to ensure that the sewage works of the transformer spill containment facility will be operated and maintained in accordance with the information submitted by the Company, and to adequately manage and clean-up any oil spill from the transformer.

12. Condition H3 is included to establish non-enforceable effluent quality objectives which the Company is required to strive towards on an ongoing basis. These objectives are to be used as a mechanism to trigger corrective action proactively and voluntarily before environmental impairment occurs.

13. Conditions H4 and H5 are included to require the Company to demonstrate that the performance of the sewage works of the transformer spill containment facility is at a level consistent with the design and effluent objectives specified in the Approval and is not causing any impairment to the environment.

14. Condition J is included to protect archaeological resources that may be found at the project location.

15. Condition K is included to emphasize that the Equipment must be maintained and operated according to a procedure that will result in compliance with the Act, O. Reg. 359/09 and this Approval.

16. Condition L is included to require the Company to keep records and provide information to the Ministry so that compliance with the Act, O. Reg. 359/09 and this Approval can be verified.

17. Condition M is included to ensure that any complaints regarding the construction, installation, use, operation, maintenance or retirement of the Facility are responded to in a timely and efficient manner.

18. Condition N is included to ensure that the Facility is operated under the corporate name which appears on the application form submitted for this Approval and to ensure that the Director is informed of any changes.

NOTICE REGARDING HEARINGS

In accordance with Section 139 of the Environmental Protection Act, within 15 days after the service of this notice, you may by further written notice served upon the Director, the Environmental Review Tribunal and the Environmental Commissioner, require a hearing by the Tribunal.

In accordance with Section 47 of the Environmental Bill of Rights, 1993, the Environmental Commissioner will place notice of your request for a hearing on the Environmental Registry.

Section 142 of the Environmental Protection Act provides that the notice requiring the hearing shall state:

1. The portions of the renewable energy approval or each term or condition in the renewable energy approval in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

The signed and dated notice requiring the hearing should also include:

3. The name of the appellant;
4. The address of the appellant;
5. The renewable energy approval number;
6. The date of the renewable energy approval;
7. The name of the Director;
8. The municipality or municipalities within which the project is to be engaged in;

This notice must be served upon:

The Secretary* Environmental Review Tribunal 655 Bay Street, 15th Floor Toronto, Ontario M5G 1E5	AND	The Environmental Commissioner 1075 Bay Street, 6th Floor Suite 605 Toronto, Ontario M5S 2B1	AND	The Director Section 47.5, *Environmental Protection Act* Ministry of the Environment 2 St. Clair Avenue West, Floor 12A Toronto, Ontario M4V 1L5

*** Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 314-4600, Fax: (416) 314-4506 or www.ert.gov.on.ca**

Under Section 142.1 of the Environmental Protection Act, residents of Ontario may require a hearing by the Environmental Review Tribunal within 15 days after the day on which notice of this decision is published in the Environmental Registry. By accessing the Environmental Registry at www.ebr.gov.on.ca , you can determine when this period ends.

Approval for the above noted renewable energy project is issued to you under Section 47.5 of the Environmental Protection Act subject to the terms and conditions outlined above.

DATED AT TORONTO this 15th day of August, 2013

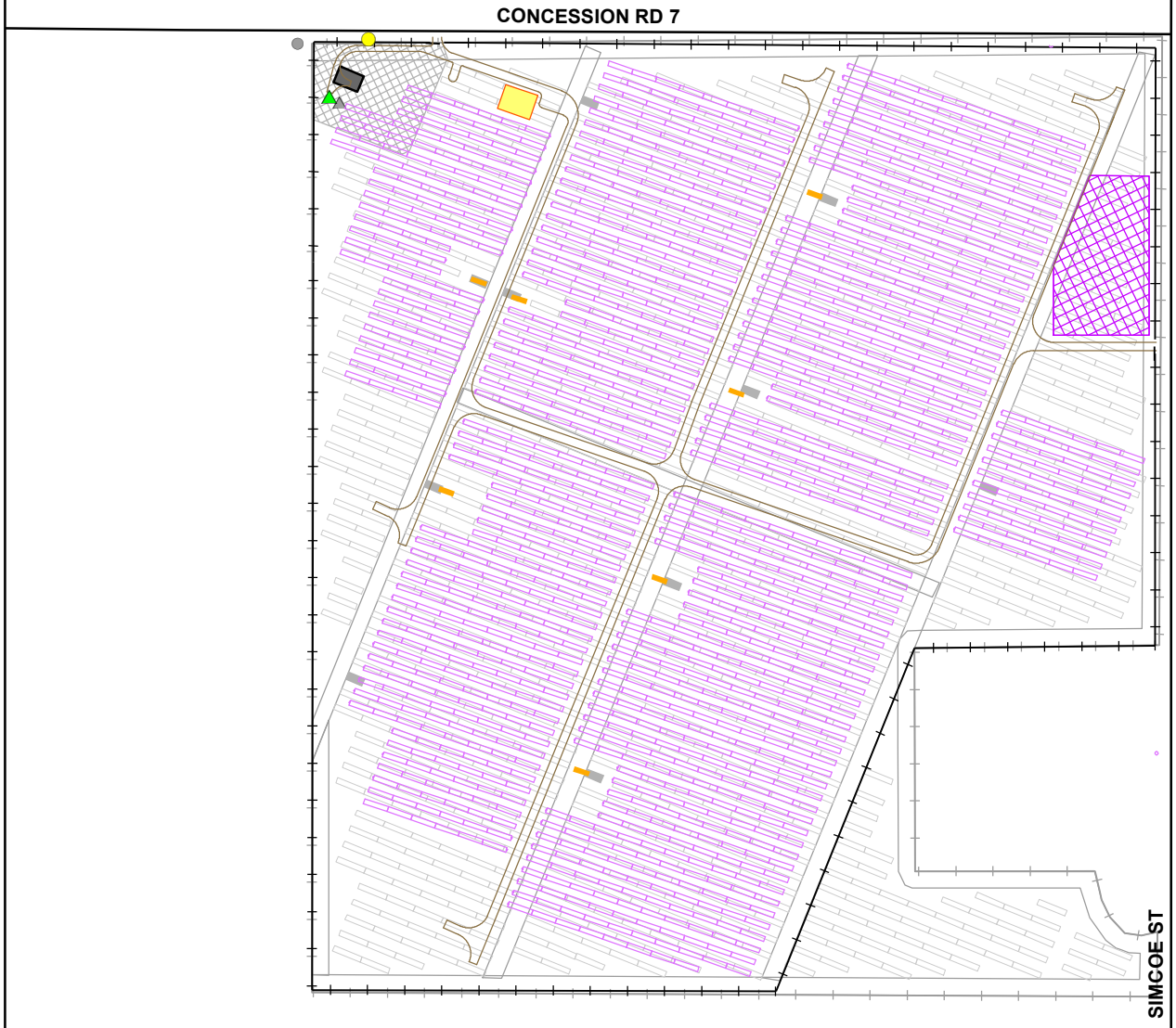
Vic Schroter, P.Eng.
Director
Section 47.5, *Environmental Protection Act*

SR/

c: District Manager, MOE York-Durham
Mark Feenstra, Canadian Solar Solutions Inc.

Appendix B

PROJECT LAYOUT



CanadianSolar

SparkleLight
Figure 1:
Comparison of Preliminary and Final Project Site Plan

Legend

Local Road

Final Project Components

- Communication Tower
- Point of Common Coupling
- Solar Panel
- Access Road
- Fence
- Inverter
- Laydown Area
- Substation

Preliminary Project Components

- Communication Tower
- Point of Common Coupling
- Fence
- Inverter
- Substation
- Solar Panels and Racks
- Laydown Area
- Access Road

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DILLON CONSULTING

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Checked By: MB
Date Created: 3/7/2014
Date Updated: 4/8/2014
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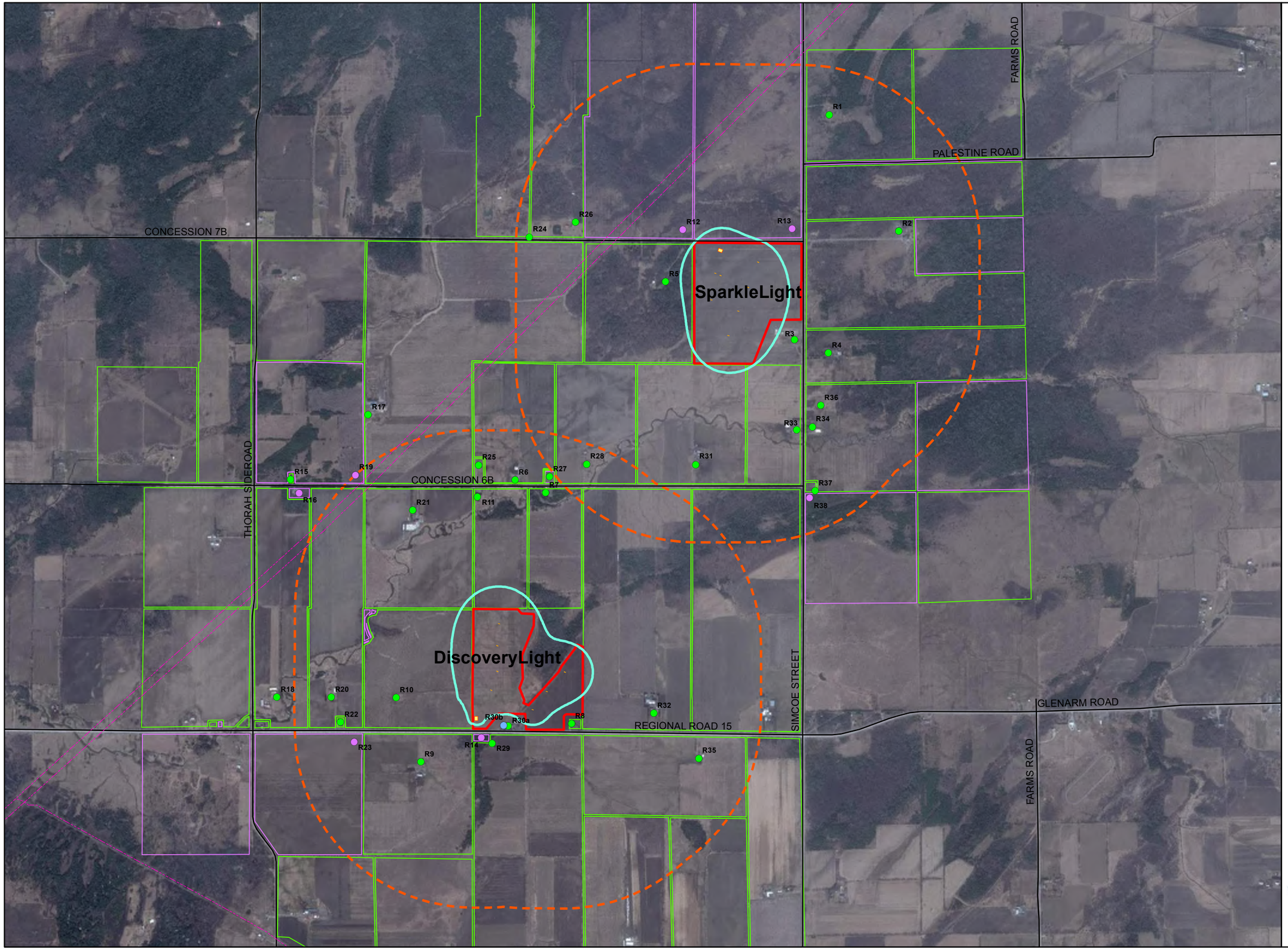
Figure 7: Predicted Sound Level Contours and Receptor Noise Levels



CanadianSolar

Sparkle Light
Figure 6:
Predicted Noise Level Contours at 1.5 m

Legend

- Potential Noise Receptor
- Assumed Future Noise Receptor
- Potential Noise Receptor 30m Offset
- Transmission Line
- Local Road
- 40 dBA Noise Contour at 1.5 m Height
- Project Location
- 1000 m from Project Location
- Vacant Parcel
- Occupied Parcel
- Substation
- Inverter

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Date Modified: 5/23/2014
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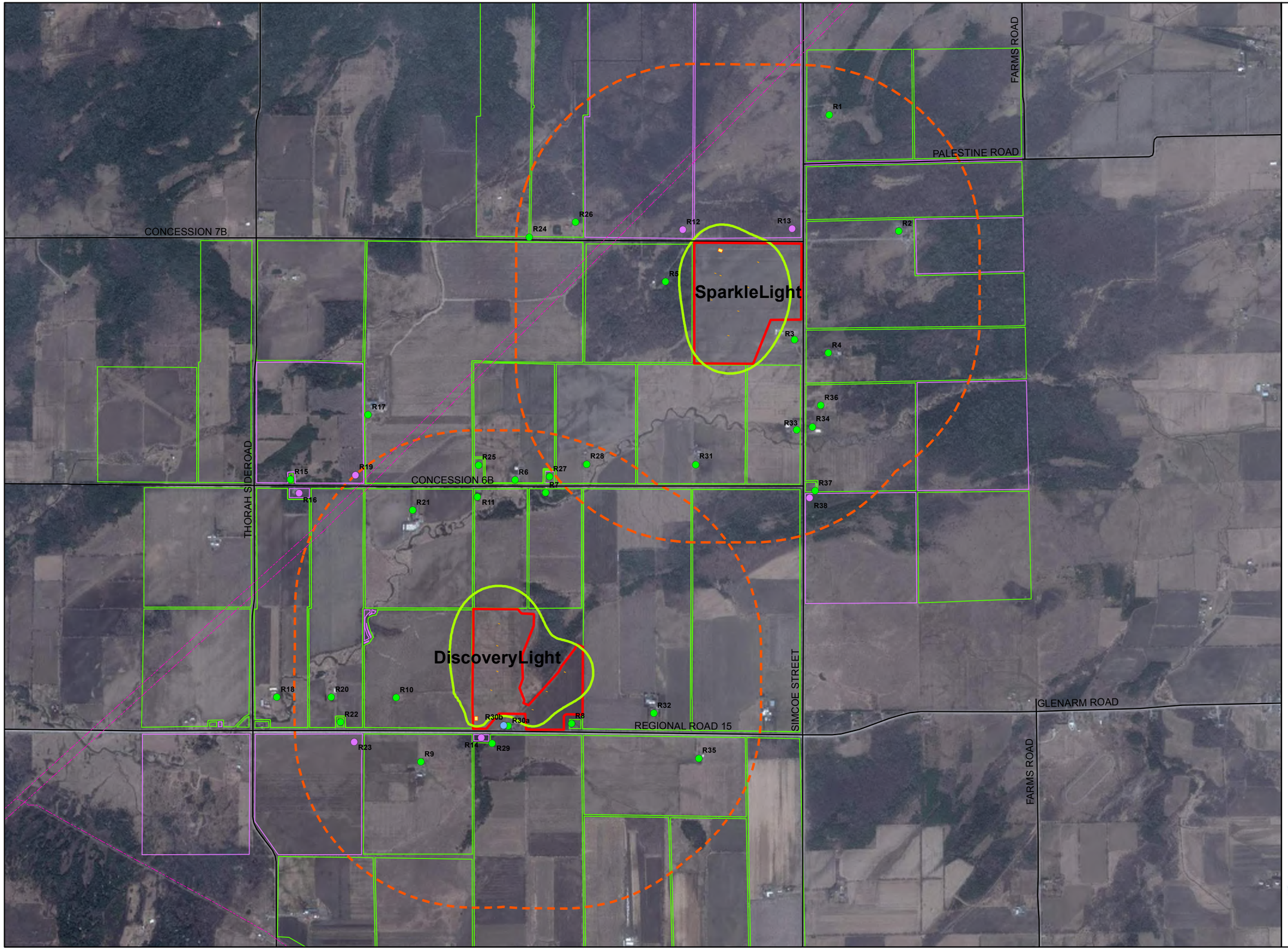
Mapping\Noise Assessment



CanadianSolar

Sparkle Light
Figure 7:
Predicted Noise Level Contours at 4.5 m

Legend

- Potential Noise Receptor
- Assumed Future Noise Receptor
- Potential Noise Receptor 30m Offset
- Transmission Line
- Local Road
- 40 dBA Noise Contour at 4.5 m Height
- Project Location
- 1000 m from Project Location
- Vacant Parcel
- Occupied Parcel
- Substation
- Inverter

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Date Modified: 5/23/2014
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Mapping\Noise Assessment

Appendix C

AGENCY CORRESPONDENCE

Bellamy, Megan <mbellamy@dillon.ca>

Notice of Amendment Letter for the SparkleLight Solar Energy Project (REA Number: 0399-99ESCE)

1 message

Grace Pasceri <Grace.Pasceri@canadiansolar.com> 10 January 2014 12:44
To: "ian.parrott@ontario.ca" <ian.parrott@ontario.ca>
Cc: "Bellamy, Megan (mbellamy@dillon.ca)" <mbellamy@dillon.ca>, "Nick.Colella@ontario.ca" <Nick.Colella@ontario.ca>, "vic.schroter@ontario.ca" <vic.schroter@ontario.ca>, "Halloran, Joe (MNR) (Joe.Halloran@ontario.ca)" <Joe.Halloran@ontario.ca>, "Andrew.Hinshelwood@ontario.ca" <Andrew.Hinshelwood@ontario.ca>

Good afternoon Ian,

Please find attached a copy of the Notice of Amendment Letter for the SparkleLight Solar Energy Project (REA Number: 0399-99ESCE).

A hard copy has been sent to you via courier as well.

Thanks,

Grace

Grace Pasceri

Permitting Manager – Solar Farms

Canadian Solar Solutions Inc. - a subsidiary of Canadian Solar Inc. (NASDAQ: CSIQ)

CanadianSolar

545 Speedvale Avenue West

Guelph, Ontario N1K 1E6

T: 1 519 837 1881 ext. 229

F: 1 519 837 2550

E: Grace.Pasceri@canadiansolar.com

W: http://www.canadian-solar.ca/

Please consider the environment before printing this email.

Grace Pasceri

Permitting Manager – Solar Farms

Canadian Solar Solutions Inc. - a subsidiary of Canadian Solar Inc. (NASDAQ: CSIQ)

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2 attachments

Figure 2 SparkleLight Project Location PDR.PDF
3183K

Initial letter to MOE SparkleLight - Jan 10 2014.pdf
327K

CanadianSolar

Canadian Solar Solutions Inc.

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Fax + 1 519 837 2550
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Mr. Ian Parrott
Director, Environmental Approvals Branch
Ministry of the Environment
2 St. Clair Avenue West, Floor 12A
Toronto, ON M4V 1L5

January 10, 2014

RE: SPARKLELIGHT REA AMENDMENT LETTER

SparkleLight LP is proposing to develop, construct and operate the SparkleLight solar project. A Renewable Energy Approval (REA) application was submitted for this project, comprised of the solar project location and all project details. An REA was granted by the Ministry of the Environment (MOE) on August 15, 2013 (**REA Number: 0399-99ESCE**).

Since issuance of the REA, a number of revisions to the layout of the facility have been identified to improve the efficiency and layout of the project. This letter provides an overview of amendments proposed for the SparkleLight project, which we believe to be a technical change amendment under REA. We are seeking confirmation that the following potential amendments are considered technical changes by the MOE. Upon confirmation, it is anticipated that a formal *Modifications Document to the SparkleLight solar project* will be submitted for review to the MOE. We understand the review and acceptance of this letter will take between 2-3 business days.

The amended design layout for SparkleLight maintains all components of the facility within the original boundaries of the project location as outlined in the original REA application (see attached figure). No environmental effects are anticipated that were not previously discussed as part of the REA application.

The following are anticipated potential technical changes to the SparkleLight project. These, as well as other related technical changes, will be detailed in the *Modifications Document* to be submitted to the MOE.

1. Reconfiguration of project components including internal access roads, communications tower, Point of Common Coupling (PCC), panel modules, inverter stations and the main substation;
2. Change in manufacturer specifications resulting from the availability of more efficient equipment for the panel modules, inverter stations, and main substation; and
3. Reduction in the total number of inverter stations, resulting in a revised *Noise Study Report.*

Based on our review of the above proposed changes, further consultation with the Ministry of Natural Resources is not warranted as part of the minor amendment process. The Ministry of Natural Resources confirmed the original Natural Heritage Assessment (NHA) on May 24, 2012. As the final design for this

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project does not exceed the original project location boundary, no amendments to the NHA are required. The Ministry of Natural Resources will be included in the stakeholder notice provided as part of this amendment process and is copied on this letter. Should any correspondence arise, it will be included in the REA Modifications Document and/or forwarded to the MOE.

Similar to the above, further consultation is not warranted with the Ministry of Tourism, Culture and Sport as part of the minor amendment process. As the final design does not exceed the original project location boundary, no amendments to the Archaeological Assessments or Cultural Heritage Assessment Report are required. The Ministry of Tourism, Culture and Sport will be included in the stakeholder notice provided as part of this amendment process and is copied on this letter. Should any correspondence arise, it will be included in the REA Modifications Document and/or forwarded to the MOE.

We trust the above table contains sufficient information to confirm that the proposed changes to the above reference REA are considered minor. If additional information or clarification is required, please do not hesitate to contact me.

Sincerely,

Grace Pasceri, Permitting Manager
Canadian Solar Solutions Inc.
545 Speedvale Avenue West
Guelph, ON N1K 1E6
Tel: 519-837-1881 ext. 2293
Grace.pasceri@canadiansolar.com

Attachments: Figure 2: Project Location and Natural Features

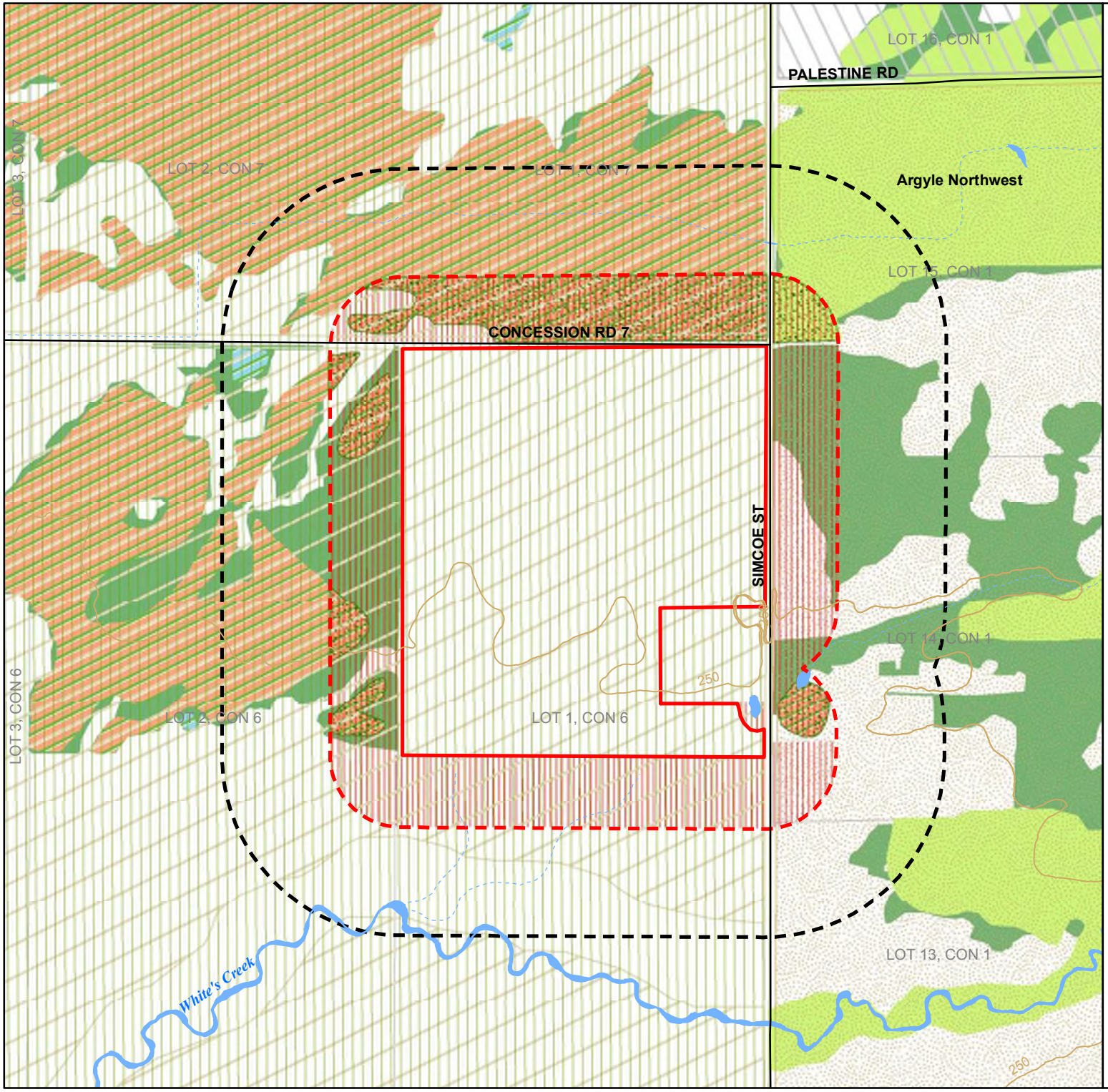
Copies to:

Nick Colella, Project Evaluator (MOE)

Andrew Hinshelwood, Archaeology Review Officer (MTCS)

Joe Halloran, A/Renewable Energy Coordinator (MNR)

Vic Schroter, Director, Section 47.5 *Environmental Protection Act* (MOE)



CanadianSolar

SparkleLight
Figure 2: Project Location and Natural Features

Legend

- 5 m Contours
- Local Roads
- Water Body (Permanent)
- Water Body (Unevaluated)
- Project Location
- 120 m from Project Location
- 300 m from Project Location
- Lots/Concessions
- Greenbelt Protected Countryside
- Rural [1]
- Rural [2]
- Agricultural [2]
- Non-Provincially Significant Wetland
- Unevaluated Wetland
- Woodland

** Municipally Zoned (Township of Brock)[1]*
** Municipally Designated (City of Kawartha Lakes) [2]*

Project within the Lake Simcoe Watershed

Lands to the east of Simcoe St. are in the City of Kawartha Lakes.

Significant Natural Features

- Amphibian Breeding Habitat
- Generalized Wildlife Habitat
- Assumed Provincially Significant Wetland
- Significant Woodland

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N W E S

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Date Modified: 050212
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Ministry of the Environment

Environmental Approvals Branch

2 St. Clair Avenue West
Floor 12A
Toronto ON M4V 1L5
Tel.: 416 314-8001
Fax: 416 314-8452

Ministère de l'Environnement

Direction des autorisations environnementales

2, avenue St. Clair Ouest
Étage 12A
Toronto ON M4V 1L5
Tél : 416 314-8001
Téléc. : 416 314-8452

Ontario

April 2, 2014

Grace Pasceri
Permitting Manager
Canadian Solar Solutions Inc.
e-mail: Grace.Pasceri@canadiansolar.com

Dear Ms. Pasceri:

The Ministry of the Environment (MOE) has reviewed the SparkleLight REA Amendment Letter dated January 10, 2014 for the SparkleLight Solar Project. I apologize for late response.

In reviewing the amendment letter, the MOE referred to Chapter 10 on making changes to renewable energy projects in the Technical Guide to Renewable Energy Projects, in order to confirm the type of change and determine next steps.

Some of the changes as outlined in the amendment letter require minor revisions to existing Renewable Energy Approval (REA) reports, and a complete update to the Noise Study Report. The changes however; do not have the potential to result in increased environmental effects that are significant. Therefore, the MOE has determined that based on the information provided in the amendment letter, the proposed changes are technical changes.

Proponents proposing technical changes should provide a notice of project changes in the form approved by the Director. The notice of proposed changes must include the following information:

- OPA Reference Number;
- Name and contact information of the applicant;
- A brief description of the project;
- A map identifying the project location;
- A description of the proposed changes and the rationale for the changes; and
- A description of where information and documentation regarding the proposed changes can be located.

The notice must be published and circulated in accordance with subsection 16.0.1 or 32.3, as applicable, of O. Reg. 359/09.

This notification constitutes the minimum requirement, and proponents are encouraged to give copies of the notice to other potentially interested persons or groups, including those that attended public meetings or submitted comments regarding the project. Please also ensure that you provide the MOE with a copy of the notice, and information on how it was distributed, and to whom.

Furthermore, you are required to obtain a re-confirmation letter/email from the Ministry of Natural Resources (MNR) and the Ministry of Tourism, Culture and Sport (MTCS) regarding proposed changes to the project and potential amendments to the natural heritage assessment, archaeological assessment and cultural heritage assessment reports. If in your assessment a re-confirmation letter from the MNR and the MTCS is not required, please provide rational and ensure that you copy the MNR and the MTCS on all your correspondence related to this issue.

2241665 Ontario Corp., as general partner for and on behalf of SparkleLight LP must make all revised reports/studies in respect of the proposed changes and any new reports/studies prepared in respect to the proposed changes available to the public on their website.

Once the requirements have been completed and your REA reports have been revised, you may submit a formal REA amendment application to the MOE.

When the MOE receives the REA amendment application (including all revised documents) we will screen the application to ensure that it includes all of the information the MOE requires for the amendment. When the MOE has completed the review of the amendment application and made a decision on the project, an Information Notice will be posted on the Environmental Registry to inform the public of the change.

Yours sincerely,

Mohsen Keyvani, P. Eng.
Team 5, Environmental Approvals Branch

c. Kathy Woeller, Supervisor, Southern Region, MNR (email)
Joe Halloran, MNR (email)
Andrew Hinshelwood, Archaeology Review Officer, MTCS (email)

Appendix D

PANELS

CanadianSolar

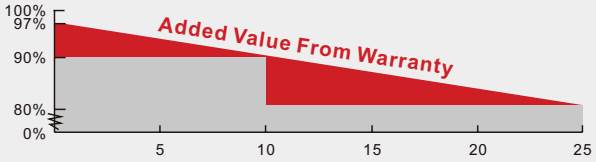
MaxPower CS6X

285/290/295/300/305P

MaxPower CS6X is a robust solar module with 72 solar cells. These modules can be used for on-grid solar applications. Our meticulous design and production techniques ensure a high-yield, long-term performance for every module produced. Our rigorous quality control and in-house testing facilities guarantee Canadian Solar's modules meet the highest quality standards possible.

Key Features

- High module efficiency up to 15.90%
- Positive power tolerance: 0 ~ +5W
- Robust frame to up to 5400 Pa load
- Self-cleaning surface
- Outstanding performance at low irradiance
- High energy yield at Low NOCT
- **Backed By Our New 10/25 Linear Power Warranty Plus our added 25 year insurance coverage**



- 10 year product warranty on materials and workmanship
- 25 year linear power output warranty

Best Quality

- 235 quality control points in module production
- EL screening to eliminate product defects
- Current binning to improve system performance
- Accredited Salt mist/Ammonia resistance
- High PID Resistance

Best Warranty Insurance

- 25 years worldwide coverage
- 100% warranty term coverage
- Providing third party bankruptcy rights
- Non-cancellable
- Immediate coverage
- Insured by 3 world top insurance companies

Comprehensive Certificates

- IEC 61215, IEC 61730, UL 1703, IEC61701 ED2, IEC 62716, KEMCO, CEC Listed, CE, MCS
- ISO9001: 2008: Quality Management System
- ISO/TS16949:2009: The automotive quality management system
- ISO14001:2004: Standards for Environmental management system
- QC080000 HSPM: The Certification for Hazardous Substances Regulations
- OHSAS 18001:2007: International standards for occupational health and safety
- REACH Compliance

www.canadiansolar.com

CS6X-285/290/295/300/305P
MaxPower

Electrical Data

STC	CS6X-285P	CS6X-290P	CS6X-295P	CS6X-300P	CS6X-305P
Nominal Maximum Power (Pmax)	285W	290W	295W	300W	305W
Optimum Operating Voltage (Vmp)	35.8V	35.9V	36.0V	36.1V	36.3V
Optimum Operating Current (Imp)	7.96A	8.08A	8.19A	8.30A	8.41A
Open Circuit Voltage (Voc)	44.3V	44.4V	44.5V	44.6V	44.8V
Short Circuit Current (Isc)	8.53A	8.64A	8.76A	8.87A	8.97A
Module Efficiency	14.85%	15.11%	15.37%	15.63%	15.90%
Operating Temperature	-40℃~+85℃				
Maximum System Voltage	1000V (IEC) /600V (UL)				
Maximum Series Fuse Rating	15A				
Application Classification	Clase A				
Power Tolerance	0 ~ +5W				

Under Standard Test Conditions (STC) of irradiance of 1000W/m^2, spectrum AM 1.5 and cell temperature of 25℃

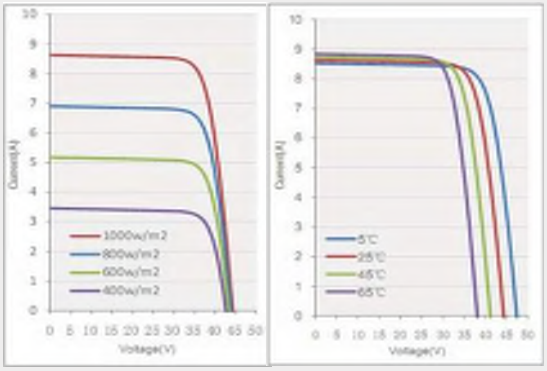
NOCT	CS6X-285P	CS6X-290P	CS6X-295P	CS6X-300P	CS6X-305P
Nominal Maximum Power (Pmax)	207W	210W	214W	218W	221W
Optimum Operating Voltage (Vmp)	32.7V	32.7V	32.8V	32.9V	33.1V
Optimum Operating Current (Imp)	6.33A	6.42A	6.51A	6.61A	6.68A
Open Circuit Voltage (Voc)	40.7V	40.8V	40.9V	41.0V	41.2V
Short Circuit Current (Isc)	6.91A	7.00A	7.10A	7.19A	7.27A

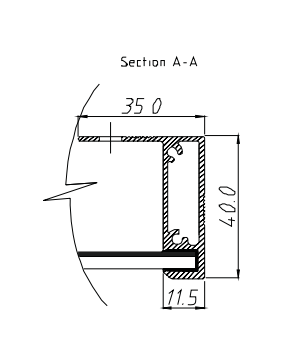
Under Normal Operating Cell Temperature, Irradiance of 800 W/m^2, spectrum AM 1.5, ambient temperature 20℃, wind speed 1 m/s

Mechanical Data

Cell Type	Poly-crystalline 156 x 156mm, 2 or 3 Busbars
Cell Arrangement	72 (6 x 12)
Dimensions	1954 x 982 x 40mm (76.93 x 38.7 x 1.57in)
Weight	23kg (50.7 lbs)
Front Cover	3.2mm Tempered glass
Frame Material	Anodized aluminium alloy
J-BOX	IP65, 3 diodes
Cable	4mm^2(IEC)/12AWG(UL), 1150mm
Connectors	MC4 or MC4 Comparable
Standard Packaging (Modules per Pallet)	24pcs
Module Pieces per container (40 ft . Container)	528pcs (40'HQ)

I-V Curves (CS6X-290P)





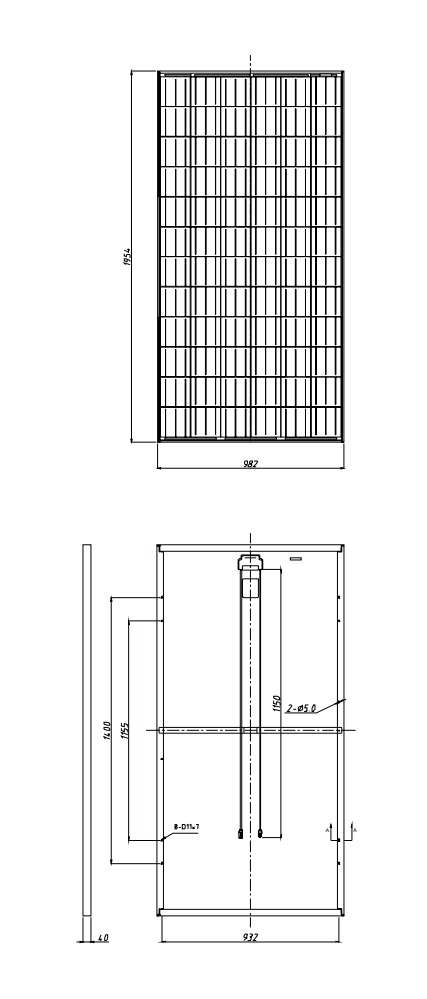
Temperature Characteristics

Temperature Coefficient	Pmax	-0.43%/℃
	Voc	-0.34 %/℃
	Isc	0.065 %/℃
Normal Operating Cell Temperature		45±2℃

Performance at Low Irradiance

Industry leading performance at low irradiation environment, +95.5% module efficiency from an irradiance of 1000w/m^2 to 200w/m^2 (AM 1.5, 25 ℃)

Engineering Drawings



*Specifications included in this datasheet are subject to change without prior notice.

About Canadian Solar

Canadian Solar Inc. is one of the world's largest solar companies. As a leading vertically-integrated manufacturer of ingots, wafers, cells, solar modules and solar systems, Canadian Solar delivers solar power products of uncompromising quality to worldwide customers. Canadian Solar's world class team of professionals works closely with our customers to provide them with solutions for all their solar needs.

Canadian Solar was founded in Canada in 2001 and was successfully listed on NASDAQ Exchange (symbol: CSIQ) in November 2006. Canadian Solar has module manufacturing capacity of 2.05GW and cell manufacturing capacity of 1.3GW.

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Appendix E

INVERTER STATIONS

Economical

- Savings in balance of system costs due to 1,000 V operating voltage
- Outdoor enclosure allows for direct field deployment
- Small footprint and light weight for easy shipping and installation

Efficient

- Highest efficiency in its power class
- Full nominal power at ambient temperatures up to 50 °C
- 10% additional power for continuous operation at ambient temperatures up to 25 °C

Flexible

- Configurable DC voltage range
- Integrated AC disconnect for NEC 2011 compliance
- Optional DC disconnects

Reliable

- Easy and safe installation and with large, separate connection area
- Powerful grid management functions (incl. LVRT and Frequency Ride Through)
- Full UL1741 and IEEE 1547 compliance

SUNNY CENTRAL
500CP-US / 630CP-US / 720CP-US / 750CP-US / 800CP-US

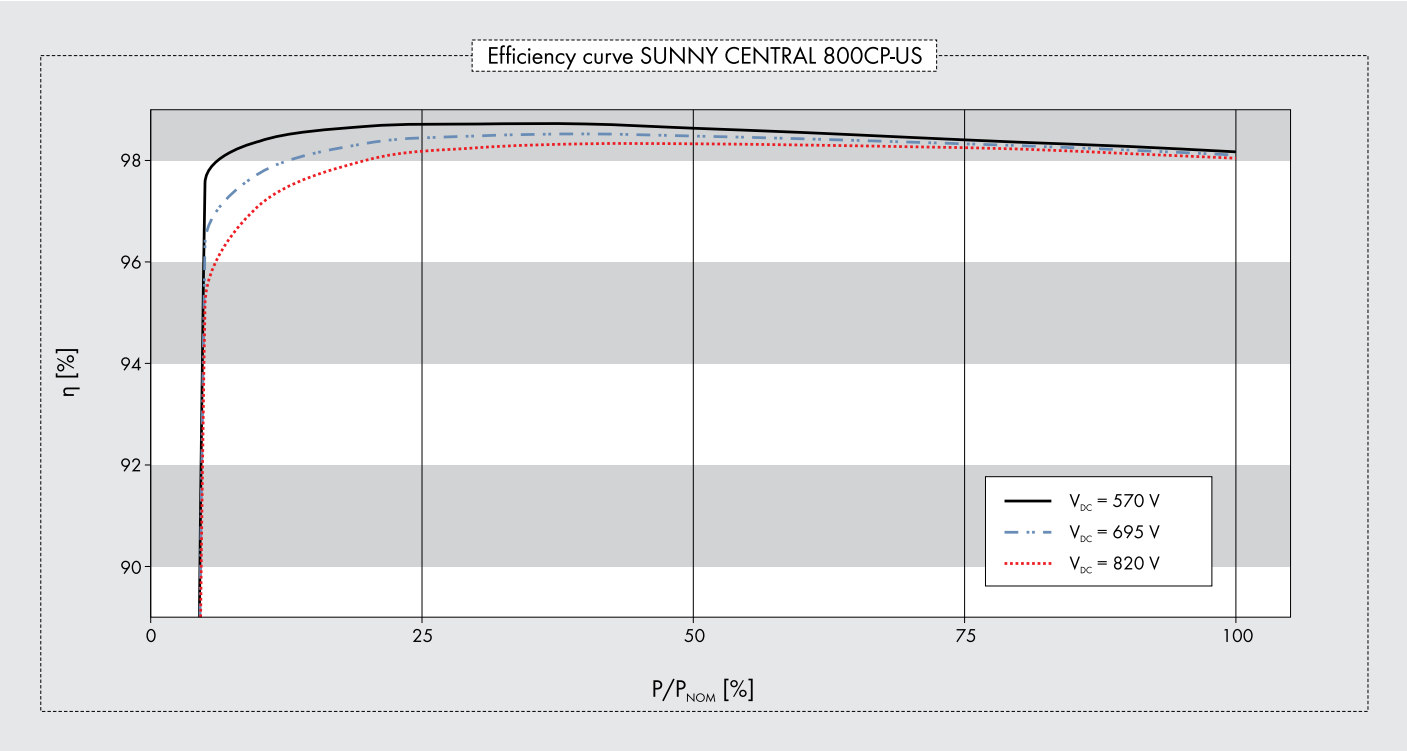
UL listed for commercial and utility-scale projects

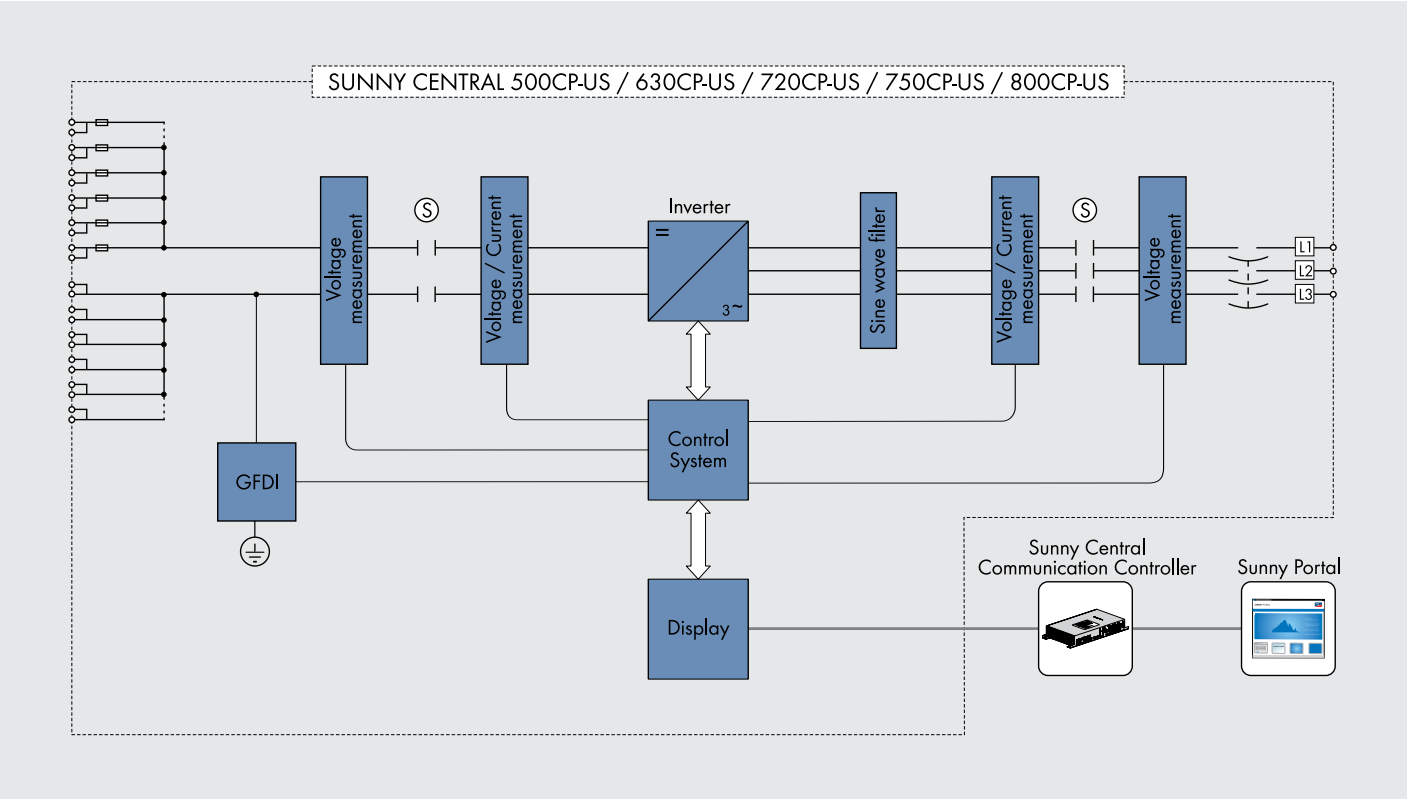
The Sunny Central CP-US series delivers outstanding performance. In combination with an external transformer, the Sunny Central CP-US can be connected to any utility grid or three-phase commercial service while directly providing grid management functions. The CP-US family is UL listed at 1,000 V DC and features an integrated AC disconnect in accordance with NEC 2011 requirements. Both the outdoor enclosure with the OptiCool™ cooling concept and the separate connection area ensures simple installation while maximizing returns. With a peak efficiency of 98.7 percent, it outperforms all other inverters in its class. The Sunny Central CP-US can also be integrated with the Power Plant Controller as well as the Medium-voltage Power Platform for utility-scale applications.

Technical data	Sunny Central 500CP-US	Sunny Central 630CP-US
Input (DC)		
Max. DC power (@ cos φ = 1)	560 kW	713 kW
Max. input voltage[1]	1000 V	1000 V
MPP voltage range (@ 25 °C / @ 50 °C at 60 Hz)	430 V – 820 V / 430 V – 820 V [1,2]	500 V – 820 V / 500 V – 820 V [1,2]
Rated input voltage	480 V	550 V
Max. input current	1250 A	1350 A
Min. input voltage / V_{MPP_min} at $I_{MPP} < I_{DCmax}$	429 V	498 V
Number of independent MPP inputs	1	1
Number of DC inputs	1; 6 – 9	1; 6 – 9
Output (AC)		
Rated power (@ 25 °C) / nominal AC power (@ 50 °C)	550 kVA / 500 kVA	700 kVA / 630 kVA
Rated grid voltage / nominal AC voltage range	270 V / 243 V – 297 V	315 V / 284 V – 347 V
AC power frequency / range	50 Hz, 60 Hz / 47 Hz ... 63 Hz	50 Hz, 60 Hz / 47 Hz ... 63 Hz
Rated power frequency / rated grid voltage	50 Hz, 60 Hz / 270 V	50 Hz, 60 Hz / 315 V
Max. output current	1176 A	1283 A
Max. total harmonic factor	< 3 %	< 3 %
Power factor at rated power / displacement power factor adjustable	1 / 0.8 leading – 0.8 lagging	
Feed-in phases / connection phases	3 / 3	3 / 3
Efficiency[3]		
Max. efficiency / European weighted efficiency / CEC efficiency	98.5 % / 98.3 % / 98.0 %	98.5 % / 98.3 % / 98.0 %
Protective devices		
DC disconnect device	DC contactor	
AC disconnect device	AC circuit breaker	
DC overvoltage protection	Surge Arrester Type II	
Grid monitoring	●	●
Ground-fault monitoring	○	○
Ungrounded PV array[4]	○	○
Lightning protection	Lightning protection level III	Lightning protection level III
Insulation monitoring	○	○
Surge arresters for auxiliary power supply	●	●
Protection class / overvoltage category	I / IV	I / IV
General data		
Dimensions (W / H / D)	2562 / 2279 / 956 mm (101 / 90 / 38 inches)	
Weight	1800 kg / 4000 lb	1800 kg / 4000 lb
Operating temperature range	-25 °C ... +50 °C / -13 °F ... +122 °F	-25 °C ... +50 °C / -13 °F ... +122 °F
Noise emission[5]	60 db(A)	60 db(A)
Max. self-consumption (in operation) / self-consumption (at night)[6]	1700 W / < 100 W	1700 W / < 100 W
External auxiliary supply voltage	230 / 400 V (3/N/PE)	230 / 400 V (3/N/PE)
Cooling concept	OptiCool	OptiCool
Degree of protection: electronics / connection area	NEMA 3R / NEMA 3R	NEMA 3R / NEMA 3R
Degree of protection	4C2, 4S2	4C2, 4S2
Application	In unprotected outdoor environments	In unprotected outdoor environments
Max. permissible value for relative humidity (non-condensing)	15 % ... 95 %	15 % ... 95 %
Max. operating altitude above mean sea level	2000 m	2000 m
Fresh-air consumption (inverter)	3000 m^3/h	3000 m^3/h
Features		
DC connection	Ring terminal lug / cage clamp	Ring terminal lug / cage clamp
AC connection	Ring terminal lug / cage clamp	Ring terminal lug / cage clamp
Display	○	○
Communication / protocols	Ethernet (optical fiber optional), Modbus	Ethernet (optical fiber optional), Modbus
Communication with Sunny String-Monitor	RS485	RS485
Transformer for auxiliary power supply	○	○
SC-COM	●	●
Color of enclosure, door, base, roof	RAL 9016 / 9016 / 7005 / 7004	
Warranty: 5 / 10 / 15 / 20 / 25 years	● / ○ / ○ / ○ / ○	● / ○ / ○ / ○ / ○
Certificates and approvals (more available on request)	EMC conformity according to FCC, Part 15, Class A, UL 1741, UL 1998, IEEE 1547	
● Standard equipment ○ Optional features – Not available		
Type designation	SC 500CP-US-10	SC 630CP-US-10

Sunny Central 720CP-US	Sunny Central 750CP-US	Sunny Central 800CP-US
808 kW	853 kW	898 kW
1000 V	1000 V	1000 V
525 V – 820 V / 525 V – 820 V [1,2]	545 V – 820 V / 545 V – 820 V [1,2]	570 V – 820 V / 570 V – 820 V [1,2]
565 V	595 V	620 V
1600 A	1600 A	1600 A
515 V	545 V	568 V
1	1	1
1; 6 – 9	1; 6 – 9	1; 6 – 9
792 kVA / 720 kVA	825 kVA / 750 kVA	880 kVA / 800 kVA
324 V / 292 V – 356 V	342 V / 308 V – 376 V	360 V / 324 V – 396 V
50 Hz, 60 Hz / 47 Hz ... 63 Hz	50 Hz, 60 Hz / 47 Hz ... 63 Hz	50 Hz, 60 Hz / 47 Hz ... 63 Hz
50 Hz, 60 Hz / 324 V	50 Hz, 60 Hz / 342 V	50 Hz, 60 Hz / 360 V
1411 A	1411 A	1411 A
< 3 %	< 3 %	< 3 %
1 / 0.8 leading – 0.8 lagging		
3 / 3	3 / 3	3 / 3
98.6 % / 98.4 % / 98.0 %	98.6 % / 98.4 % / 98.0 %	98.7 % / 98.4 % / 98.5 %
DC contactor		
AC circuit breaker		
Surge Arrester Type II		
●	●	●
○	○	○
○	○	○
Lightning protection level III	Lightning protection level III	Lightning protection level III
○	○	○
●	●	●
I / IV	I / IV	I / IV
2562 / 2279 / 956 mm (101 / 90 / 38 inches)		
1800 kg / 4000 lb	1800 kg / 4000 lb	1800 kg / 4000 lb
-25 °C ... +50 °C / -13 °F ... +122 °F	-25 °C ... +50 °C / -13 °F ... +122 °F	-25 °C ... +50 °C / -13 °F ... +122 °F
60 db(A)	60 db(A)	61 db(A)
1700 W / 100 W	1700 W / < 100 W	1700 W / < 100 W
230 / 400 V (3/N/PE)	230 / 400 V (3/N/PE)	230 / 400 V (3/N/PE)
OptiCool	OptiCool	OptiCool
NEMA 3R / NEMA 3R	NEMA 3R / NEMA 3R	NEMA 3R / NEMA 3R
4C2, 4S2	4C2, 4S2	4C2, 4S2
In unprotected outdoor environments	In unprotected outdoor environments	In unprotected outdoor environments
15 % ... 95 %	15 % ... 95 %	15 % ... 95 %
2000 m	2000 m	2000 m
3000 m^3/h	3000 m^3/h	3000 m^3/h
Ring terminal lug / cage clamp	Ring terminal lug / cage clamp	Ring terminal lug / cage clamp
Ring terminal lug / cage clamp	Ring terminal lug / cage clamp	Ring terminal lug / cage clamp
○	○	○
Ethernet (optical fiber optional), Modbus	Ethernet (optical fiber optional), Modbus	Ethernet (optical fiber optional), Modbus
RS485	RS485	RS485
○	○	○
●	●	●
RAL 9016 / 9016 / 7005 / 7004		
● / ○ / ○ / ○ / ○	● / ○ / ○ / ○ / ○	● / ○ / ○ / ○ / ○
EMC conformity according to FCC, Part 15, Class A, UL 1741, UL 1998, IEEE 1547		
SC 720CP-US-10	SC 750CP-US-10	SC 800CP-US-10

[1] At 1.00 $U_{AC, nom}$ and cos φ = 1
[2] The inverter will track MPP to 850V before self-protecting
[3] Measured efficiency includes all auxiliary power
[4] Included in the inverter's UL listing
[5] Sound pressure level at a distance of 10 m
[6] Self-consumption at rated operation





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Appendix F

SUBSTATION

VIRGINIA TRANSFORMER CORP
ROANOKE, VA, USA

LIQUID FILLED STEP UP TRANSFORMER

SERIAL NUMBER: 477500A176-C028A

CLASS: ONAN/ONAF — BUILT TO CAN/CSA-C88-M90

kVA: 7500/10000 AT 65°C RISE

HV: 44000 — BIL: 250 kV — COND. MATERIAL: COPPER

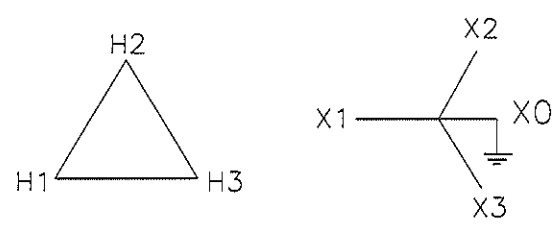
LV: 27600 GrdY/15935 — BIL: 200 kV — COND. MATERIAL: COPPER

PHASES: 3 — FREQUENCY: 60 Hz — LIQUID: TYPE II MINERAL OIL

IMPEDANCE: 5.60 % AT 7500 kVA — MONTH/YEAR OF MANUFACTURE: 10/2013

	VOLTS	AMPS @ 10000 kVA	POS
HV	46200	125	1
	45100	128	2
	44000	131	3
	42900	135	4
	41800	138	5
LV	27600	209	

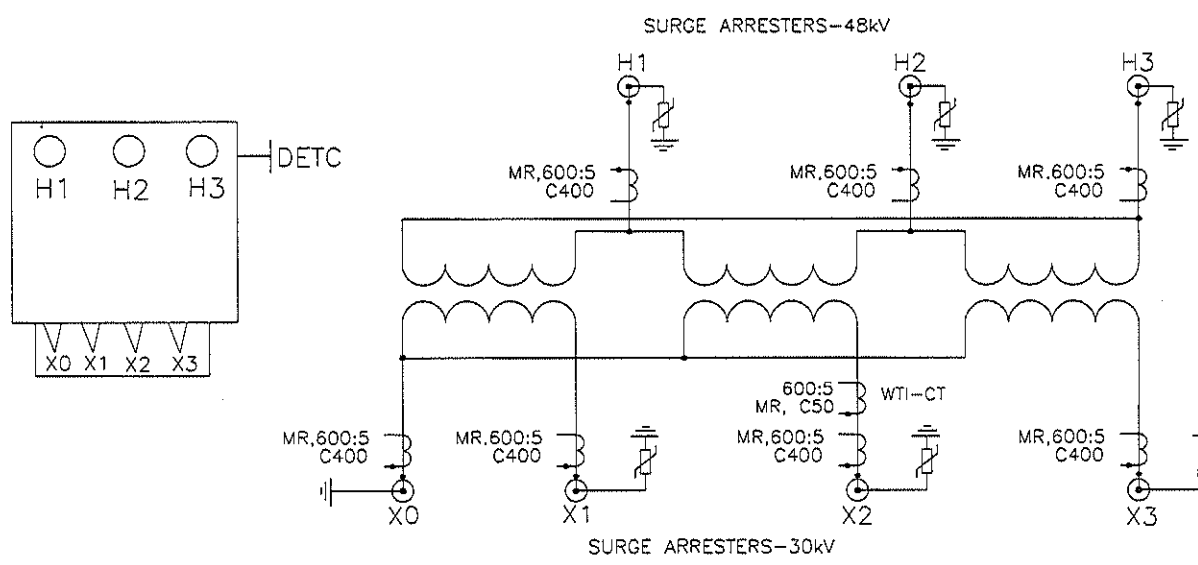
VECTOR DIAGRAM—Dyn1



APPROXIMATE WEIGHT IN LBS (kg)

CORE & COILS	20040 (9090)	TOTAL WEIGHT	50150 (22748)
TANK & FITTINGS	15760 (7149)	UNTANKING WEIGHT	22340 (10133)
LIQUID U.S. GALLONS (m^3) 1717 (6.5)	12880 (5842)	(HEAVIEST PIECE)	

MAX. OPERATING PRESSURE OF LIQUID PRESERVATION SYSTEM 9(62) lbf/in^2 (kPa) POSITIVE, 7(48) lbf/in^2 (kPa) NEGATIVE. TANK DESIGNED FOR 15(104) lbf/in^2 (kPa) VACUUM FILLING. 25 °C LIQUID LEVEL TO TOP FLANGE OF MANHOLE 15.38(391) in(mm) LIQUID LEVEL CHANGES 0.58(14.73) in(mm) PER 10 °C CHANGE IN LIQUID TEMPERATURE. CONTAINS NO DETECTABLE LEVEL OF PCB (<2 PPM) AT THE TIME OF MANUFACTURE.



CAUTION
DE-ENERGIZE TRANSFORMER BEFORE CHANGING TAPS
REFER TO INSTRUCTION MANUAL LF-4 BEFORE ENERGIZATION

11.00 — 0.19 — 7.00 — 0.19

MATERIAL: 0.023 STAINLESS STEEL NON-CORROSIVE OUTDOOR BLACK LETTER ENGRAVED PROTECTIVE CLEAR PLASTIC FILM 0.1875 DIA. HOLES (4)

NOTES:

IMPEDANCE WILL BE ENTERED ON NAMEPLATE AFTER TESTING. FOR NOMINAL DESIGN IMPEDANCE SEE OUTLINE DWG.

ALL DIMENSIONS IN INCHES & IN mm IF SHOWN IN PARENTHESIS

THIS DOCUMENT IS INTENDED FOR COORDINATION PURPOSES ONLY. OTHER USES ARE PROHIBITED EXCEPT BY WRITTEN PERMISION OF VTC. C028A-13.DWG

VIRGINIA TRANSFORMER CORP.
220 GLADE VIEW DR., N.E., ROANOKE, VA 24012
(540) 345-9892

1	ADDED WEIGHTS, LEVELS AND PRESSURES	ALL 09/12/13	
2	UPDATED WEIGHTS, LEVELS AND PRESSURES	ALL 09/19/13	
3	ADDED IMPEDANCE VALUE AS TESTED	BDP 10/16/13	
4	CHANGED OIL QTY AS FILLED	HGB 10/23/13	

TITLE: STANDARD LIQUID FILLED NAMEPLATE — JOB# C028A

DWN:3NAD — CHK:SD — DATE:08/29/13 — DWG SCALE: 1:1 — PLOT SCALE: 1:1

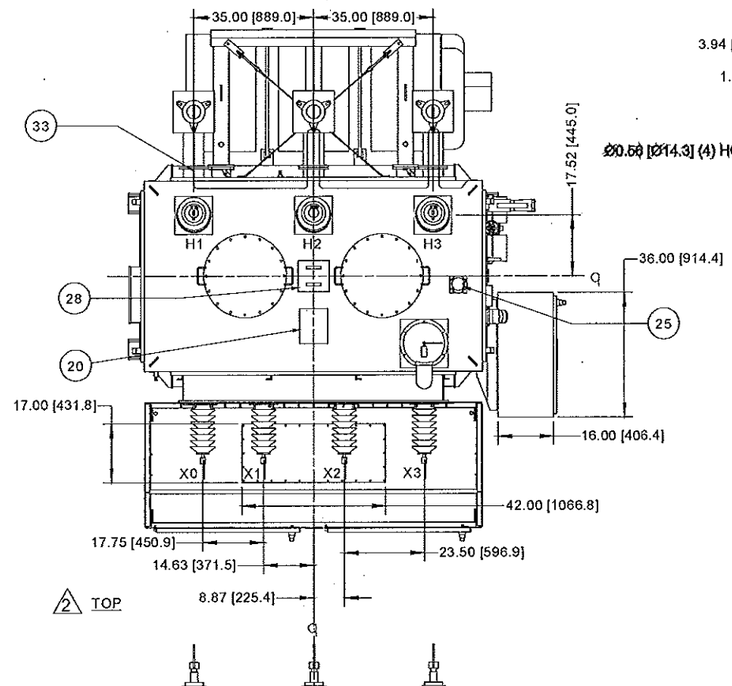
B — 477500A176 — SHEET 13 — REV 4

ITEMS:
1. PROVISION ON BASE FOR SKIDDING
2. TRANSFORMER LIFTING LUGS
3. STAINLESS STEEL GROUND PADS (2) ON DIAGONALLY OPPOSITE SIDE OF TANK
4. STAINLESS STEEL DIAGRAMMATIC NAMEPLATE
5. 20" DIA, MANHOLE (2) WITH COVER (BOLTED AND GASKETED)
6. WELDED TOP COVER WITH LIFTING EYES (4) FOR COVER ONLY, SLOPED FOR DRAINAGE
7. COOLING RADIATORS, HOT DIPPED GALVANIZED, UNPAINTED, DEMOUNTABLE WITH ISOLATION VALVES AND 1/2" DRAIN VALVES
8. HV DRAWLEAD BUSHING, 46 kV, 250 kV BIL (3) WITH 4 HOLE NEMA PAD
9. LV BOTTOM CONNECTED BUSHING, 34.5 kV, 200 kV BIL, (4) WITH 4 HOLE NEMA PAD
10. 2" COMBINATION LOWER DRAIN AND FILTER VALVE WITH SAMPLER, AND PLUG
11. 2" UPPER FILTER VALVE, WITH PLUG 1
12. VTC PRESSURIZATION TEST POINT WITH 1/2" BALL VALVE
13. LIQUID LEVEL GAUGE WITH CONTACTS, GAUGE CENTER IS AT 25deg C OIL LEVEL
14. OIL TEMPERATURE GAUGE WITH CONTACTS
15. PRESSURE VACUUM GAUGE WITH CONTACTS AND BLEEDER
16. PRESSURE RELIEF DEVICE WITH CONTACTS DIRECTIONAL SHROUD AND FLAG
17. DE-ENERGIZED NO LOAD MANUAL TAP CHANGER WITH PROVISION FOR PADLOCKING
18. CONTROL BOX, NEMA 4, 48 x 36 x 16 , WITH BOLTED BOTTOM PLATE
19. JACK PADS (4) WITH PULLING EYES
20. BOX FOR HV CT FEED-THRU AND CORE GROUND BUSHING
21. COOLING FANS
22. WINDING TEMPERATURE GAUGE, SIMULATION SYSTEM, WITH CONTACTS
23. BOLTED, GASKETED PLATE FOR ACCESS TO DETC
24. THERMOWELLS FOR TEMPERATURE GAUGES
25. SUDDEN PRESSURE RELAY
26. HV STATION CLASS ARRESTER, POLYMER, 48 kV, 39 kV MCOV MFG: ABB, CATALOG #: Q048SA039A 2
27. LV STATION CLASS ARRESTER, POLYMER, 30 kV, 24.4 kV MCOV MFG: ABB, CATALOG #: Q030SA024A
28. FALL PROTECTION PLATE
29. LV AIR TERMINAL CHAMBER, BOLTED ON, WITH FRONT HINGED DOORS, CABLE SUPPORTS, BOTTOM PLATE AND THERMOSTATICALLY CONTROLLED HEATERS
30. RTD THERMOWELL
31. SUDDEN PRESSURE RELAY, UNDER OIL TYPE WITH SHUT OFF VALVE
32. 4/0 BARE CU CABLE FROM X0 TO BASE GROUND PAD
33. 4/0 BARE CU CABLE FROM LV/HV ARRESTERS TO BASE GROUND PADS 1
34. BOX FOR LV CT FEED-THRU'S
35. 4/0 BARE CU CABLE FROM CONTROL BOX GROUND POINT TO TANK WALL 2

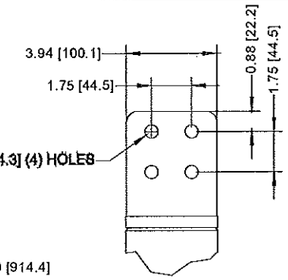
3

NOTES:
1. TYPE II MINERAL OIL FILLED TRANSFORMER, APPROXIMATELY 1717 GALLONS
2. OUTDOOR SERVICE
3. PAINT: ANSI-70 URETHANE OVER EPOXY (VTC PAINT SYSTEM III), TOP COVER WITH ANTI-SKID COATING
4. TOUCH UP PAINT KIT PROVIDED
5. UNIT DESIGNED FOR SEALED TYPE OIL PRESERVATION
6. SEE 20 SERIES SHEETS FOR SCHEMATIC
7. CG IS FULLY ASSEMBLED
8. UNIT DESIGNED FOR FULL VACUUM FILLING
9. UNIT SHIPS FULLY ASSEMBLED AND OIL FILLED, HV SPADES SHIP INSIDE CONTROL BOX
10. UNIT DESIGNED FOR OPERATION AT MINIMUM AMBIENT - 40deg C
11. TANK SEAMS ARE WELDED INSIDE AND OUTSIDE-NO CORNER WELDS WITHIN 6" OF CORNER
12. UNIT SHIPS WITH IMPACT RECORDER
13. 60/60 EXTENDED WARRANTY IS PROVIDED

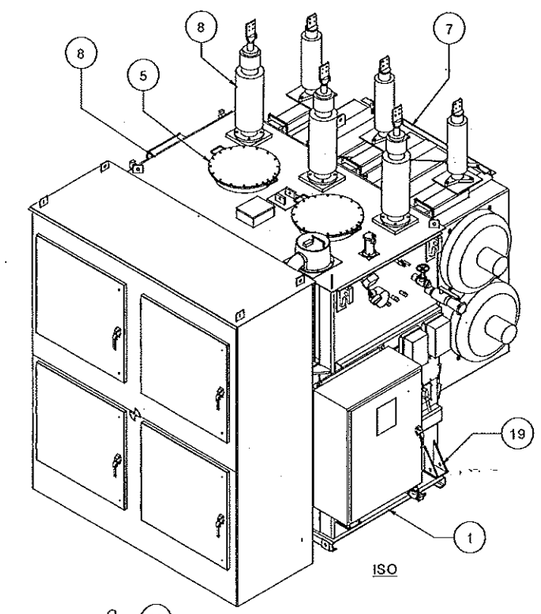
REFER SHEET 102 FOR ADDITIONAL DETAILS 2



2 TOP



DETAIL A
ARRESTER TERMINAL
2



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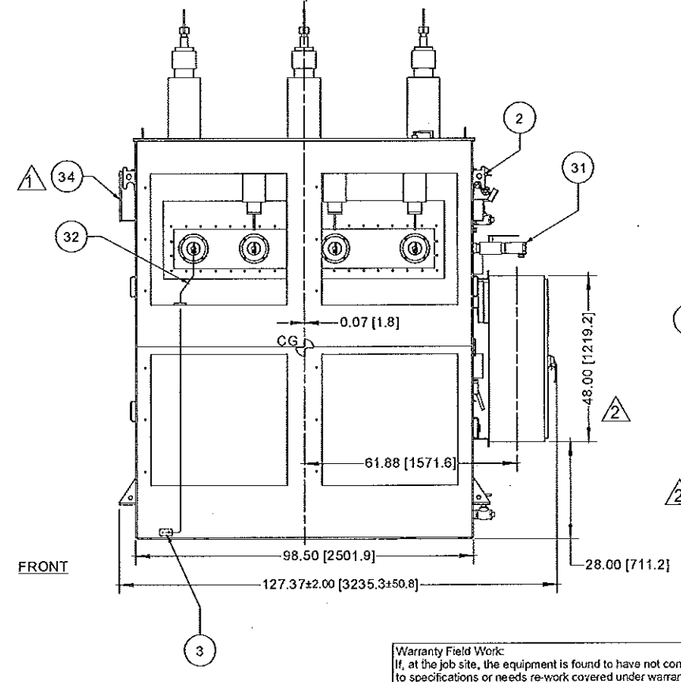

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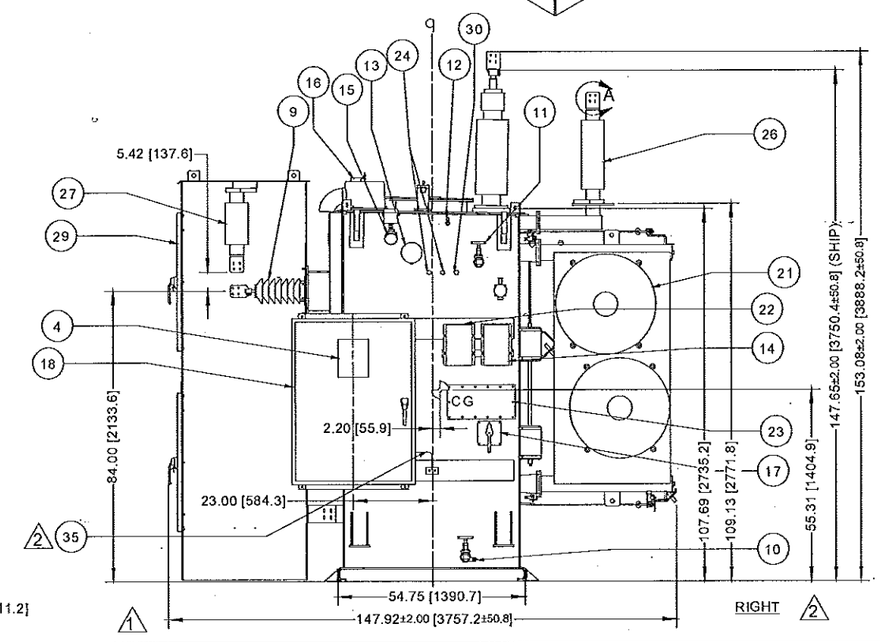

RIGHT 2

Liquid Filled Transformer Data:

MOD/SN: 477500A176	MVA: 7.5/10 AT 65°C RISE
3 PHASE, 60 Hz	CLASS: ONAN/ONAF
IMP: 5.625 % NOM.	WT: 50,150 LBS
WINDINGS: COPPER	
TAPS: 2 X 2.5 %	
HV: 44,000 DELTA, 250 kV BIL, 131 A NOM @ 10 MVA	
LV: 27,600 GrdY/15,935 , 200 kV BIL, 209 A @ 10 MVA	

Customer: KA FACTOR GROUP INC.

Warranty Field Work:
If, at the job site, the equipment is found to have not conformed to specifications or needs re-work covered under warranty, all parties concerned shall provide full access to Virginia Transformer Corp. or their representatives to work on the unit(s) at the job site. The method of repair/re-work will be determined solely by Virginia Transformer Corp.

TOLERANCES IF NO TOLERANCES SHOWN ±0.5(12.7) OTHERWISE:
Δ ±0.25(6.3)
O ±1.0(25.4)

ALL DIMENSIONS IN INCHES & IN mm IF SHOWN IN PARENTHESIS

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C028A-101.idw

1 REVISED PER FINAL DESIGN ALL 09/12/13	2 REVISED PER CUSTOMER COMMENTS ALL 09/19/13	3 REVISED OIL QUANTITY HGB 10/23/13

VIRGINIA TRANSFORMER CORP.
203 GLADE VIEW DR., N.E. ROANOKE, VA 24012
(540) 345-9392

TITLE: DIMENSIONAL OUTLINE JOB # C028A
DWN: HGB CHK: 3NAD DATE: 08/27/13
D 477500A176 SHEET 101 REVISION 3

DEVICE	QTY	DESCRIPTION	LOCATION	VTC PART#
8-M	1	CIRCUIT BREAKER, 2 POLE, 40 A	JB	380261
8-1	1	CIRCUIT BREAKER, 2 POLE, 16 A	JB	380216
8-3	1	CIRCUIT BREAKER, 1 POLE, 16 A	JB	380116
8-2 8-4 8-5 8-8	4	CIRCUIT BREAKER, 1 POLE, 6 A CIRCUIT BREAKER, 1 POLE, 6 A CIRCUIT BREAKER, 1 POLE, 6 A CIRCUIT BREAKER, 1 POLE, 6 A	JB JB JB JB	380106
8-6 8-7	2	CIRCUIT BREAKER, 2 POLE, 6 A CIRCUIT BREAKER, 2 POLE, 6 A	JB JB	380206
63PRX	1	AUXILIARY RELAY, 125VDC, 2 NO & 2 NC CONTACTS	JB	306611020P
CT1-6 NCT	7	OIL CURRENT TRANSFORMER, 600:5, MR, C400, TRF=2.0 OIL CURRENT TRANSFORMER, 600:5, MR, C400, TRF=2.0	XFMR XFMR	400160411
WTI-CT	1	OIL CURRENT TRANSFORMER, 600:5, MR, C50, TRF=1.5	XFMR	400160110I
4-1	1	FAN CONTACTOR, 120VAC COIL, 2 POLE	JB	30651201
88F1 88F2	2	FAN 26", 7496CFM, 1140 RPM, 1/3 HP, 240VAC, 1 PH FAN 26", 7496CFM, 1140 RPM, 1/3 HP, 240VAC, 1 PH	XFMR XFMR	360317C1
GFII	1	GND FAULT INTERRUPT RECEPTACLE, 120V, 15A	JB	30410100
H1 H2	2	ANTI-CONDENSATION HEATER, RATED 250W@250VAC ANTI-CONDENSATION HEATER, RATED 250W@250VAC	JB JB	362021
H3 H4	2	ANTI-CONDENSATION HEATER, RATED 375W@250VAC ANTI-CONDENSATION HEATER, RATED 375W@250VAC	LV ATC LV ATC	362026
AC DC	2	TERMINAL BLOCK, 4 POLE TERMINAL BLOCK, 4 POLE	JB JB	30125063
71Q	1	LIQUID LEVEL GAUGE, WITH 2 CONTACTS	XFMR	3420381
26Q	1	LIQUID TEMP GAUGE, WITH 4 CONTACTS	XFMR	3421182
63PR	1 1	PRESSURE RELIEF DEVICE WITH YELLOW FLAG SHROUD WITH 1 CONTACT SET @ 10 PSI	XFMR XFMR	3420502 342041
63PVG	1	PRESSUR VACUUM GAUGE WITH BLEEDER	XFMR	342090
63PVS	1	PRESSURE VACUUM SWITCH, VAC SET@-7.0PSI, PRE @ +9PSI	XFMR	3421004
63X1 63X2	2	SUDDEN PRESSURE SEAL IN RELAY,ALARM AND TRIP CONTACTS SUDDEN PRESSURE SEAL IN RELAY,ALARM AND TRIP CONTACTS	JB JB	3420605I
63SP1	1	SUDDEN PRESSURE RELAY (GAS SPACE), 1 MOMENTARY CONTACT	XFMR	342060
63SP2	1	SUDDEN PRESSURE RELAY (OIL SPACE), 1 MOMENTARY CONTACT	XFMR	342064
43F1	1	FAN SELECTOR SWITCH, 3 POSITION MAINT, MANUAL/OFF/AUTO	JB	30611416
RTD	1	RTD, PT 100 OHMS @ 0°C, FOR MAIN TANK OIL TEMPERATURE	XFMR	347S04
A1-4 B1 D1	6	TERMINAL BLCOK, 12 POLE TERMINAL BLCOK, 12 POLE TERMINAL BLCOK, 12 POLE	JB JB JB	30122123
B2 E1	2	TERMINAL BLOCK, 6 POLE TERMINAL BLOCK, 6 POLE	JB JB	30122063
FTA FTB FTC	3	FEEDTHROUGH, 19 CONDUCTOR FOR CT WIRING FEEDTHROUGH, 19 CONDUCTOR FOR CT WIRING FEEDTHROUGH, 19 CONDUCTOR FOR CT WIRING	XFMR XFMR XFMR	55101197
SB1-8	8	SHORTING TERMINAL BLOCK FOR CT CONNECTION	JB	301320650
E2 E3	2	TERMINAL BLOCK, 2 POLE TERMINAL BLOCK, 2 POLE	JB LV ATC	30122021
GND1	1	GROUND BAR, COPPER	JB	20880080
23-1 23-2	2	THERMOSTAT, NON ADJUSTABLE SET @ 80°F THERMOSTAT, NON ADJUSTABLE SET @ 80°F	JB LV ATC	363100
49T	1	WINDING TEMPERATURE GAUGE, W/4 CONTACTS	XFMR	343030
CBA	1	CURRENT BALANCING AUTO-TRANSFORMER, SIM. WDG TEMP.	JB	343015I
LT1	1	JB LIGHT, LED, 120VAC, 5.5 WATTS	JB	30390103
DS1	1	DOOR SWITCH FOR JB LICHT	JB	30620020
JB	1	JUNCTION BOX, NEMA 4, 48 X 36 X 16, W/ BACK AND SWING PANEL	XFMR	303203S6M

1

NOTE
1. ALL WIRES ARE NUMBERED ON EACH END WITH HEAT SHRINK PLASTIC SLEEVE WRAPPED WIRE MARKERS.
2. CONTROL WIRES ARE 14AWG SIS/XHHW (WHERE APPLICABLE).
3. CT AND POWER WIRES ARE 10AWG SIS/XHHW (WHERE APPLICABLE).
4. GROUNDING WIRES ARE 12AWG GREEN SIS/XHHW (WHERE APPLICABLE).
5. SHORTING LINK TO BE REMOVED FROM SHORTING TYPE TB WHEN CURRENT XFMR IS TO BE USED.
6. ALL TERMINAL CONNECTIONS TO BE MADE WITH PRE-INSULATED RING TONGUE CRIMPED TYPE LUGS.
7. ALL DEVICES IN JB PROVIDED WITH PHENOLIC NAME PLATES WITH BLACK LETTERING ON WHITE BACKGROUND.
8. NO BUTT SPLICES ARE ALLOWED.
9. NEUTRAL WIRES ARE 10AWG WHITE SIS/XHHW.
10. POWER AND CONTROL WIRE TO RUN SEPARATE.

ALL DIMENSIONS IN INCHES & IN mm IF SHOWN IN PARENTHESIS

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C02BA-21.DWG

1	DRAWING REVISED GS 10/21/13

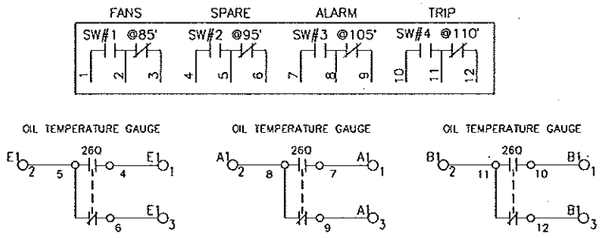
VIRGINIA TRANSFORMER CORP.
220 GLADE VIEW DR., N.E., ROANOKE, VA 24012
(540) 345-9892

TITLE: DEVICE LEGEND AND DRAWING NOTES — JOB# C02BA

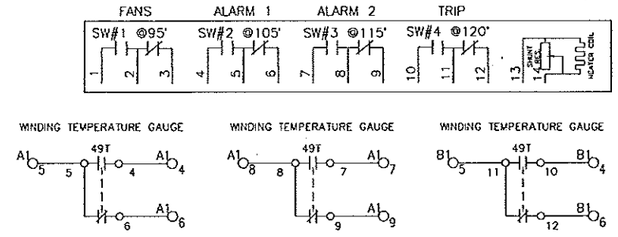
DWN: PSP	CHK: JWB	DATE: 08/26/13	DWG SCALE: NTS	PLOT SCALE: 1:1

D	477500A176	SHEET 21	DRAWING 1 OF 6	REV 1

(FAN CONTACT SHOWN ON SHEET 22)
26Q
OIL TEMPERATURE GAUGE

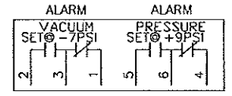


(FAN CONTACT SHOWN ON SHEET 22)
49T
WINDING TEMPERATURE GAUGE

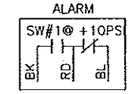


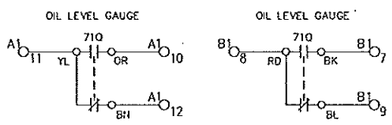
71Q
OIL LEVEL GAUGE

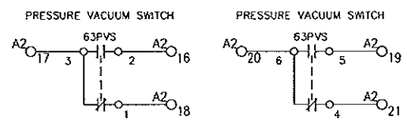
(SHOWN @ 0 PSI)
63PVS
PRESSURE VACUUM SWITCH



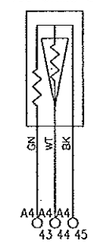
(CONTACT SHOWN ON SHEET 24)
63PR
PRESSURE RELIEF DEVICE



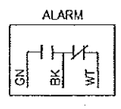




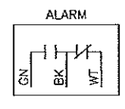
RTD
OIL TEMPERATURE
PT 100 OHMS @ 0°C



(CONTACT SHOWN ON SHEET 24)
63SP1
SUDDEN PRESSURE RELAY



(CONTACT SHOWN ON SHEET 24)
63SP2
SUDDEN PRESSURE RELAY



NOTE:
ALL CONTACTS ARE DRAWN IN THE NON-ALARM STATE.

NOTE
SEE DEVICE LEGEND AND WIRING NOTES ON SHEET 21

ALL DIMENSIONS IN INCHES & IN mm IF SHOWN IN PARENTHESIS

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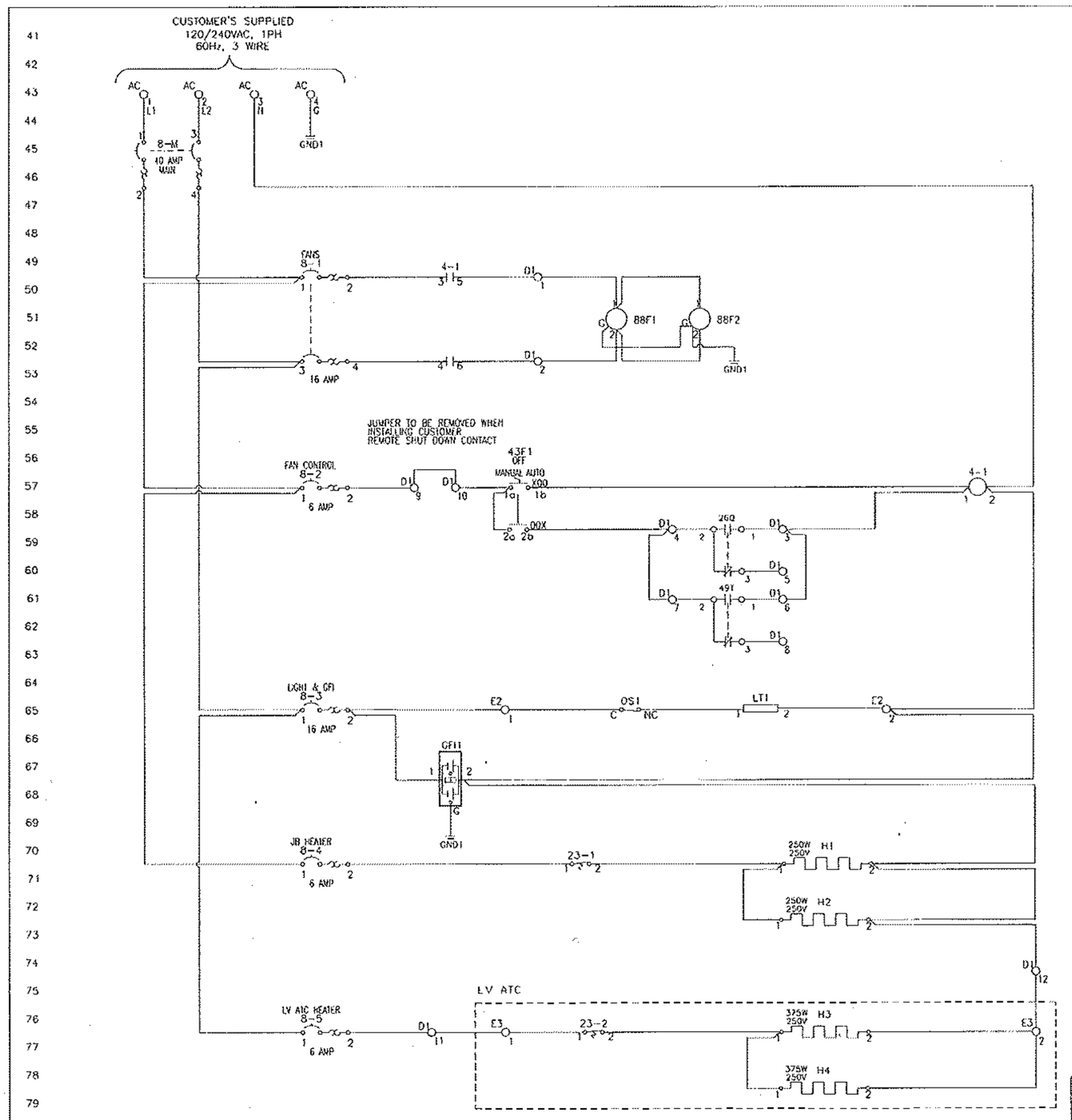
C028A-21.1.DWG

VIRGINIA TRANSFORMER CORP.
220 GLADE VIEW DR., N.E., ROANOKE, VA 24012
(540) 345-9892

TITLE: ACCESSORY SCHEMATIC				JOB# C028A	
DWN: PSP	CHK: JWB	DATE: 08/26/13	DWG SCALE: NTS	PLOT SCALE: 1:1	
D	477500A176	SHEET 21.1	DRAWING 2 OF 6	REV 0	



WIRE SIZE CHART	
CB SIZE	MINIMUM AWG
16 AMP	14 AWG
20 AMP	12 AWG
30-40 AMP	10 AWG
41-55 AMP	8 AWG
56-75 AMP	6 AWG
76-95 AMP	4 AWG
96-110 AMP	3 AWG

NOTE
SEE DEVICE LEGEND AND WIRING NOTES ON SHEET 21

ALL DIMENSIONS IN INCHES & IN mm IF SHOWN IN PARENTHESIS

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C028A-22.DWG

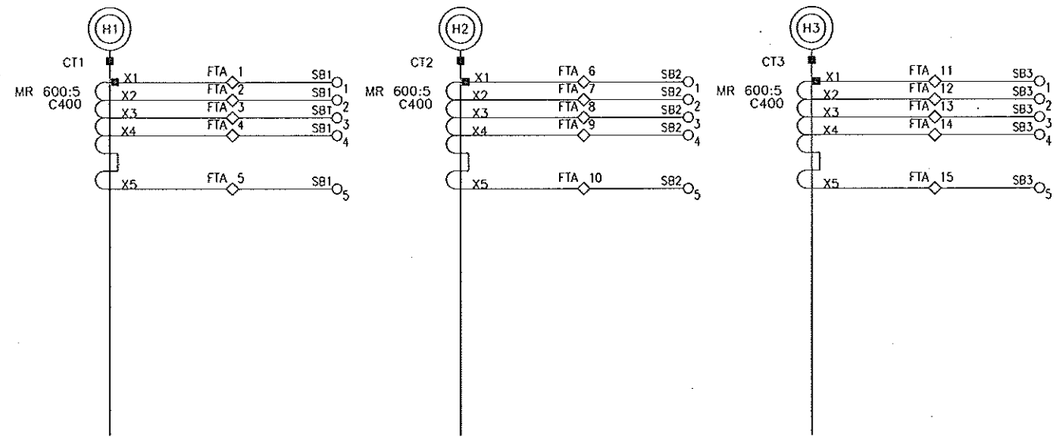
VIRGINIA TRANSFORMER CORP.
220 GLADE VIEW DR., N.E., ROANOKE, VA 24012
(540) 345-9892

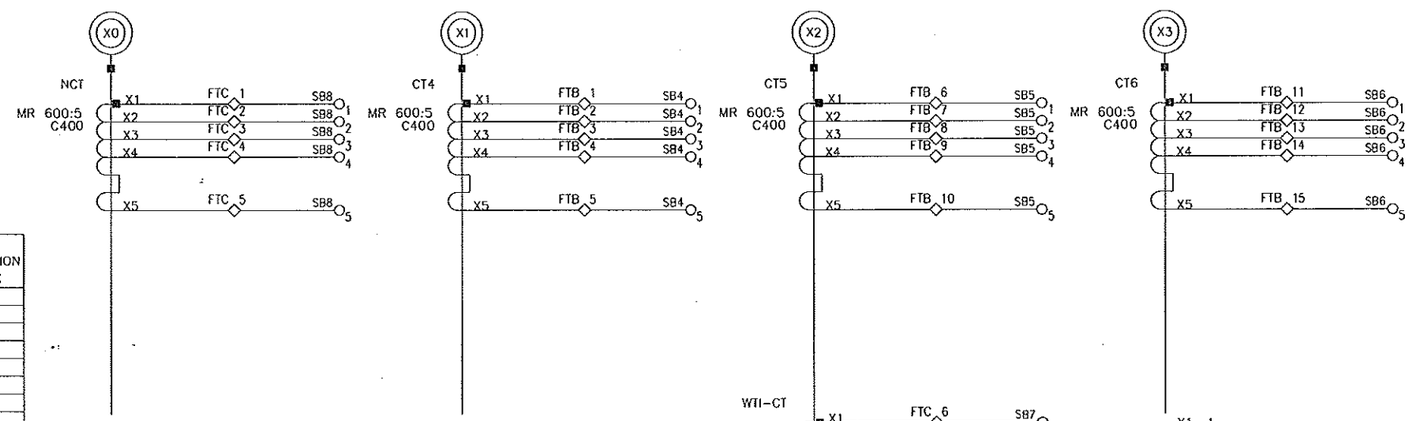
TITLE: FAN, LIGHT, HEATER AND GFI SCHEMATICS JOB# C028A

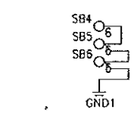
DWN: PSP	CHK: JWB	DATE: 08/26/13	DWG SCALE: NTS	PLOT SCALE: 1:1
D	477500A176	SHEET 22	DRAWING 3 OF 6	REV 0

WTI-CT, 600:5, MR, C50
CT1-6, NCT, 600:5, MR, C400
CAUTION:
SHORT CIRCUIT TERMINALS 1 & 5
BEFORE DISCONNECTING SECONDARY BURDEN.

TAP CONNECTIONS FOR 600/5 MR CT	
RATIO	TAPS
50/5	X2-X3
100/5	X1-X2
150/5	X1-X3
200/5	X4-X5
250/5	X3-X4
300/5	X2-X4
400/5	X1-X4
450/5	X3-X5
500/5	X2-X5
600/5	X1-X5







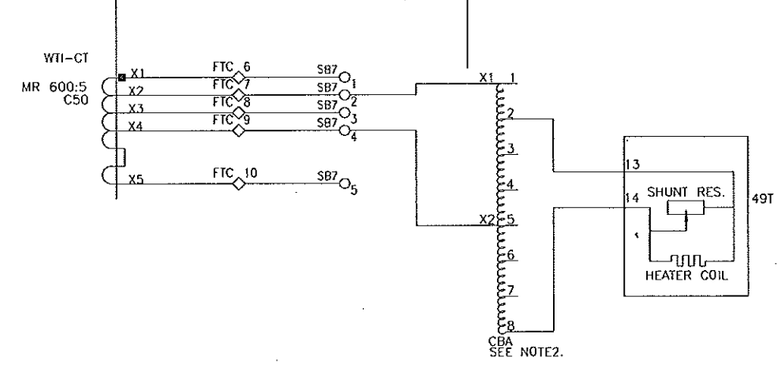


TABLE 1
CURRENT BALANCING
AUTO-TRANSFORMER

CURRENT INPUT		CURRENT OUTPUT		RATIO: INPUT TO OUTPUT	CONNECTION PER X
3	8	X1	X2	1.41	
2	5	X1	X2	1.29	
2	6	X1	X2	1.23	
2	7	X1	X2	1.17	
X1	X2	1	8	1.12	
X1	X2	1	7	1.08	
X1	X2	1	6	1.04	
X1	X2	1	5	1.00	
X1	X2	2	8	0.90	X
X1	X2	2	7	0.86	
X1	X2	2	6	0.82	
X1	X2	2	5	0.78	
X1	X2	3	8	0.71	
X1	X2	3	7	0.67	
X1	X2	3	6	0.63	
X1	X2	3	5	0.59	
X1	X2	4	8	0.54	
X1	X2	4	7	0.50	
X1	X2	4	6	0.46	
X1	X2	4	5	0.42	
X1	8	4	5	0.37	
X1	8	2	4	0.32	
3	6	3	4	0.27	
2	7	3	4	0.20	

CAUTION:
SHORT TERMINALS 1 & 2 BEFORE
DISCONNECTING SECONDARY BURDEN.
NOTE2 : INPUT WIRES MAY BE MOVED FOR CALIBRATION OF
AUTOTRANSFORMER AS PER TABLE1

NOTE
SEE DEVICE LEGEND AND WIRING NOTES ON SHEET 21

ALL DIMENSIONS IN INCHES & IN mm IF SHOWN IN PARENTHESIS

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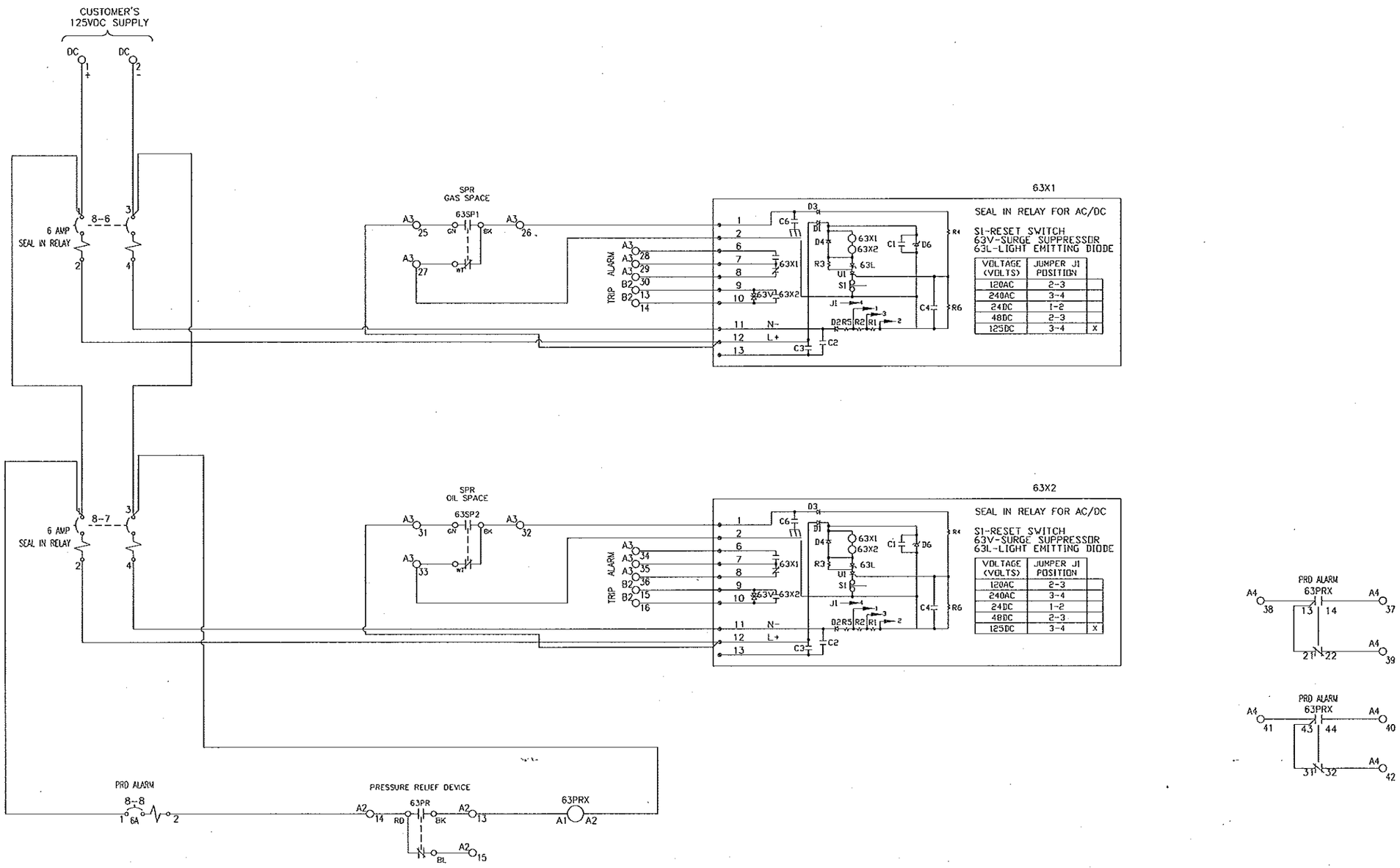
C028A-23.DWG

VIRGINIA TRANSFORMER CORP.
220 GLADE VIEW DR., N.E., ROANOKE, VA 24012
(540) 345-9892

TITLE: CT SCHEMATICS
JOB# C028A
DWN: PSP | CHK: JWB | DATE: 08/26/13 | DWG SCALE: NTS | PLOT SCALE: 1:1
D 477500A176
SHEET 23 | DRAWING 4 OF 6 | REV 0



NOTE
SEE DEVICE LEGEND AND WIRING NOTES ON SHEET 21

ALL DIMENSIONS IN INCHES & IN mm IF SHOWN IN PARENTHESIS

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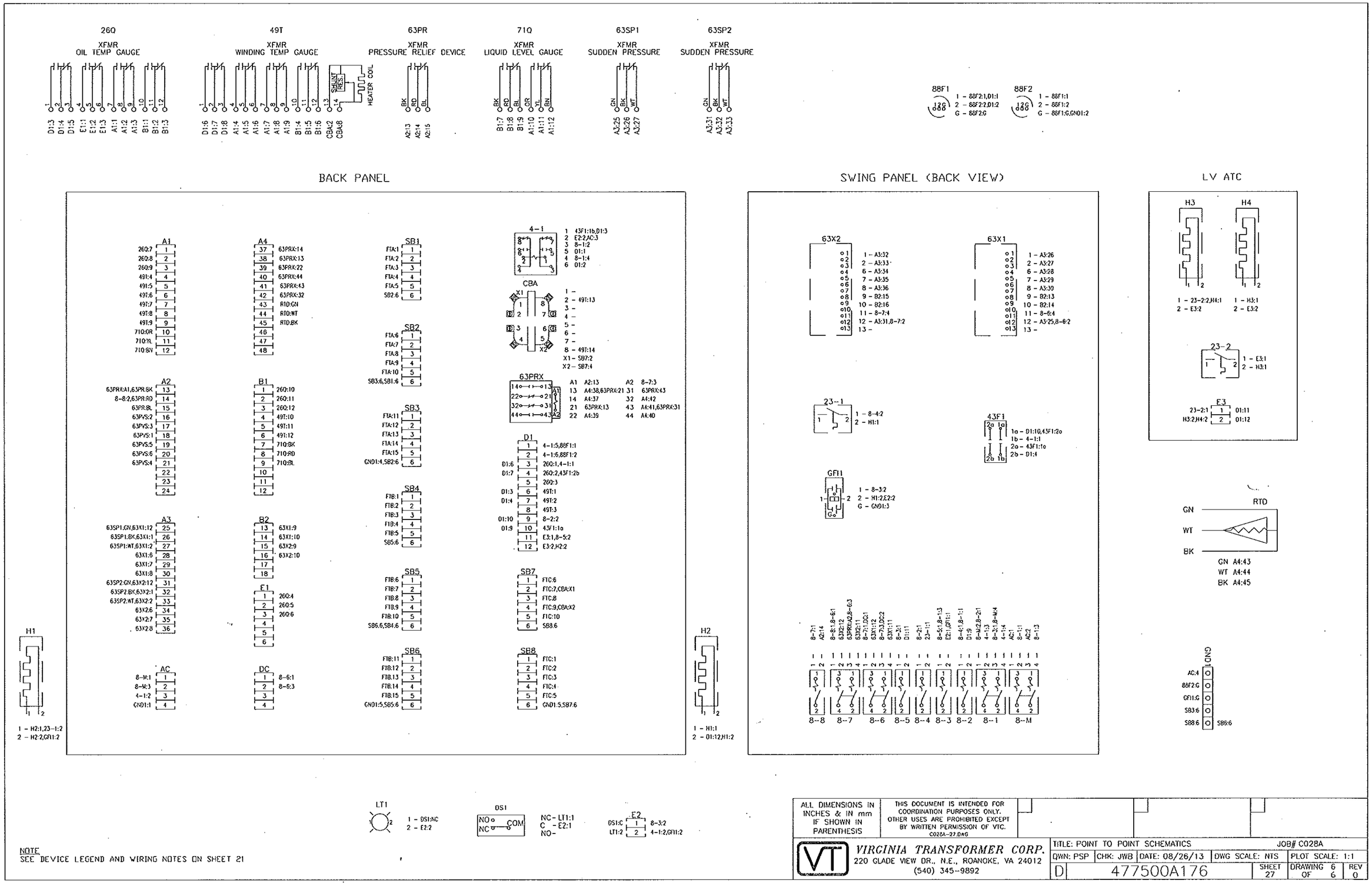
C028A-24.DWG

VIRGINIA TRANSFORMER CORP.
220 GLADE VIEW DR., N.E., ROANOKE, VA 24012
(540) 345-9892

TITLE: SEAL IN SCHEMATICS | JOB# C028A
DWN: PSP | CHK: JWB | DATE: 08/26/13 | DWG SCALE: NTS | PLOT SCALE: 1:1
D | 477500A176 | SHEET 24 | DRAWING 5 OF 6 | REV 0



ALL DIMENSIONS IN INCHES & IN mm IF SHOWN IN PARENTHESIS	THIS DOCUMENT IS INTENDED FOR COORDINATION PURPOSES ONLY. OTHER USES ARE PROHIBITED EXCEPT BY WRITTEN PERMISSION OF VTC. C028A-27.DWG			
VIRGINIA TRANSFORMER CORP. 220 GLADE VIEW DR., N.E., ROANOKE, VA 24012 (540) 345-9892	TITLE: POINT TO POINT SCHEMATICS			JOB# C028A
	QWN: PSP	CHK: JWB	DATE: 08/26/13	DWG SCALE: NTS	PLOT SCALE: 1:1
	D	477500A176	SHEET 27	DRAWING 6 OF 6	REV 0

Appendix G

NOISE STUDY REPORT

WHITE
an IEA company

SparkleLight Solar Project

REVISED FINAL NOISE STUDY REPORT

MAY 2014

DILLON
CONSULTING

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Appendix B: CADNA Noise Modelling and Calculations

1. Introduction

Canadian Solar Solutions Inc., acting on behalf of SparkleLight LP, proposes to develop a solar facility with a maximum name plate capacity of approximately 10 megawatts (MW) alternating current (AC), located near Beaverton, in the Township of Brock and Region of Durham, Ontario (**Figure 1**). Canadian Solar Solutions Inc. is coordinating and managing the approvals process for SparkleLight LP. The renewable energy facility will be known as SparkleLight and will be rated as a Class 3 Solar Facility. SparkleLight LP has received a contract from the Ontario Power Authority (OPA) for the sale of electricity generated by this renewable facility through the province's Feed-in-Tariff (FIT) program (enabled by the *Green Energy and Green Economy Act*, *2009*). The project will require a Renewable Energy Approval (REA) as per *Ontario Regulation 359/09* under Part V.0.1 of the *Ontario Environmental Protection Act*.

This *Noise Study Report* (NSR) is being submitted to the Ministry of the Environment as required under the Renewable Energy Approvals (REA) process as outlined in *Ontario Regulation 359/09*. Due to the proximity of one neighbouring proposed solar project (DiscoveryLight), the noise sources for both proposed facilities were modelled together to address potential cumulative noise impacts. This assessment documents the compliance of all the proposed noise sources at SparkleLight and DiscoveryLight with MOE Publication *NPC-232 Sound Level Limits for Stationary Sources in Class 3 Areas (Rural)*.

2. The Proponent

Canadian Solar Solutions Inc. is managing and coordinating the approvals process for SparkleLight LP. Canadian Solar is an experienced developer, owner and operator of power generation and energy delivery assets. Company activities include developing, building, owning and operating renewable energy facilities. Canadian Solar strives to satisfy various environmental approval requirements and obtain regulatory approvals that vary depending on the jurisdiction, project capacity and site location. In addition, they build long-term relationships with the communities that host the projects and are committed to the health and welfare of the Township of Brock and Region of Durham, Ontario.

Contact information for the proponent is as follows:

Full Name of Company:	*SparkleLight LP*
Prime Contact	*Mark Feenstra*
Address:	*545 Speedvale Ave. W., Guelph, Ontario, N1K 1E6*
Telephone:	*519-837-1881 x2342*
Fax:	*519-837-2550*
Email:	*Mark.Feenstra@na.canadiansolar.com*

Dillon Consulting Limited (Dillon) is the consultant responsible for the preparation of REA-related reports for SparkleLight. The contact at Dillon is:

Full Name of Company:	*Dillon Consulting Limited*
Prime Contact:	*Megan Bellamy, REA Project Coordinator*
Address:	*235 Yorkland Boulevard, Suite 800, Toronto, Ontario, M2J 4Y8*
Telephone:	*416-229-4647 ext 2381*
Fax:	*416-229-4692*
Email:	*kmyrans@dillon.ca*

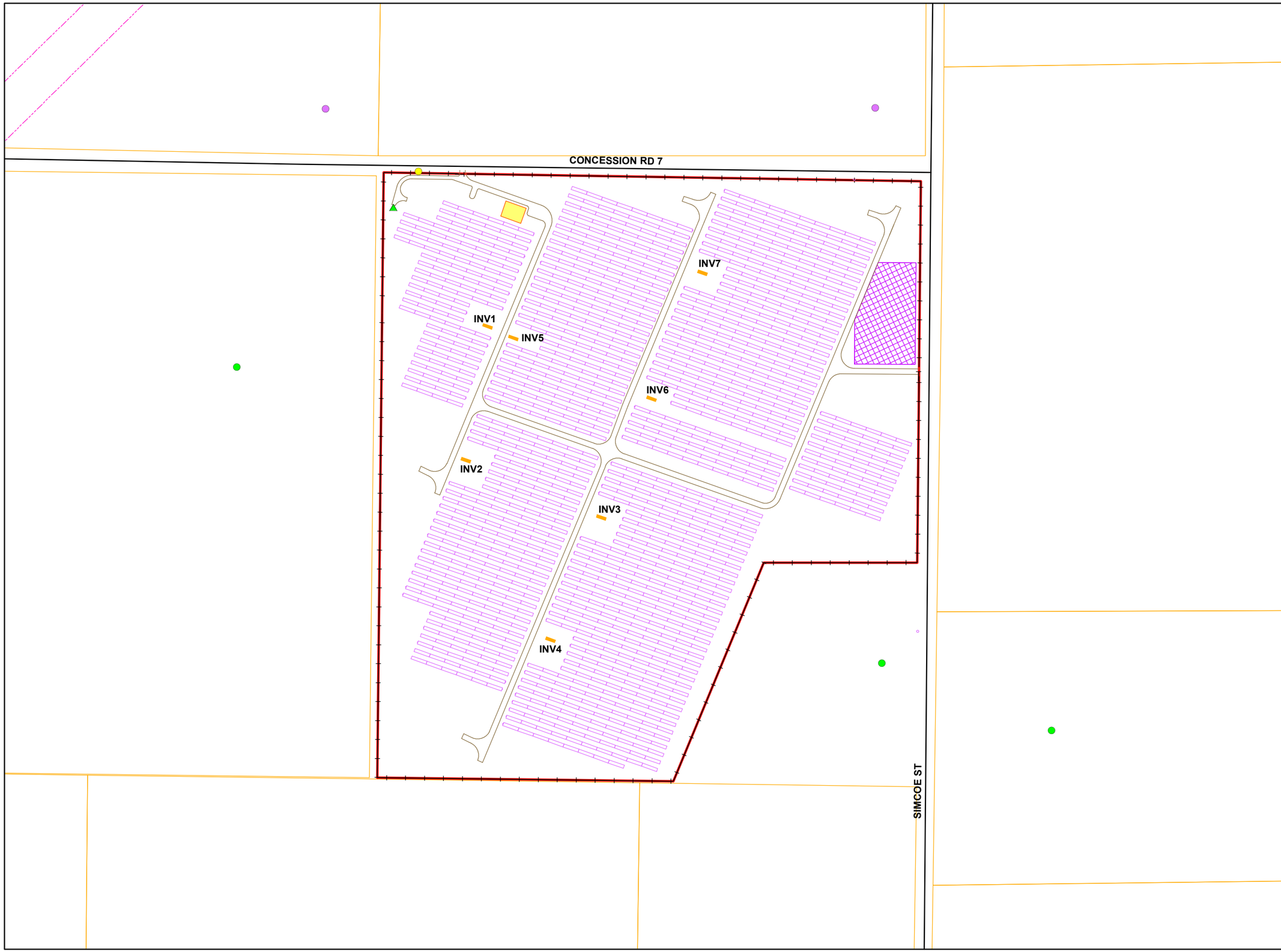
3. Project Location

The proposed Class 3 Solar facility is located at B29530 Simcoe Street, approximately 11 km from the community of Beaverton. **Figure 1** shows the general location of the project in Ontario. The project location covers the north half of Lot 1, Concession 6, of the Township of Brock and consists of 38.86 hectares of privately owned land (leased by the proponent), with geographic coordinates (centroids) as follows:

- Latitude: 44° 27' 41.48" N
- Longitude: 79° 03' 44.03" W

"Project Location" is defined in *Ontario Regulation 359/09* to be "a part of land and all or part of any building or structure in, on or over which a person is engaging in or proposes to engage in the project". **Figure 2** shows the proposed layout and location of all project components. Further information on facility components making up the project location is provided in Sections 4 and 5 of the *Design and Operations Report*, in the REA submission.

Figure 1: General Location of SparkleLight in Ontario



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SparkleLight
Figure 2: Site Plan - Component Layout

Legend

- Potential Noise Receptor
- Assumed Future Noise Receptor
- Local Roads
- Transmission Line
- Parcel Boundary

Project Components

- Communication Tower
- Point of Common Coupling
- Solar Panel
- Access Road
- Fence
- Inverter
- Laydown Area
- Substation
- Project Boundary

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4. Overview of Noise Study

4.1 Summary of Acoustic Environment & Applicable Noise Limits

The background ambient noise, exclusive of that generated by SparkleLight, can be characterized as having qualities of a Class 3 (Rural) Area, as described in the Ontario Ministry of the Environment Noise Pollution Control Publication NPC-232 *Sound Level Limits for Stationary Sources in Class 3 Areas (Rural)*. The primary contributor to the background sound during the daytime and nighttime periods are natural sounds and occasional vehicle traffic on nearby roadways.

The NPC-232 Class 3 Area exclusion limits of 45 dBA for daytime (07:00 – 19:00), 40 dBA for evening (19:00 to 23:00) and 40 dBA for nighttime (23:00 to 07:00) were selected to represent the performance limits at noise sensitive receptors [note: for the purposes of this report, since the limits for evening and nighttime are the same, the nighttime is defined as 19:00 to 07:00].

4.2 Statement of Compliance

With the implementation of the noise mitigation measures presented in this assessment, the proposed project complies with the daytime and nighttime noise criteria as defined in NPC-232 for all sources assessed in this study.

5. Facility Description

The SparkleLight facility will consist of approximately 42,120 solar PV modules. These will be contained in a series of fixed racking systems which will be attached to galvanized steel support structures. Based on the results of the Geotechnical Assessment, driven piles, screw piles or concrete foundations will be used as appropriate. An aluminum or steel racking system will be installed on the foundations to support the panels. Foundation types may consist of ground screws or plate-mounted steel beams (with possible pre-drilling), installed using a mechanical, hydraulic or vibratory pile hammer mounted on a rig, excavator or boom truck. The hydraulic drive motor would rotate the screw pile into the ground. Alternatively, if driven piles are to be used, they would be installed in a similar fashion but would be driven rather than rotated or screwed into the ground. Solar PV panels (60 - 300 watts each) will be mounted on the racks and the panels and racks will be aligned in rows approximately 4 - 10 metres apart.

Inverters and transformers will be installed to convert DC to AC current and boost the voltage for connection to the grid. The components that emit noise are as follows:

Substation Transformer (Source ID: TRS)

One (1) 44 kV, 10 MVA (max) substation transformer will be installed to step up the current for connection with the grid. The substation transformer will be manufactured by Virginia Transformer Corp. The transformer specifications, including NEMA noise rating and dimensions are provided in Appendix A. The octave spectrum for the substation transformer was calculated using IEEE standard, accounting for 0.3m increase in dimensions. The transformer is oversized and can handle up to 10 MVA (ONAF). Noise spectrum calculation is presented in **Appendix A**. The sound power calculation includes a 5 dB tonal penalty across the octave band.

Inverter Stations (Source IDs: INV1 – INV7)

For the project, there are 7 inverter stations, each consisting of two (2) inverters and one (1) 1.6 MVA inverter transformer, with the exception of inverter station 1 (S_INV1) which consists of one (1) inverter and one (1) 0.8 MVA inverter transformer (See **Appendix A**).

- **Inverters** – A total of thirteen (13) inverters (to convert DC to AC current) will be used at the project location. Each inverter will have its own cabinet-type enclosure and will be mounted on a concrete platform inside a larger, secondary enclosure. The inverters will be SMA's Sunny Central model SC800CP-US, rated for up to 800 kVA of continuous power

output. The manufacturer's noise data for the inverter, provided in 1/3 octave band, was used for this assessment (see **Appendix A**).

- **Inverter Transformers** – A total of seven (7) inverter transformers will be installed beside the inverters to boost the AC voltage for connection to the grid. The inverter transformers will have a power rating of up to 1.6 MVA for each inverter station, with the exception of inverter station 1 (source ID: S_INV1), which will have a power rating of up to 0.8 MVA. The inverter transformers will be located on concrete platforms next to the inverter enclosures. The noise data for the inverter transformer was calculated based on the applicable IEEE Standard and is considered to be conservative (see **Appendix A**).

Figure 2 identifies the inverter stations and substation transformer. The octave spectra and the overall Sound Power Levels (PWLs) for onsite noise sources are presented in **Table 1**. The first letter of each project name (e.g., S for SparkleLight) accompanies the label to distinguish between the two projects.

Table 1: Summary of Noise Source Types

Source		Octave Spectrum (dB)									Overall	
Type	Count	31.5	63	125	250	500	1000	2000	4000	8000	A	lin
Substation Transformer (10 MVA)	1	88.6	94.6	96.6	91.6	91.6	85.6	80.6	75.6	68.6	92	100.6
1.6 MVA Inverter Transformer	6	104.7	97.5	89.4	76.9	71.5	62.3	56.1	51.3	46.4	77.3	105.6
0.8 MVA Inverter Transformer	1	105.6	98.4	90.3	77.8	72.4	63.2	57	52.2	47.3	78.2	106.5
Inverter (800 kW)	13	96.2	89.1	86.7	88.2	88.3	82.7	86.4	95	84.4	97.3	100.4

Note:
A: A-weighted, Lin: Linear
The manufacturer-specified A-weighted spectra were converted to linear spectra and presented in this table.
The 5 dB tonal penalty is included in the sound power levels for all the noise sources presented above

5.1 Operating Hours of Facility

The solar farm is designed to operate 365 days per year. The solar panels are only able to generate electricity when the sun is shining. Similarly, the inverters only operate when the solar panels are generating electricity. Furthermore, the inverters infrequently operate at full power as full power output requires a clear sky when the sun is at peak intensity. For this assessment the inverters and transformers were conservatively assumed to be operational at full power (i.e., maximum noise emission) during both daytime (07:00 to 19:00) and nighttime (19:00 to 07:00) hours [note: nighttime power generation occurs after 19:00 during the summer].

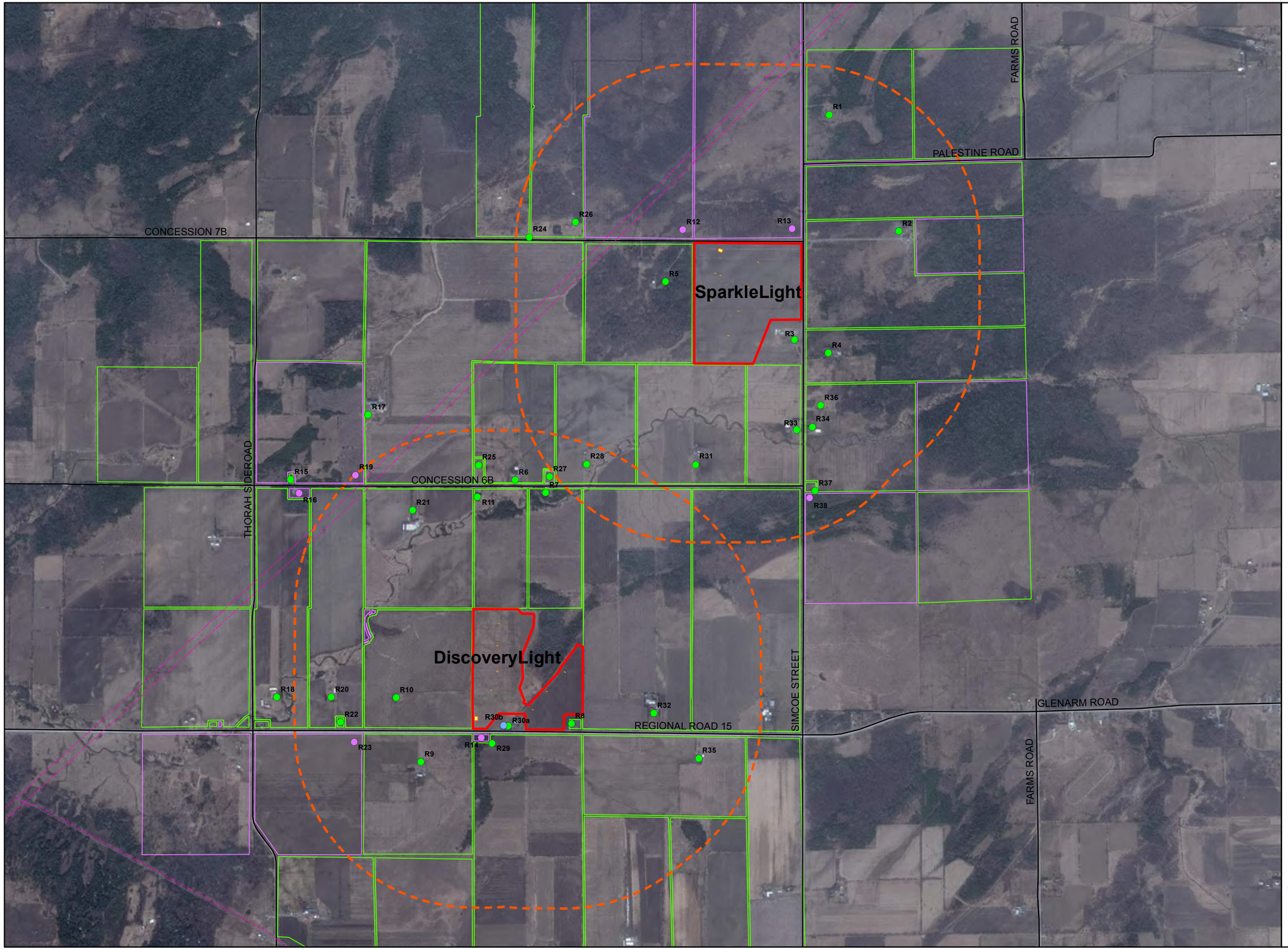
5.2 Site Plan Identifying All Significant Sources

Figures 3 illustrates the SparkleLight project location and identify all noise sources associated with the facility. **Figure 3** also illustrates all 'Potential[1] Noise Receptors' surrounding the project location, which includes those surrounding the neighbouring solar farm project (DiscoveryLight) that is being planned by Canadian Solar. In addition, as per *Ontario Regulation 359/09* and guidance documents from the MOE, 'Assumed Future Noise Receptors' must be identified on vacant lots measuring at least 100 metres by 100 metres. Six (6) vacant lots suitable for potential future receptor locations have been identified within 1 kilometre of the two project locations. Given that the proposed SparkleLight and DiscoveryLight projects will be in close proximity to each other, all noise sources for DiscoveryLight were included in the noise modelling for SparkleLight. In addition, for the purposes of this NSR, noise impacts at receptors located in the vicinity of the DiscoveryLight project location were also assessed.

[1] While it is possible that the potential noise receptor may be a barn or outbuilding that does not meet the definition of a noise receptor as defined by MOE Publication NPC-205 and NPC-232, these structures are considered to be noise receptors in order to err on the side of caution with regard to noise analysis.

CanadianSolar

Sparkle Light
Figure 3:
Scaled Area Location Plan



Legend

- Potential Noise Receptor
- Assumed Future Noise Receptor
- Potential Noise Receptor 30m Offset
- Transmission Line
- Local Road
- Project Location
- 1000 m from Project Location
- Vacant Parcel
- Occupied Parcel
- Substation
- Inverter

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6. Noise Source Summary

6.1 Noise Source Summary Table

The dominant noise sources identified in this noise study for both SparkleLight and the neighbouring DiscoveryLight solar projects are listed in **Table 2**. This table contains sound power levels, source location, sound characteristics, and any noise control measures that already exist as a part of the original equipment.

Table 2: Noise Source Summary

Proposed Solar Project	Noise Source ID	PWL (dBA)	Source Location[1] (I or O)	Sound Characteristics[2] (S,Q,I,B,T,C)	Noise Control Measures[3] (S,A,B,L,E,O,U)	UTM		Height (m)
						X (m)	Y (m)	
SparkleLight	S_INV1	97.3	O	T	U	653943	4925042	2
	S_INV2	100.3	O	T	U	653974	4924893	2
	S_INV3	100.3	O	T	U	654138	4924883	2
	S_INV4	100.3	O	T	U	654130	4924735	2
	S_INV5	100.3	O	T	U	653978	4925039	2
	S_INV6	100.3	O	T	U	654146	4925027	2
	S_INV7	100.3	O	T	U	654153	4925178	2
	S_INVTR1	78.2	O	T	U	653949	4925041	2
	S_INVTR2	77.3	O	T	U	653968	4924893	2
	S_INVTR3	77.3	O	T	U	654132	4924883	2
	S_INVTR4	77.3	O	T	U	654124	4924736	2
	S_INVTR5	77.3	O	T	U	653972	4925040	2
	S_INVTR6	77.3	O	T	U	654140	4925027	2
	S_INVTR7	77.3	O	T	U	654147	4925179	2
	S_TRS	92	O	T	U	653934	4925172	2.5
Neighbouring DiscoveryLight	D_INV1	100.3	O	T	U	653434	4922792	2
	D_INV2	100.3	O	T	U	653466	4922673	2
	D_INV3	100.3	O	T	U	653511	4922537	2
	D_INV4	100.3	O	T	U	653514	4922427	2
	D_INV5	97.3	O	T	U	653875	4922657	2
	D_INV6	100.3	O	T	U	653815	4922521	2
	D_INV7	100.3	O	T	U	653773	4922400	2
	D_INVTR1	77.3	O	T	U	653440	4922792	2
	D_INVTR2	77.3	O	T	U	653471	4922673	2
	D_INVTR3	77.3	O	T	U	653517	4922537	2
	D_INVTR4	77.3	O	T	U	653519	4922426	2
	D_INVTR5	78.2	O	T	U	653869	4922658	2
	D_INVTR6	77.3	O	T	U	653809	4922521	2
	D_INVTR7	77.3	O	T	U	653767	4922400	2
	D_TRS	92	O	T	U	653484	4922253	2.5

Noise Source Summary Table Notes:

1. Source Locations	2. Sound Characteristics	3. Noise Control Measures
O – located/installed outside of a building, including on the roof	S – Steady	S – silencer, acoustic louver, muffler
I – located/installed inside a building	Q – Quasi Steady Impulsive	A – acoustic lining, plenum
	I – Impulsive	B – barrier, berm, screening
	B – Buzzing	L – lagging
	T – Tonal	E – acoustic enclosure
	C – Cyclic	O – other
	Int – Intermittent	U – uncontrolled

6.2 Noise Source Specifications

Noise source specifications, including manufacturer-specified noise data and calculation of transformer noise levels, are provided in **Appendix A**.

6.3 Source Power/Capacity Ratings

Manufacturer data for capacity and operating specifications for primary noise sources can be found in **Appendix A.**

6.4 Noise Control Description & Acoustical Specifications

For the Project, there are 7 inverter stations, consisting of two (2) inverters and one (1) 1.6 MVA inverter transformer, with the exception of inverter station 5, which has one (1) inverter and a 0.8 MVA transformer. In all cases, the inverters will each be contained in a cabinet (as per the specifications presented in **Appendix A**) and a secondary enclosure. The secondary enclosure will have louvers for ventilation through which noise can propagate to outside. Conservatively, no additional noise mitigation measure was incorporated in the modelling for the secondary enclosure. The secondary enclosure will have openings for ventilation. Through modelling iterations it was determined that for the SparkleLight project, three (3) of the inverter enclosures (i.e., S_INV2, S_INV5 and S_INV7) will require acoustic louvers for the openings. This is in addition to the three inverter stations for the DiscoveryLight solar project that also need acoustic louvers. The Transmission Loss (TL) spectrum for the required acoustic louver is presented in **Table 3**.

Table 3: Noise Attenuation Data for Acoustic Louver

Solar Project	Noise Source	Noise Control		TL Spectrum (dB)					
		Type	Manufacturer	125	250	500	1000	2000	4000
SparkleLight	S_INV2	Acoustic Louver	Greenheck	4	4	6	10	17	12
	S_INV5	Acoustic Louver	Greenheck	4	4	6	10	17	12
	S_INV7	Acoustic Louver	Greenheck	4	4	6	10	17	12
DiscoveryLight	D_INV4	Acoustic Louver	Greenheck	4	4	6	10	17	12
	D_INV6	Acoustic Louver	Greenheck	4	4	6	10	17	12
	D_INV7	Acoustic Louver	Greenheck	4	4	6	10	17	12

Note: The TL spectrum is for the enclosure's acoustic louvers.

It was determined through noise modelling iterations that the noise from the substation transformer belonging to DiscoveryLight (noise source ID: D_TRS) would need to be mitigated. A "U" shaped, 4m high, noise barrier wall was incorporated in the modelling for the DiscoveryLight substation transformer. The noise wall will consist of solid material with a minimum surface area density of 20 kg/m^2.

The wall will eliminate the line-of-sight between the substation transformer and the receptors to the east, south, and west of the site. The "U" shaped wall will be open on the north side (see **Figure 4** and **5**). Details of the noise barrier wall, including UTM coordinates and dimensions are provided in **Table 4**. Plan and isometric views of the noise barrier walls (with dimensions) are presented in **Figure 4** and its site plan drawing is presented in **Figure 5.**

Through modelling iterations it was determined that with a combination of acoustic louvers and a noise barrier wall at DiscoveryLight, and acoustic louvers at SparkleLight, are required in order to meet the required performance limit of 40 dBA at noise receptors associated with both projects.

Table 4: Substation Transformer Barrier Wall Information

Noise Control		Construction Material	Height (m)	Total Length (m)	Distance from Source (m)	UTM Coordinates for Wall	
Type	Source					X (m)	Y (m)
Barrier Wall	Substation Transformer for DiscoveryLight	Continuous with Minimum Density: 20 kg/m²	4	28.8	variable	653478	4922254
						653481	4922245
						653491	4922249
						653488	4922257

Figure 4: DiscoveryLight Transformer Barrier Wall Isometric and Plan View

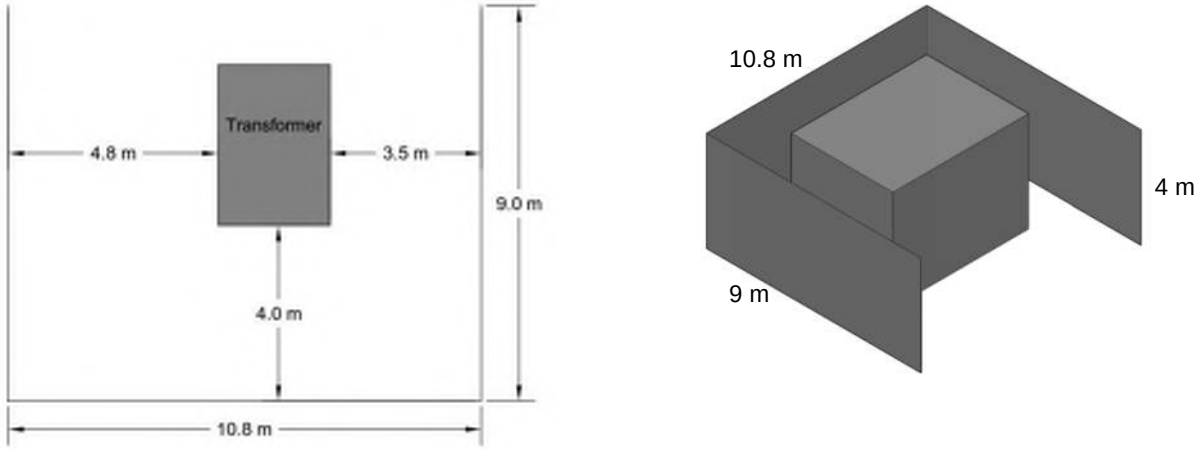
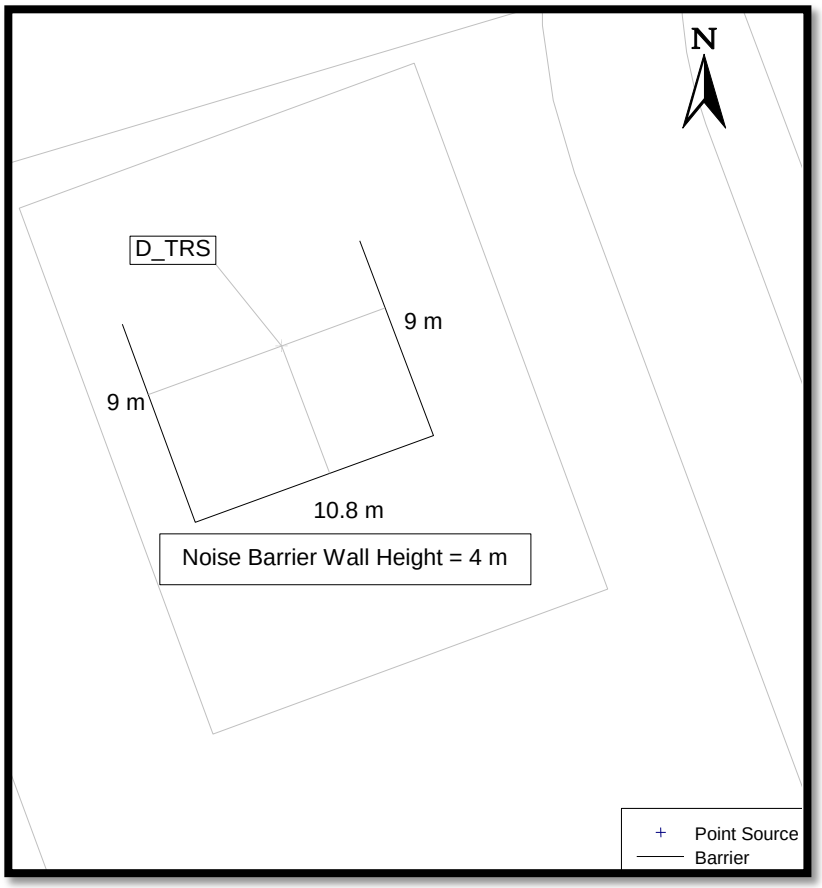


Figure 5: DiscoveryLight Transformer Noise Barrier Wall Site Plan Drawing



7. Point of Reception Noise Impact Analysis

7.1 Land Use Zoning Plan

The planned solar facility will occur primarily within lands zoned by the Township of Brock as 'Rural'. The surrounding lands can be described as rural with scattered residential dwellings. Zoning and land use information is provided in the *Design and Operations Report* of the REA submission.

7.2 Scaled Area Location Plan

Figure 4 is an aerial photo showing the location of the proposed SparkleLight and DiscoveryLight projects as well as the surrounding area and nearby receptors.

7.3 Points of Reception (PORs) List and Description

The Model Municipal Noise Control By-Law defines a Point of Reception (POR) / receptor as "*any point on the premises of a person where sound or vibration originating from other than those premises is received.*" Noise-sensitive receptors, as defined in MOE Publication NPC-205 and NPC-232, include the following land uses:

- Permanent, seasonal, or rental residences;
- Hotels, motels and campgrounds;
- Schools, universities, libraries and daycare centres;
- Hospitals and clinics, nursing / retirement homes; and,
- Churches and places of worship.

Conservatively, a receptor height of 4.5 metres was considered for all receptors, assuming a 2-storey dwelling at each receptor location. The UTM coordinates (NAD83, zone 17) for all the receptors (including vacant lots) within 1 km of each of the two projects are summarized in **Table 5**. The receptor R30 is located on the same parcel as the DiscoveryLight project and is financially benefiting from the proposed project. For this receptor, due to its close proximity to the onsite noise components two receptor locations were considered: R30a – at the façade of the house closest to the project site and at a receptor height of 4.5m; and, R30b – 30m from the façade of the house in the direction of the project site. For the vacant lot receptors, the centres of the 100 metre by 100 metre area within the lot that is closest to the project site and is in line with the existing development pattern in the area were chosen to represent the receptor locations, as per relevant MOE guidelines.

Table 5: Noise Sensitive Receptors – Coordinates

Point of Reception		Location of the Dwelling		Receptor Height (m)
ID	Description	UTM-X (m)	UTM-Y (m)	
R1	Existing Potential Receptor	654260	4926059	4.5
R2	Existing Potential Receptor	654817	4925581	4.5
R3	Existing Potential Receptor	654457	4924826	4.5
R4	Existing Potential Receptor	654659	4924823	4.5
R5	Existing Potential Receptor	653724	4924916	4.5
R6	Existing Potential Receptor	653258	4923555	4.5
R7	Existing Potential Receptor	653438	4923542	4.5
R8	Existing Potential Receptor	653986	4922391	4.5
R9	Existing Potential Receptor	653289	4921945	4.5
R10	Existing Potential Receptor	653054	4922223	4.5
R11	Existing Potential Receptor	653091	4923395	4.5
R12	Vacant Lot	653693	4925211	4.5
R13	Vacant Lot	654272	4925416	4.5
R14	Vacant Lot	653551	4922158	4.5
R15	Existing Potential Receptor	652094	4923158	4.5
R16	Vacant Lot	652139	4923120	4.5
R17	Existing Potential Receptor	652379	4923633	4.5
R18	Existing Potential Receptor	652406	4922025	4.5
R19	Vacant Lot	652405	4923317	4.5
R20	Existing Potential Receptor	652710	4922106	4.5
R21	Existing Potential Receptor	652784	4923210	4.5
R22	Existing Potential Receptor	652796	4921990	4.5
R23	Vacant Lot	652884	4921903	4.5
R24	Existing Potential Receptor	652898	4924892	4.5
R25	Existing Potential Receptor	653041	4923564	4.5
R26	Existing Potential Receptor	653148	4925012	4.5
R27	Existing Potential Receptor	653429	4923635	4.5
R28	Existing Potential Receptor	653603	4923768	4.5
R29	Existing Potential Receptor	653610	4922176	4.5

Point of Reception		Location of the Dwelling		Receptor Height (m)
ID	Description	UTM-X (m)	UTM-Y (m)	
R30a	Existing Potential Receptor	653670	4922263	4.5
R30b	Existing Potential Receptor	653646	4922257	1.5
R31	Existing Potential Receptor	654182	4924023	4.5
R32	Existing Potential Receptor	654393	4922592	4.5
R33	Existing Potential Receptor	654649	4924388	4.5
R34	Existing Potential Receptor	654709	4924410	4.5
R35	Existing Potential Receptor	654712	4922436	4.5
R36	Existing Potential Receptor	654725	4924558	4.5
R37	Existing Potential Receptor	654861	4924100	4.5
R38	Existing Potential Receptor	654854	4924026	4.5

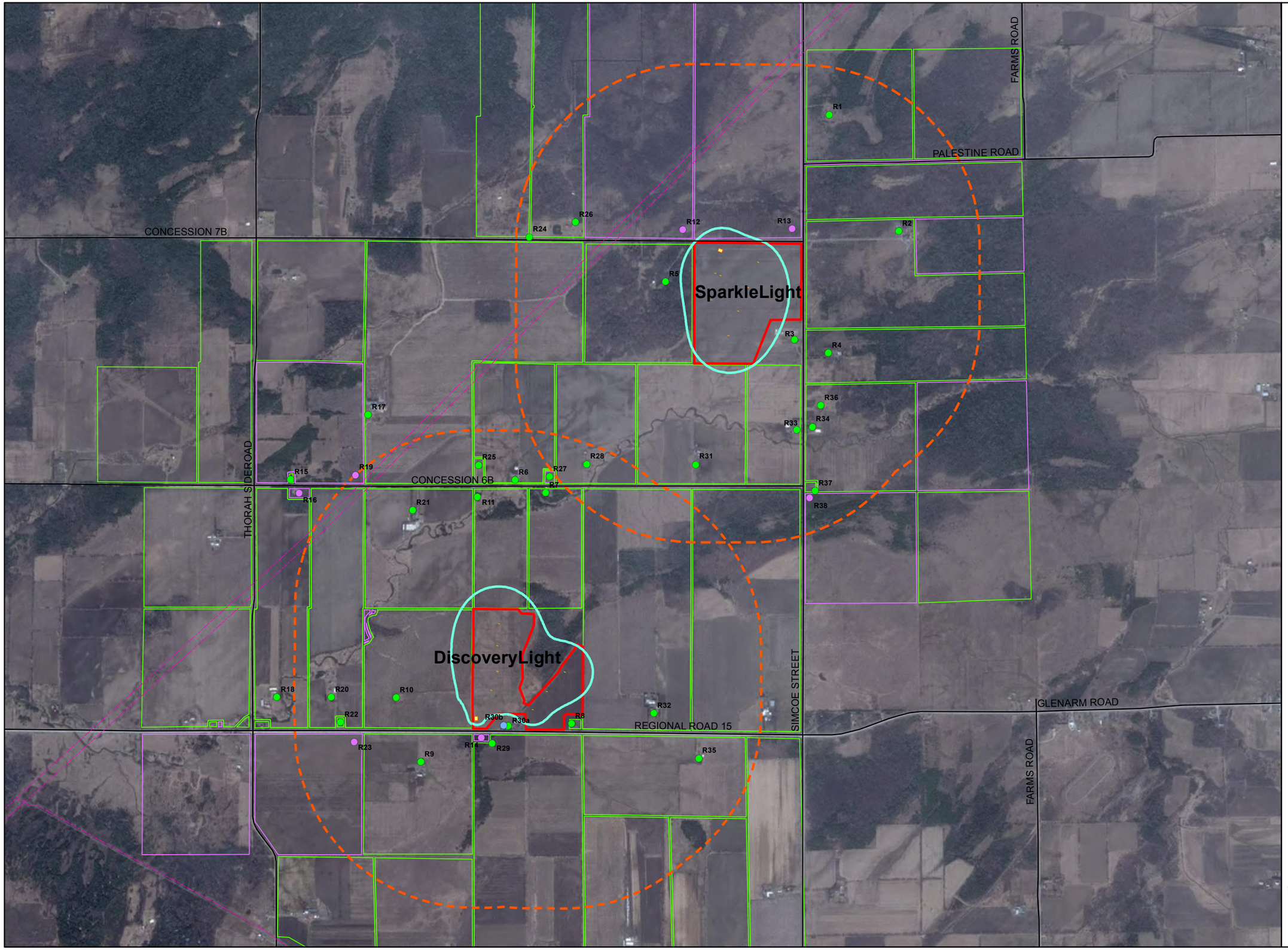
7.4 Procedure for Assessing Noise Impacts at Each POR

7.4.1 Method Selection Factors

The worst-case noise emission scenario at each POR was modeled using the CADNA/A software program from DataKustik GmbH. The outdoor noise propagation model is based on ISO 9613, Part 1: Calculation of the absorption of sound by the atmosphere, 1993 and Part 2: General method of calculation (ISO-9613-2: 1996). The model is capable of incorporating various site-specific features such as elevation, berms, ground absorption and barriers to accurately predict noise levels at specific receptors, pertaining to noise emissions from a particular source(s). Modeling output from the CADNA/A program is presented in **Figure 7.**

7.4.2 Ambient Determination

No on-site measurements were made to assess the background ambient noise level at the noise-sensitive receptors. Therefore, the MOE's default daytime and nighttime criteria for a Class 3 Area were used for this assessment.



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Sparkle Light
Figure 6:
Predicted Noise Level Contours at 1.5 m

Legend

- Potential Noise Receptor
- Assumed Future Noise Receptor
- Potential Noise Receptor 30m Offset
- Transmission Line
- Local Road
- 40 dBA Noise Contour at 1.5 m Height
- Project Location
- 1000 m from Project Location
- Vacant Parcel
- Occupied Parcel
- Substation
- Inverter

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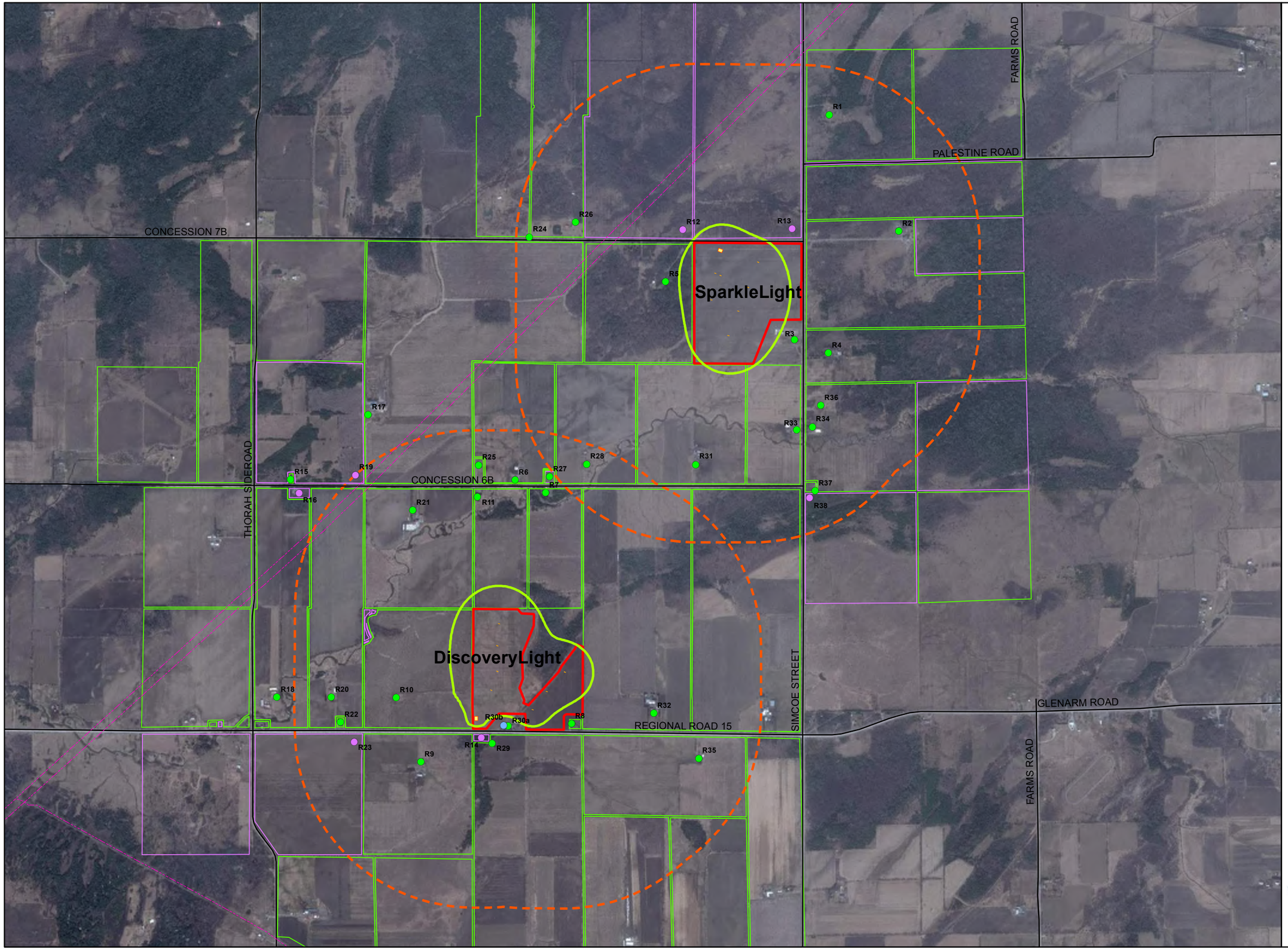
Mapping\Noise Assessment



CanadianSolar

Sparkle Light
Figure 7:
Predicted Noise Level Contours at 4.5 m

Legend

- Potential Noise Receptor
- Assumed Future Noise Receptor
- Potential Noise Receptor 30m Offset
- Transmission Line
- Local Road
- 40 dBA Noise Contour at 4.5 m Height
- Project Location
- 1000 m from Project Location
- Vacant Parcel
- Occupied Parcel
- Substation
- Inverter

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N W E S

1:20,000

0 200 400 600 800 m

DILLON CONSULTING

Created By: GM
Checked By: AI
Date Created: 3/1/2012
Date Modified: 5/23/2014
File Path: I:\GIS\138042 EMP Sparkle Light LP\
Mapping\Noise Assessment

7.5 Parameter/Assumptions for Calculations

Manufacturer-specified noise data and calculated noise levels were used in the CADNA/A software to model the noise impact at each Point of Reception (POR). Also incorporated in the modelling was the site layout for the project and the terrain elevation (i.e., elevation contours) for the project location and surrounding areas. The noise impact for each receptor was modelled assuming the worst-case noise emission scenario at the site. The dominant noise sources include:

- Inverter Units (for both SparkleLight and DiscoveryLight solar projects); and,
- Substation Transformers (for both SparkleLight and DiscoveryLight solar projects).

Inverter Stations – Each Inverter station consists of two (2) 800 kW inverters, located in an enclosure and one (1) pad-mounted 1.6 MVA inverter step-up transformer, with the exception of inverter station 5 (source ID: D_INV5), which has a single inverter and a 0.8 MVA inverter transformer. The components in the Inverter stations are expected to be operational primarily during the daytime period, however, to be conservative the contributions from these sources were also included in the nighttime scenario. As per the MOE requirement, a 5 dB tonal penalty was added to the Inverter and inverter transformer noise. The Inverters and inverter transformers were modeled as point sources with hemi-spherical spreading.

Substation Transformer – The substation transformers were modeled using manufacturer specified noise level and calculated based on applicable IEEE Standard (see **Appendix A**). A 5 dB tonal penalty was also added to the transformer noise spectrum. Like the inverter units, the transformers were conservatively modeled using the same data for nighttime as for daytime. The transformers were modeled as point sources with hemi-spherical spreading.

Receptors – Conservatively, a receptor height of 4.5 metres representing a receiver in the plane of a second floor window (i.e., 2-storey dwelling) was assumed for all receptor locations, with the exception of R30b (receptor height of 1.5m was applied for the location 30m from the dwelling in the direction of the project site, as per MOE guidelines).

Topography – There are topographical features that extend beyond the property boundary of the project sites, and can reduce the noise impact from the proposed projects. However, conservatively, topography was not included in the noise modelling.

Reflections – Conservatively, sources were modeled assuming a third order reflection.

Ground Absorption – For the noise modeling, a global ground absorption coefficient of 0.7 was used to represent the mostly absorptive, vegetated areas, between the onsite sources and receptors.

7.6 Point of Reception Noise Impact Table

Table 6 summarizes the partial noise levels (i.e., contribution from each of the onsite noise sources to the receptor noise levels) and corresponding source-receptor distance for nearest (most impacted) receptors in various directions from the project site. The sound level at the POR accounts for attenuation by divergence (distance), applicable barrier/screening effects, ground effects and atmospheric absorption. This table gives the sum total of these attenuations for each source. Details of the noise modelling (CADNA output file), including partial noise levels for all of the PORs are provided in **Appendix B – CADNA Model Output**. Graphical output generated by CADNA, showing the modelled sound level emissions for the site are shown in **Figure 7.**

Table 6: Point of Reception Noise Impact Table – Partial Levels (dBA)

R3			R5			R12			R13		
Source ID	Distance (m)	Partial Level (dBA)	Source ID	Distance (m)	Partial Level (dBA)	Source ID	Distance (m)	Partial Level (dBA)	Source ID	Distance (m)	Partial Level (dBA)
S_INV3	324	33.0	S_INV1	253	33.2	S_INV1	302	30.9	S_INV6	409	30.0
S_INV4	340	32.4	S_INV3	415	29.8	S_INV6	489	27.6	S_INV3	550	26.1
S_INV6	370	31.3	S_INV6	437	29.1	S_INV3	553	26.1	S_INV4	695	23.2
S_INV1	557	23.0	S_INV4	444	28.9	S_TRS	244	32.6	S_INV1	498	24.4
S_TRS	627	23.7	S_TRS	331	29.9	S_INV4	646	24.1	S_INV7	266	25.4
S_INV7	465	19.2	S_INV2	251	26.0	S_INV5	333	22.9	S_TRS	417	27.7
S_INV2	488	18.7	S_INV5	283	24.7	S_INV2	424	20.2	S_INV5	478	18.9
S_INV5	524	17.9	S_INV7	503	18.4	S_INV7	461	19.3	S_INV2	602	16.4
D_INV1	2276	7.9	D_INV1	2143	8.8	D_INV1	2433	7.0	D_INV1	2754	5.3
D_INV2	2370	7.4	D_INV2	2258	8.1	D_INV2	2548	6.4	D_INV2	2859	4.7
D_INV3	2476	6.8	D_INV3	2388	7.3	D_INV3	2680	5.7	D_INV3	2978	4.1
D_INV5	2246	5.1	D_INV5	2264	5.0	D_INV5	2560	3.3	S_INVTR7	268	18.4
S_INVTR3	330	16.9	S_INVTR1	257	19.6	S_INVTR1	307	18.3	D_INV5	2787	2.1
S_INVTR4	345	16.5	S_INVTR2	245	19.1	S_INVTR5	328	16.9	S_INVTR6	411	15.1
S_INVTR6	375	15.8	S_INVTR5	278	18.2	S_INVTR2	420	14.9	S_INVTR1	495	14.5
S_INVTR7	469	14.0	S_INVTR3	409	15.1	S_INVTR7	455	14.3	S_INVTR5	481	13.8
S_INVTR2	494	13.6	S_INVTR6	431	14.7	S_INVTR6	484	13.8	S_INVTR3	551	12.7
S_INVTR1	552	13.6	S_INVTR4	439	14.6	S_INVTR3	548	12.7	D_TRS	3260	4.2
D_TRS	2751	6.6	D_TRS	2674	7.0	D_TRS	2965	5.6	S_INVTR2	605	11.9
S_INVTR5	530	13.0	S_INVTR7	498	13.5	S_INVTR4	642	11.4	S_INVTR4	696	10.7
D_INV6	2393	0.8	D_INV6	2397	0.8	D_INV6	2693	-0.8	D_INV6	2931	-1.9
D_INV7	2521	0.1	D_INV4	2498	0.2	D_INV4	2790	-1.3	D_INV7	3057	-2.5
D_INV4	2578	-0.2	D_INV7	2517	0.1	D_INV7	2813	-1.4	D_INV4	3084	-2.6
D_INVTR5	2247	1.4	D_INVTR5	2263	1.3	D_INVTR5	2560	0.2	D_INVTR5	2788	-0.6
D_INVTR1	2274	0.4	D_INVTR1	2143	0.9	D_INVTR1	2432	-0.2	D_INVTR1	2753	-1.4
D_INVTR2	2368	0.0	D_INVTR2	2257	0.4	D_INVTR2	2548	-0.7	D_INVTR2	2858	-1.7
D_INVTR6	2394	-0.1	D_INVTR3	2388	-0.1	D_INVTR3	2680	-1.1	D_INVTR6	2932	-1.9
D_INVTR3	2475	-0.4	D_INVTR6	2397	-0.1	D_INVTR6	2693	-1.2	D_INVTR3	2976	-2.1
D_INVTR7	2522	-0.6	D_INVTR4	2498	-0.5	D_INVTR4	2790	-1.5	D_INVTR7	3058	-2.3
D_INVTR4	2576	-0.8	D_INVTR7	2516	-0.6	D_INVTR7	2812	-1.6	D_INVTR4	3083	-2.4

Note:
The partial levels presented include impact of sources for both SparkleLight and DiscoveryLight Solar Projects. (Source IDs starting with 'D' are for DiscoveryLight and those starting with 'S' are for SparkleLight).

8. Acoustic Assessment Summary

8.1 Acoustic Assessment Summary Table

Table 7 summarizes the compliance of the proposed SparkleLight project with the applicable Sound Level Performance Limits at the designated Points of Reception. The performance limits in the table reflect the applicable sound level limits in the MOE Publication NPC-232 for Class 3 Areas.

Table 7: Acoustic Assessment Summary Table

Point of Reception		Sound Level at POR (dBA, Leq)			Verified by Acoustic Audit (Yes/No)	Performance Limit - Combined Projects		
ID	Description	SparkleLight Project	DiscoveryLight Project	Combined Projects		Daytime (dBA)	Nighttime (dBA)	Compliance (Yes/No)
R1	Existing Potential Receptor	25.2	10.4	25.4	No	45	40	Yes
R2	Existing Potential Receptor	26.6	11.5	26.7	No	45	40	Yes
R3	Existing Potential Receptor	37.8	15.4	37.8	No	45	40	Yes
R4	Existing Potential Receptor	32.4	15.0	32.5	No	45	40	Yes
R5	Existing Potential Receptor	38.3	15.8	38.3	No	45	40	Yes
R6	Existing Potential Receptor	20.4	26.4	27.4	No	45	40	Yes
R7	Existing Potential Receptor	21.0	27.0	27.9	No	45	40	Yes
R8	Existing Potential Receptor	14.7	36.3	36.3	No	45	40	Yes
R9	Existing Potential Receptor	12.1	30.0	30.0	No	45	40	Yes
R10	Existing Potential Receptor	13.0	31.4	31.4	No	45	40	Yes
R11	Existing Potential Receptor	18.8	27.6	28.1	No	45	40	Yes
R12	Vacant Lot	36.9	14.3	36.9	No	45	40	Yes
R13	Vacant Lot	35.0	12.9	35.0	No	45	40	Yes
R14	Vacant Lot	13.3	36.4	36.4	No	45	40	Yes
R15	Existing Potential Receptor	14.1	20.9	21.8	No	45	40	Yes
R16	Vacant Lot	14.2	21.4	22.1	No	45	40	Yes

Point of Reception		Sound Level at POR (dBA, Leq)			Verified by Acoustic Audit (Yes/No)	Performance Limit - Combined Projects		
ID	Description	SparkleLight Project	DiscoveryLight Project	Combined Projects		Daytime (dBA)	Nighttime (dBA)	Compliance (Yes/No)
R17	Existing Potential Receptor	16.9	20.9	22.4	No	45	40	Yes
R18	Existing Potential Receptor	11.1	22.7	23.0	No	45	40	Yes
R19	Vacant Lot	15.8	22.7	23.5	No	45	40	Yes
R20	Existing Potential Receptor	12.0	26.0	26.2	No	45	40	Yes
R21	Existing Potential Receptor	16.8	26.7	27.2	No	45	40	Yes
R22	Existing Potential Receptor	11.7	26.0	26.2	No	45	40	Yes
R23	Vacant Lot	11.5	26.1	26.2	No	45	40	Yes
R24	Existing Potential Receptor	24.3	15.5	24.9	No	45	40	Yes
R25	Existing Potential Receptor	19.6	25.4	26.4	No	45	40	Yes
R26	Existing Potential Receptor	27.2	15.2	27.4	No	45	40	Yes
R27	Existing Potential Receptor	21.6	25.8	27.2	No	45	40	Yes
R28	Existing Potential Receptor	23.3	24.3	26.8	No	45	40	Yes
R29	Existing Potential Receptor	13.4	36.3	36.3	No	45	40	Yes
R30a	Existing Potential Receptor	13.9	38.1	38.1	No	45	40	Yes
R30b	Existing Potential Receptor	12.0	37.5	37.5	No	45	40	Yes
R31	Existing Potential Receptor	27.4	20.8	28.2	No	45	40	Yes
R32	Existing Potential Receptor	15.6	28.6	28.8	No	45	40	Yes
R33	Existing Potential Receptor	29.2	17.1	29.4	No	45	40	Yes
R34	Existing Potential Receptor	28.7	16.8	28.9	No	45	40	Yes
R35	Existing Potential Receptor	14.5	24.1	24.6	No	45	40	Yes
R36	Existing Potential Receptor	29.7	16.0	29.9	No	45	40	Yes
R37	Existing Potential Receptor	24.6	17.4	25.3	No	45	40	Yes
R38	Existing Potential Receptor	24.1	17.8	25.0	No	45	40	Yes

Note: The presented receptor sound levels are with the noise mitigation measures implemented

8.2 Rationale for Selecting Applicable Noise Guideline Limits

8.2.1 Acoustic Environment

The background ambient noise, exclusive of the proposed SparkleLight and DiscoveryLight solar projects, can be characterized as a Class 3 Area as described in NPC-232. The sources that contribute to the background sound include sounds of nature as well as occasional vehicle traffic noise from nearby roadways.

For a project located in a Class 3 Area, the project is considered compliant with NPC-232 if the predicted cumulative noise levels at the nearby receptors are at or below either the exclusion limits (see **Table 8**) or the background ambient levels as measured or calculated.

Table 8: NPC-232 – Class 3 Area Exclusion Limits

Time of Day	One Hour Leq (dBA) Class 3 Area
07:00 – 19:00	45
19:00 – 23:00	40
23:00 – 07:00	40

The applicable nighttime limit is the most restrictive level for operation of a stationary source. The background ambient sound level at the points of reception were not measured or modeled. Therefore, the NPC-232 exclusion limits have been adopted as the performance limit at each of the PORs.

8.2.2 Predictable Worst Case Operating Scenario

The inverter unit components and substation transformer were assumed to operate on a continuous basis and at their maximum load during daytime, evening and nighttime hours and at their maximum capacity/load. These sources were modeled as such.

9. Conclusion

This *Noise Study Report* was prepared as a supporting document for an REA application for the proposed SparkleLight 10 MW solar farm project. The assessment conforms to the guidelines for an Acoustic Assessment Report as defined in Ministry of the Environment publication NPC-233 *Information to be Submitted for the Approval of Stationary Sources of Sound*. All procedures used in this assessment were conducted in accordance with requirements of NPC-233 and additional general direction provided by the Ontario Ministry of the Environment for preparation of acoustic assessment reports for solar farms under the REA. For the purpose of this NSR, noise impact associated with the dominant noise sources at the proposed neighbouring solar project (i.e., DiscoveryLight) was also assessed. In this NSR, Through modelling iterations it was determined that with a combination of acoustic louvers and a noise barrier wall at DiscoveryLight, and acoustic louvers at SparkleLight, are required in order to meet the required performance limit of 40 dBA at noise receptors associated with both projects. With the implementation of the noise mitigation measures presented in this assessment the proposed SparkleLight project will comply with the daytime and nighttime noise criteria as defined in the Ontario Ministry of the Environment Noise Pollution Control Publication NPC-232 *Sound Level Limits for Stationary Sources in Class 3 Areas (Rural)*, for all sources assessed in this study.

10. Closure

This *Noise Study Report* has been prepared based on the information provided and/or approved by Canadian Solar Solutions Inc. This report was prepared by Dillon for the sole benefit of Canadian Solar Solutions Inc. to satisfy reporting requirements for the Ontario Ministry of the Environment. The material in the report reflects Dillon's judgment in light of the information available to Dillon at the time of this report preparation. Any use which a third party makes of this report, or any reliance on or decisions made based on it, are the responsibilities of such third parties. Dillon accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

Respectfully Submitted,

DILLON CONSULTING LIMITED

Amir A. Iravani, Ph.D.
Associate

11. References

Industrial Noise Control Fundamentals and Applications, Bell, Lewis H., Marcel Dekker, Inc. 1982.

Ministry of Environment Publication NPC- 205 Sound Level Limits for Stationary Sources in Class 1 & 2 Areas (Urban), October 1995.

Ministry of Environment Publication NPC- 232 Sound Level Limits for Stationary Sources in Class 3 Areas (Rural), October 1995.

Ministry of Environment Publication NPC-233 Information to be Submitted for Approval of Stationary Sources of Sound, October 1995.

Ontario Regulation 359/09. Environmental Protection Act. Renewable Energy Approvals Under Part V.0.1 of the Act.

Ontario Ministry of the Environment, Model Municipal Noise Control By-Law Publication NPC- 104, August 1978.

Transformers, Regulators and Reactors, NEMA Standards Publication No. TR 1-1993(R2000), National Electrical Manufacturers Association.

Appendix A

MANUFACTURER'S EQUIPMENT SPECIFICATIONS

VIRGINIA TRANSFORMER CORP.

220 Glade View Drive, N.E. ◊ Roanoke, Virginia 24012, U.S.A.
Phone: (540) 345-9892 ◊ Fax: (540) 342-7694

The Commitment Company
ISO 9001 REGISTERED

TRANSFORMER TEST REPORT

DATE OF TEST	02/06/14	**MVA**	7.5/10
PURCHASER	KA FACTOR GROUP INC.	**CLASS**	ONAN/ONAF
MODEL No.	477500A180-C087A	**RISE**	65°C
P.O. No.	P13-383-5092	**PHASE**	3
HIGH VOLTAGE	44000 DELTA	**HERTZ**	60
LOW VOLTAGE	27600 GrdY/15935	**TYPE**	HYVOLT CSA C50B

RESISTANCES, EXCITING CURRENTS, LOSSES, AND IMPEDANCE ARE BASED ON NORMAL RATINGS UNLESS OTHERWISE STATED. LOSSES AND REGULATION ARE BASED ON WATTMETER MEASUREMENTS. FOR THREE-PHASE TRANSFORMERS, THE RESISTANCES GIVEN ARE THE SUM OF THREE PHASES IN SERIES.

TEMPERATURE DATA

Measured on: Duplicate Unit C028A

Insulation Class A

		(7.5 MVA) ONAN	(10.0 MVA) ONAF	
Average Temperature Rise - 100 % load:	High voltage	57.5	51.4	degrees C
	Low voltage	61.6	55.3	degrees C

MEASURED TRANSFORMER DATA

Winding Resistance at 85 degrees C reference temperature:

- High voltage	OHMS	=	4.76609
- Low voltage	OHMS	=	0.50460
No load loss at 100% of rated voltage	WATTS	=	7103
Exciting current at 100% of rated voltage	PERCENT	=	0.382
Load loss at 85 degrees C reference temperature	WATTS	=	30864
Impedance at 85 degrees C reference temperature	PERCENT	=	5.56
Sound level (ONAN/ONAF)	dB	=	67/69

CALCULATED DATA

Regulation at reference temperature 85 degrees C

and 1.0 power factor	PERCENT	=	0.57
and 0.8 power factor	PERCENT	=	3.74

Efficiencies at:	100% full load	PERCENT	=	99.50
	75% full load	PERCENT	=	99.57
	50% full load	PERCENT	=	99.61
	25% full load	PERCENT	=	99.52

DIELECTRIC TESTS

Lightning Impulse: HV = 250 KV, LV = 200 KV BIL, ***PASS***

Applied Potential for 60 seconds:

High voltage to low voltage and ground	KV	=	95, ***PASS***
Low voltage to high voltage and ground	KV	=	70, ***PASS***

Induced Potential – double voltage at 240 cycles per second for 30 seconds, ***PASS***

Partial Discharge, ***PASS***

2/20/14
Date

Test Engineer

Project Engineer 2/21/14

C087A

VIRGINIA TRANSFORMER CORP.

220 Glade View Drive, N.E. ◊ Roanoke, Virginia 24012, U.S.A.
Phone: (540) 345-9892 ◊ Fax: (540) 342-7694

The Commitment Company
ISO 9001 REGISTERED

TRANSFORMER TEST REPORT

RATIO AND PHASE RELATION TEST

DETC Position	Calculated Ratio	Phase 1	Phase 2	Phase 3
1	2.8993	2.8986	2.8987	2.8989
2	2.8303	2.8306	2.8307	2.8309
3	2.7612	2.7624	2.7625	2.7627
4	2.6922	2.6943	2.6944	2.6946
5	2.6232	2.6263	2.6263	2.6265

Vector group verified as Dyn1

NO-LOAD LOSS AND EXCITING CURRENT TEST

% Voltage Applied	Measured (%) Excitation Current Calculation	Measured No-Load Loss (W)
90	0.263	5409
100	0.382	7103
110	0.937	9833

LOAD LOSS AND IMPEDANCE TEST

DETC Position	Measured Impedance (%) at 85°C	Measured Load Loss (W) at 85°C
1	5.54	30224
3	5.56	30864
5	5.64	31940

INSULATION POWER FACTOR (%) AT 20 DEGREES C

Energize	Ground	Guard	Ust	Test KV	Equivalent 10KV measured [mA]	Equivalent 10KV measured [Watts]	% PF corrected 20°C	Measured Winding Capacitance [pF]	Designation
High #4	low			10 KV	25.84	0.7959	0.28	6854.8	Ch + Cl
High #5		low		10 KV	9.226	0.2159	0.21	2447.7	Ch
High #3			low	10 KV	16.61	0.5781	0.32	4406.7	Chl
Low #4	High			10 KV	29.20	0.9402	0.29	7745.5	Cl + Ch
Low #5		High		10 KV	12.58	0.3624	0.26	3338.3	Cl
Low #3			High	10 KV	16.61	0.5814	0.32	4406.7	Chl

INSULATION RESISTANCE TEST FOR CORE

Applied 1 KV to Core and measured >5700 Mega-Ohms at 20°C.

INSULATION RESISTANCE TEST FOR WINDINGS

Applied 10KV to HV with LV grounded and measured >11000 Mega-Ohms at 20°C.
Applied 10KV to LV with HV grounded and measured >7500 Mega-Ohms at 20°C.

AUXILIARY DEVICES AND CURRENT TRANSFORMERS

All auxiliary devices have been operated successfully.
All wiring has been hipot tested with 1.5KV and passed.
All current transformers have been ratio and polarity tested and passed.

TANK PRESSURE TEST: *PASS*

2/20/14
Date

Test Engineer

2/21/14
Project Engineer

C087A

Virginia Transformer Corp.

KA FACTOR GROUP INC

project : CO87A

Climate - Data

temperature °C humidity %

air-pressure hPa

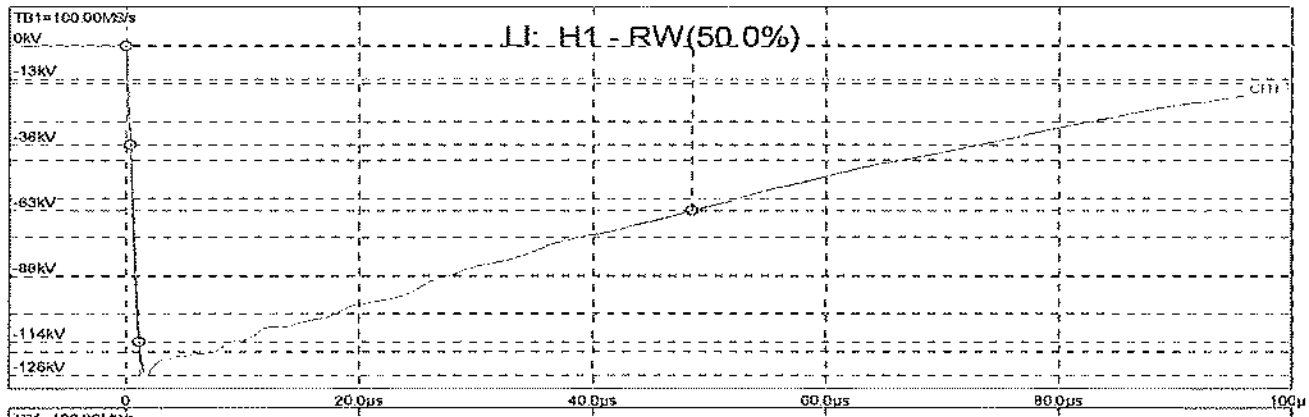
LI lightning-impulse

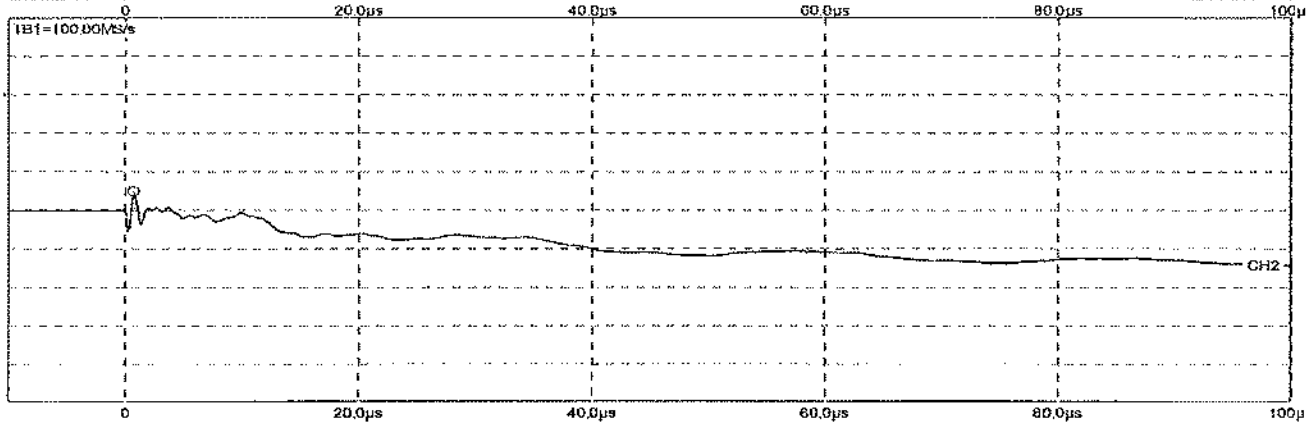
no.	Up [kV]	T1[µs]	T2[µs]	Tc[µs]	remark
1	-126.4	1.26	48.6		LI: H1 - RW(50.0%)
2	-275.7	1.28		3.65	LI: H1 - CFW(110.0%)
3	-276.3	1.27		3.58	LI: H1 - CFW(110.0%)
4	-252.6	1.26	48.7		LI: H1 - FW(100.0%)
5	-126.8	1.25	48.6		LI: H2 - RW(50.0%)
6	-276.5	1.27		3.56	LI: H2 - CFW(110.0%)
7	-276.9	1.26		3.55	LI: H2 - CFW(110.0%)
8	-252	1.26	48.7		LI: H2 - FW(100.0%)
9	-126.5	1.27	47.9		LI: H3 - RW(50.0%)
10	-277.6	1.28		3.56	LI: H3 - CFW(110.0%)
11	-275.9	1.28		3.5	LI: H3 - CFW(110.0%)
12	-251.8	1.27	48		LI: H3 - FW(100%)
13	-101.4	1.11	40.8		LI: X1 - RW(50.0%)
14	-219.3	1.11		3.59	LI: X1 - CFW(110.0%)
15	-220.5	1.11		3.63	LI: X1 - CFW(110.0%)
16	-202.3	1.12	40.8		LI: X1 - FW(100.0%)
17	-101.4	1.11	40.3		LI: X2 - RW(50.0%)
18	-220.4	1.11		3.64	LI: X2 - CFW(110.0%)
19	-220.5	1.12		3.61	LI: X2 - CFW(110.0%)
20	-201	1.11	40.5		LI: X2 - FW(100.0%)
21	-101	1.12	40.3		LI: X3 - RW(50.0%)
22	-220	1.11		3.6	LI: X3 - CFW(110.0%)
23	-221.3	1.11		3.62	LI: X3 - CFW(110.0%)
24	-201.8	1.12	40.6		LI: X3 - FW(100.0%)
25	-100.9	1.19	40.8		LI: X0 - RW(50.0%)
26	-199.4	1.2	41.1		LI: X0 - FW(100.0%)
27	-201.4	1.19	41.1		LI: X0 - FW(100.0%)

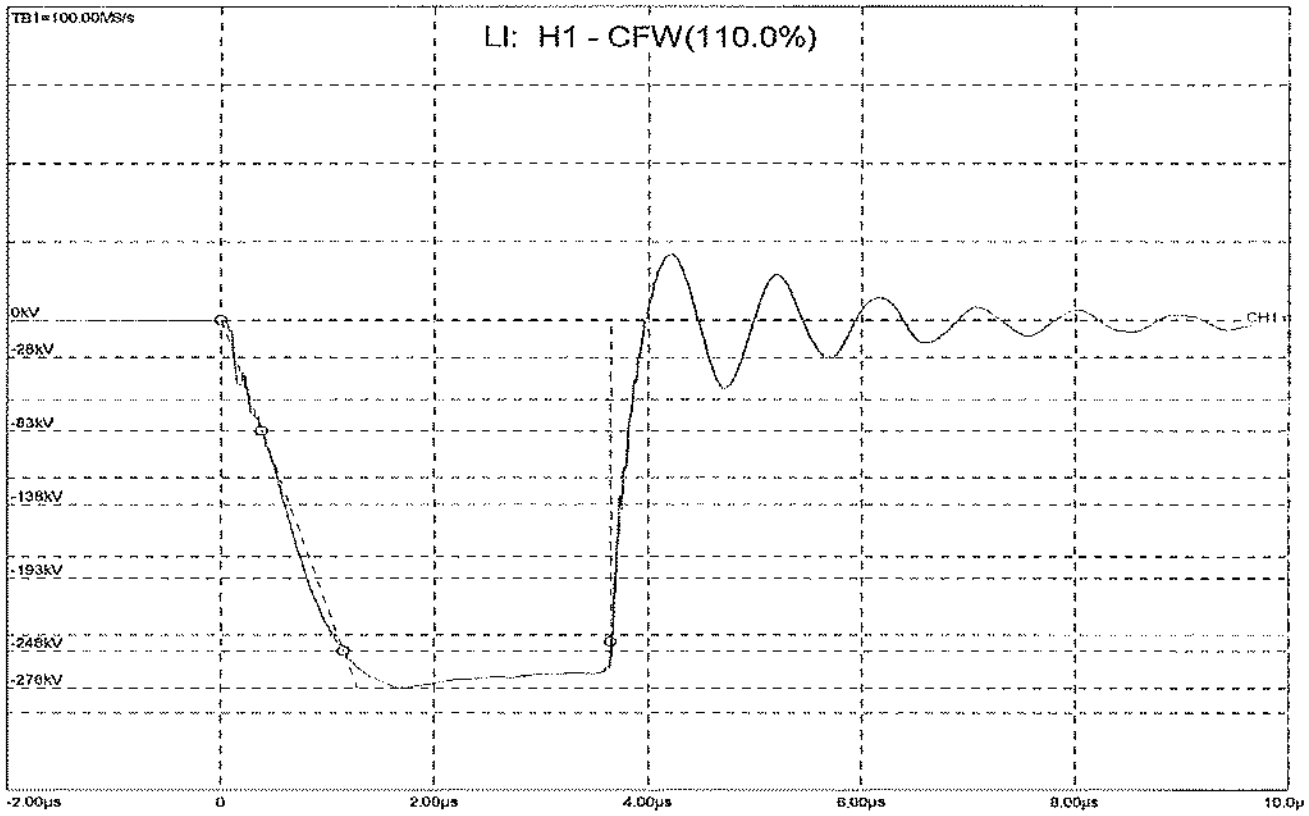
Virginia Transformer Corp.

KA FACTOR GROUP INC

project : CO87A



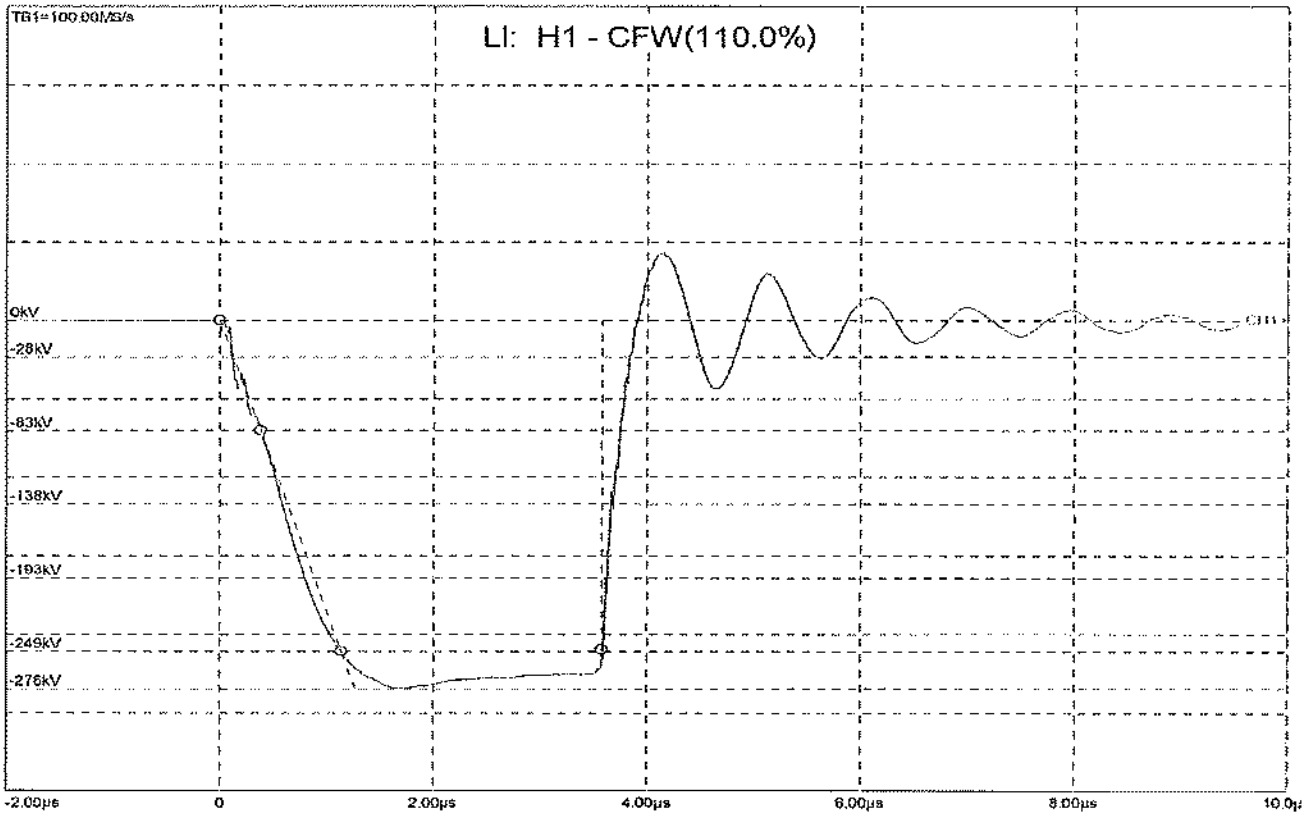


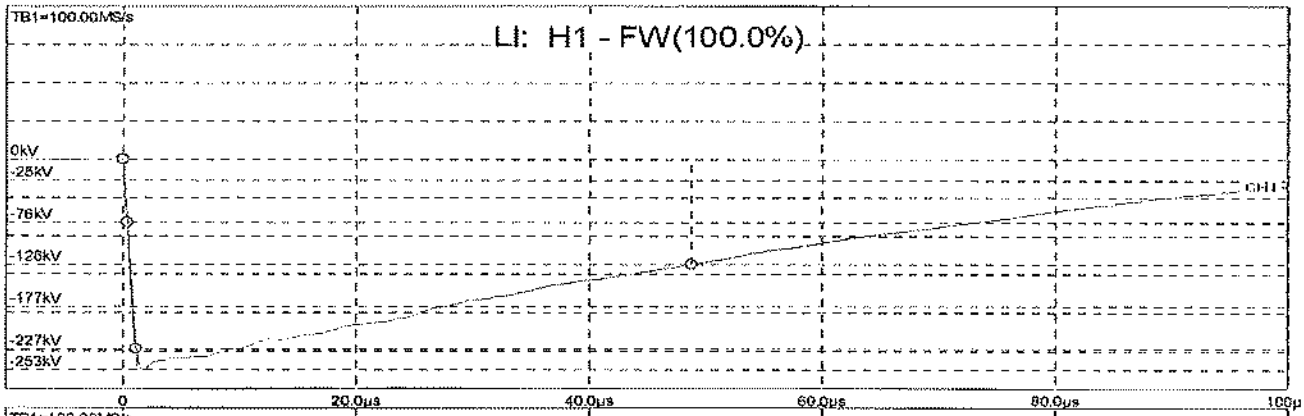


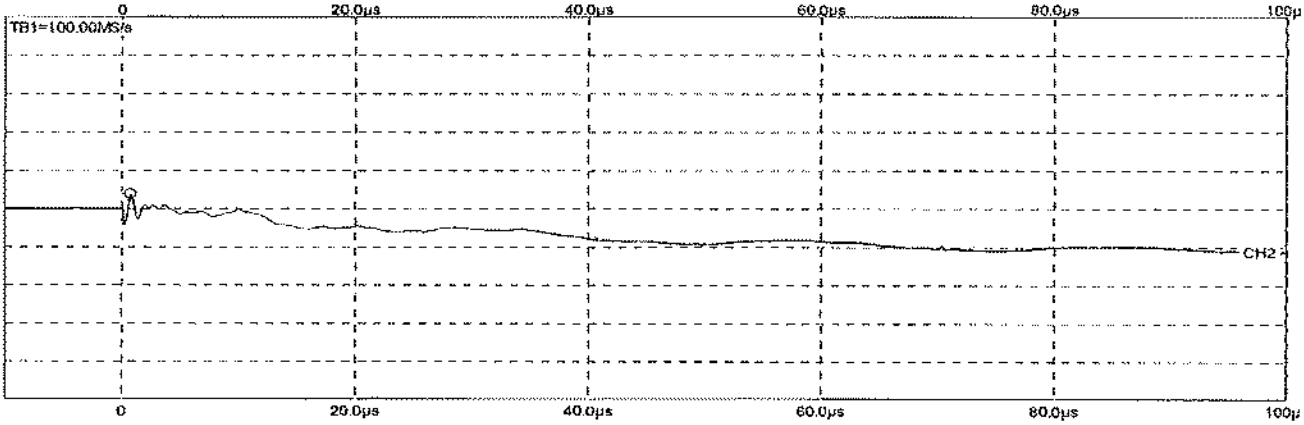
Virginia Transformer Corp.

KA FACTOR GROUP INC

project : CO87A







Virginia Transformer Corp.

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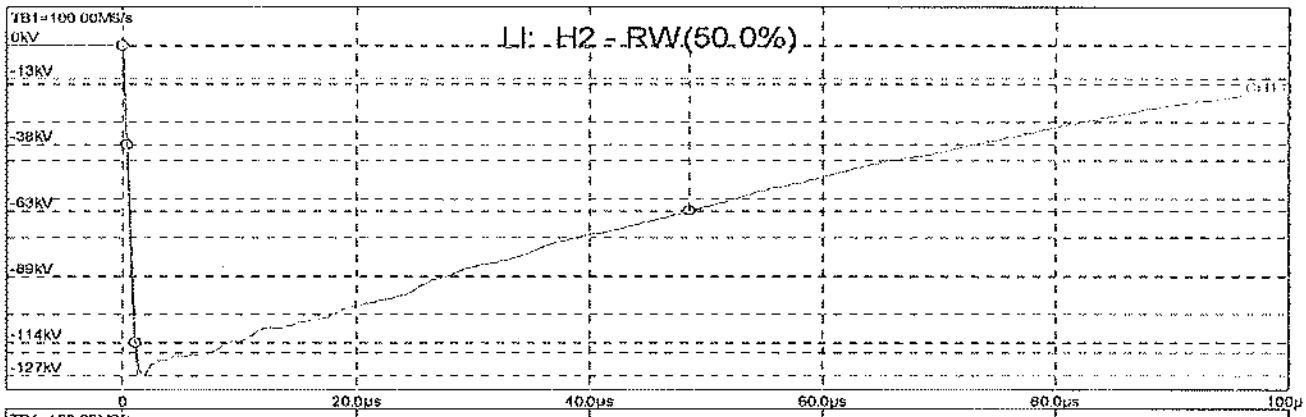
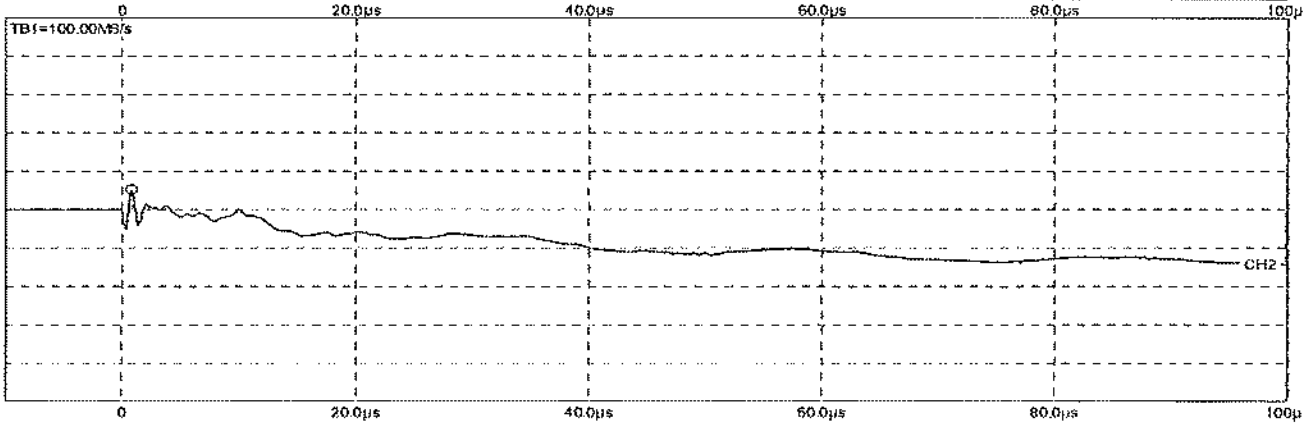
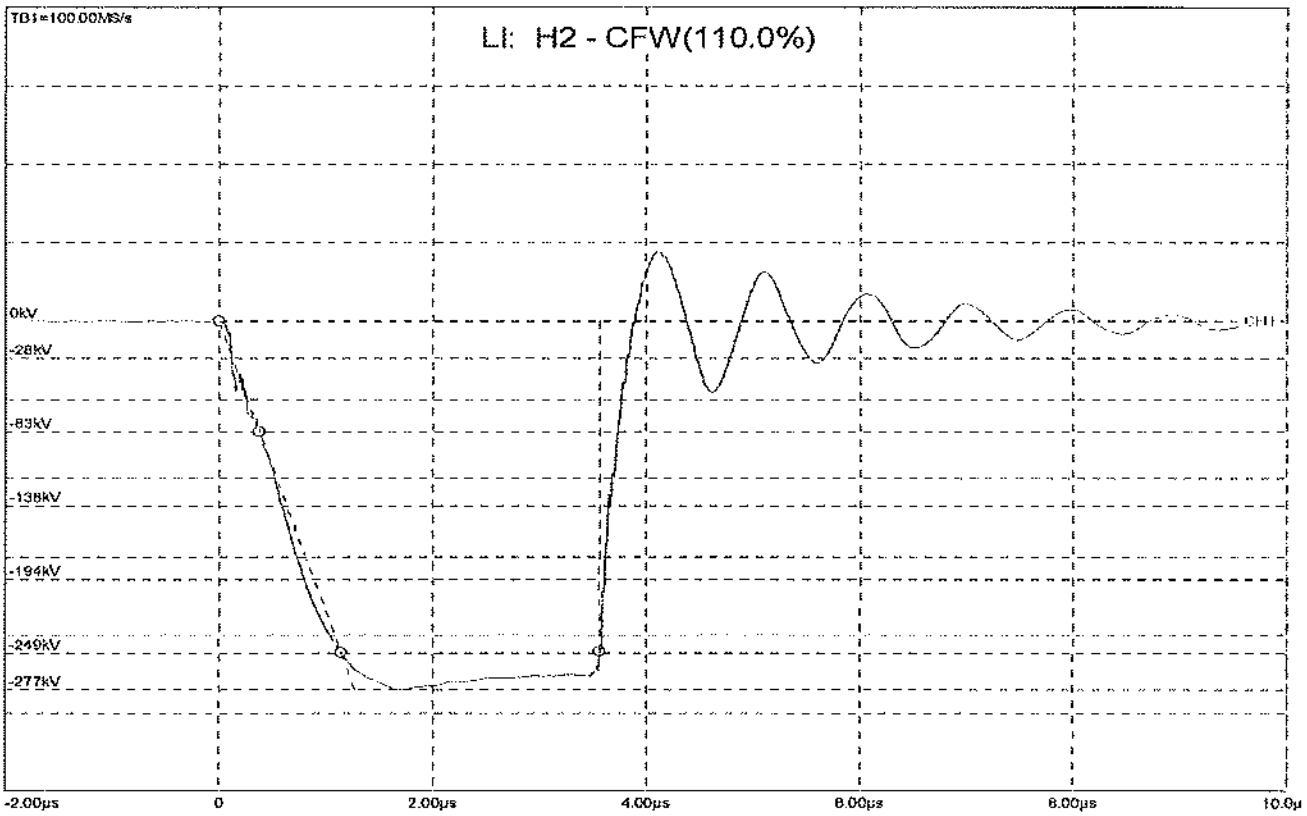
project : CO87A







Virginia Transformer Corp.

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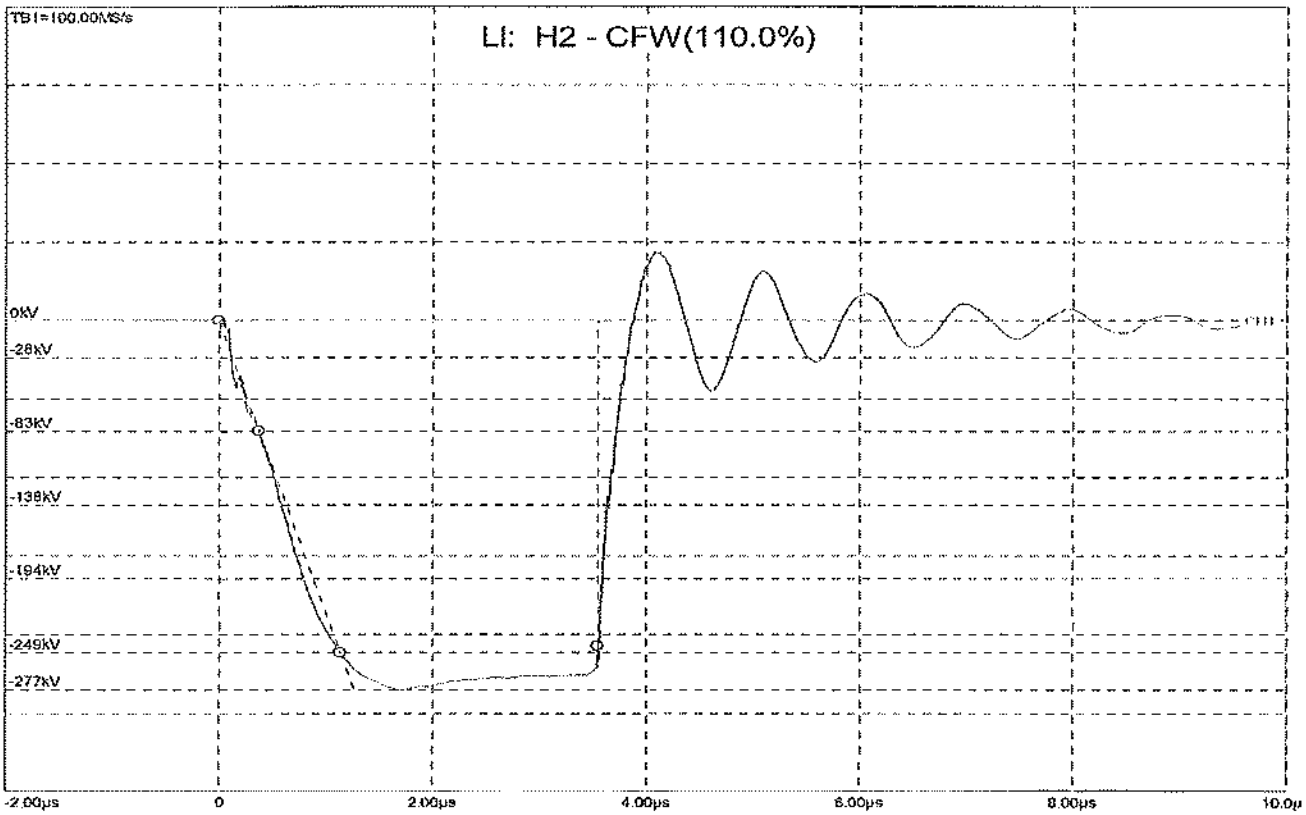
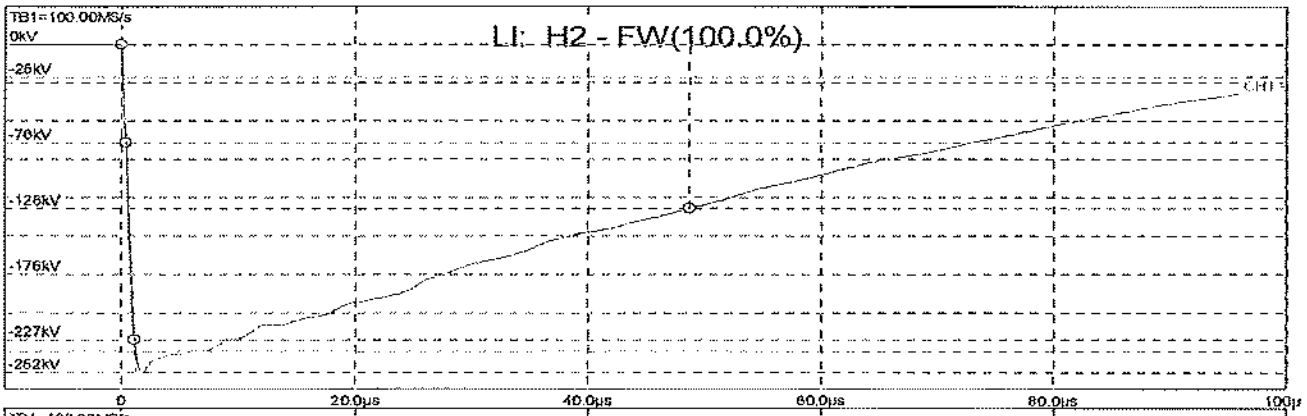
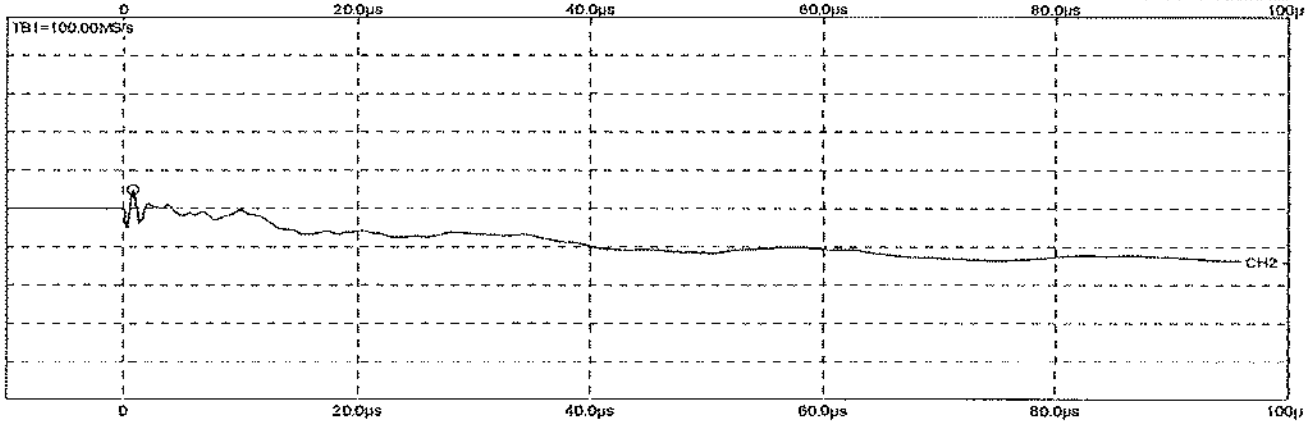
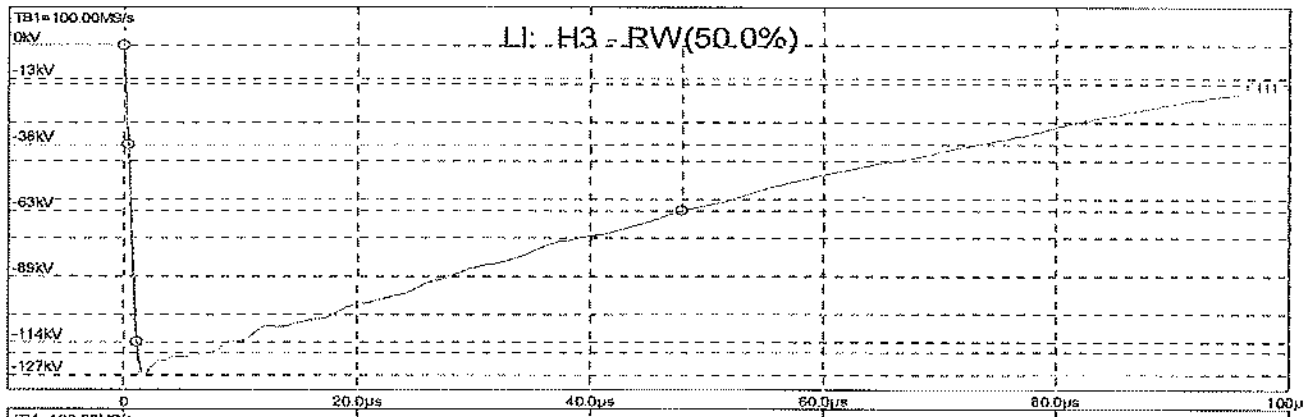
project : CO87A





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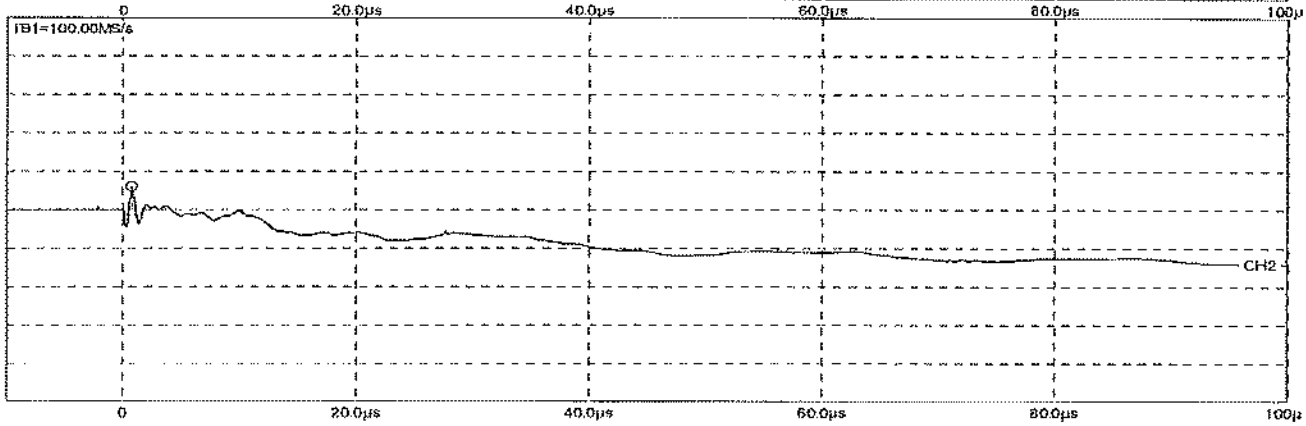
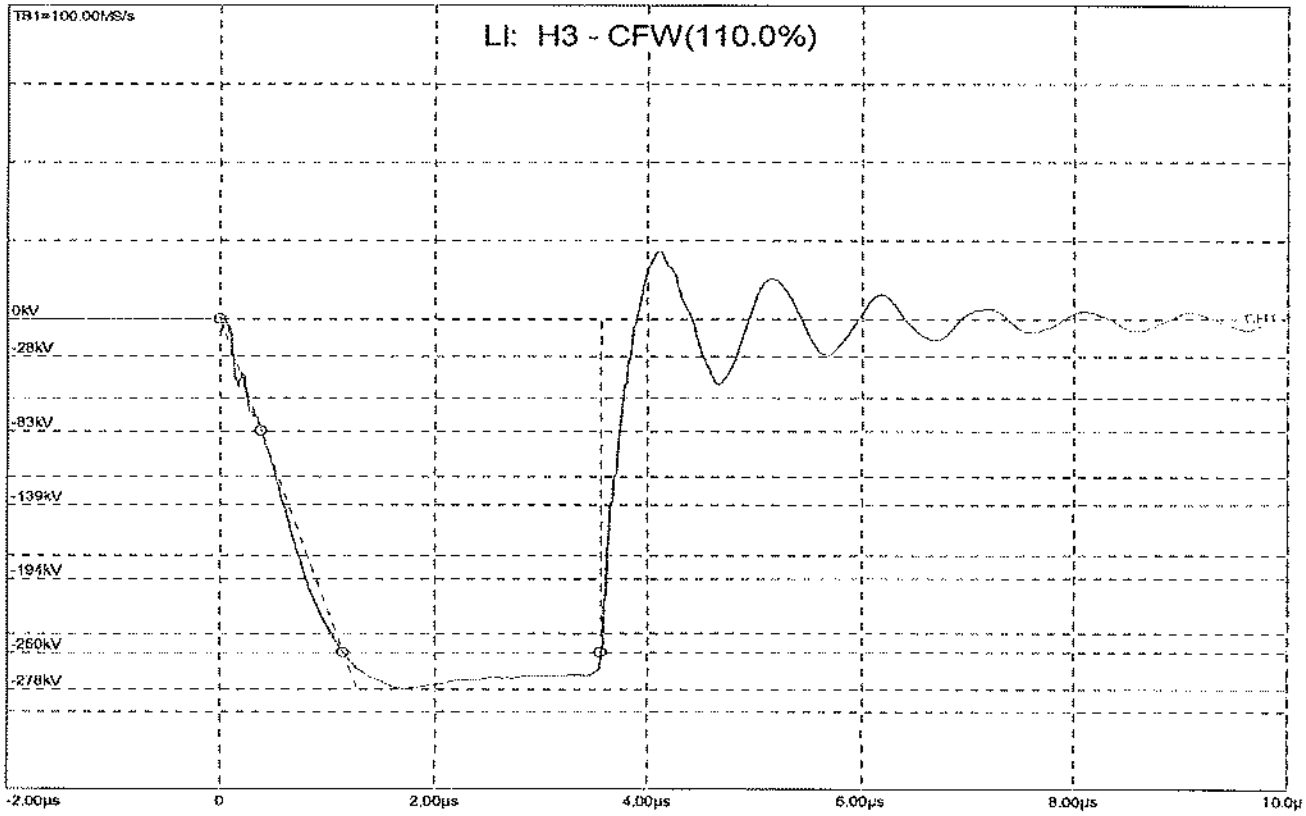
LI: H3 - RW(50.0%)
0kV
-13kV
-38kV
-63kV
-89kV
-114kV
-127kV
CH1
0
20.0µs
40.0µs
60.0µs
80.0µs
100µ


TB1=100.00MS/s
CH2
0
20.0µs
40.0µs
60.0µs
80.0µs
100µ


TB1=100.00MS/s
LI: H3 - CFW(110.0%)
0kV
-28kV
-83kV
-139kV
-194kV
-250kV
-278kV
CH1
-2.00µs
0
2.00µs
4.00µs
6.00µs
8.00µs
10.0µ

Virginia Transformer Corp.

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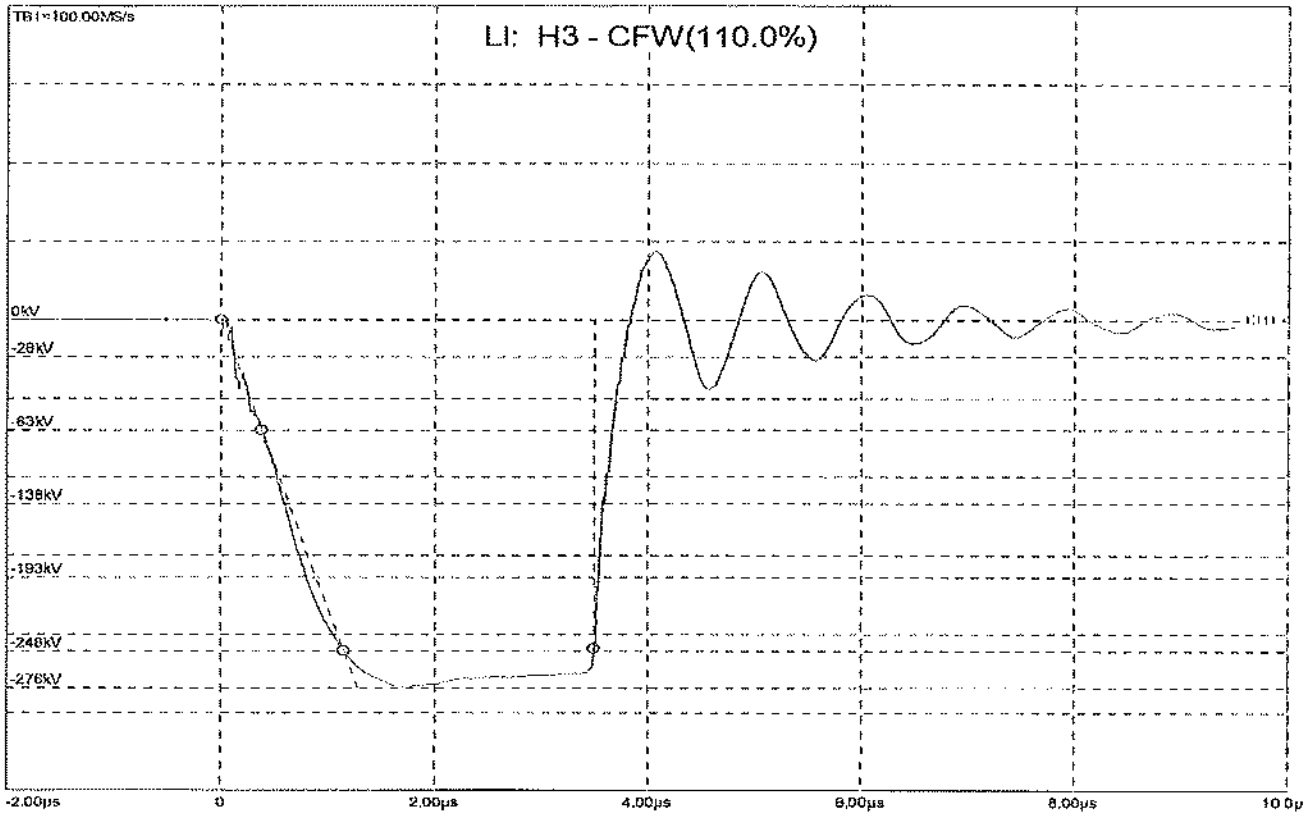
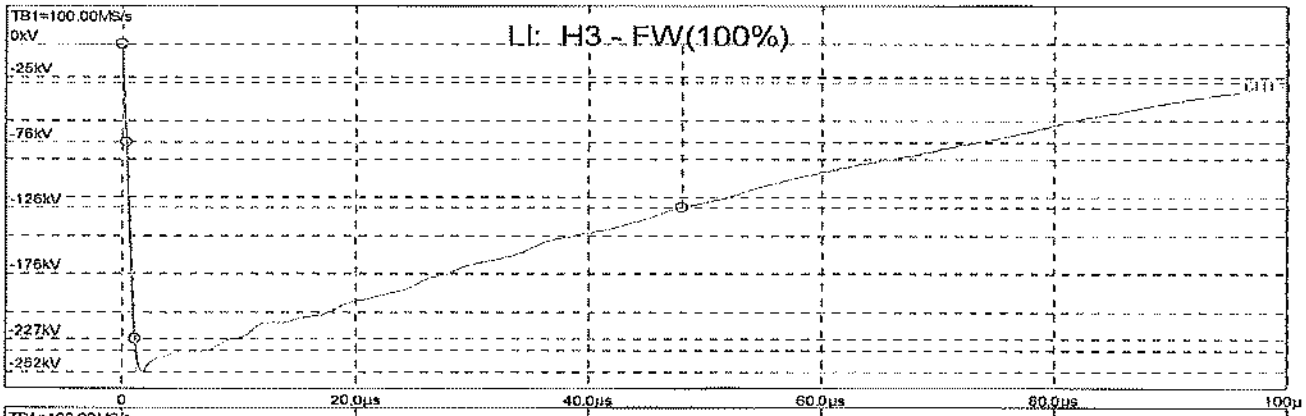
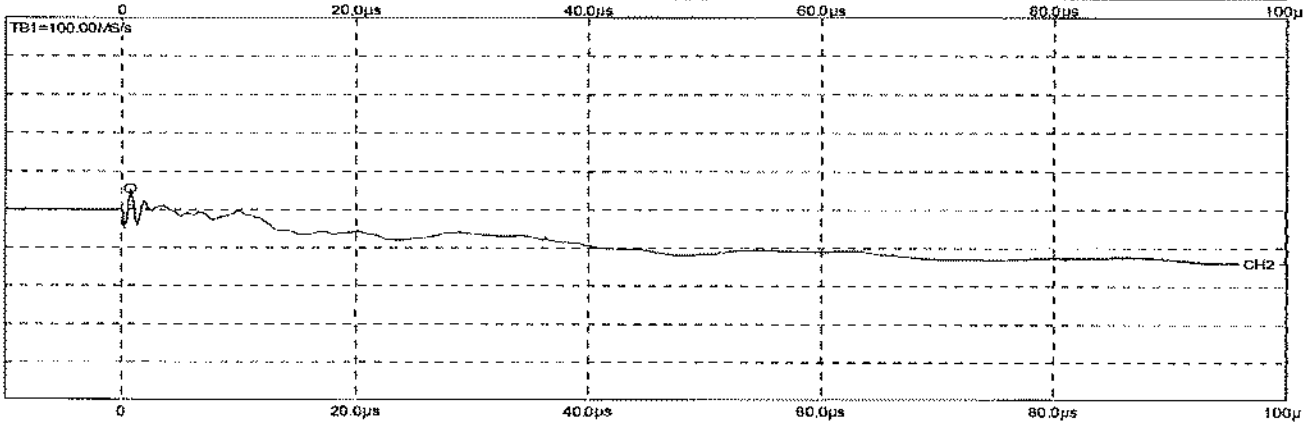
project : CO87A



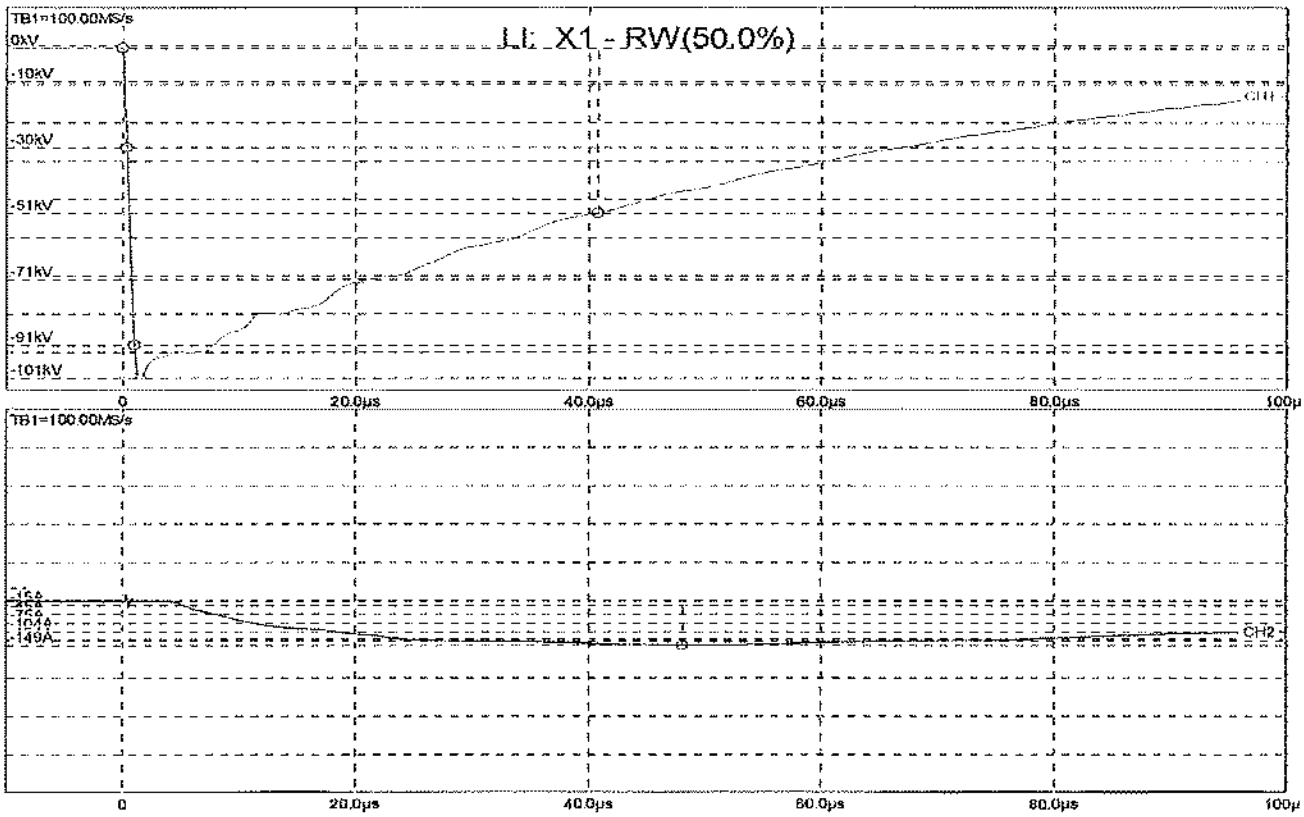


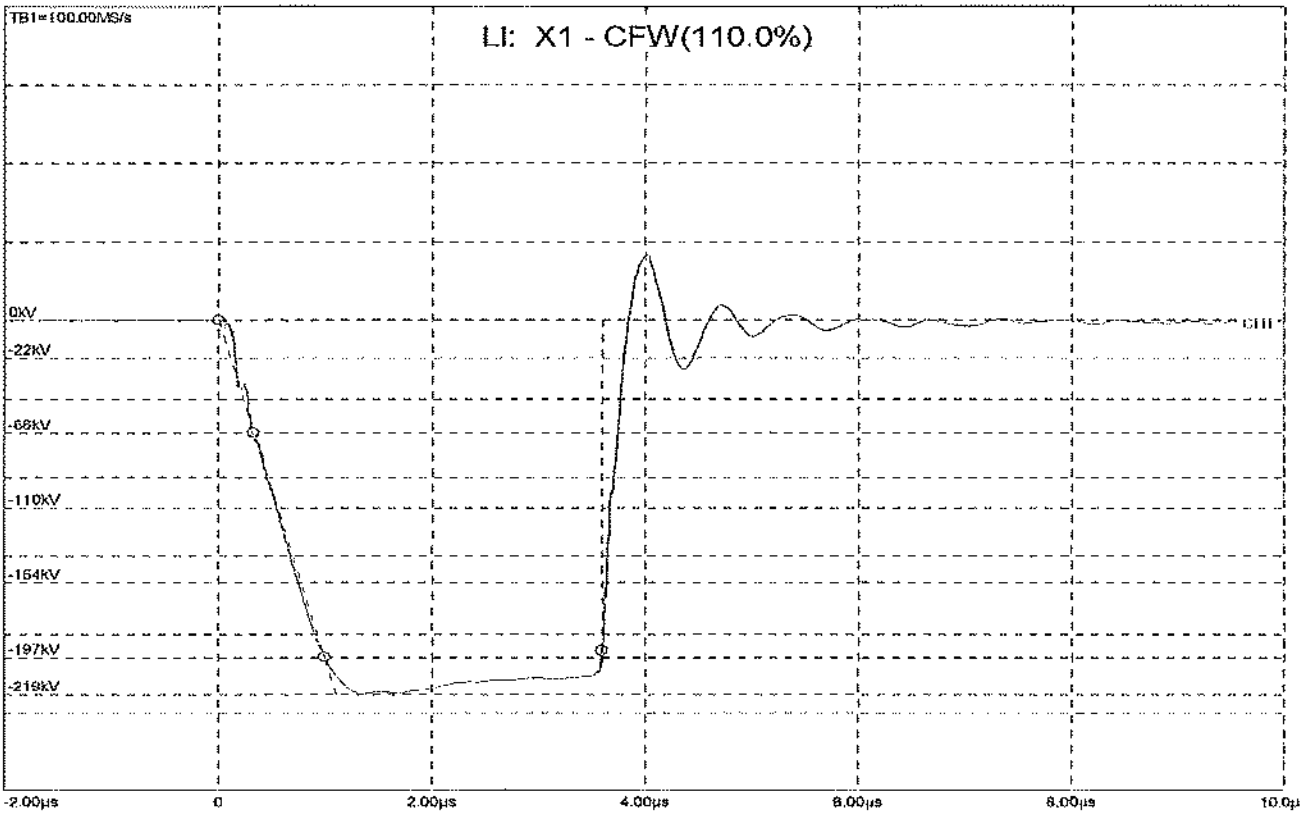


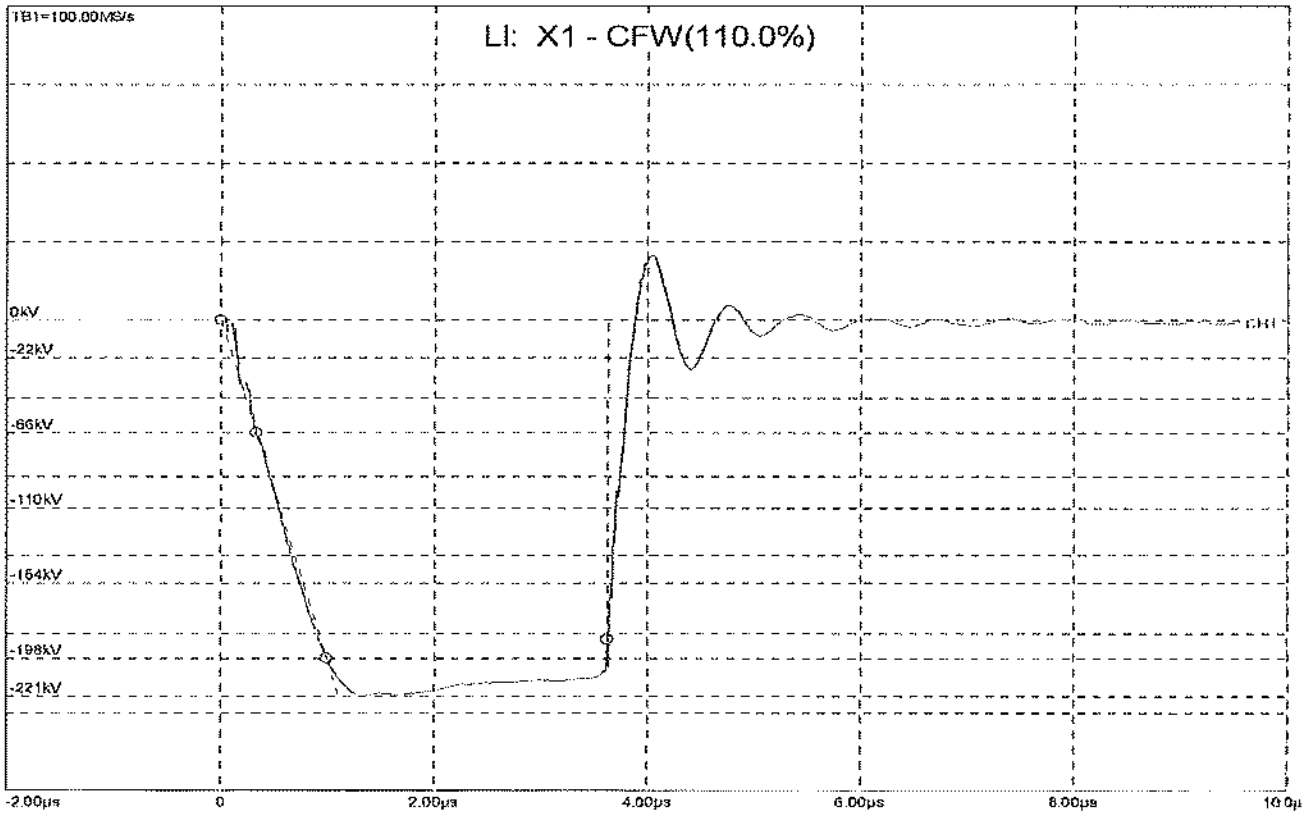
Virginia Transformer Corp.

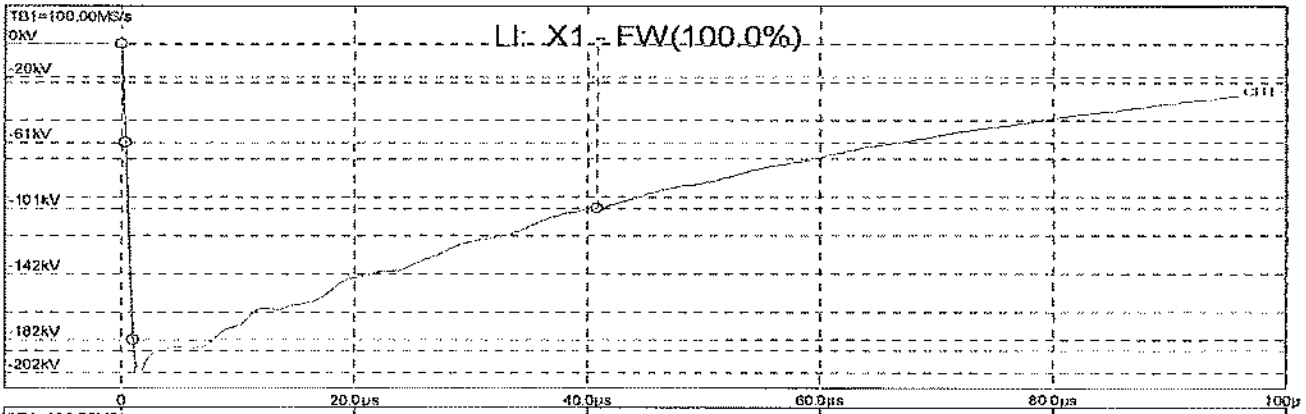
KA FACTOR GROUP INC

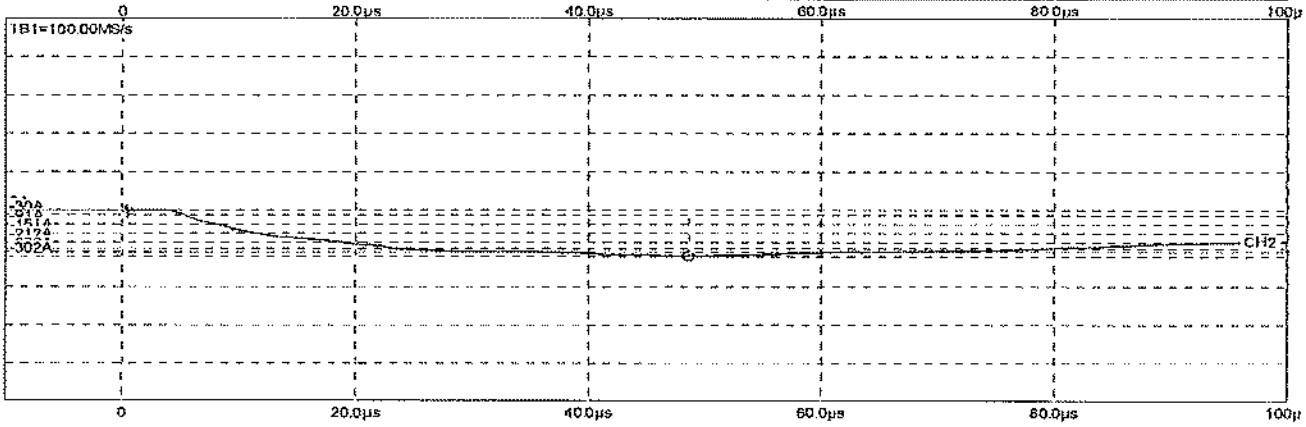
project : CO87A

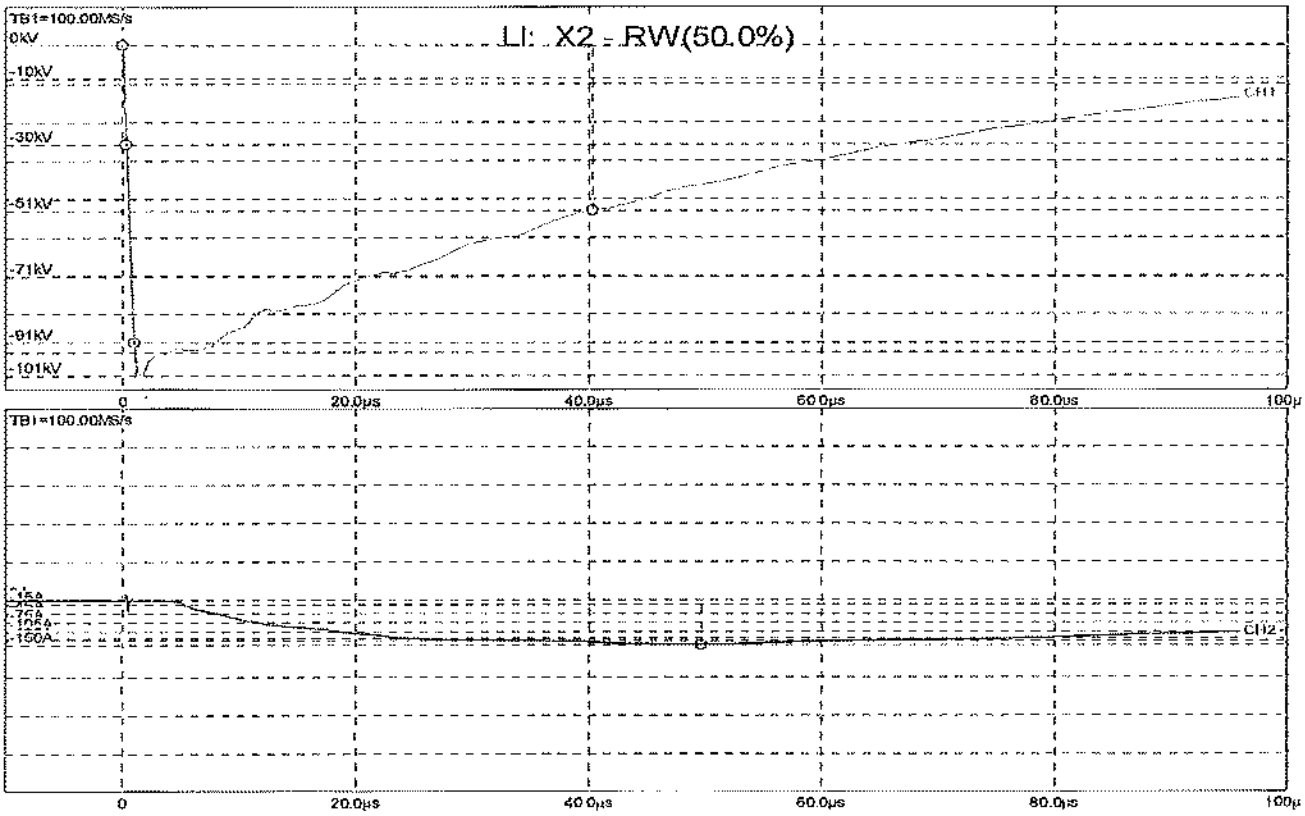





TB1=100.00MS/s
LI: X1 - CFW(110.0%)
0kV
-22kV
-66kV
-110kV
-154kV
-198kV
-221kV
CH1
-2.00µs
0
2.00µs
4.00µs
6.00µs
8.00µs
10.0µ


TB1=100.00MS/s
LI: X1 - FW(100.0%)
0kV
-20kV
-61kV
-101kV
-142kV
-182kV
-202kV
CH1
0
20.0µs
40.0µs
60.0µs
80.0µs
100µ


TB1=100.00MS/s
-30A
-91A
-151A
-212A
-302A
CH2
0
20.0µs
40.0µs
60.0µs
80.0µs
100µ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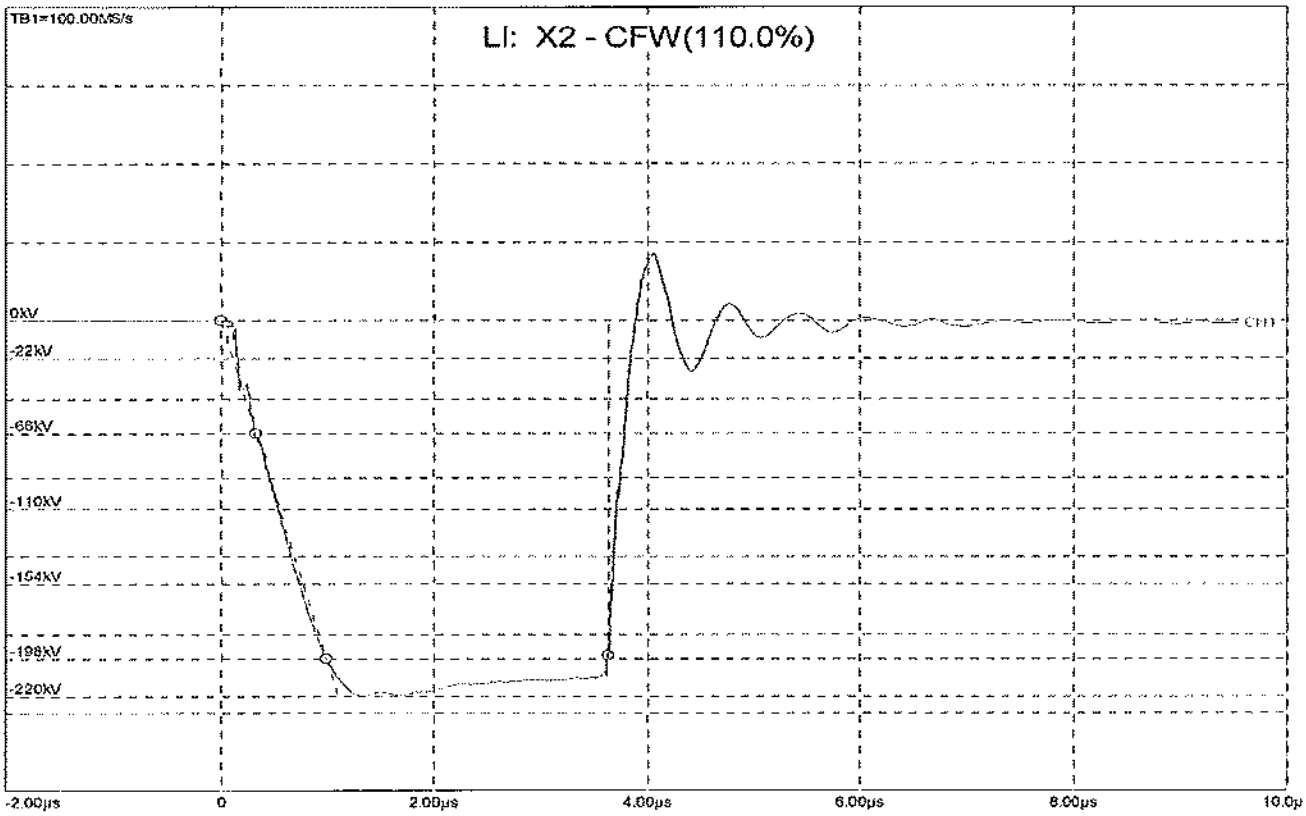
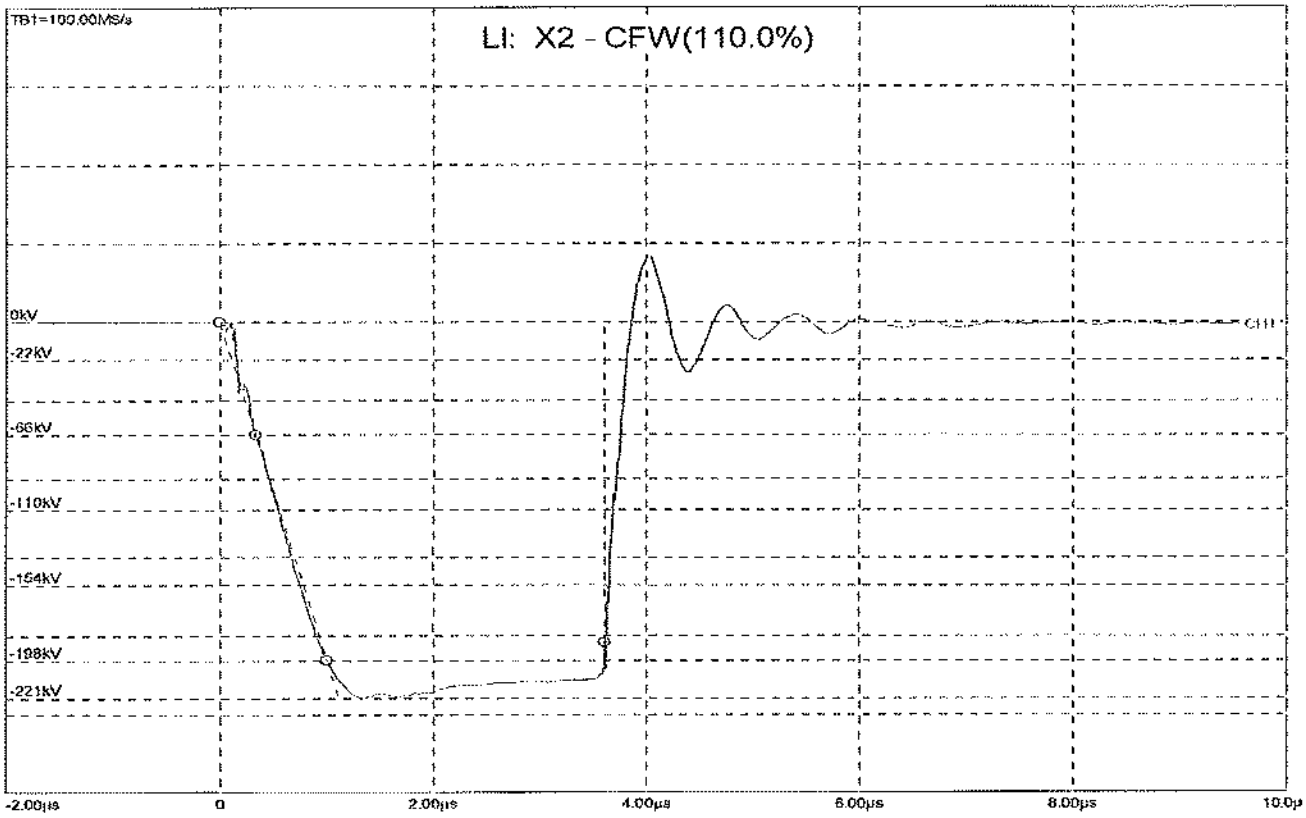
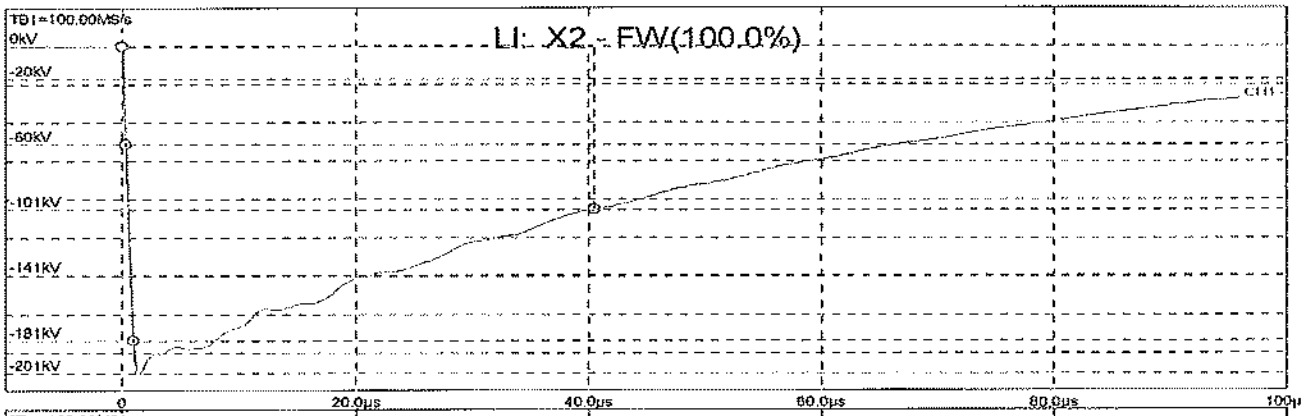
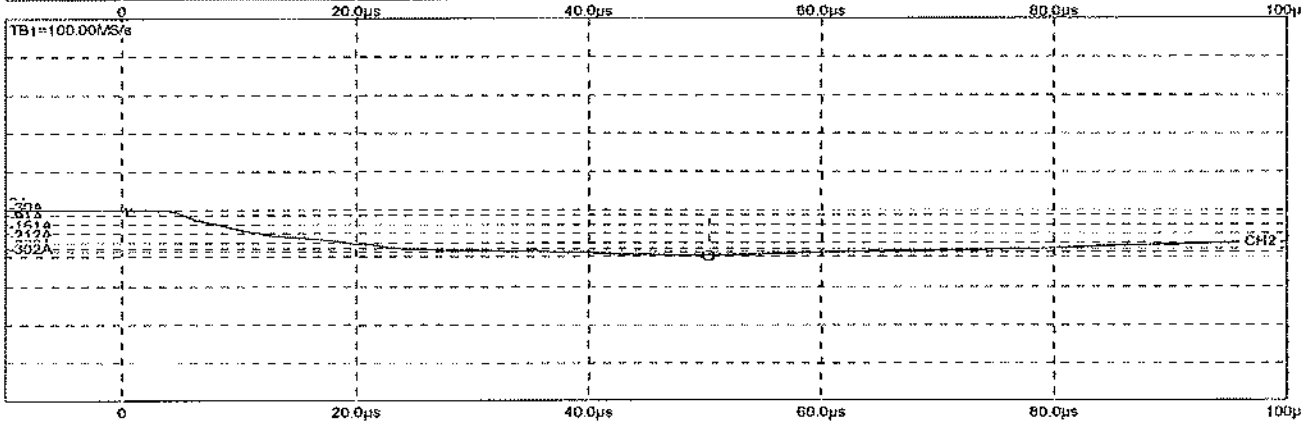
LI: X2 - RW(50.0%)
0kV
-10kV
-30kV
-51kV
-71kV
-91kV
-101kV
CH1
0
20.0µs
40.0µs
60.0µs
80.0µs
100µ
TB1=100.00MS/s
-150A
CH2


TB1=100.00MS/s
LI: X2 - CFW(110.0%)
0kV
-22kV
-66kV
-110kV
-154kV
-198kV
-220kV
CH1
-2.00µs
0
2.00µs
4.00µs
6.00µs
8.00µs
10.0µ


TB1=100.00MS/s
LI: X2 - CFW(110.0%)
0kV
-22kV
-66kV
-110kV
-154kV
-198kV
-221kV
CH1
-2.00µs
0
2.00µs
4.00µs
6.00µs
8.00µs
10.0µ


TB1=100.00MS/s
LI: X2 - FW(100.0%)
0kV
-20kV
-60kV
-101kV
-141kV
-181kV
-201kV
CH1
0
20.0µs
40.0µs
60.0µs
80.0µs
100µ


TB1=100.00MS/s
CH2
0
20.0µs
40.0µs
60.0µs
80.0µs
100µ

Virginia Transformer Corp.

KA FACTOR GROUP INC

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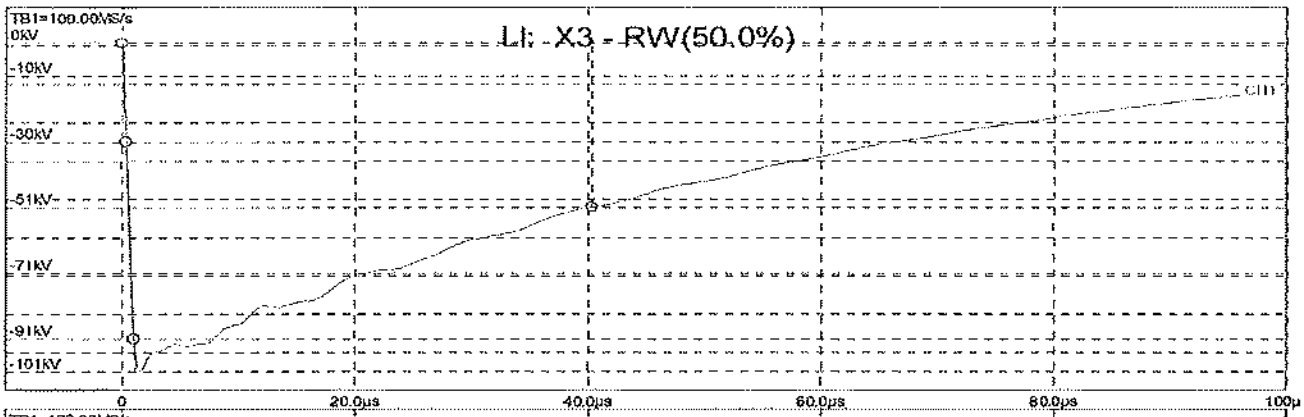

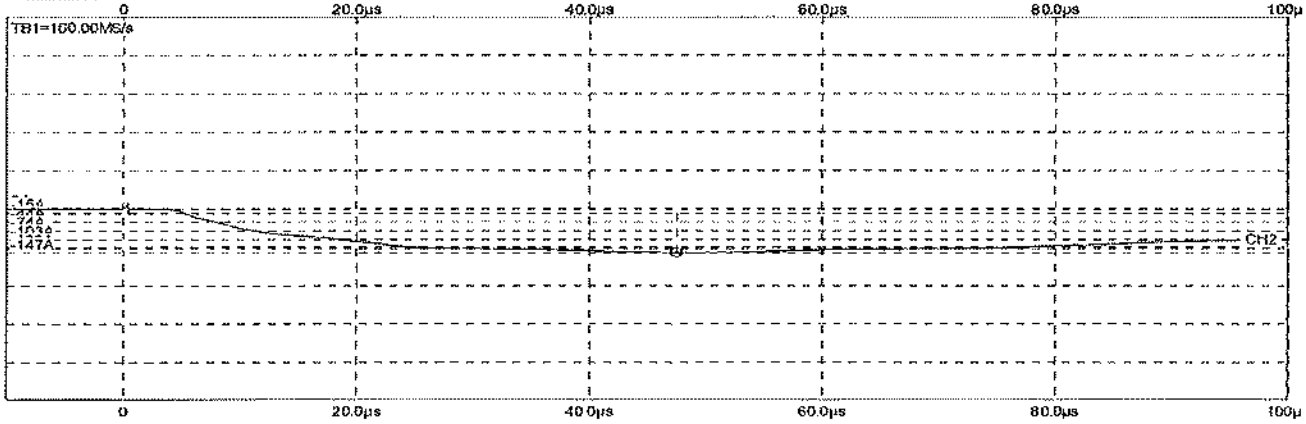

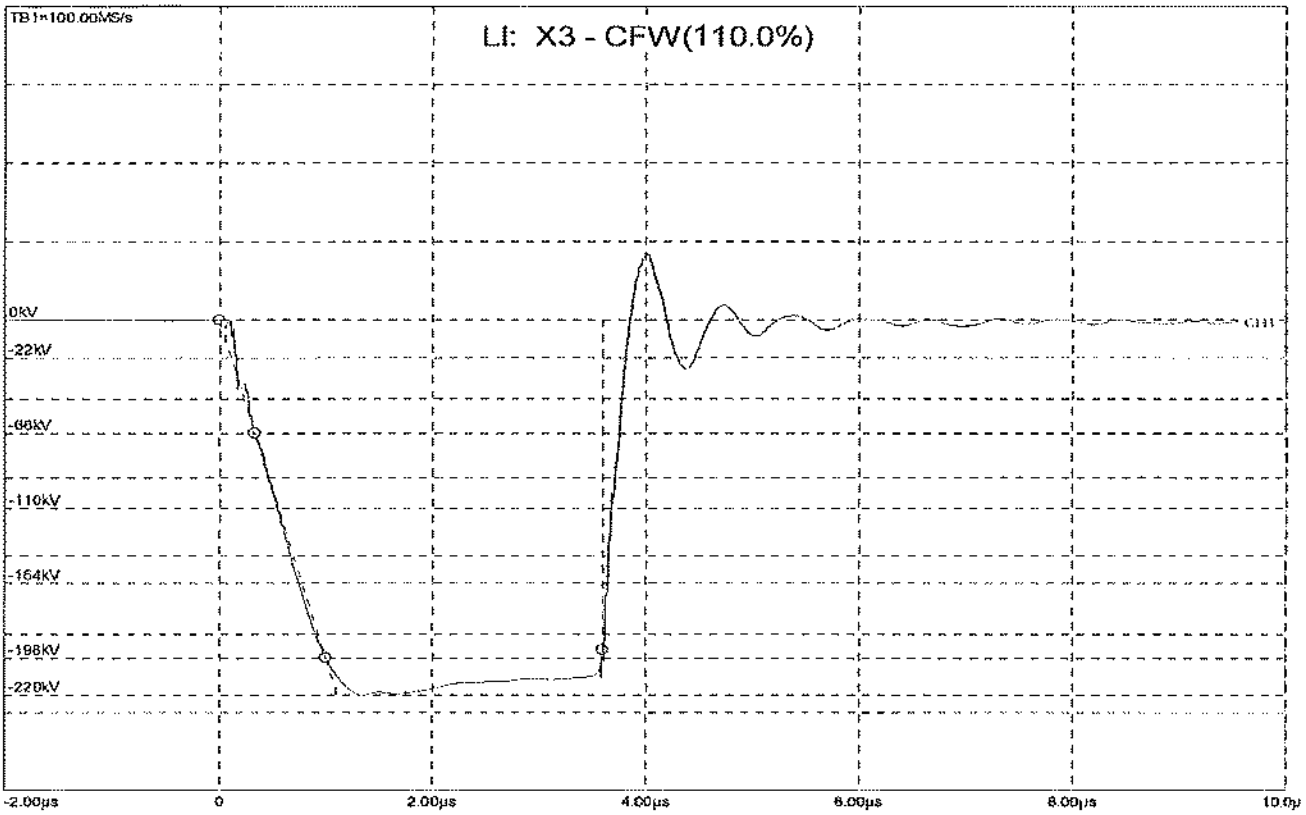

Virginia Transformer Corp.

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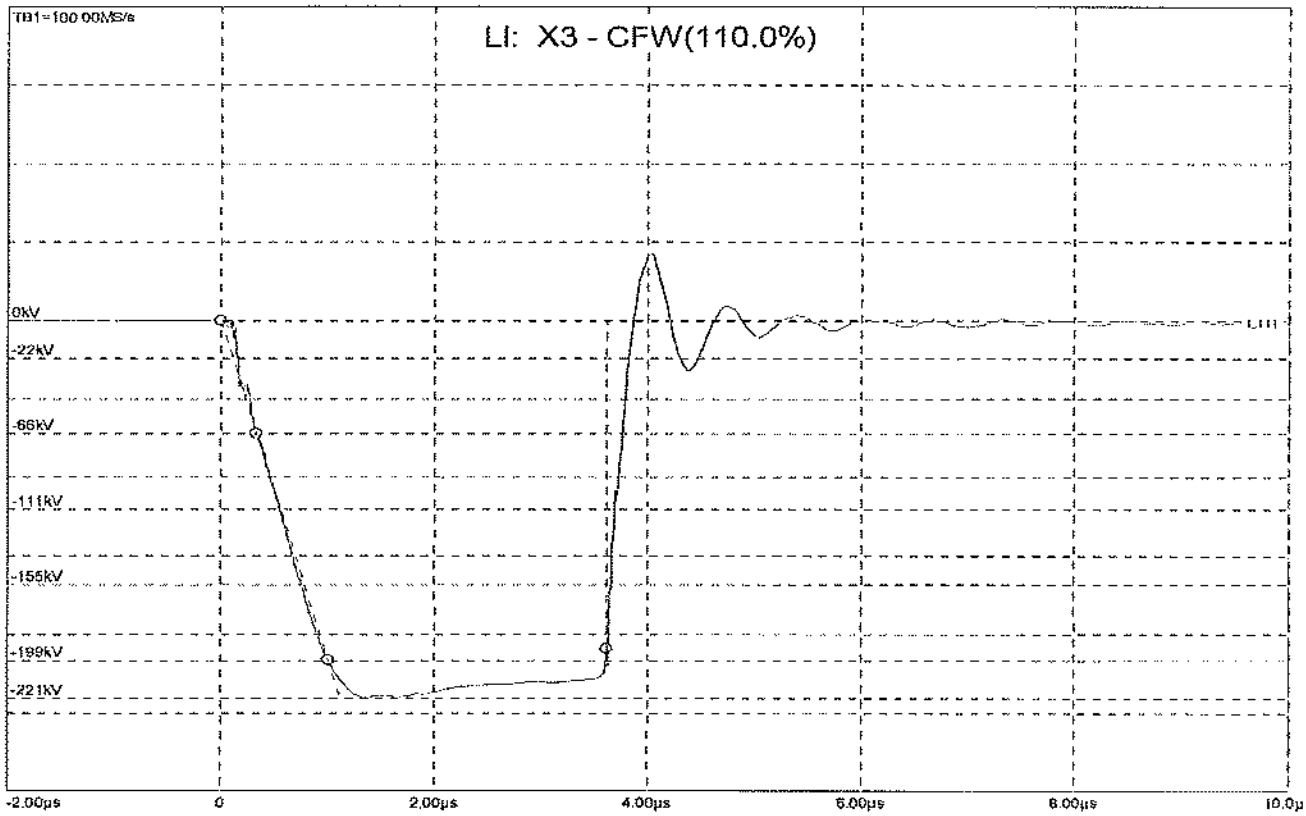
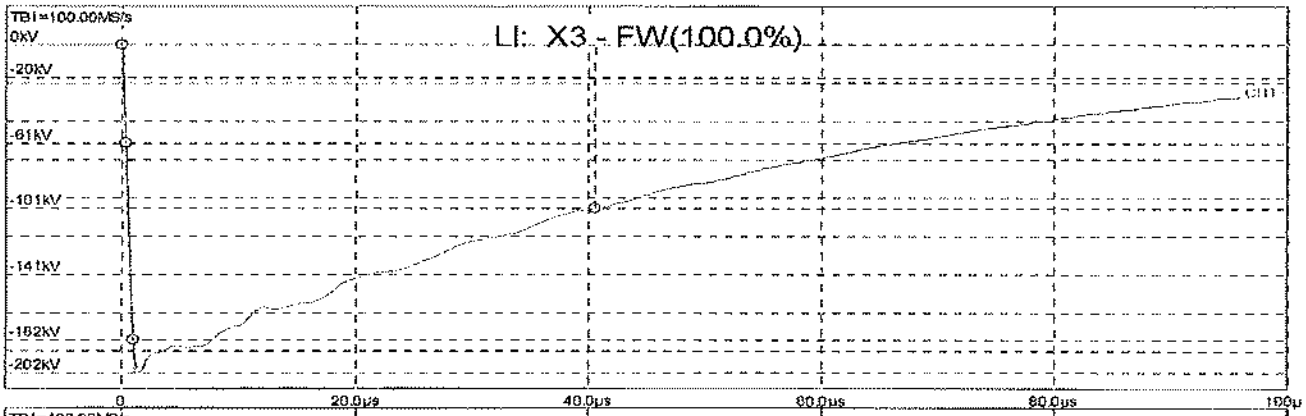
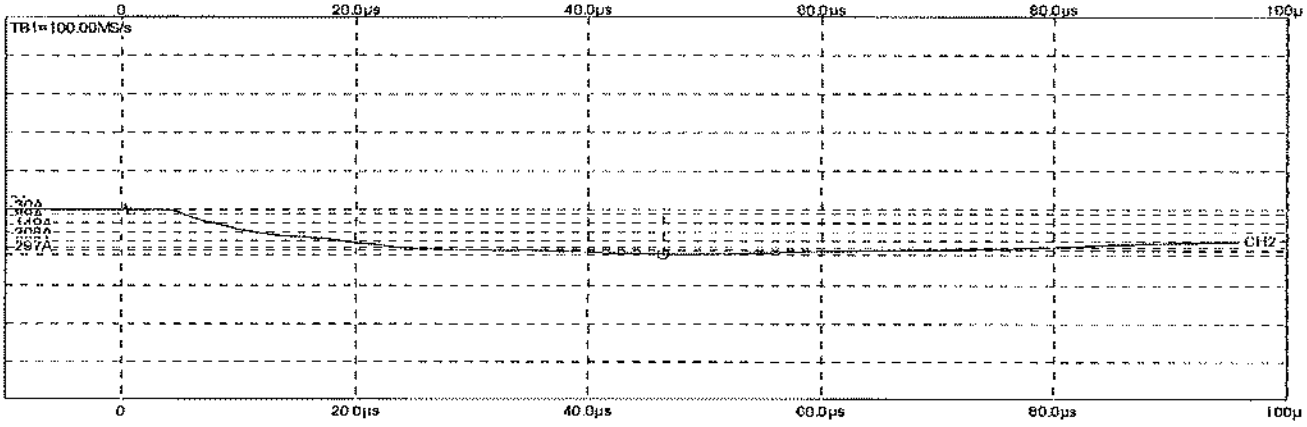
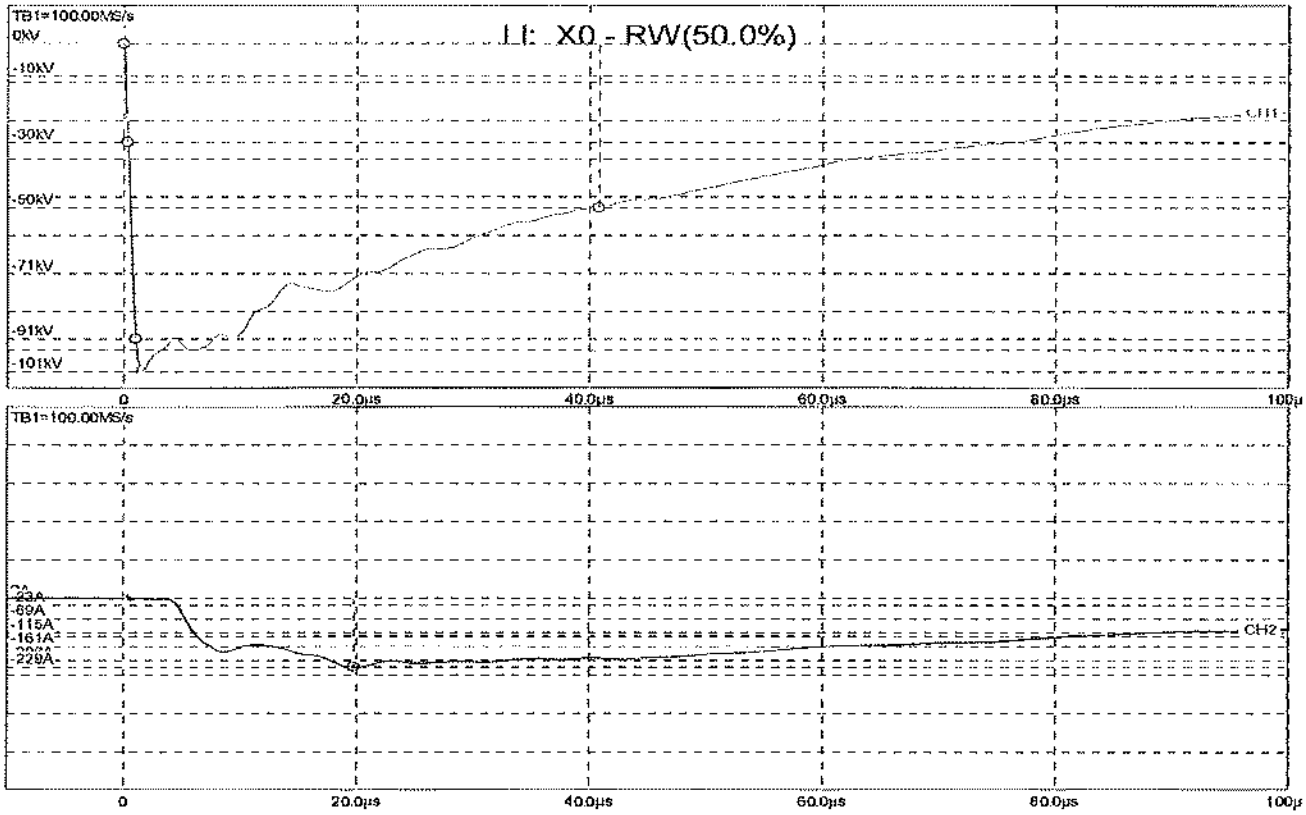
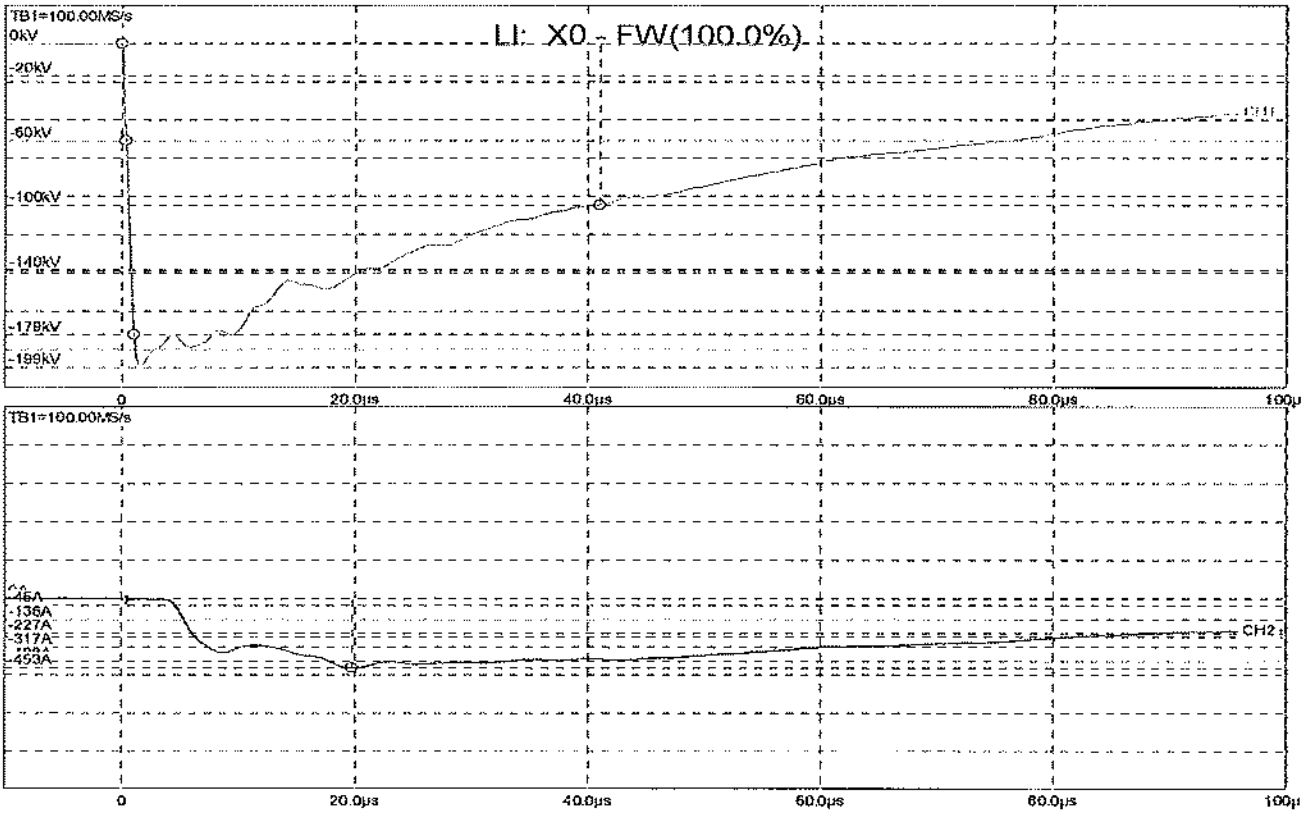
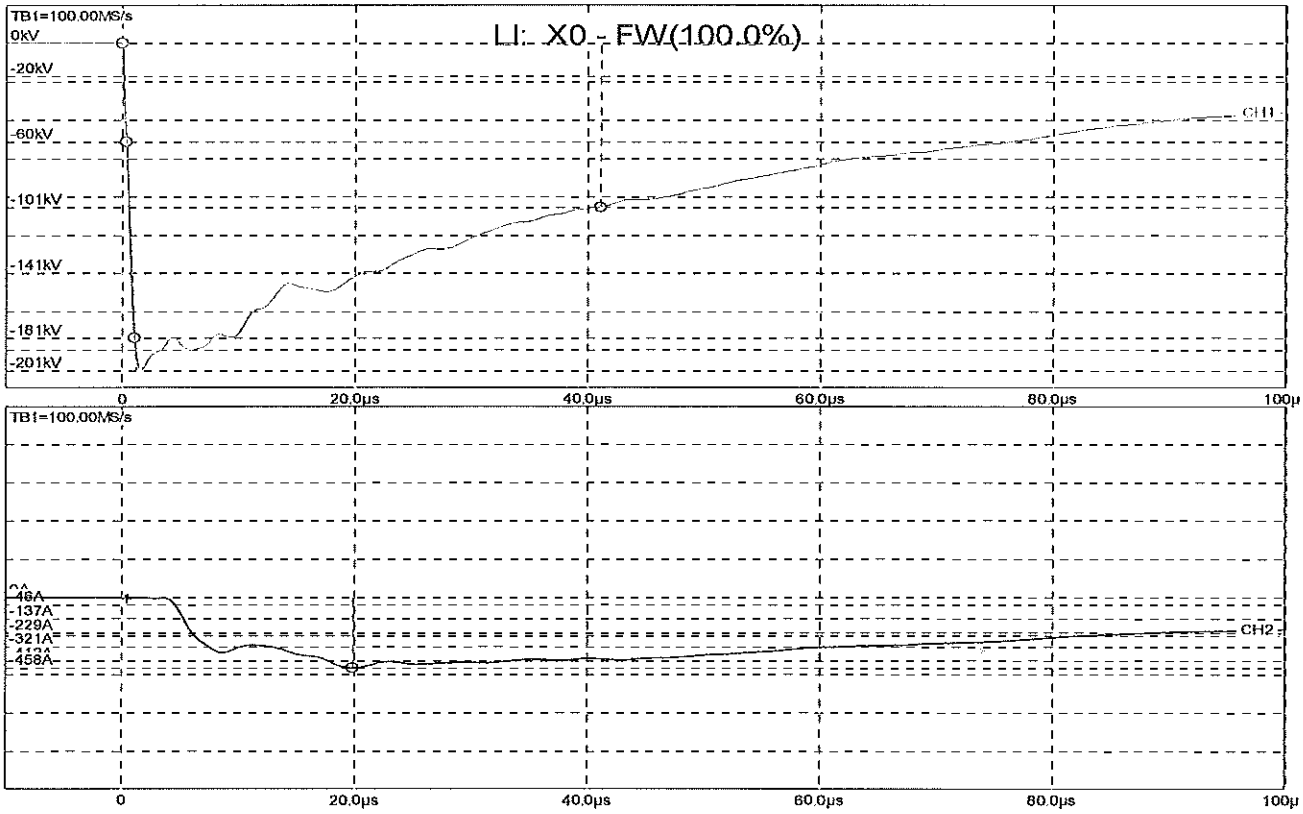




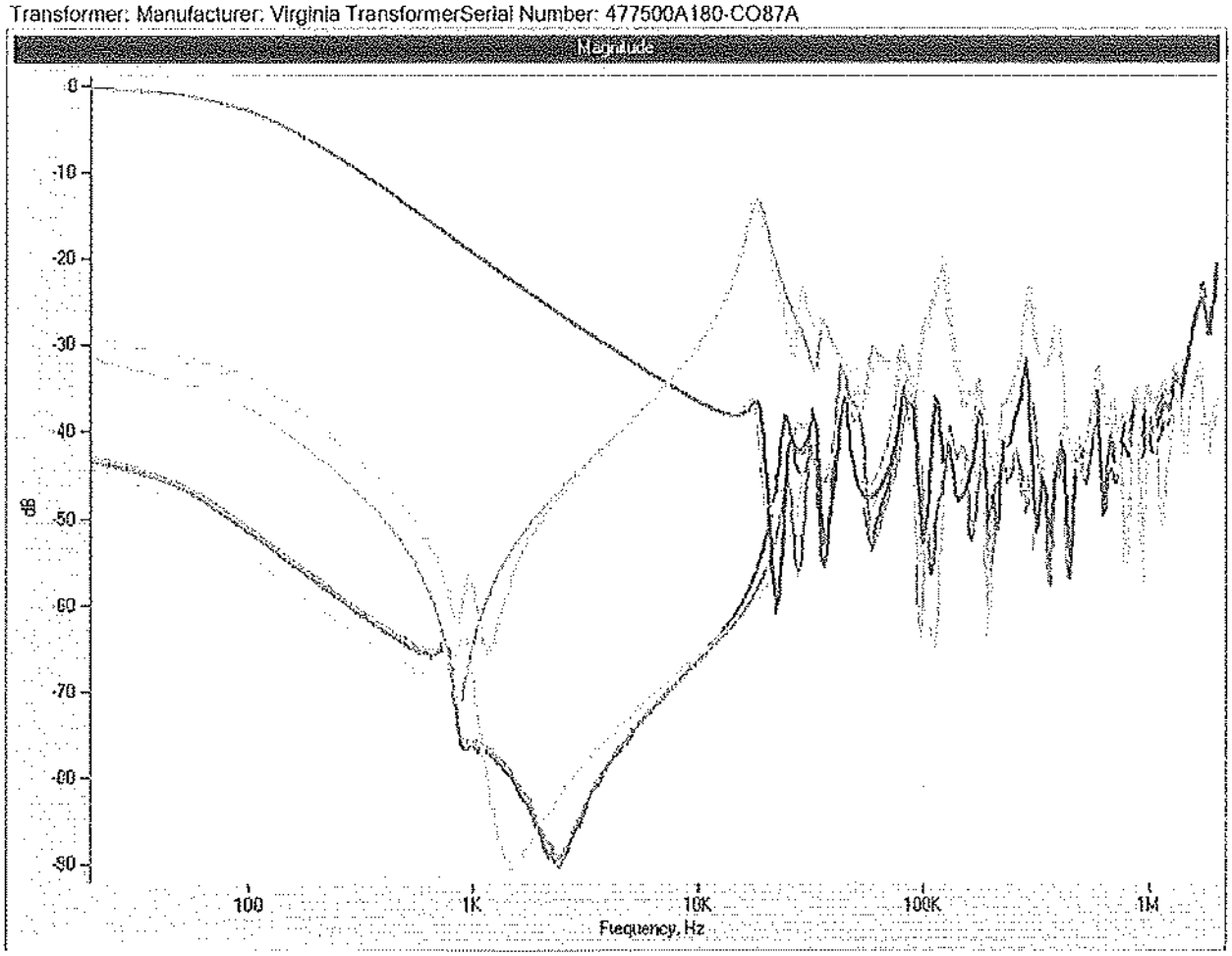



LI: X0 - RW(50.0%)
TB1=100.00MS/s
0kV
-10kV
-30kV
-50kV
-71kV
-91kV
-101kV
CH1
0
20.0µs
40.0µs
60.0µs
80.0µs
100µ
TB1=100.00MS/s
-23A
-69A
-115A
-161A
-229A
CH2
0
20.0µs
40.0µs
60.0µs
80.0µs
100µ


LI: X0 - FW(100.0%)
TB1=100.00MS/s
0kV
-20kV
-60kV
-100kV
-140kV
-179kV
-199kV
CH1
0
20.0µs
40.0µs
60.0µs
80.0µs
100µ
TB1=100.00MS/s
-46A
-136A
-227A
-317A
-453A
CH2
0
20.0µs
40.0µs
60.0µs
80.0µs
100µ

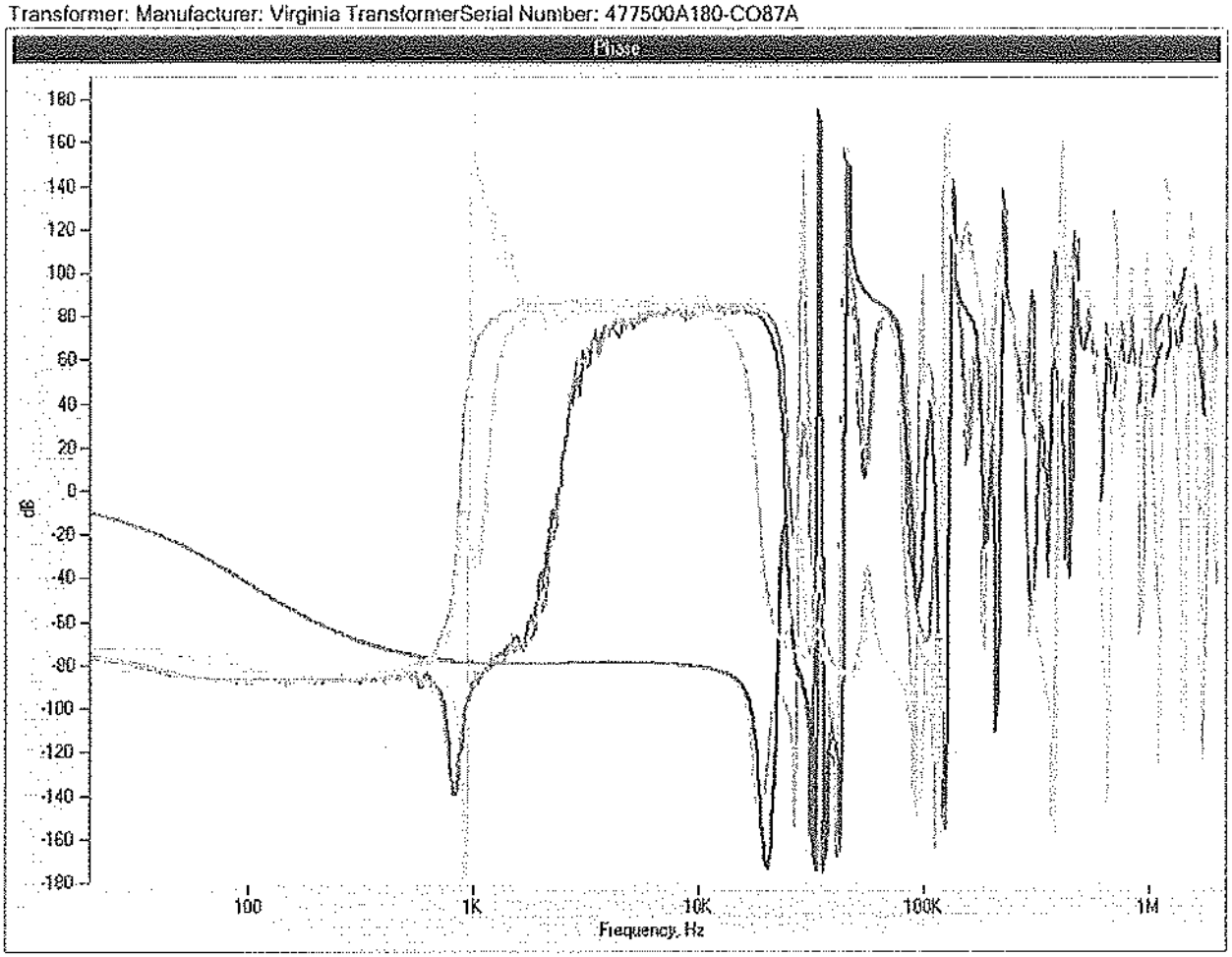

TB1=100.00MS/s
LI: X0 - FW(100.0%)
0kV
-20kV
-60kV
-101kV
-141kV
-181kV
-201kV
CH1
0
20.0µs
40.0µs
60.0µs
80.0µs
100µ
TB1=100.00MS/s
46A
-137A
-229A
-321A
-458A
CH2
0
20.0µs
40.0µs
60.0µs
80.0µs
100µ

Transformer: Manufacturer: Virginia TransformerSerial Number: 477500A180-CO87A

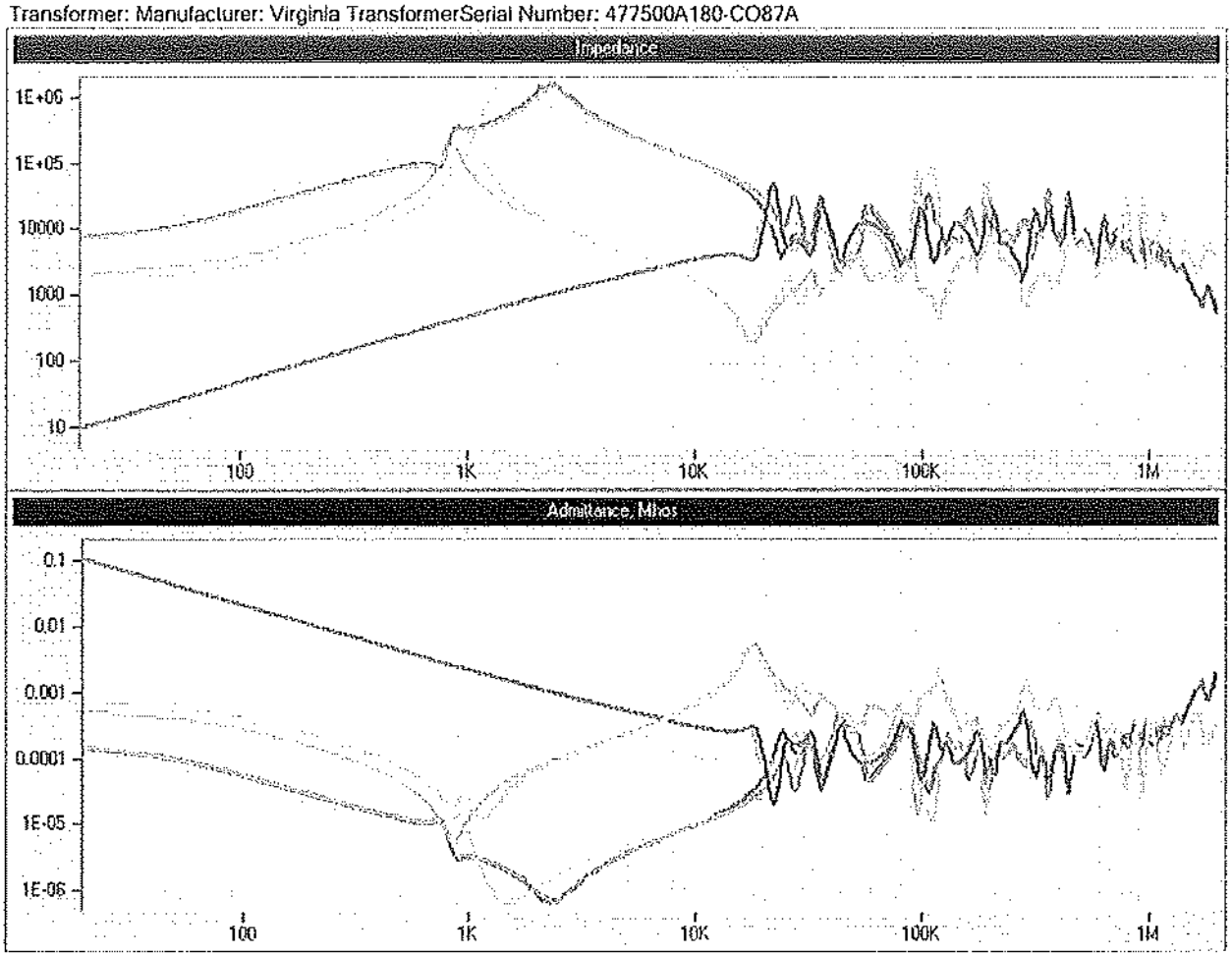


H1-H2_2014-02-06_21-02-27	Manufacturer: Virginia TransformerSerial Number: 477500A180-CO87ADate: 2/6/2014 9:02:27 PM LTC:NADETC: 3MVA Maximum: 0
H2-H1_2014-02-06_21-08-43	Manufacturer: Virginia TransformerSerial Number: 477500A180-CO87ADate: 2/6/2014 9:08:43 PM LTC:NADETC: 3MVA Maximum: 0
H3-H2_2014-02-06_21-14-00	Manufacturer: Virginia TransformerSerial Number: 477500A180-CO87ADate: 2/6/2014 9:14:00 PM LTC:NADETC: 3MVA Maximum: 0
H3-H2_2014-02-06_21-19-03	Manufacturer: Virginia TransformerSerial Number: 477500A180-CO87ADate: 2/6/2014 9:19:03 PM LTC:NADETC: 3MVA Maximum: 0
H2-H1_2014-02-06_21-23-27	Manufacturer: Virginia TransformerSerial Number: 477500A180-CO87ADate: 2/6/2014 9:23:27 PM LTC:NADETC: 3MVA Maximum: 0
H1-H3_2014-02-06_21-27-36	Manufacturer: Virginia TransformerSerial Number: 477500A180-CO87ADate: 2/6/2014 9:27:36 PM LTC:NADETC: 3MVA Maximum: 0
X1-X0_2014-02-06_21-34-53	Manufacturer: Virginia TransformerSerial Number: 477500A180-CO87ADate: 2/6/2014 9:34:53 PM LTC:NADETC: 3MVA Maximum: 0
X2-X0_2014-02-06_21-39-46	Manufacturer: Virginia TransformerSerial Number: 477500A180-CO87ADate: 2/6/2014 9:39:46 PM LTC:NADETC: 3MVA Maximum: 0
X3-X0_2014-02-06_21-43-24	Manufacturer: Virginia TransformerSerial Number: 477500A180-CO87ADate: 2/6/2014 9:43:24 PM LTC:NADETC: 3MVA Maximum: 0

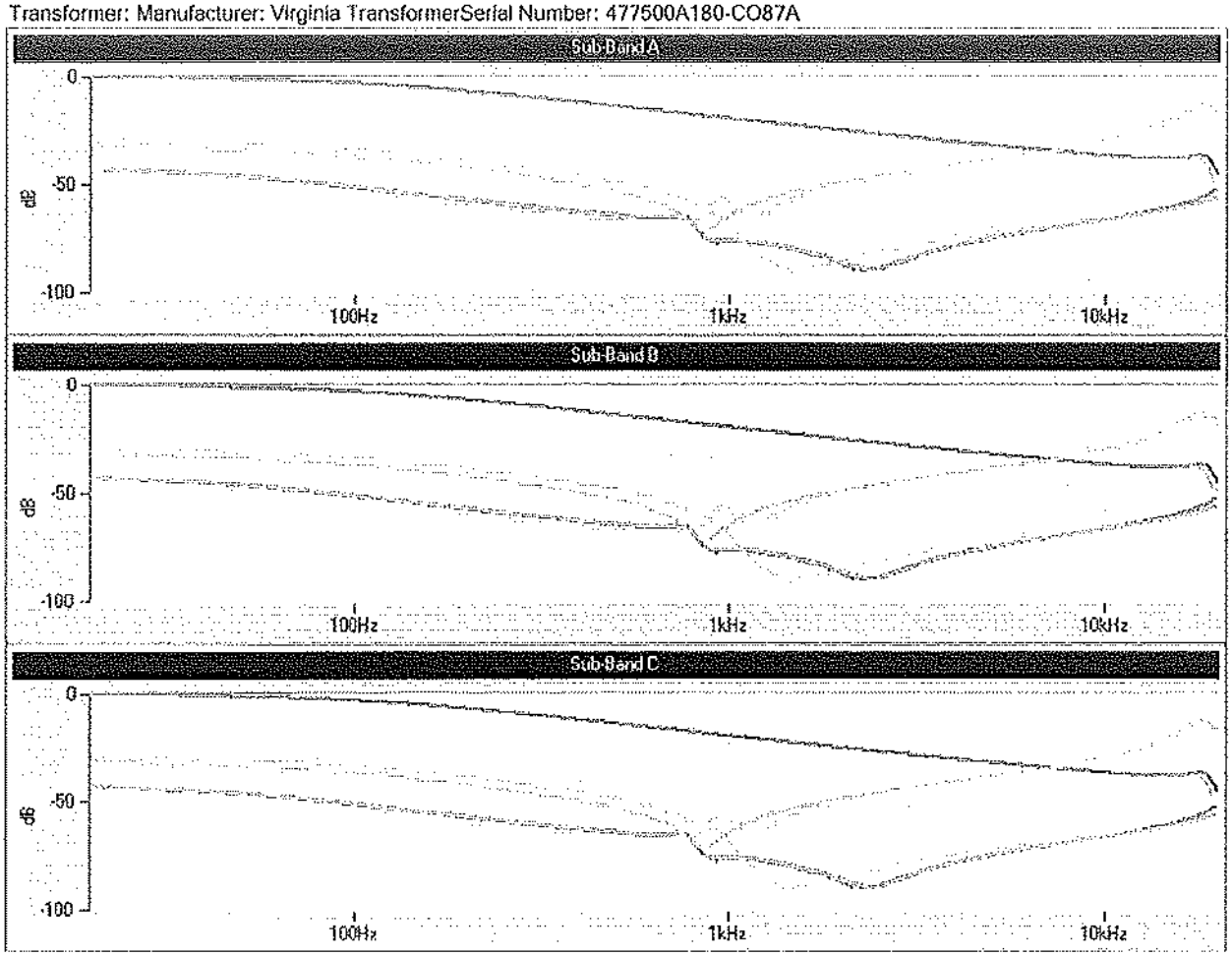
Transformer: Manufacturer: Virginia TransformerSerial Number: 477500A180-CO87A



Transformer: Manufacturer: Virginia TransformerSerial Number: 477500A180-CO87A



Transformer: Manufacturer: Virginia TransformerSerial Number: 477500A180-CO87A



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TEST REPORT
01-6626866-437039-00

Virginia Transformer Corporation	**Serial#:**	C087A	**Mfr:**		**Control#:**	6626866
	Location:	BEFORE TEST	**kV:**		**Order#:**	437039
	Equipment:	TRANSFORMER	**kVA:**		**Account:**	1069
ROANOKE, VA 24012 US	**Compartment:**	MAIN(BOTTOM)	**Year Mf'd:**		**Received:**	02/10/2014
ATTN: KIM FINK	**Breathing:**	SEAL	**Syringe ID:**	52003875	**Reported:**	02/12/2014
PO#: DAVE BISHOP	**Bank:**	**Phase:**	**Bottle ID:**			
Project ID:	**Fluid:**	MIN	**Sampled By:**			
Customer ID:						

	Lab Control Number:	6626866
	Date Sampled:	02/08/2014
	Order Number:	437039
	Oil Temp:	
Dissolved Gas Analysis (DGA)	**Hydrogen (H2) (ppm):**	<2
ASTM	**Methane (CH4) (ppm):**	<1
D-3612[1]	**Ethane (C2H8) (ppm):**	<1
	Ethylene (C2H4) (ppm):	<1
	Acetylene (C2H2) (ppm):	<1
	Carbon Monoxide (CO) (ppm):	2
	Carbon Dioxide (CO2) (ppm):	114
	Nitrogen (N2) (ppm):	12859
	Oxygen (O2) (ppm):	6123
	Total Dissolved Gas (TDG) (ppm):	19098
	Total Dissolved Combustible Gas (TDCG) (ppm):	2
	Equivalent TCG (%):	0.0090
DGA	**DGA Keys Gas / Interpretive Method:**	Hydrogen within condition 1 limits (100 ppm).
Diagnostics	**PER IEEE C57.104-2008**	Methane within condition 1 limits (120 ppm).
	(most recent sample)	Ethane within condition 1 limits (65 ppm).
		Ethylene within condition 1 limits (50 ppm).
		Acetylene within condition 1 limits (1 ppm).
		Carbon Monoxide within condition 1 limits (350 ppm).
		Carbon Dioxide within condition 1 limits (2500 ppm).
		TDCG within condition 1 limits (720 ppm).
	DGA TDCG Rate Interpretive Method:	No previous sample available.
	PER IEEE C57.104-2008	
	(two most recent sample)	
	DGA Cellulose (Paper) Insulation:	CO2/CO Ratio not applicable - neither gas exceeds its limit.
	WDS DGA Condition Code:	NORMAL
	WDS Recommended Action:	Continue normal operation. Resample for testing within one year.
Comment:		

End of Test Report

Authorized By: _____
JAMES F. NEAL
SUPERVISING CHEMIST

Notations: 1. Analysis is ISO/IEC 17025:2005 accredited, L-A-B Accredited Certificate Number L2303.05 2. This test is conducted by a subcontracted laboratory. 3. Subcontracted laboratory has received ISO Standard 17025 accreditation for this test. 5. This test is conducted by Weidmann Laboratory other than Primary Lab. 6. Weidmann Laboratory has received ISO Standard 17025 accreditation for this test. 7. Imported Sample: WEIDMANN Diagnostic Solutions accepts no responsibility for these results; accreditation status does not apply to these results. 8. Imported Equipment

Accreditation applies to current analysis only. The analyses, opinions or interpretations contained in this report are based upon material and information supplied by the client. WEIDMANN Diagnostic Solutions does not imply that the contents of the sample received by this laboratory are the same as all such material in the environment from which the sample was taken. Our test results relate only to the sample or samples tested. Any interpretations or opinions expressed represent the best judgment of WEIDMANN Diagnostic Solutions. WEIDMANN Diagnostic Solutions assumes no responsibility and makes no warranty or representation, expressed or implied as to the condition, productivity or proper operation of any equipment or other property for which this report may be used or relied upon for any reason whatsoever. This test report shall not be reproduced except in full, without written approval of the laboratory.

A Member of the WICOR Group

WEIDMANN

WEIDMANN DIAGNOSTIC SOLUTIONS
5305 COMMERCE SQUARE DRIVE + INDIANAPOLIS, IN + 46237
317 888 7288 + 317 888 2577
WWW.WEIDMANN-DIAGNOSTICS.COM

TEST REPORT
01-6626868-437039-00

Virginia Transformer Corporation	**Serial#:** C087A	**Mfr:**	**Control#:** 6626868
	Location: AFTER TEST	**kV:**	**Order#:** 437039
	Equipment: TRANSFORMER	**kVA:**	**Account:** 1069
ROANOKE, VA 24012 US	**Compartment:** MAIN(BOTTOM)	**Year Mf'd:**	**Received:** 02/10/2014
ATTN: KIM FINK	**Breathing:** SEAL	**Syringe ID:** 52003613	**Reported:** 02/12/2014
PO#: DAVE BISHOP	**Bank:** **Phase:**	**Bottle ID:**	
Project ID:	**Fluid:** MIN	**Sampled By:**	
Customer ID:			

	Lab Control Number:	6626868
	Date Sampled:	02/06/2014
	Order Number:	437039
	Oil Temp:	
Dissolved Gas Analysis (DGA)	**Hydrogen (H2) (ppm):**	<2
ASTM	**Methane (CH4) (ppm):**	<1
D-3612[1]	**Ethane (C2H6) (ppm):**	<1
	Ethylene (C2H4) (ppm):	<1
	Acetylene (C2H2) (ppm):	<1
	Carbon Monoxide (CO) (ppm):	2
	Carbon Dioxide (CO2) (ppm):	121
	Nitrogen (N2) (ppm):	14479
	Oxygen (O2) (ppm):	6530
	Total Dissolved Gas (TDG) (ppm):	21132
	Total Dissolved Combustible Gas (TDCG) (ppm):	2
	Equivalent TCG (%):	0.0081
DGA	**DGA Keys Gas / Interpretive Method:**	Hydrogen within condition 1 limits (100 ppm).
Diagnostics	**PER IEEE C57.104-2008**	Methane within condition 1 limits (120 ppm).
	(most recent sample)	Ethane within condition 1 limits (65 ppm).
		Ethylene within condition 1 limits (50 ppm).
		Acetylene within condition 1 limits (1 ppm).
		Carbon Monoxide within condition 1 limits (350 ppm).
		Carbon Dioxide within condition 1 limits (2500 ppm).
		TDCG within condition 1 limits (720 ppm).
	DGA TDCG Rate Interpretive Method:	No previous sample available.
	PER IEEE C57.104-2008	
	(two most recent sample)	
	DGA Cellulose (Paper) Insulation:	CO2/CO Ratio not applicable - neither gas exceeds its limit.
	WDS DGA Condition Code:	NORMAL
	WDS Recommended Action:	Continue normal operation. Resample for testing within one year.
Comment:		

End of Test Report

Authorized By: _____
JAMES F. NEAL
SUPERVISING CHEMIST

Notations: 1. Analysis is ISO/IEC 17025:2005 accredited, L-A-B Accredited Certificate Number L2303.05 2. This test is conducted by a subcontracted laboratory. 3. Subcontracted laboratory has received ISO Standard 17025 accreditation for this test. 5. This test is conducted by Weidmann Laboratory other than Primary Lab. 6. Weidmann Laboratory has received ISO Standard 17025 accreditation for this test. 7. Imported Sample: WEIDMANN Diagnostic Solutions accepts no responsibility for these results; accreditation status does not apply to these results. 8. Imported Equipment

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ERGON

Ergon Global

Hyvolt II C50B
Certificate of Analysis

Customer:	Virginia Transformer	P. D. No.:	CSR0053	Date:	1/27/2014
Destination:	Roanoke, VA	Tank:	107	Time:	14:48
Order/Lot No.:	L132214	Cert Date:	1/25/14	Vessel:	52-2923
Product Code:	N/A	Cert No.:	AE43606	Volume:	See Bill of Lading

TEST DESCRIPTION	METHOD	SPECIFICATION	INSPECTION
Viscosity, cSt @ -40°C	ASTM D 445	6000 max.	4805
Viscosity, cSt @ 0°C	ASTM D 445	76.0 max.	65.3
Viscosity, cSt @ 40°C	ASTM D 445	12.0 max.	10.4
Specific Gravity, 15.6°C	ASTM D 4052	0.9060 max.	0.8838
Flash Point, CDC, °C	ASTM D 92	145 min.	157
Color, ASTM	ASTM D 6045	0.5 max.	L0.5
Pour Point, °C	ASTM D 5949	-40 max.	-67
Interfacial Tension, 25°C, dynes/cm	ASTM D 971	40 min.	46
Dielectric Breakdown @ 60 Hz, kv	ASTM D 877	30 min.	40
Dissipation Factor @ 60 Hz, 25°C, %	ASTM D 924	0.05 max.	0.006
Dissipation Factor @ 60 Hz, 100°C, %	ASTM D 924	0.5 max.	0.033
Rotating Bomb Test, Minutes	ASTM D 2112	195 min.	263
Oxidation Inhibitor Content, wt%	ASTM D 2668	0.08 to 0.40	0.25
Corrosive Sulfur	ASTM D 1275 (B)	NONCORROSIVE	NONCORROSIVE
Water Content, ppm	ASTM D 1533	35 max.	12
Neutralization Number, mg KOH/g	ASTM D 974	0.03 max.	0.01
PCB Content, ppm	ASTM D 4059	2 max.	NOT DETECTED
Visual Examination	ERTM-2	PASS	PASS
Dielectric Breakdown @ 60 Hz: kV, 2-mm	ASTM D 1816	35 min.	48

ERI COA No.:
AE43941

Antonio Eaves

Certified by Ergon Authorized Representative

P. O. Box 309 • Vicksburg, MS 39180
Phone (601) 630-8300 • Fax (601) 630-8327

Acoustic Environmental Test

SC 800CP-US central inverter

(Extract of Test report SC800CP-US-91:LE1613)

1 Overview

Project title:	SC800CP-US
Type of test / thresholds and requirements:	Sound level measurement according to DIN EN ISO 3744:2011-02 and DIN EN ISO 9614-2:2010-11 of sinusoidal, irregularly shaped, transient signals. Classification of ambient conditions in compliance with the German Noise Control Guidelines (TA Lärm). (according to Section 2)
Type of device:	e.g. solar central inverter for large-scale PV power plants
Type designation:	SC800CP-US
Test specification:	Level of emissions according to the German Noise Control Guidelines and acoustic power

2 Results

The EN 3744:04/2005 and German Noise Control Guidelines form the testing specification for the thresholds and requirements	Requirement		Results [dBA]/ without fan (distance 1m)	Results [dBA]/ with fan (distance 1m)
	Standard (Germany)	**SMA**		
EN 3744:2011-02 typical value; LAeq averaged [1)]	-	-	-	78,74
§48 of the German Federal Emission Control ACT (BImSchG): 09-2002 German Noise Control Guidelines; L_{pa} [2)]	-	-	-	77,81
EN 9614-2 sound power L_{WA} [3)]	-	-	-	92,30
Sound pressure level in 10m L_{xpA} [4)]	-	-	-	64,31
Sound pressure level in 50m L_{xpA} [4)]	-	-	-	50,32
Overall result (if applicable)			*Standard requirments: - passed	

* Dependent on the local conditions at the mounting location (distance of 10m standard)

3 Operating States

The following states and configurations have been defined as operating conditions:

- Operation of the inverter.
- Operating conditions: UDC =820 V; 800 kW
- The device fans must be running.
- The unit under test must have reached its operating temperature.
- The unit under test must have reached an operating temperature of 25°C.

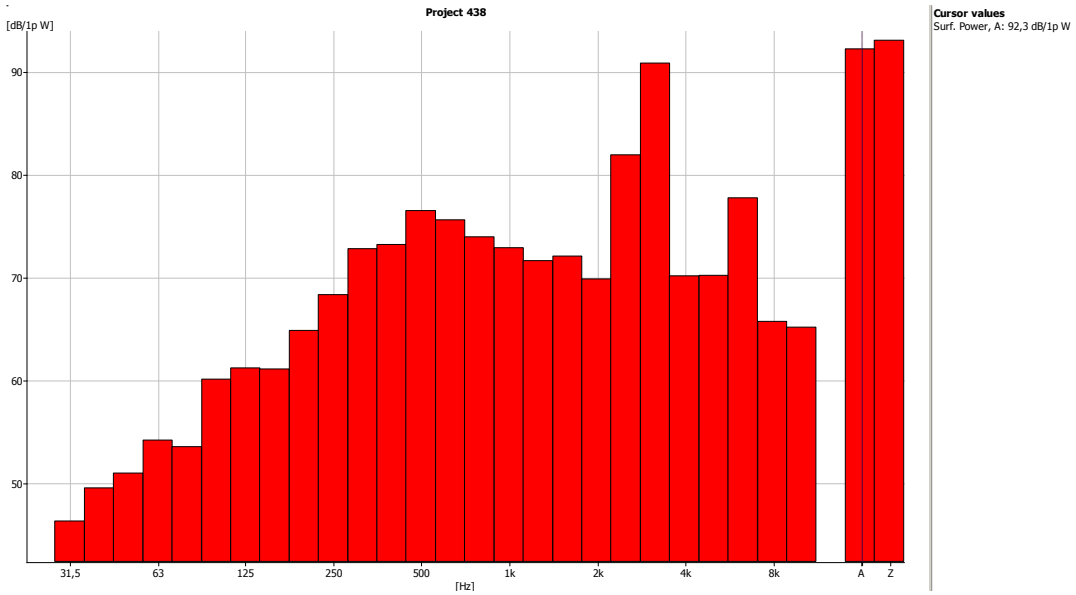
4 Calculating the Acoustic Power

L_{pA} =	average sound pressure level on the measurement surface [dB_A] *	77.81
S =	overall measurement surface [m^2]	28.09
S_0 =	1 [m^2]	

* This specified spatially/temporally averaged sound pressure level was determined using the calcu-lated acoustic power level.
$L_{PA} = L_{WA} - 10\log (S/S_0)$

Acoustic power of L_{WA}= 92,3 dBA/W results for the measurement.

Acoustic Power Levels of the Third Octave Band Frequencies According to EN ISO 9614-2



A-rated sound power = 92.3 $dB_{A/W}$

Z-rated sound power = 93.1 $dB_{A/W}$

A-rated acoustic power – based on physiologic human hearing

Z-rated acoustic power – technically linear measured value

5 Overview of the Acoustic Power

Third octave band center frequency [Hz]	Acoustic power- level LwA [dBA/pW] 880 kW	Acoustic power- level LwZ [dBA/pW] 880 kW
25 Hz	42,33	–
31.5 Hz	46,34	–
40 Hz	49,56	–
50 Hz	51	–
63 Hz	54,21	–
80 Hz	53,57	–
100 Hz	60,14	–
125 Hz	61,23	–
160 Hz	61,13	–
200 Hz	64,88	–
250 Hz	68,36	–
315 Hz	72,83	–
400 Hz	73,24	–
500 Hz	76,54	–
630 Hz	75,64	–
800 Hz	73,99	–
1 kHz	72,93	–
1.25 kHz	71,67	–
1.6 kHz	72,11	–
2 kHz	69,89	–
2.5 kHz	81,96	–
3.15 kHz	90,89	–
4 kHz	70,19	–
5 kHz	70,24	–
6.3 kHz	77,78	–
8 kHz	65,76	–
10 kHz	65,2	–
Acoustic power above the surface	A-rated	Z-rated
	92,3	93.1

6 Deriving the Emission Sound Pressure Level at a Distance

The calculated acoustic power can be used to derive an A-rated sound pressure level L_{xpA} for undirected sources at any distance x.

$$LxpA = LwA + Ko - 10 \cdot \log\left(4 \cdot \pi \cdot \frac{X^2}{So}\right)$$

K_0 = solid angle index on the floor 3 [dB]
X = distance from the source [m]
S_0 = 1 m

Device	Distance X [m]	Sound pressure level LxpA [dBA] without fan	Sound pressure level LxpA [dBA] with fan
SC800CP-US	10	–	64,30
	50	–	50.33

7 Appendix - Calculations

deriving sound pressure level at a distance

LxpA = LWA + K0 - 10log (4*PI*(x^2/S0))

LWA 92,3dB
K0 3dB
x 10m
S0 1m

LxpA 64,31dBA

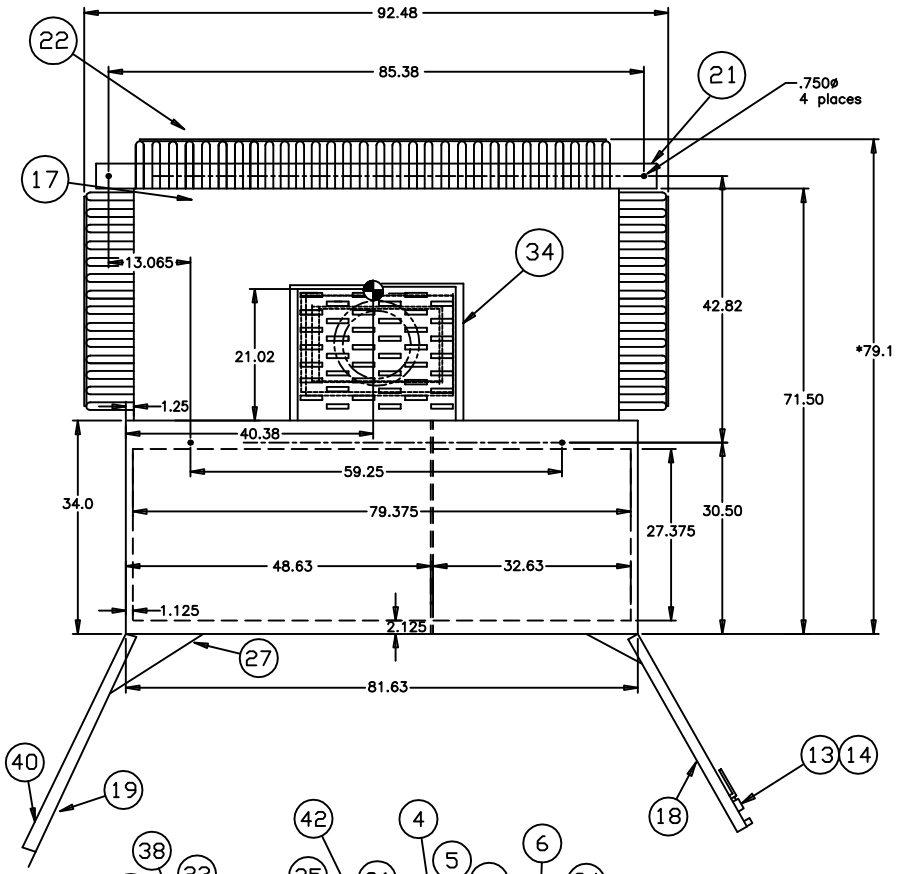
CANADIAN SOLAR

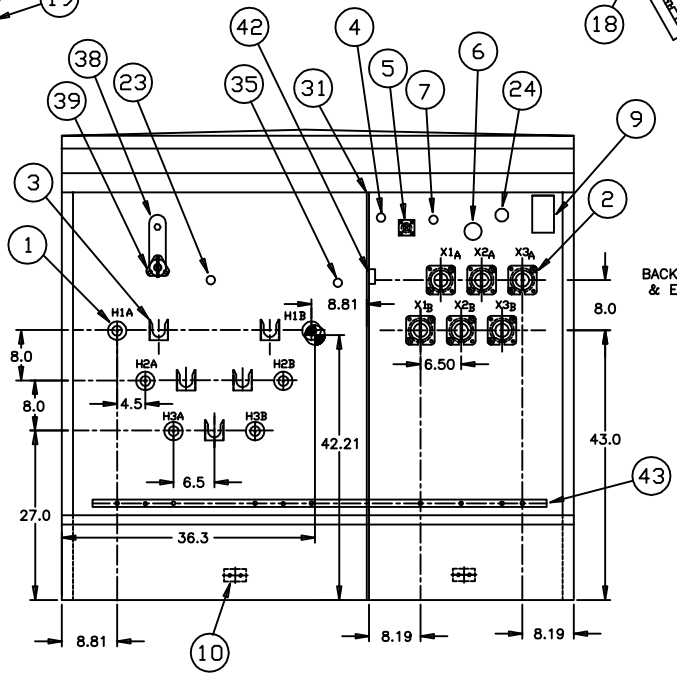
S.O.# 496900845-1

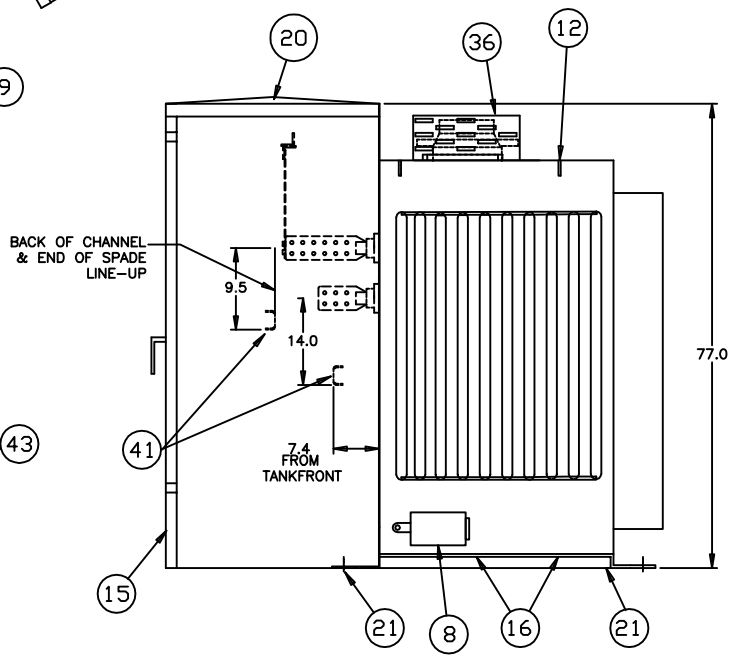
KVA= 1600
H.V.= 27600 DELTA
L.V.= 2 X 360Y

= CENTER OF GRAVITY

NOTES:
3 WINDING DESIGN
ALUMINUM WINDINGS
FR3 FLUID FILLED
*DOOR HANDLE ADDS APPROX. 2" TO THIS DIMENSION OVERALL







LV SIDE VIEW

R1	AB	TM	----	10/04/13	CG POWER SYSTEMS USA INC WASHINGTON, MO 63090, USA	NAME: LOOP FEED TRANSFORMER OUTLINE					
						MAT'L: ---					
						DATE: 9/30/2013	PART NUMBER: LF04895A				REV: 1
ADDED INSIDE CABINET DIMENSION (2.125).						DECIMAL ± .032	ANGULAR ± 2°	FRACTIONAL ± 1/32	SCALE TM	TOLERANCES (except as noted) ± .032	DRAWN BY: ZW	APPROVED TM

ALL ITEMS MARKED " ☒ " ARE INCLUDED

ITEM NO.		DESCRIPTION
1	☒	High Voltage Bushings
		Wells
		Load Break Inserts
	☒	600AMP Non-Loadbreak 35KV 150BIL
		HJ 12-001-0
2	☒	Low Voltage Bushings
		4 Hole H Spade
	☒	6 Hole J Spade(Qty 3) HJ 10-023-101
	☒	12 Hole Supported J Spade(Qty 3) HJ 10-023-104
3	☒	Parking Stand
4	☒	Pres. Relief Val.(VIAT 302-060-01N)
5		Provision For Liquid Level Ga.
	☒	Liquid Level Ga.(QUAL 035-008-01)
		With Contacts
6	☒	Liquid Temp. Ga.(QUAL 165-205-01)
		With Contacts
7	☒	Oil Fill Plug W/Schrader Valve
		Oil Drain Plug 1"
		Oil Drain Plug And Sampler
		Oil Drain Valve
8	☒	Oil Drain Valve & Sampler
		(APEX APS/114) In Padlockable Box
9	☒	Nameplate
10	☒	2-Hole ANSI Ground Pads Without Lugs
		Ground Nuts
		Low Voltage Ground Strap
12	☒	Lifting Lugs
13	☒	Padlock Facility And Door Bolt
	☒	Pentahead Bolt
		Hexhead Bolt
14	☒	Low Voltage Door Handle
15	☒	Removable Lower Front Sill
16	☒	Base Arrangement For Rolling
		In Two Directions
17	☒	Transformer Tank
18	☒	Low Voltage Compartment Door
19	☒	High Voltage Compartment Door

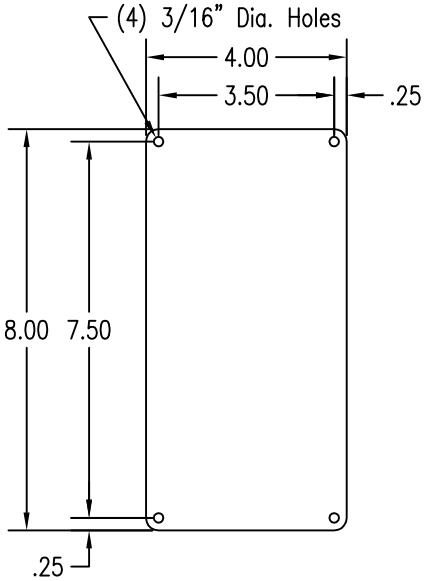
ITEM NO.		DESCRIPTION
20	☒	Domed & Raised Air Compartment Top
		Doors With Weather Stripping
21	☒	Hold Down Brackets
22	☒	Cooling Fins
		Radiators
23	☒	Tap Changer
	☒	"B"Taps +5% +2.5% -2.5% -5%
24	☒	Pressure Vacuum Gauage (QUAL 50-35E)
25	☒	Cartridge Fuse
		35KV CURVE 9 (A.B.B. 345B995G27)
26		Plastic Dripshield W/Absorbent Pad
27	☒	Door holding bars 90° & 110° open position
28	☒	Partial Range Current Limiting Fuses
		HI-TECH HTSS 372125
29	☒	Paint GRAY RAL 7035
30		Additional Protective Coating
31	☒	High-Low Barrier
32	☒	Stainless Steel Hinges
33	☒	All Bushings Are externally clamped.
34	☒	14" x 24" Handhole
35	☒	2-Position L.B. Switch A.B.B.(L150BC3003)
36	☒	Cover Mounted Pressure Relief
		Device (QUAL 208-60U)
37	☒	Isolated Core Ground (Accessible Thru
		Handhole) (Not Shown)
38	☒	Ground Strap for Static Shield
39	☒	Static Shield Bushing
40		Nema 4 enclosure containing fused
		disconnect switch
41	☒	Fiberglass Cable Support
42	☒	Terminal Block for Guage Contacts
43	☒	Ground bar

CG POWER SYSTEMS USA INC
WASHINGTON, MO 63090, USA

NAME: LOOP FEED TRANSFORMER OUTLINE						
MAT'L: ---						
DATE: 9/27/2013	PART NUMBER: LF04735D					REV: 0
DECIMAL ± .032	ANGULAR ± 2°	FRACTIONAL ± 1/32	SCALE NTS	TOLERANCES (except as noted) ± .032	DRAWN BY: ZW	APPROVED TM

S.O.# 496900845

S.N.: ----



MATERIAL: STN. STL.
(4).1875" DIA. MTG.
HOLES ON CENTERLINE
3.5" x 7.5" APART.
SIZE OF PLATE 4.0"
x 8.0" WITH .25"
CORNER RADIUS.

CG POWER SYSTEMS USA INC
MANUFACTURED IN WASHINGTON MO 63090 USA
THREE PHASE TRANSFORMER 65°C RISE 60 HZ. CLASS KNAN ENVIROTEMP FR3 FLUID

1600kVA HV (AL) 27600 DELTA
LV (AL) 2 X 360Y

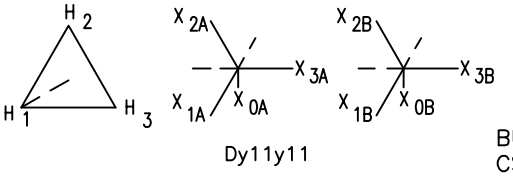
S/N
MODEL MB160276BE72003

H–X %IMP
H–XA %IMP
H–XB %IMP
XA–XB %IMP

CORE & COIL (UNTANKING) 2215 kG
TANK & FITTINGS 1301 kG
LIQUID 2388 LIT. 2118 kG
TOTAL 5634 kG
DATE OF MFG. ---
FOR OPERATION BELOW 1000 m ASL

% RATED VOLTAGE	SWITCH POSITION
105.0	1
102.5	2
100.0	3
97.5	4
95.0	5

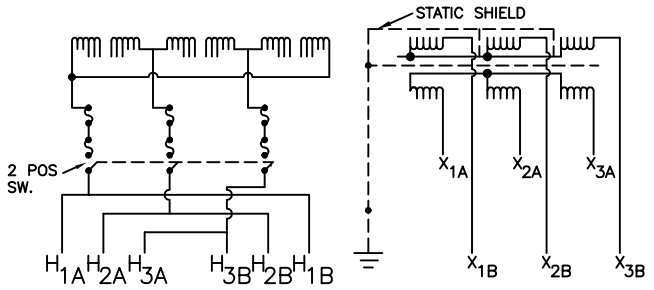
H.V.BIL. 150 K.V.
L.V.BIL. 30 K.V.



BUILT PER APPLICABLE
CSA STANDARDS

LIQUID CONTAINS LESS THAN 1 PPM PCB AT TIME OF MANUFACTURE.
25°C LIQUID LEVEL IS 152 MM BELOW TOP OF HANDHOLE FLANGE.
LIQUID LEVEL CHANGES 12 MM PER 10°C CHANGE IN LIQUID TEMPERATURE.
OPERATING PRESSURES OF LIQUID PRESERVATION SYSTEM ARE +50 kPA MAX
AND –14 kPA MIN. TANK IS DESIGNED FOR 21 kPA VACUUM FILLING.
REFER TO INSTRUCTION BOOK NO. 7–8102.

38064498A01 13634-1



TRANSFORMER FOR STEP UP OPERATION

SOLARPAD TRANSFORMER

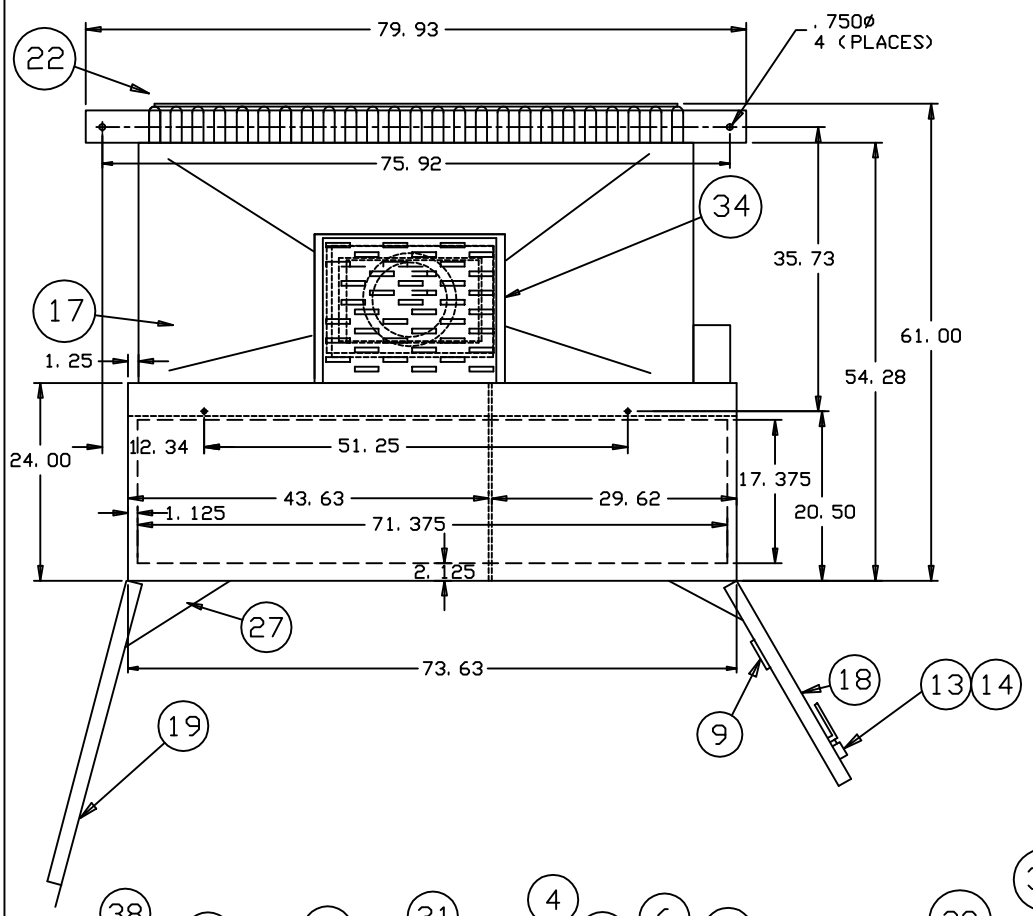
3–WINDING
ENVIROTEMP FR3 FLUID

R1	TM	RR	----	10/2/2013
REVISED TO INCLUDE REFERENCE TO CSA STANDARDS				

CG POWER SYSTEMS USA INC
WASHINGTON, MO 63090, USA

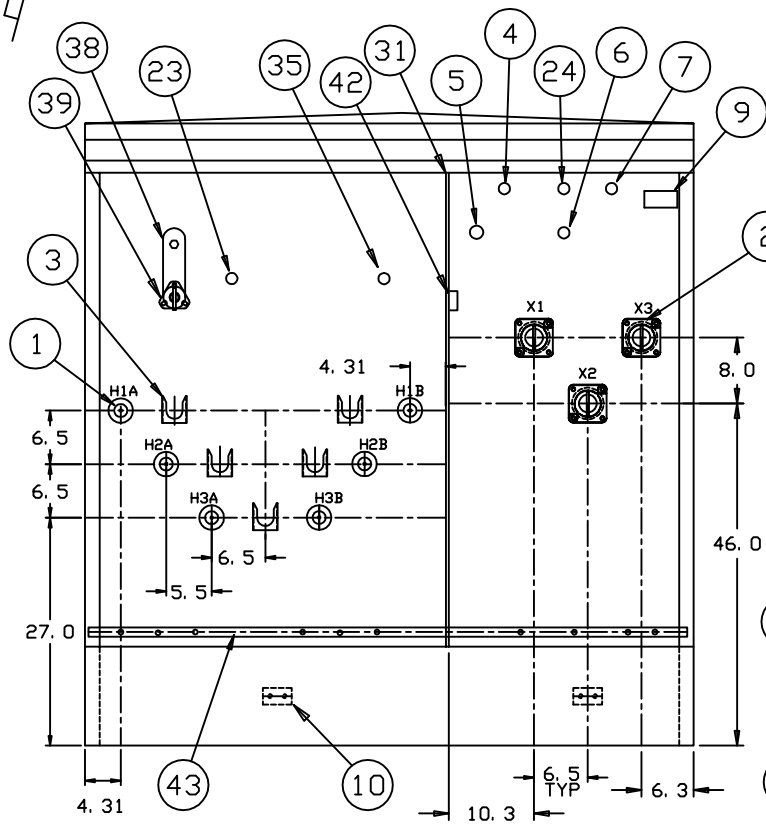
NAME: D–Y NAMEPLATE
MAT'L: 38018693A01 (Stainless Steel)
DATE: 9/27/2013
PART NUMBER: 38064498A01
REV: 1

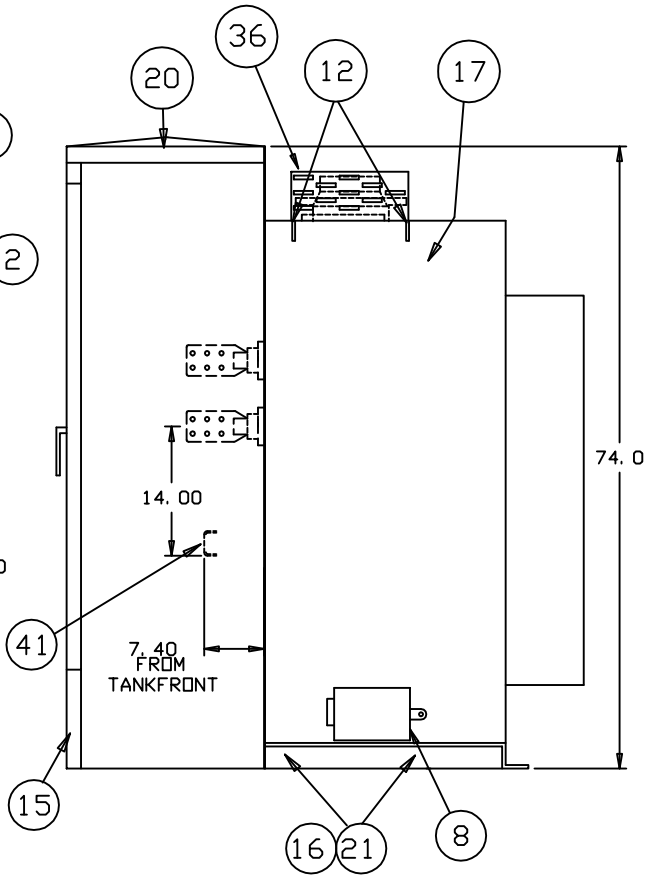
DECIMAL	ANGULAR	FRACTIONAL	SCALE	TOLERANCES (except as noted)	DRAWN BY:	APPROVED
± .032	± 2°	± 1/32	NTS	± .032	TM	RR



CANADIAN SOLAR

KVA = 800
H.V. = 27600 DELTA
L.V. = 360Y
LIT. OIL = 1318
TOTAL WT. = 3473 KG





R2	AB	TM	----	10/7/2013	
ADDED INSIDE CABINET DIMENSION (2. 125).					
R1	AB	TM	----	10/02/13	
ADDED INSIDE CABINET DIMENSIONS (17. 375, 71. 375)					

CG POWER SYSTEMS USA INC.
WASHINGTON, MO 63090, USA

NAME:	LOOP FEED TRANSFORMER OUTLINE
MAT'L:	---
DATE: 8/30/2013	PART NUMBER: LF04870A
SHEET 1	REV: 2
DECIMAL ---	ANGULAR ---
FRACTIONAL ---	SCALE NTS
TOLERANCES (except as noted) ---	DRAWN BY: ZW
APPROVED DC	

ALL ITEMS MARKED " ☒ " ARE INCLUDED

ITEM NO.		DESCRIPTION
	☒	High Voltage Bushings
		Wells
		Load Break Inserts
	☒	600AMP Non-Loadbreak 35KV 150BIL
1		HJ 12-001-103
	☒	Low Voltage Bushings
		4 Hole H Spade
	☒	6 Hole J Spade (Qty 3)
		HJ 10-023-101
		12 Hole Supported J Spade
2		10 Hole Supported J Spade
3	☒	Parking Stand
4	☒	Pres. Relief Val.(VIAT 302-060-01N)
		Provision For Liquid Level Ga.
	☒	Liquid Level Ga.(QUAL 035-008-01)
5		With Contacts
	☒	Liquid Temp. Ga.(QUAL 165-205-01)
6		With Contacts
7	☒	Oil Fill Plug
		Oil Drain Plug 1"
		Oil Drain Plug And Sampler
		Oil Drain Valve
	☒	Oil Drain Valve & Sampler
8		(APEX APS/114) In Padlockable Box
9	☒	Nameplate
	☒	2-Hole ANSI Ground Pads Without Lugs
10		Ground Nuts
11		Low Voltage Ground Strap
12	☒	Lifting Lugs
	☒	Padlock Facility And Door Bolt
	☒	Pentahead Bolt
13		Hexhead Bolt
14	☒	Low Voltage Door Handle
15	☒	Removable Lower Front Sill
	☒	Base Arrangement For Rolling
16		In Two Directions
17	☒	Transformer Tank
18	☒	Low Voltage Compartment Door
19	☒	High Voltage Compartment Door

ITEM NO.		DESCRIPTION
	☒	Domed & Raised Air Compartment Top
20	☒	Doors With Weather Stripping
21	☒	Hold Down Brackets (0.75" Holes)
	☒	Cooling Fins
22		Radiators
	☒	Tap Changer
		"A" Taps -2.5% -5% -7.5% -10%
23	☒	"B"Taps -5% -2.5% +2.5% +5%
	☒	Pressure Vacuum Ga. with Schreader Valve
24	☒	Contacts(QUAL 50-35E)
	☒	Cartridge Fuse 34.5 KV
25	☒	A.B.B. 34.5 KV FUSE CURVE 7
26		Plastic Dripshield W/Absorbent Pad
	☒	Door Holding Bars 90° & 110° Open
27	☒	Position
	☒	Partial Range Current Limiting Fuses
28	☒	0S SHORTY 38.KV 65 AMP
29	☒	Paint GRAY RAL 7035
30		Additional Protective Coating
31	☒	High-Low Barrier
32	☒	Stainless Steel Hinges
	☒	All Bushings Are Externally
33	☒	Clamped
34	☒	14" x 24" Handhole
	☒	2-Position Loadbreak Switch ABB 300A
35	☒	(L150BC3003)
	☒	Cover Mounted Pressure Relief
36	☒	Device (QUAL 208-60U)
	☒	Isolated Core Ground (Accessible Thru
37	☒	Handhole)
38	☒	Ground Strap for Static Shield
39	☒	Static Shield Bushing
40		Nema 4 enclosure containing fused
		disconnect switch
41	☒	Fiberglass Cable Support
42	☒	Terminal Block for Guage Contacts
43	☒	Ground bar

CG POWER SYSTEMS USA INC
WASHINGTON, MO 63090, USA

NAME:	LOOP FEED TRANSFORMER OUTLINE
MAT'L:	---
DATE:	9/17/2013
PART NUMBER:	LF04870D
REV:	0

DECIMAL	ANGULAR	FRACTIONAL	SCALE	TOLERANCES (except as noted)	DRAWN BY:	APPROVED
± .032	± 2°	± 1/32	NTS	± .032	CK	TM

1 ea.

S.O.#496900845-2

S.N.: 20111346611

CG POWER SYSTEMS USA INC
MANUFACTURED IN WASHINGTON MO 63090 USA
THREE PHASE TRANSFORMER 65°C RISE 60 HZ. CLASS KNAN ENVIROTEMP FR3 FLUID

800 kVA HV (AL) 27600 DELTA
LV (AL) 360Y

S/N
MODEL MB080276BE36004

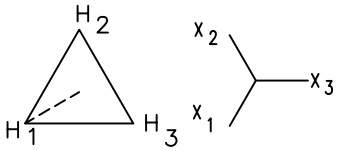
CORE & COIL (UNTANKING)	1509	kG
TANK & FITTINGS	795	kG
LIQUID 1318 LIT.	1169	kG
TOTAL	3473	kG

DATE OF MFG. --
TRANSFORMER FOR STEP UP OR STEP DOWN OPERATION

%IMP.

% RATED VOLTAGE	SWITCH POSITION
105.0	A
102.5	B
100.0	C
97.5	D
95.0	E

H.V.BIL. 150 K.V.
L.V.BIL. 30 K.V.

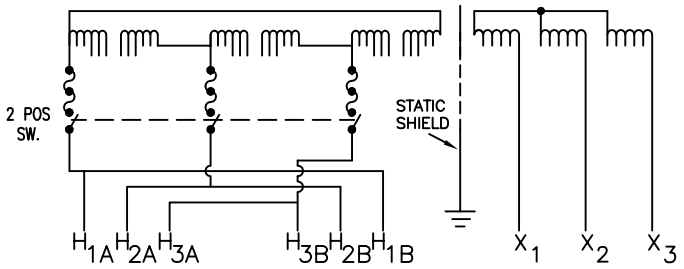


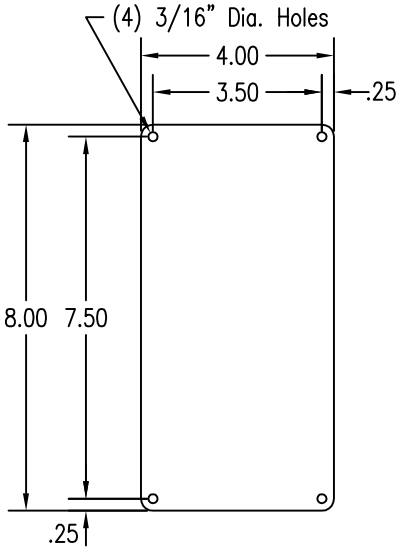
Dy11

BUILT PER APPLICABLE CSA STANDARDS

LIQUID CONTAINS LESS THAN 1 PPM PCB AT TIME OF MANUFACTURE.
25°C LIQUID LEVEL IS 152 MM BELOW TOP OF HANDHOLE FLANGE.
LIQUID LEVEL CHANGES 12 MM PER 10°C CHANGE IN LIQUID TEMPERATURE.
OPERATING PRESSURES OF LIQUID PRESERVATION SYSTEM ARE +50 kPA MAX AND −14 kPA MIN. TANK IS DESIGNED FOR 21 kPA VACUUM FILLING.
REFER TO INSTRUCTION BOOK NO. 7-8102.

38070067A01 496900845-2





MATERIAL: STN. STL
(4).1875" DIA. MTG. HOLES ON CENTERLINE 3.5" x 7.5" APART. SIZE OF PLATE 4.0" x 8.0" WITH .25" CORNER RADIUS.

SOLARPAD TRANSFORMER
ENVIROTEMP FR3 FLUID

R1	TM	RR	----	10/2/2013
REVISED TO INCLUDE REFERENCE TO CSA STANDARDS				

CG POWER SYSTEMS USA INC
WASHINGTON, MO 63090, USA

NAME: D-Y NAMEPLATE
MAT'L: 38018693A01 (Stainless Steel)

DATE:	PART NUMBER:	REV:
09/27/13	38070067A01	1

DECIMAL	ANGULAR	FRACTIONAL	SCALE	TOLERANCES (except as noted)	DRAWN BY:	APPROVED
± .032	± 2°	± 1/32	1:1	± .032	TM	RR

10 MVA Substation Transformer - Sound Power Calc. based on Manufacturer-specified rating of 69 dB (ONAF)

Tranformer Length	148.0	in.
Transformer Width	128.0	in.
Transformer Height	110.0	in.
Horizontal surface area (transformer top + 0.3m)	26022	$in.^2$
Vertical Surface area (+ 0.3m in each direction)	71114	$in.^2$
	675	ft^2
Total Surface area	62.7	m^2

Lw = Lp + 10 x log (S)

Lp	69	dB
Lw	86.97	dB

Centre Frequency	Corr1	Corr2	PWL	add 5 dB	A-weighted correction	PWL (A-weighted)
31.5	-1	-2.4	83.57	88.57	-39.4	49.2
63	5	-2.4	89.57	94.57	-26.2	68.4
125	7	-2.4	91.57	96.57	-16.1	80.5
250	2	-2.4	86.57	91.57	-8.6	83.0
500	2	-2.4	86.57	91.57	-3.2	88.4
1000	-4	-2.4	80.57	85.57	0	85.6
2000	-9	-2.4	75.57	80.57	1.2	81.8
4000	-14	-2.4	70.57	75.57	1	76.6
8000	-21	-2.4	63.57	68.57	-1.1	67.5
Overall:			**95.6**	**100.6**		**91.9**

Lp: Sound pressure level
Lw: Sound Power Level

1.6 MVA Inverter Transformer - Sound Power Calc. based on Manufacturer-specified rating of 49 dBA (ONAN)

Tranformer Length	79.1	in.
Transformer Width	92.5	in.
Transformer Height	77.0	in.
Horizontal surface area (transformer top + 0.3m)	11926	$in.^2$
Vertical Surface area (+ 0.3m in each direction)	33699	$in.^2$
	317	ft^2
Total Surface area	29.5	m^2

Lw = Lp + 10 x log (S)

Lp	49	dBA
Lw	63.69	dBA

Centre Frequency	Corr1	Corr2	PWL	add 5 dB	PWL (A-weighted)
31.5	-1	-2.4	60.29	65.29	65.29
63	5	-2.4	66.29	71.29	71.29
125	7	-2.4	68.29	73.29	73.29
250	2	-2.4	63.29	68.29	68.29
500	2	-2.4	63.29	68.29	68.29
1000	-4	-2.4	57.29	62.29	62.29
2000	-9	-2.4	52.29	57.29	57.29
4000	-14	-2.4	47.29	52.29	52.29
8000	-21	-2.4	40.29	45.29	45.29
Overall:			**72.3**	**77.3**	**77.3**

Lp: Sound pressure level
Lw: Sound Power Level

0.8 MVA Inverter Transformer - Sound Power Calc. based on Manufacturer-specified rating of 51 dBA (ONAN)

Tranformer Length	74.0	in.
Transformer Width	61.0	in.
Transformer Height	74.0	in.
Horizontal surface area (transformer top + 0.3m)	8261	$in.^2$
Vertical Surface area (+ 0.3m in each direction)	26972	$in.^2$
	245	ft^2
Total Surface area	22.7	m^2

Lw = Lp + 10 x log (S)

Lp	51	dBA
Lw	64.57	dBA

Centre Frequency	Corr1	Corr2	PWL	add 5 dB	PWL (A-weighted)
31.5	-1	-2.4	61.17	66.17	66.17
63	5	-2.4	67.17	72.17	72.17
125	7	-2.4	69.17	74.17	74.17
250	2	-2.4	64.17	69.17	69.17
500	2	-2.4	64.17	69.17	69.17
1000	-4	-2.4	58.17	63.17	63.17
2000	-9	-2.4	53.17	58.17	58.17
4000	-14	-2.4	48.17	53.17	53.17
8000	-21	-2.4	41.17	46.17	46.17
Overall:			**73.2**	**78.2**	**78.2**

Lp: Sound pressure level
Lw: Sound Power Level

GREENHECK

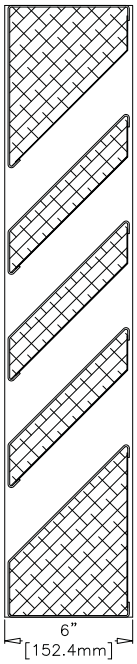
AFJ-601X

Florida Product Approval No: FL6876.1, 15718
UL Classified: R25119

Florida Product Approved Acoustical Louver

Application and Design

AFJ-601X is a **Florida Product Approved** stationary acoustical aluminum louver designed to protect air intake and exhaust openings in building exterior walls. AFJ-601X is tested in accordance with AMCA 500-L Air Performance and Water Penetration. AFJ-601X is tested in accordance with AMCA sound ratings program. AFJ-601X is tested in accordance with AMCA 540 Test Method for Louvers Impacted by Wind Borne Debris (Basic Protection, Missile Level D and Enhanced Protection, Missile Level E). **AFJ-601X is licensed to bear the AMCA seal allowing design professionals to select and apply with confidence.** AFJ-601X is tested and qualified per the following Florida test protocols: TAS 201 (Large Missile Impact), TAS 202 (Uniform Static Air Pressure) and TAS 203 (Cyclic Wind Loading). AFJ-601X is approved by Florida for use in Florida's High Velocity Hurricane Zone. AFJ-601X is qualified for wind loads up to 200 PSF *(size and configuration dependent, refer to the UL published certification for size and design load restrictions).*



Standard Construction

Frame . . . . . .Heavy gauge formed aluminum, 6 in. x 0.080 in. nominal wall thickness

Blades. . . . . .J style acoustical, heavy gauge formed aluminum, 0.080 in. nominal wall thickness

Construction . . . .Mechanically fastened

Birdscreen. . . . . .3/4 in. x 0.051 in. flattened expanded aluminum in removable frame, inside mount (rear)

Acoustical Insulation . . . . . .Fiberglass insulation

Finish. . . . . .Mill

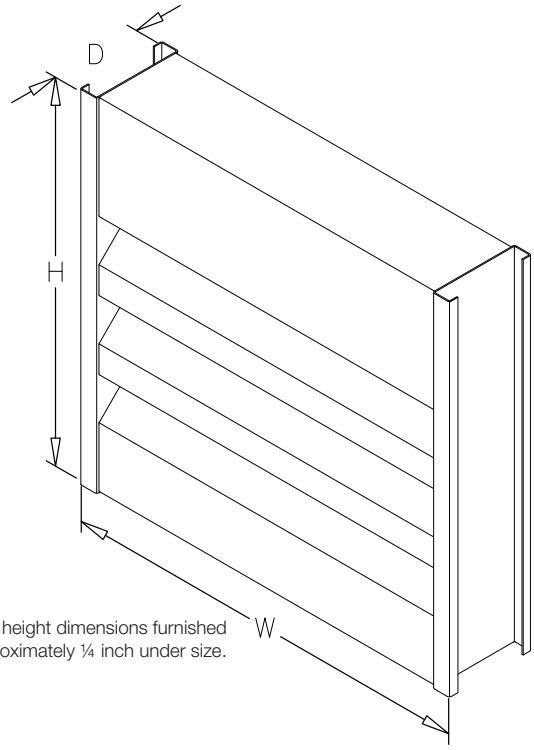
Angles . . . . . .Continuous, Ship Loose (mill finish)

Minimum Size . . .12 in. W x 15 in. H

Maximum Single Section Size . . . .60 in. W x 96 in. H

Options *(at additional cost)*

- A variety of bird and insect screens
- Blank-off panel
- Extended sill
- Filter rack
- Flanged frame
- Security bars
- A variety of architectural finishes including:
  - Clear anodize
  - Integral color anodize
  - Baked enamel paint
  - Kynar paint



*Width and height dimensions furnished approximately ¼ inch under size.

PERFORMANCE DATA

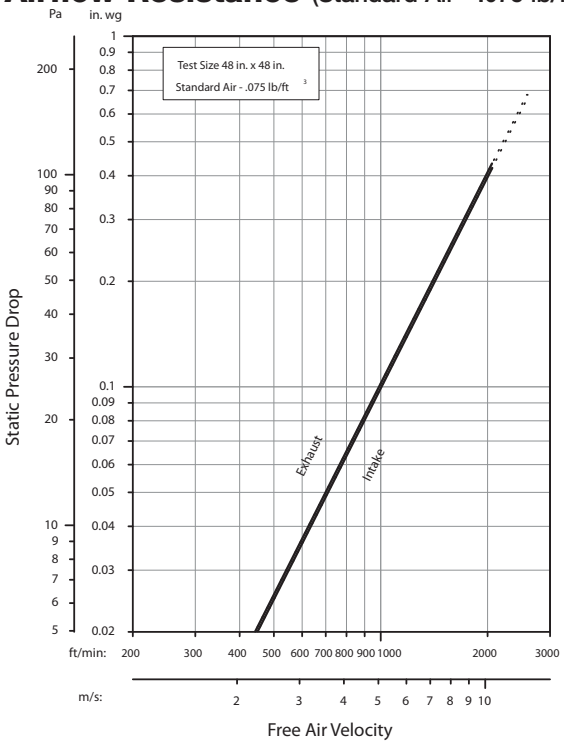
AFJ-601X

Florida Product Approval No.: FL6876.1, 15718
UL Classified: R25119

Free Area Chart (Sq. ft.)

Louver Height Inches	Louver Width Inches								
	12	18	24	30	36	42	**48**	54	60
15	0.12	0.21	0.29	0.37	0.45	0.53	0.61	0.69	0.77
18	0.25	0.41	0.57	0.74	0.90	1.06	1.22	1.38	1.55
24	0.37	0.62	0.86	1.10	1.35	1.59	1.83	2.08	2.32
30	0.50	0.82	1.15	1.47	1.80	2.12	2.44	2.77	3.09
36	0.62	1.03	1.43	1.84	2.24	2.65	3.05	3.46	3.86
42	0.75	1.24	1.72	2.21	2.69	3.18	3.67	4.15	4.64
48	1.00	1.65	2.30	2.94	3.59	4.24	**4.89**	5.54	6.18
54	1.12	1.85	2.58	3.31	4.04	4.77	5.50	6.23	6.96
60	1.25	2.06	2.87	3.68	4.49	5.30	6.11	6.92	7.73
66	1.37	2.26	3.16	4.05	4.94	5.83	6.72	7.61	8.50
72	1.50	2.47	3.44	4.41	5.39	6.36	7.33	8.30	9.27
78	1.75	2.88	4.02	5.15	6.28	7.42	8.55	9.69	10.82
84	1.87	3.09	4.30	5.52	6.73	7.95	9.16	10.38	11.59
90	2.00	3.29	4.59	5.89	7.18	8.48	9.77	11.07	12.37
96	2.12	3.50	4.88	6.25	7.63	9.01	10.38	11.76	13.14
102	2.25	3.71	5.16	6.62	8.08	9.54	11.00	12.45	13.91
108	2.50	4.12	5.74	7.36	8.98	10.60	12.22	13.84	15.46
114	2.62	4.32	6.02	7.73	9.43	11.13	12.83	14.53	16.23
120	2.75	4.53	6.31	8.09	9.88	11.66	13.44	15.22	17.00

Airflow Resistance (Standard Air - .075 lb/ft³)



Model AFJ-601X resistance to airflow (pressure drop) varies depending on louver application (air intake or air exhaust). Free area velocities (shown) are higher than average velocity through the overall louver size. See louver selection information. (Test Figure 5.5-6.5)

Greenheck Fan Corporation certifies that the AFJ-601X louvers shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Seal applies to water penetration, air performance and sound ratings.

Greenheck Fan Corporation certifies that the AFJ-601X louvers shown herein are approved to bear the AMCA Listing Label. The Ratings shown are based on tests and procedures performaned in accordance with AMCA Publications and comply with the requirements of the AMCA Listing Label Program. The AMCA Listing Label applies to Wind Borne Debris Impact Resistant Resistant Louvers.

Sound Transmission Class

The Sound Transmission Class (STC) is a rating of the effectiveness of an assembly in isolating or reducing airborne sound transmission. STC is a single number that summarizes airborne sound transmission loss data. Assemblies with higher STC ratings are more efficient at reducing sound transmission. STC is determined in accordance with ASTM E413-04.

Transmission Loss

Transmission loss (TL) is a measurement of the reduction of sound power transmission (dB) through an assembly at a given frequency. The more sound power that is reduced, the greater the TL. TL is tested in accordance with ASTM E90-04.

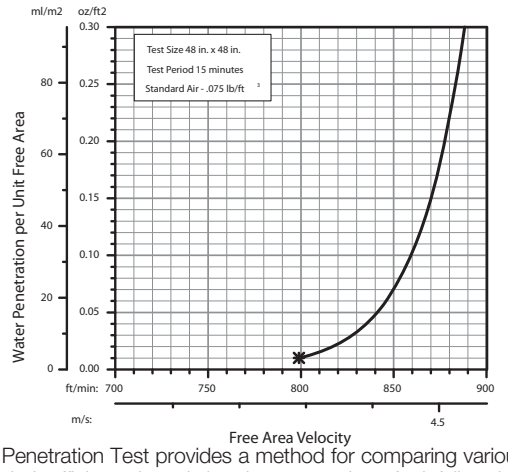
Free Field Noise Reduction in Decibels

Free Field Noise Reduction is determined by adding 6 dB to the Transmission Loss.

Octave Band	2	3	4	5	6	7	STC
Frequency (Hz)	125	250	500	1000	2000	4000	10
Transmission Loss (dB)	4	4	6	10	17	12	
Free Field Noise Reduction (dB)	10	10	12	16	23	18	

Water Penetration (Standard Air - .075 lb/ft³)

Test size 48 in. x 48 in. Test duration of 15 min.



The AMCA Water Penetration Test provides a method for comparing various louver models and designs as to their efficiency in resisting the penetration of rainfall under specific laboratory test conditions. The beginning point of water penetration is defined as that velocity where the water penetration curve projects through .01 oz. of water (penetration) per sq. ft. of louver free area. ***The beginning point of water penetration for Model AFJ-601X is 799 fpm free area velocity.** These performance ratings do not guarantee a louver to be weatherproof or stormproof and should be used in combination with other factors including good engineering judgement in selecting louvers.

GREENHECK

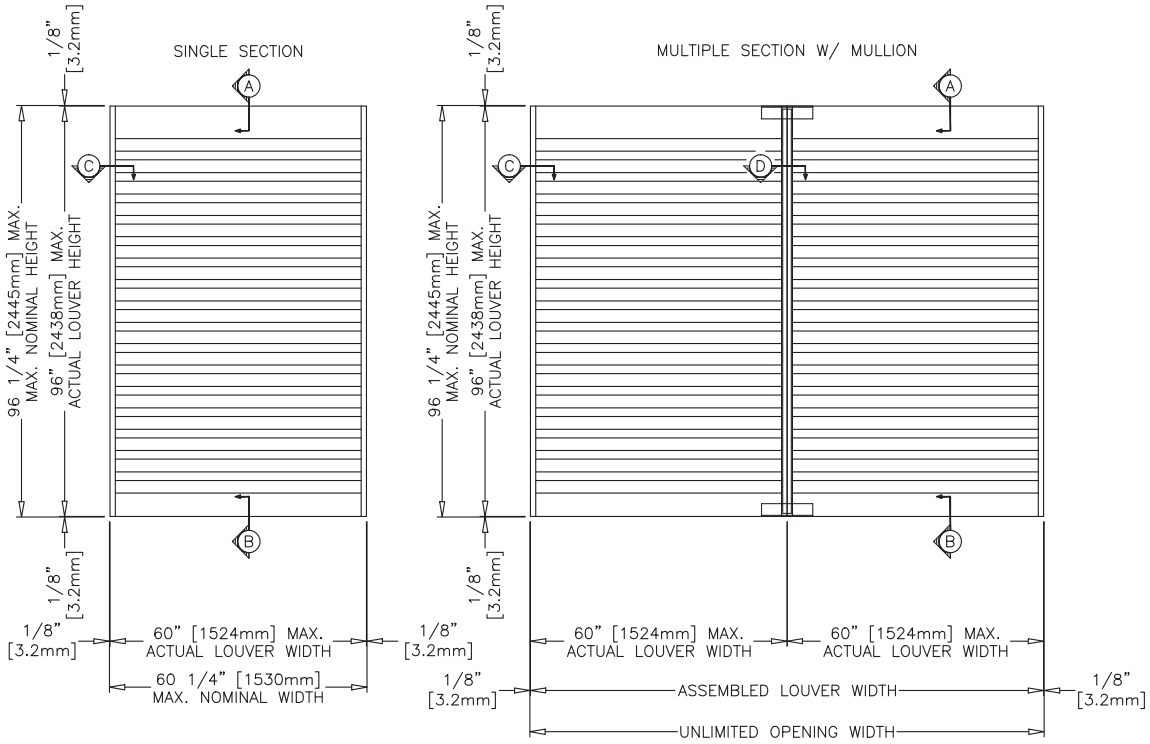
INSTALLATION DETAILS

AFJ-601X

Florida Product Approval No.: FL6876.1, 15718
UL Classified: R25119

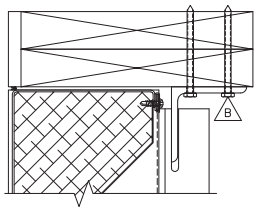
Maximum Size and Installation Information

Model AFJ-601X is a Florida Product Approved louver and must be installed in accordance with the installation instructions shown herein. Model AFJ-601X is qualified for installation within concrete/masonry, steel stud, structural steel or wood framed building conditions. Model AFJ-601X is structurally calculated to withstand positive and negative wind-loads up to 200 PSF. The louver section size will determine the actual maximum wind-load that the louver sections will withstand. The maximum single section width is 60 in. The maximum single section height is 96 in. While, the maximum opening height is limited to 96 in., the opening width may be unlimited as multiple sections may be installed side by side in accordance with installation instructions.

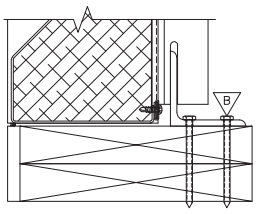


Minimum Single Section Size	Maximum Single Section Size
12 in. W x 15 in. H	60 in. W x 96 in. H

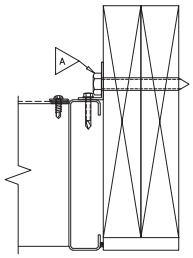
Wood Opening



Ⓐ HEAD DETAIL AT MULLION

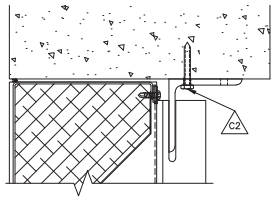


Ⓑ SILL DETAIL AT MULLION

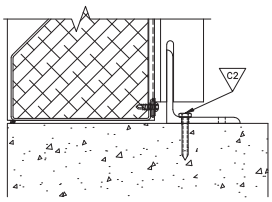


Ⓒ JAMB DETAIL

Concrete/Masonry Opening



Ⓐ HEAD DETAIL AT MULLION



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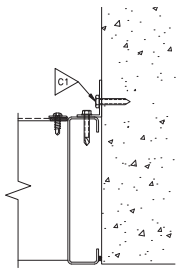


Ⓒ JAMB DETAIL

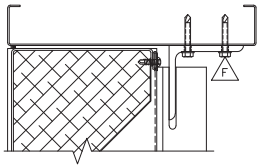
GREENHECK

INSTALLATION DETAILS

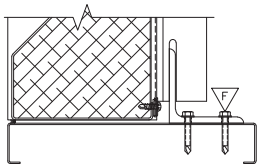
AFJ-601X

Florida Product Approval No.: FL6876.1, 15718
UL Classified: R25119

Steel Stud Opening



Ⓐ HEAD DETAIL AT MULLION



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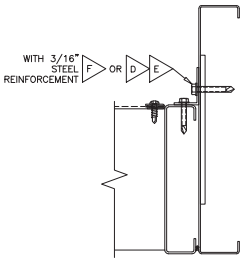
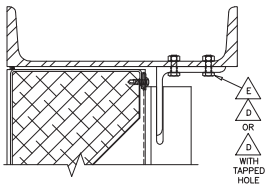
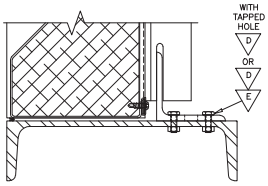


Ⓒ JAMB DETAIL

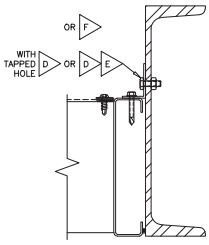
Structural Steel Opening



Ⓐ HEAD DETAIL AT MULLION



Ⓑ SILL DETAIL AT MULLION



Ⓒ JAMB DETAIL

FASTENER SCHEDULE (FIELD INSTALLED - NOT BY GREENHECK)							
MOUNTING SUBSTRATE	FASTENER TYPE	DESCRIPTION	ANCHOR CLIP LOCATION	QUANTITY	MIN. EMBED.	MIN. EDGE DIST.	MIN. SPACING
WOOD	A	1/2" DIA. LAG SCREW	JAMB	VARIES	3"	2 1/2"	6.5"
WOOD	B	1/4" DIA. LAG SCREW	VERT. MULLION (HEAD/SILL)	12 PER CLIP	3"	1/2"	2"
CONCRETE	C1	1/4" DIA. TAPCON ANCH.	JAMB	VARIES	1.25"	1"	3.25"
CONCRETE	C2	1/4" DIA. TAPCON ANCH.	VERT. MULLION (HEAD/SILL)	7 PER CLIP	1.75"	2.5"	2"
MASONRY BLOCK	C1	1/4" DIA. TAPCON ANCH.	JAMB	VARIES	1.25"	1"	3.25"
MASONRY BLOCK	C2	1/4" DIA. TAPCON ANCH.	VERT. MULLION (HEAD/SILL)	7 PER CLIP	1.75"	2.5"	2"
STEEL STUD	D & E	1/4" DIA. BOLT & NUT	JAMB	VARIES	THRU BOLT	1/2"	6.5"
STEEL STUD (3/16" STEEL REINFORCED)	F	1/4" DIA. DRILL FLEX	JAMB	VARIES	FULL	1/2"	6.5"
STEEL STUD	G	1/4" DIA. DRILL FLEX	VERT. MULLION (HEAD/SILL)	12 PER CLIP	FULL	1/2"	2"
STRUCTURAL STEEL	D & E	1/4" DIA. BOLT & NUT	JAMB	VARIES	THRU BOLT	1/2"	6.5"
STRUCTURAL STEEL	D	1/4" DIA. BOLT	JAMB (FIELD DRILL & TAP HOLE)	VARIES	FULL	1/2"	6.5"
STRUCTURAL STEEL	F	1/4" DIA. DRILL FLEX	JAMB	VARIES	FULL	1/2"	6.5"
STRUCTURAL STEEL	D & E	1/4" DIA. BOLT & NUT	VERT. MULLION (HEAD/SILL)	4 PER CLIP	THRU BOLT	1/2"	6.5"
STRUCTURAL STEEL	D	1/4" DIA. BOLT	VERT. MULLION (HEAD/SILL) FIELD DRILL & TAP HOLE	4 PER CLIP	FULL	1/2"	6.5"
STRUCTURAL STEEL	F	1/4" DIA. DRILL FLEX	JAMB	VARIES	FULL	1/2"	6.5"

GENERAL NOTES:

1. IT SHALL BE THE RESPONSIBILITY OF THE PERMIT HOLDER TO VERIFY THE STRUCTURAL INTEGRITY OF THE EXISTING STRUCTURE TO SUPPORT THE LOADS SUPERIMPOSED BY THE LOUVERS.

2. INSTALLER TO PROVIDE SEPARATION OF DISSIMILAR MATERIALS AS REQUIRED.

3. WOOD SUBSTRATE TO BE MINIMUM G = 0.42 DENSITY.

4A. CONCRETE SUBSTRATE TO BE MINIMUM 3,192 PSI CONCRETE OR 3,192 PSI GROUT FILLED ASTM C-90 HOLLOW BLOCK AT HEAD/SILL MULLION ANCHORS.

4B. CONCRETE SUBSTRATE TO BE MINIMUM 3,192 PSI CONCRETE OR ASTM C-90 HOLLOW BLOCK AT JAMB ANCHORS.

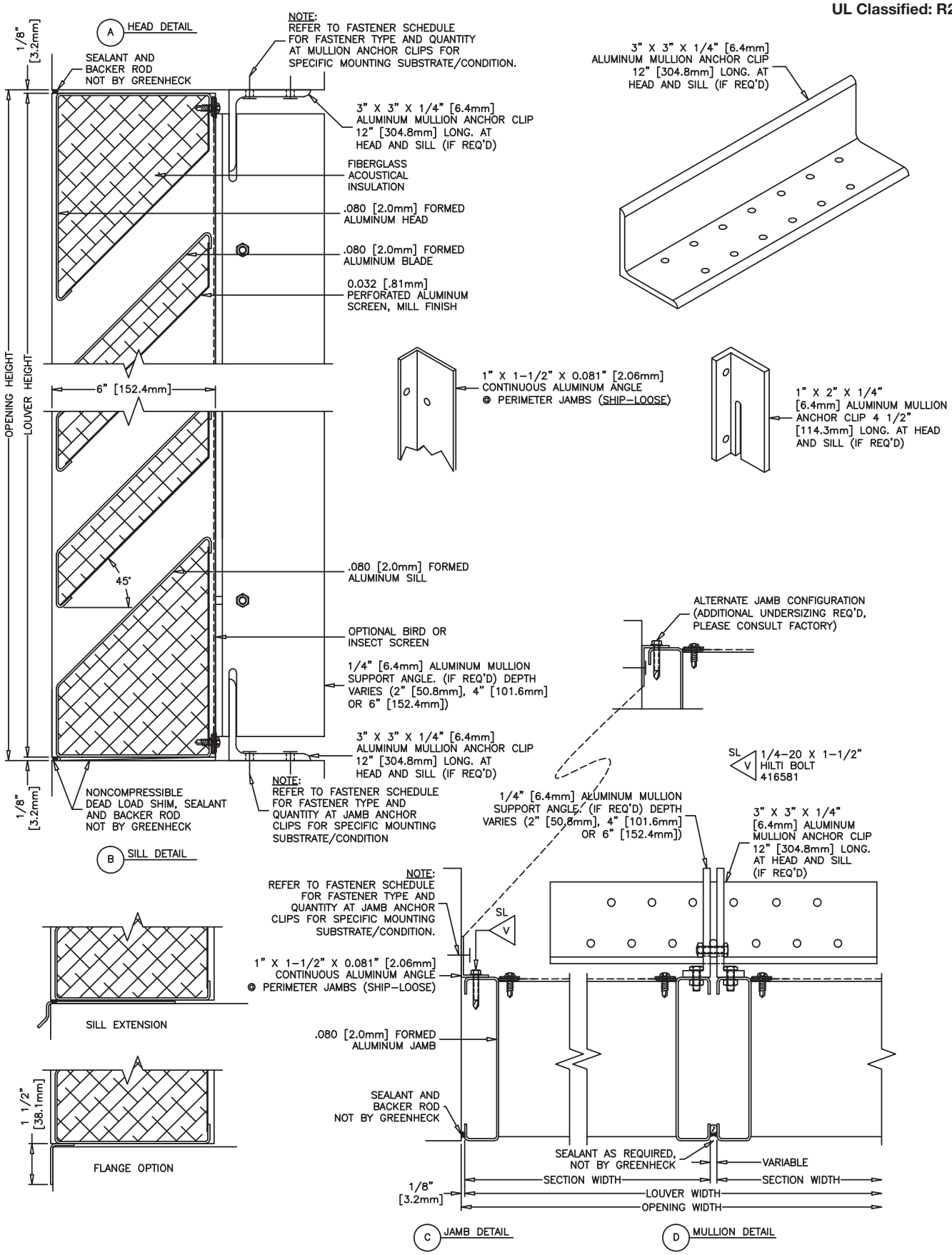
5. STEEL STUD OPENINGS (16 GA. MINIMUM THICKNESS) TO BE MINIMUM Fy = 33 ksi.

6. STRUCTURAL STEEL OPENINGS (1/4" MINIMUM THICKNESS) TO BE MINIMUM Fy = 36 ksi.

PRODUCT DETAILS

AFJ-601X

Florida Product Approval No.: FL6876.1, 15718
UL Classified: R25119

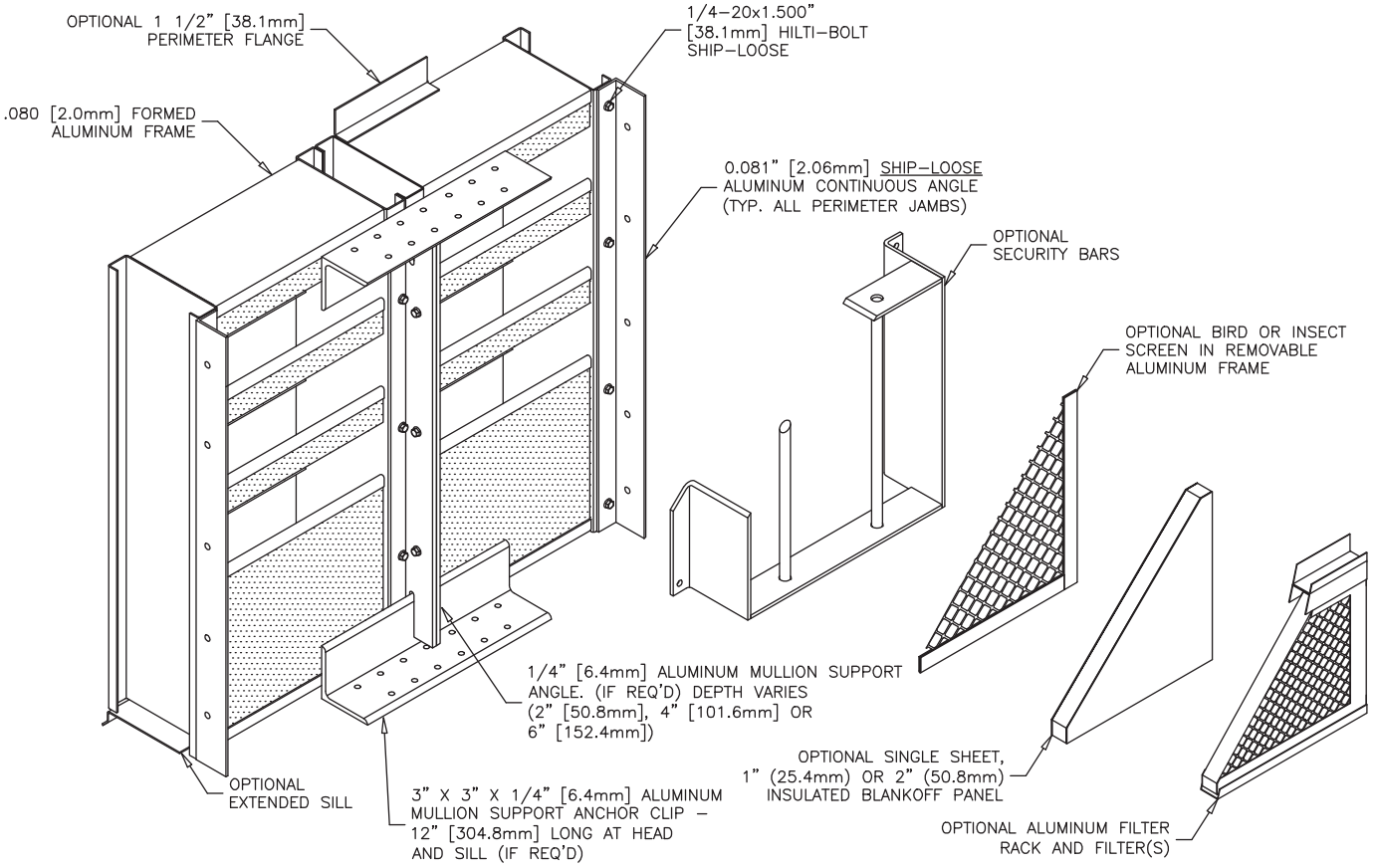


GREENHECK

OPTION DRAWINGS

AFJ-601X

Florida Product Approval No.: FL6876.1, 15718
UL Classified: R25119



FINISHES

Finish Type	Description/Application	Color Selection	Standard Warranty (Aluminum)
2-coat 70% KYNAR 500®/HYLAR 5000® AAMA 2605 – Dry film thickness 1.2 mil. (AKA: Duranar®, Fluoropon®, Trinar®, Flouropolymer, Polyvinylidene Fluoride, PVDF2)	***"Best."*** The premier finish for extruded aluminum. Tough, long-lasting coating has superior color retention and abrasive properties. Resists chalking, fading, chemical abrasion and weathering.	**Standard Colors:** Any of the 24 standard colors shown can be furnished in 70% or 50% KYNAR 500®/HYLAR 5000® or Baked Enamel. **2-Coat Mica:** Greenheck offers 9 standard 2-coat Mica colors. Other colors are available. Consult Greenheck for possible extra cost when selecting non-standard colors or special finishes.	10 Years (Consult Greenheck for availability of extended warranty)
2-coat 50% KYNAR 500®/HYLAR 5000® AAMA 2604 – Dry film thickness 1.2 mil. (AKA: Acroflur®, Acrynar®)	***"Better."*** Tough, long-lasting coating has excellent color retention and abrasive properties. Resists chalking, fading, chemical abrasion and weathering.		5 Years
Baked Enamel AAMA 2603 – Dry film thickness 0.8 mil. (AKA: Acrabond Plus®, Duracron®)	***"Good."*** Provides good adhesion and resistance to weathering, corrosion and chemical stain.		1 Year
Integral Color Anodize AA-M10C22A42 (>0.7 mil)	"Two-step" anodizing is produced by following the normal anodizing step with a second, colorfast process.	Light, Medium or Dark Bronze; Champagne; Black	5 years
Clear Anodize 215 R-1 AA-M10C22A41 (>0.7 mil)	Clear, colorless and hard oxide aluminum coating that resists weathering and chemical attack.	Clear	5 years
Clear Anodize 204 R-1 AA-M10C22A31 (0.4-0.7 mil)	Clear, colorless and hard oxide aluminum coating that resists weathering and chemical attack.	Clear	1 Year
Industrial coatings	Greenheck offers a number of industrial coatings such as Hi-Pro Polyester, Epoxy, and Permatector®. Consult a Greenheck Product Specialist for complete color and application information.		Consult Greenheck
Mill	Materials may be supplied in natural aluminum or galvanized steel finish when normal weathering is acceptable and there is no concern for color or color change.		n/a

Finishes meet or exceed AAMA 2605, AAMA 2604, and AAMA 2603 requirements. Please consult www.greenheck.com for complete information on standard and extended paint warranties. Paint finish warranties are not applicable to steel products.

GREENHECK®

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Greenheck Fan Corporation reserves the right to make product changes without notice.

Appendix B

CADNA NOISE MODELLING AND CALCULATIONS

Receiver: Existing Potential Receptor
ID: R1
X: 654260
Y: 4926059
Z: 4.5
Ground: 0

ISO	Description	ID	X	Y	Z	Ground	ReflOrd	LxT	LxN	L/A	Dist.	hm	Freq	Adiv	K0b	Agr	Abar	z	Aatm	Afol	Ahous	Cmet	CmetN	Dc	RL	LtotT	LtotN
	Sparkle Inverter enclosure 6	S_INV6	654146.3	4925027	2	0	0	100.3	100.3	1	1038.58	3.25	0	71.33	0	-0.23	0	0	11.04	0	0	0	0	0	0	18.17	18.17
	Sparkle Inverter enclosure 3	S_INV3	654137.8	4924883	2	0	0	100.3	100.3	1	1182.43	3.25	0	72.46	0	-0.16	0	0	11.47	0	0	0	0	0	0	16.54	16.54
	Sparkle Inverter enclosure 4	S_INV4	654129.9	4924735	2	0	0	100.3	100.3	1	1330.16	3.25	0	73.48	0	-0.1	0	0	11.89	0	0	0	0	0	0	15.05	15.05
	Sparkle Inverter enclosure 1	S_INV1	653943	4925042	2	0	0	97.3	97.3	1	1065.55	3.25	0	71.55	0	-0.21	0	0	11.12	0	0	0	0	0	0	14.85	14.85
	Sparkle Substation Transformer	S_TRS	653933.6	4925172	2.5	0	0	92	92	1	945.43	3.5	0	70.51	0	-0.38	0	0	2.41	0	0	0	0	0	0	19.43	19.43
	Sparkle Inverter enclosure 7	S_INV7	654153.1	4925178	2	0	0	89.1	89.1	1	887.27	3.25	0	69.96	0	0.66	0	0	6.1	0	0	0	0	0	0	12.34	12.34
	Discovery Inverter enclosure 1	D_INV1	653434.4	4922792	2	0	0	100.3	100.3	1	3369.46	3.25	0	81.55	0	0.43	0	0	16.01	0	0	0	0	0	0	2.32	2.32
	Discovery Inverter enclosure 2	D_INV2	653465.5	4922673	2	0	0	100.3	100.3	1	3477.72	3.25	0	81.83	0	0.45	0	0	16.19	0	0	0	0	0	0	1.84	1.84
	Discovery Inverter enclosure 3	D_INV3	653511.4	4922537	2	0	0	100.3	100.3	1	3600.44	3.25	0	82.13	0	0.47	0	0	16.4	0	0	0	0	0	0	1.32	1.32
	Sparkle Inverter enclosure 5	S_INV5	653978.3	4925039	2	0	0	89.1	89.1	1	1058.01	3.25	0	71.49	0	0.7	0	0	6.42	0	0	0	0	0	0	10.45	10.45
	Sparkle Inverter enclosure 2	S_INV2	653973.9	4924893	2	0	0	89.1	89.1	1	1200.88	3.25	0	72.59	0	0.73	0	0	6.68	0	0	0	0	0	0	9.06	9.06
	Discovery Inverter enclosure 5	D_INV5	653875	4922657	2	0	0	97.3	97.3	1	3423.58	3.25	0	81.69	0	0.44	0	0	16.1	0	0	0	0	0	0	-0.92	-0.92
	Discovery Substation Transforme	D_TRS	653484.4	4922253	2.5	0	0	92	92	1	3884.32	3.5	0	82.79	0	0.3	0	0	7.21	0	0	0	0	0	0	1.68	1.68
	Sparkle Inverter transformer 7	S_INVTR7	654147.2	4925179	2	0	0	77.3	77.3	1	887.61	3.25	0	69.96	0	-1.86	0	0	0.61	0	0	0	0	0	0	8.62	8.62
	Discovery Inverter enclosure 6	D_INV6	653814.6	4922521	2	0	0	89.1	89.1	1	3566.36	3.25	0	82.04	0	1.29	0	0	10.46	0	0	0	0	0	0	-4.73	-4.73
	Discovery Inverter enclosure 7	D_INV7	653773.3	4922400	2	0	0	89.1	89.1	1	3691.61	3.25	0	82.34	0	1.32	0	0	10.64	0	0	0	0	0	0	-5.24	-5.24
	Sparkle Inverter transformer 1	S_INVTR1	653948.9	4925041	2	0	0	78.2	78.2	1	1064.19	3.25	0	71.54	0	-1.97	0	0	0.72	0	0	0	0	0	0	7.96	7.96
	Discovery Inverter enclosure 4	D_INV4	653513.6	4922427	2	0	0	89.1	89.1	1	3708.15	3.25	0	82.38	0	1.32	0	0	10.67	0	0	0	0	0	0	-5.31	-5.31
	Sparkle Inverter transformer 6	S_INVTR6	654140.4	4925027	2	0	0	77.3	77.3	1	1038.85	3.25	0	71.33	0	-1.96	0	0	0.7	0	0	0	0	0	0	7.27	7.27
	Sparkle Inverter transformer 5	S_INVTR5	653972.5	4925040	2	0	0	77.3	77.3	1	1059.21	3.25	0	71.5	0	-1.97	0	0	0.71	0	0	0	0	0	0	7.1	7.1
	Sparkle Inverter transformer 3	S_INVTR3	654132	4924883	2	0	0	77.3	77.3	1	1182.66	3.25	0	72.46	0	-2.04	0	0	0.78	0	0	0	0	0	0	6.14	6.14
	Sparkle Inverter transformer 2	S_INVTR2	653968	4924893	2	0	0	77.3	77.3	1	1201.91	3.25	0	72.6	0	-2.05	0	0	0.79	0	0	0	0	0	0	6	6
	Sparkle Inverter transformer 4	S_INVTR4	654124	4924736	2	0	0	77.3	77.3	1	1330.36	3.25	0	73.48	0	-2.12	0	0	0.86	0	0	0	0	0	0	5.12	5.12
	Discovery Inverter Transformer	D_INVTR5	653869.2	4922658	2	0	0	78.2	78.2	1	3423.86	3.25	0	81.69	0	-2.83	0	0	1.83	0	0	0	0	0	0	-2.45	-2.45
	Discovery Inverter Transformer	D_INVTR1	653440.3	4922792	2	0	0	77.3	77.3	1	3368.41	3.25	0	81.55	0	-2.81	0	0	1.81	0	0	0	0	0	0	-3.2	-3.2
	Discovery Inverter Transformer	D_INVTR2	653471.4	4922673	2	0	0	77.3	77.3	1	3476.77	3.25	0	81.82	0	-2.84	0	0	1.85	0	0	0	0	0	0	-3.5	-3.5
	Discovery Inverter Transformer	D_INVTR6	653808.8	4922521	2	0	0	77.3	77.3	1	3566.71	3.25	0	82.05	0	-2.86	0	0	1.89	0	0	0	0	0	0	-3.73	-3.73
	Discovery Inverter Transformer	D_INVTR3	653517.2	4922537	2	0	0	77.3	77.3	1	3599.61	3.25	0	82.13	0	-2.87	0	0	1.9	0	0	0	0	0	0	-3.82	-3.82
	Discovery Inverter Transformer	D_INVTR7	653767.4	4922400	2	0	0	77.3	77.3	1	3692	3.25	0	82.35	0	-2.89	0	0	1.94	0	0	0	0	0	0	-4.05	-4.05
	Discovery Inverter Transformer	D_INVTR4	653519.4	4922426	2	0	0	77.3	77.3	1	3707.36	3.25	0	82.38	0	-2.89	0	0	1.94	0	0	0	0	0	0	-4.09	-4.09

Value D/N: 0 0
Level D/N: 25.361 25.361

Receiver: Existing Potential Receptor
ID: R2
X: 654817
Y: 4925581
Z: 4.5
Ground: 0

ISO	Description	ID	X	Y	Z	Ground	ReflOrd	LxT	LxN	L/A	Dist.	hm	Freq	Adiv	K0b	Agr	Abar	z	Aatm	Afol	Ahous	Cmet	CmetN	Dc	RL	LtotT	LtotN
	Sparkle Inverter enclosure 6	S_INV6	654146.3	4925027	2	0	0	100.3	100.3	1	870.17	3.25	0	69.79	0	-0.31	0	0	10.46	0	0	0	0	0	0	20.38	20.38
	Sparkle Inverter enclosure 3	S_INV3	654137.8	4924883	2	0	0	100.3	100.3	1	973.96	3.25	0	70.77	0	-0.26	0	0	10.82	0	0	0	0	0	0	18.98	18.98
	Sparkle Inverter enclosure 4	S_INV4	654129.9	4924735	2	0	0	100.3	100.3	1	1089.72	3.25	0	71.75	0	-0.2	0	0	11.2	0	0	0	0	0	0	17.57	17.57
	Sparkle Inverter enclosure 1	S_INV1	653943	4925042	2	0	0	97.3	97.3	1	1026.98	3.25	0	71.23	0	-0.23	0	0	11	0	0	0	0	0	0	15.31	15.31
	Sparkle Substation Transformer	S_TRS	653933.6	4925172	2.5	0	0	92	92	1	973.61	3.5	0	70.77	0	-0.37	0	0	2.47	0	0	0	0	0	0	19.12	19.12
	Sparkle Inverter enclosure 7	S_INV7	654153.1	4925178	2	0	0	89.1	89.1	1	776.56	3.25	0	68.8	0	0.63	0	0	5.87	0	0	0	0	0	0	13.75	13.75
	Discovery Inverter enclosure 1	D_INV1	653434.4	4922792	2	0	0	100.3	100.3	1	3112.66	3.25	0	80.86	0	0.38	0	0	15.57	0	0	0	0	0	0	3.5	3.5
	Discovery Inverter enclosure 2	D_INV2	653465.5	4922673	2	0	0	100.3	100.3	1	3206.48	3.25	0	81.12	0	0.4	0	0	15.73	0	0	0	0	0	0	3.06	3.06
	Discovery Inverter enclosure 3	D_INV3	653511.4	4922537	2	0	0	100.3	100.3	1	3311.95	3.25	0	81.4	0	0.42	0	0	15.91	0	0	0	0	0	0	2.58	2.58
	Sparkle Inverter enclosure 5	S_INV5	653978.3	4925039	2	0	0	89.1	89.1	1	998.49	3.25	0	70.99	0	0.68	0	0	6.31	0	0	0	0	0	0	11.07	11.07
	Sparkle Inverter enclosure 2	S_INV2	653973.9	4924893	2	0	0	89.1	89.1	1	1088.42	3.25	0	71.74	0	0.7	0	0	6.48	0	0	0	0	0	0	10.14	10.14
	Discovery Inverter enclosure 5	D_INV5	653875	4922657	2	0	0	97.3	97.3	1	3071.86	3.25	0	80.75	0	0.38	0	0	15.5	0	0	0	0	0	0	0.69	0.69
	Discovery Substation Transforme	D_TRS	653484.4	4922253	2.5	0	0	92	92	1	3584.98	3.5	0	82.09	0	0.23	0	0	6.8	0	0	0	0	0	0	2.86	2.86
	Sparkle Inverter transformer 7	S_INVTR7	654147.2	4925179	2	0	0	77.3	77.3	1	781.37	3.25	0	68.86	0	-1.78	0	0	0.55	0	0	0	0	0	0	9.72	9.72
	Discovery Inverter enclosure 6	D_INV6	653814.6	4922521	2	0	0	89.1	89.1	1	3220.41	3.25	0	81.16	0	1.2	0	0	9.95	0	0	0	0	0	0	-3.25	-3.25
	Discovery Inverter enclosure 7	D_INV7	653773.3	4922400	2	0	0	89.1	89.1	1	3348.22	3.25	0	81.5	0	1.23	0	0	10.14	0	0	0	0	0	0	-3.81	-3.81
	Sparkle Inverter transformer 6	S_INVTR6	654140.4	4925027	2	0	0	77.3	77.3	1	874.44	3.25	0	69.83	0	-1.85	0	0	0.61	0	0	0	0	0	0	8.75	8.75
	Discovery Inverter enclosure 4	D_INV4	653513.6	4922427	2	0	0	89.1	89.1	1	3412.95	3.25	0	81.66	0	1.25	0	0	10.23	0	0	0	0	0	0	-4.09	-4.09
	Sparkle Inverter transformer 1	S_INVTR1	653948.9	4925041	2	0	0	78.2	78.2	1	1022.19	3.25	0	71.19	0	-1.95	0	0	0.69	0	0	0	0	0	0	8.31	8.31
	Sparkle Inverter transformer 3	S_INVTR3	654132	4924883	2	0	0	77.3	77.3	1	977.77	3.25	0	70.8	0	-1.92	0	0	0.67	0	0	0	0	0	0	7.79	7.79
	Sparkle Inverter transformer 5	S_INVTR5	653972.5	4925040	2	0	0	77.3	77.3	1	1003.2	3.25	0	71.03	0	-1.93	0	0	0.68	0	0	0	0	0	0	7.57	7.57
	Sparkle Inverter transformer 2	S_INVTR2	653968	4924893	2	0	0	77.3	77.3	1	1092.71	3.25	0	71.77	0	-1.99	0	0	0.73	0	0	0	0	0	0	6.83	6.83
	Sparkle Inverter transformer 4	S_INVTR4	654124	4924736	2	0	0	77.3	77.3	1	1093.12	3.25	0	71.77	0	-1.99	0	0	0.73	0	0	0	0	0	0	6.83	6.83

Discovery Inverter Transformer	D_INVTR5	653869.2	4922658	2	0	0	78.2	78.2	1	3073.3	3.25	0	80.75	0	-2.73	0	0	1.69	0	0	0	0	0	0	-1.46	-1.46
Discovery Inverter Transformer	D_INVTR1	653440.3	4922792	2	0	0	77.3	77.3	1	3110.41	3.25	0	80.86	0	-2.74	0	0	1.7	0	0	0	0	0	0	-2.47	-2.47
Discovery Inverter Transformer	D_INVTR2	653471.4	4922673	2	0	0	77.3	77.3	1	3204.37	3.25	0	81.11	0	-2.77	0	0	1.74	0	0	0	0	0	0	-2.75	-2.75
Discovery Inverter Transformer	D_INVTR6	653808.8	4922521	2	0	0	77.3	77.3	1	3221.87	3.25	0	81.16	0	-2.77	0	0	1.75	0	0	0	0	0	0	-2.8	-2.8
Discovery Inverter Transformer	D_INVTR3	653517.2	4922537	2	0	0	77.3	77.3	1	3310.01	3.25	0	81.4	0	-2.8	0	0	1.79	0	0	0	0	0	0	-3.04	-3.04
Discovery Inverter Transformer	D_INVTR7	653767.4	4922400	2	0	0	77.3	77.3	1	3349.68	3.25	0	81.5	0	-2.81	0	0	1.8	0	0	0	0	0	0	-3.15	-3.15
Discovery Inverter Transformer	D_INVTR4	653519.4	4922426	2	0	0	77.3	77.3	1	3411.08	3.25	0	81.66	0	-2.82	0	0	1.83	0	0	0	0	0	0	-3.32	-3.32

Value D/N: 0 0
Level D/N: 26.6926 26.6926

Receiver: Existing Potential Receptor
ID: R3
X: 654457
Y: 4924826
Z: 4.5
Ground: 0

ISO	Description	ID	X	Y	Z	Ground	ReflOrd	LxT	LxN	L/A	Dist.	hm	Freq	Adiv	K0b	Agr	Abar	z	Aatm	Afol	Ahous	Cmet	CmetN	Dc	RL	LtotT	LtotN
	Sparkle Inverter enclosure 3	S_INV3	654137.8	4924883	2	0	0	100.3	100.3	1	324.2	3.25	0	61.22	0	-0.65	0	0	6.73	0	0	0	0	0	0	33.02	33.02
	Sparkle Inverter enclosure 4	S_INV4	654129.9	4924735	2	0	0	100.3	100.3	1	339.5	3.25	0	61.62	0	-0.65	0	0	6.92	0	0	0	0	0	0	32.42	32.42
	Sparkle Inverter enclosure 6	S_INV6	654146.3	4925027	2	0	0	100.3	100.3	1	369.91	3.25	0	62.36	0	-0.63	0	0	7.29	0	0	0	0	0	0	31.29	31.29
	Sparkle Inverter enclosure 1	S_INV1	653943	4925042	2	0	0	97.3	97.3	1	557.41	3.25	0	65.92	0	-0.51	0	0	8.94	0	0	0	0	0	0	22.96	22.96
	Sparkle Substation Transformer	S_TRS	653933.6	4925172	2.5	0	0	92	92	1	627.26	3.5	0	66.95	0	-0.4	0	0	1.72	0	0	0	0	0	0	23.71	23.71
	Sparkle Inverter enclosure 7	S_INV7	654153.1	4925178	2	0	0	89.1	89.1	1	465.21	3.25	0	64.35	0	0.5	0	0	5.02	0	0	0	0	0	0	19.19	19.19
	Sparkle Inverter enclosure 2	S_INV2	653973.9	4924893	2	0	0	89.1	89.1	1	487.74	3.25	0	64.76	0	0.52	0	0	5.1	0	0	0	0	0	0	18.68	18.68
	Sparkle Inverter enclosure 5	S_INV5	653978.3	4925039	2	0	0	89.1	89.1	1	524.02	3.25	0	65.39	0	0.54	0	0	5.22	0	0	0	0	0	0	17.91	17.91
	Discovery Inverter enclosure 1	D_INV1	653434.4	4922792	2	0	0	100.3	100.3	1	2276.36	3.25	0	78.14	0	0.2	0	0	14.03	0	0	0	0	0	0	7.94	7.94
	Discovery Inverter enclosure 2	D_INV2	653465.5	4922673	2	0	0	100.3	100.3	1	2370.1	3.25	0	78.5	0	0.23	0	0	14.21	0	0	0	0	0	0	7.38	7.38
	Discovery Inverter enclosure 3	D_INV3	653511.4	4922537	2	0	0	100.3	100.3	1	2476.4	3.25	0	78.88	0	0.25	0	0	14.41	0	0	0	0	0	0	6.77	6.77
	Discovery Inverter enclosure 5	D_INV5	653875	4922657	2	0	0	97.3	97.3	1	2245.59	3.25	0	78.03	0	0.2	0	0	13.96	0	0	0	0	0	0	5.13	5.13
	Sparkle Inverter transformer 3	S_INVTR3	654132	4924883	2	0	0	77.3	77.3	1	330.03	3.25	0	61.37	0	-1.13	0	0	0.26	0	0	0	0	0	0	16.85	16.85
	Sparkle Inverter transformer 4	S_INVTR4	654124	4924736	2	0	0	77.3	77.3	1	345.04	3.25	0	61.76	0	-1.18	0	0	0.27	0	0	0	0	0	0	16.5	16.5
	Sparkle Inverter transformer 6	S_INVTR6	654140.4	4925027	2	0	0	77.3	77.3	1	375.05	3.25	0	62.48	0	-1.27	0	0	0.29	0	0	0	0	0	0	15.84	15.84
	Sparkle Inverter transformer 7	S_INVTR7	654147.2	4925179	2	0	0	77.3	77.3	1	469.34	3.25	0	64.43	0	-1.46	0	0	0.35	0	0	0	0	0	0	14.02	14.02
	Sparkle Inverter transformer 2	S_INVTR2	653968	4924893	2	0	0	77.3	77.3	1	493.59	3.25	0	64.87	0	-1.5	0	0	0.37	0	0	0	0	0	0	13.61	13.61
	Sparkle Inverter transformer 1	S_INVTR1	653948.9	4925041	2	0	0	78.2	78.2	1	551.84	3.25	0	65.84	0	-1.58	0	0	0.41	0	0	0	0	0	0	13.58	13.58
	Discovery Substation Transforme	D_TRS	653484.4	4922253	2.5	0	0	92	92	1	2750.78	3.5	0	79.79	0	0.02	0	0	5.58	0	0	0	0	0	0	6.59	6.59
	Sparkle Inverter transformer 5	S_INVTR5	653972.5	4925040	2	0	0	77.3	77.3	1	529.53	3.25	0	65.48	0	-1.55	0	0	0.39	0	0	0	0	0	0	13.02	13.02
	Discovery Inverter enclosure 6	D_INV6	653814.6	4922521	2	0	0	89.1	89.1	1	2393.26	3.25	0	78.58	0	1	0	0	8.68	0	0	0	0	0	0	0.8	0.8
	Discovery Inverter enclosure 7	D_INV7	653773.3	4922400	2	0	0	89.1	89.1	1	2520.88	3.25	0	79.03	0	1.03	0	0	8.88	0	0	0	0	0	0	0.12	0.12
	Discovery Inverter enclosure 4	D_INV4	653513.6	4922427	2	0	0	89.1	89.1	1	2578.07	3.25	0	79.23	0	1.04	0	0	8.97	0	0	0	0	0	0	-0.18	-0.18
	Discovery Inverter Transformer	D_INVTR5	653869.2	4922658	2	0	0	78.2	78.2	1	2246.75	3.25	0	78.03	0	-2.49	0	0	1.32	0	0	0	0	0	0	1.38	1.38
	Discovery Inverter Transformer	D_INVTR1	653440.3	4922792	2	0	0	77.3	77.3	1	2274.08	3.25	0	78.14	0	-2.5	0	0	1.34	0	0	0	0	0	0	0.37	0.37
	Discovery Inverter Transformer	D_INVTR2	653471.4	4922673	2	0	0	77.3	77.3	1	2368.01	3.25	0	78.49	0	-2.53	0	0	1.38	0	0	0	0	0	0	0	0
	Discovery Inverter Transformer	D_INVTR6	653808.8	4922521	2	0	0	77.3	77.3	1	2394.46	3.25	0	78.58	0	-2.54	0	0	1.39	0	0	0	0	0	0	-0.1	-0.1
	Discovery Inverter Transformer	D_INVTR3	653517.2	4922537	2	0	0	77.3	77.3	1	2474.53	3.25	0	78.87	0	-2.56	0	0	1.43	0	0	0	0	0	0	-0.39	-0.39
	Discovery Inverter Transformer	D_INVTR7	653767.4	4922400	2	0	0	77.3	77.3	1	2522.1	3.25	0	79.04	0	-2.58	0	0	1.45	0	0	0	0	0	0	-0.57	-0.57
	Discovery Inverter Transformer	D_INVTR4	653519.4	4922426	2	0	0	77.3	77.3	1	2576.3	3.25	0	79.22	0	-2.59	0	0	1.47	0	0	0	0	0	0	-0.76	-0.76

Value D/N: 0 0
Level D/N: 37.7835 37.7835

Receiver: Existing Potential Receptor
ID: R4
X: 654659
Y: 4924823
Z: 4.5
Ground: 0

ISO	Description	ID	X	Y	Z	Ground	ReflOrd	LxT	LxN	L/A	Dist.	hm	Freq	Adiv	K0b	Agr	Abar	z	Aatm	Afol	Ahous	Cmet	CmetN	Dc	RL	LtotT	LtotN
	Sparkle Inverter enclosure 3	S_INV3	654137.8	4924883	2	0	0	100.3	100.3	1	524.6	3.25	0	65.4	0	-0.53	0	0	8.71	0	0	0	0	0	0	26.74	26.74
	Sparkle Inverter enclosure 4	S_INV4	654129.9	4924735	2	0	0	100.3	100.3	1	536.37	3.25	0	65.59	0	-0.52	0	0	8.79	0	0	0	0	0	0	26.45	26.45
	Sparkle Inverter enclosure 6	S_INV6	654146.3	4925027	2	0	0	100.3	100.3	1	551.72	3.25	0	65.83	0	-0.51	0	0	8.9	0	0	0	0	0	0	26.09	26.09
	Sparkle Inverter enclosure 1	S_INV1	653943	4925042	2	0	0	97.3	97.3	1	748.64	3.25	0	68.49	0	-0.38	0	0	9.96	0	0	0	0	0	0	19.25	19.25
	Sparkle Substation Transformer	S_TRS	653933.6	4925172	2.5	0	0	92	92	1	804.86	3.5	0	69.11	0	-0.4	0	0	2.11	0	0	0	0	0	0	21.14	21.14
	Sparkle Inverter enclosure 7	S_INV7	654153.1	4925178	2	0	0	89.1	89.1	1	618.16	3.25	0	66.82	0	0.58	0	0	5.5	0	0	0	0	0	0	16.15	16.15
	Discovery Inverter enclosure 1	D_INV1	653434.4	4922792	2	0	0	100.3	100.3	1	2371.4	3.25	0	78.5	0	0.23	0	0	14.21	0	0	0	0	0	0	7.37	7.37
	Discovery Inverter enclosure 2	D_INV2	653465.5	4922673	2	0	0	100.3	100.3	1	2458.83	3.25	0	78.81	0	0.25	0	0	14.38	0	0	0	0	0	0	6.87	6.87
	Sparkle Inverter enclosure 2	S_INV2	653973.9	4924893	2	0	0	89.1	89.1	1	688.7	3.25	0	67.76	0	0.61	0	0	5.67	0	0	0	0	0	0	15.01	15.01
	Discovery Inverter enclosure 3	D_INV3	653511.4	4922537	2	0	0	100.3	100.3	1	2557.67	3.25	0	79.16	0	0.27	0	0	14.57	0	0	0	0	0	0	6.32	6.32
	Sparkle Inverter enclosure 5	S_INV5	653978.3	4925039	2	0	0	89.1	89.1	1	714.2	3.25	0	68.08	0	0.62	0	0	5.73	0	0	0	0	0	0	14.63	14.63
	Discovery Inverter enclosure 5	D_INV5	653875	4922657	2	0	0	97.3	97.3	1	2303.39	3.25	0	78.25	0	0.21	0	0	14.08	0	0	0	0	0	0	4.78	4.78
	Discovery Substation Transforme	D_TRS	653484.4	4922253	2.5	0	0	92	92	1	2825.79	3.5	0	80.02	0	0.04	0	0	5.69	0	0	0	0	0	0	6.22	6.22

Sparkle Inverter transformer 3	S_INVTR3	654132	4924883	2	0	0	77.3	77.3	1	530.45	3.25	0	65.49	0	-1.55	0	0	0.39	0	0	0	0	0	0	13.01	13.01
Sparkle Inverter transformer 4	S_INVTR4	654124	4924736	2	0	0	77.3	77.3	1	542.08	3.25	0	65.68	0	-1.57	0	0	0.4	0	0	0	0	0	0	12.83	12.83
Sparkle Inverter transformer 6	S_INVTR6	654140.4	4925027	2	0	0	77.3	77.3	1	557.3	3.25	0	65.92	0	-1.58	0	0	0.41	0	0	0	0	0	0	12.59	12.59
Sparkle Inverter transformer 7	S_INVTR7	654147.2	4925179	2	0	0	77.3	77.3	1	623.19	3.25	0	66.89	0	-1.65	0	0	0.45	0	0	0	0	0	0	11.65	11.65
Discovery Inverter enclosure 6	D_INV6	653814.6	4922521	2	0	0	89.1	89.1	1	2452.38	3.25	0	78.79	0	1.01	0	0	8.77	0	0	0	0	0	0	0.48	0.48
Discovery Inverter enclosure 7	D_INV7	653773.3	4922400	2	0	0	89.1	89.1	1	2580.18	3.25	0	79.23	0	1.05	0	0	8.97	0	0	0	0	0	0	-0.19	-0.19
Sparkle Inverter transformer 1	S_INVTR1	653948.9	4925041	2	0	0	78.2	78.2	1	742.9	3.25	0	68.42	0	-1.76	0	0	0.53	0	0	0	0	0	0	11.05	11.05
Discovery Inverter enclosure 4	D_INV4	653513.6	4922427	2	0	0	89.1	89.1	1	2655.94	3.25	0	79.48	0	1.06	0	0	9.09	0	0	0	0	0	0	-0.58	-0.58
Sparkle Inverter transformer 2	S_INVTR2	653968	4924893	2	0	0	77.3	77.3	1	694.56	3.25	0	67.83	0	-1.72	0	0	0.5	0	0	0	0	0	0	10.73	10.73
Sparkle Inverter transformer 5	S_INVTR5	653972.5	4925040	2	0	0	77.3	77.3	1	719.9	3.25	0	68.15	0	-1.74	0	0	0.51	0	0	0	0	0	0	10.42	10.42
Discovery Inverter Transformer	D_INVTR5	653869.2	4922658	2	0	0	78.2	78.2	1	2305.03	3.25	0	78.25	0	-2.51	0	0	1.35	0	0	0	0	0	0	1.15	1.15
Discovery Inverter Transformer	D_INVTR1	653440.3	4922792	2	0	0	77.3	77.3	1	2368.71	3.25	0	78.49	0	-2.53	0	0	1.38	0	0	0	0	0	0	0	0
Discovery Inverter Transformer	D_INVTR6	653808.8	4922521	2	0	0	77.3	77.3	1	2454.04	3.25	0	78.8	0	-2.56	0	0	1.42	0	0	0	0	0	0	-0.32	-0.32
Discovery Inverter Transformer	D_INVTR2	653471.4	4922673	2	0	0	77.3	77.3	1	2456.33	3.25	0	78.81	0	-2.56	0	0	1.42	0	0	0	0	0	0	-0.33	-0.33
Discovery Inverter Transformer	D_INVTR3	653517.2	4922537	2	0	0	77.3	77.3	1	2555.4	3.25	0	79.15	0	-2.59	0	0	1.46	0	0	0	0	0	0	-0.68	-0.68
Discovery Inverter Transformer	D_INVTR7	653767.4	4922400	2	0	0	77.3	77.3	1	2581.83	3.25	0	79.24	0	-2.6	0	0	1.48	0	0	0	0	0	0	-0.78	-0.78
Discovery Inverter Transformer	D_INVTR4	653519.4	4922426	2	0	0	77.3	77.3	1	2653.78	3.25	0	79.48	0	-2.62	0	0	1.51	0	0	0	0	0	0	-1.03	-1.03

Value D/N: 0 0
Level D/N: 32.4938 32.4938

Receiver: Existing Potential Receptor
ID: R5
X: 653724
Y: 4924916
Z: 4.5
Ground: 0

ISO	Description	ID	X	Y	Z	Ground	ReflOrd	LxT	LxN	L/A	Dist.	hm	Freq	Adiv	K0b	Agr	Abar	z	Aatm	Afol	Ahous	Cmet	CmetN	Dc	RL	LtotT	LtotN
	Sparkle Inverter enclosure 1	S_INV1	653943	4925042	2	0	0	97.3	97.3	1	252.54	3.25	0	59.05	0	-0.62	0	0	5.67	0	0	0	0	0	0	33.22	33.22
	Sparkle Inverter enclosure 3	S_INV3	654137.8	4924883	2	0	0	100.3	100.3	1	415.17	3.25	0	63.36	0	-0.61	0	0	7.78	0	0	0	0	0	0	29.78	29.78
	Sparkle Inverter enclosure 6	S_INV6	654146.3	4925027	2	0	0	100.3	100.3	1	436.52	3.25	0	63.8	0	-0.6	0	0	7.98	0	0	0	0	0	0	29.12	29.12
	Sparkle Inverter enclosure 4	S_INV4	654129.9	4924735	2	0	0	100.3	100.3	1	444.32	3.25	0	63.95	0	-0.59	0	0	8.06	0	0	0	0	0	0	28.89	28.89
	Sparkle Substation Transformer	S_TRS	653933.6	4925172	2.5	0	0	92	92	1	330.63	3.5	0	61.39	0	-0.27	0	0	1.01	0	0	0	0	0	0	29.85	29.85
	Sparkle Inverter enclosure 2	S_INV2	653973.9	4924893	2	0	0	89.1	89.1	1	250.94	3.25	0	58.99	0	0.34	0	0	3.73	0	0	0	0	0	0	25.99	25.99
	Sparkle Inverter enclosure 5	S_INV5	653978.3	4925039	2	0	0	89.1	89.1	1	282.58	3.25	0	60.02	0	0.36	0	0	4	0	0	0	0	0	0	24.68	24.68
	Sparkle Inverter enclosure 7	S_INV7	654153.1	4925178	2	0	0	89.1	89.1	1	502.86	3.25	0	65.03	0	0.53	0	0	5.15	0	0	0	0	0	0	18.35	18.35
	Discovery Inverter enclosure 1	D_INV1	653434.4	4922792	2	0	0	100.3	100.3	1	2143.4	3.25	0	77.62	0	0.17	0	0	13.76	0	0	0	0	0	0	8.76	8.76
	Discovery Inverter enclosure 2	D_INV2	653465.5	4922673	2	0	0	100.3	100.3	1	2257.6	3.25	0	78.07	0	0.2	0	0	13.99	0	0	0	0	0	0	8.05	8.05
	Discovery Inverter enclosure 3	D_INV3	653511.4	4922537	2	0	0	100.3	100.3	1	2388.23	3.25	0	78.56	0	0.23	0	0	14.24	0	0	0	0	0	0	7.28	7.28
	Discovery Inverter enclosure 5	D_INV5	653875	4922657	2	0	0	97.3	97.3	1	2263.91	3.25	0	78.1	0	0.2	0	0	14	0	0	0	0	0	0	5.01	5.01
	Sparkle Inverter transformer 1	S_INVTR1	653948.9	4925041	2	0	0	78.2	78.2	1	257.46	3.25	0	59.21	0	-0.81	0	0	0.2	0	0	0	0	0	0	19.63	19.63
	Sparkle Inverter transformer 2	S_INVTR2	653968	4924893	2	0	0	77.3	77.3	1	245.08	3.25	0	58.79	0	-0.73	0	0	0.2	0	0	0	0	0	0	19.09	19.09
	Sparkle Inverter transformer 5	S_INVTR5	653972.5	4925040	2	0	0	77.3	77.3	1	277.5	3.25	0	59.87	0	-0.92	0	0	0.22	0	0	0	0	0	0	18.17	18.17
	Sparkle Inverter transformer 3	S_INVTR3	654132	4924883	2	0	0	77.3	77.3	1	409.31	3.25	0	63.24	0	-1.35	0	0	0.31	0	0	0	0	0	0	15.14	15.14
	Sparkle Inverter transformer 6	S_INVTR6	654140.4	4925027	2	0	0	77.3	77.3	1	430.97	3.25	0	63.69	0	-1.4	0	0	0.33	0	0	0	0	0	0	14.72	14.72
	Sparkle Inverter transformer 4	S_INVTR4	654124	4924736	2	0	0	77.3	77.3	1	438.82	3.25	0	63.85	0	-1.41	0	0	0.33	0	0	0	0	0	0	14.58	14.58
	Discovery Substation Transforme	D_TRS	653484.4	4922253	2.5	0	0	92	92	1	2673.86	3.5	0	79.54	0	0	0	0	5.46	0	0	0	0	0	0	6.97	6.97
	Sparkle Inverter transformer 7	S_INVTR7	654147.2	4925179	2	0	0	77.3	77.3	1	498.08	3.25	0	64.95	0	-1.51	0	0	0.37	0	0	0	0	0	0	13.53	13.53
	Discovery Inverter enclosure 6	D_INV6	653814.6	4922521	2	0	0	89.1	89.1	1	2397.16	3.25	0	78.59	0	1	0	0	8.68	0	0	0	0	0	0	0.78	0.78
	Discovery Inverter enclosure 4	D_INV4	653513.6	4922427	2	0	0	89.1	89.1	1	2498.13	3.25	0	78.95	0	1.03	0	0	8.84	0	0	0	0	0	0	0.24	0.24
	Discovery Inverter enclosure 7	D_INV7	653773.3	4922400	2	0	0	89.1	89.1	1	2516.86	3.25	0	79.02	0	1.03	0	0	8.87	0	0	0	0	0	0	0.14	0.14
	Discovery Inverter Transformer	D_INVTR5	653869.2	4922658	2	0	0	78.2	78.2	1	2263.14	3.25	0	78.09	0	-2.5	0	0	1.33	0	0	0	0	0	0	1.31	1.31
	Discovery Inverter Transformer	D_INVTR1	653440.3	4922792	2	0	0	77.3	77.3	1	2143.01	3.25	0	77.62	0	-2.46	0	0	1.27	0	0	0	0	0	0	0.9	0.9
	Discovery Inverter Transformer	D_INVTR2	653471.4	4922673	2	0	0	77.3	77.3	1	2257.33	3.25	0	78.07	0	-2.49	0	0	1.33	0	0	0	0	0	0	0.43	0.43
	Discovery Inverter Transformer	D_INVTR3	653517.2	4922537	2	0	0	77.3	77.3	1	2388.11	3.25	0	78.56	0	-2.54	0	0	1.39	0	0	0	0	0	0	-0.07	-0.07
	Discovery Inverter Transformer	D_INVTR6	653808.8	4922521	2	0	0	77.3	77.3	1	2396.56	3.25	0	78.59	0	-2.54	0	0	1.39	0	0	0	0	0	0	-0.1	-0.1
	Discovery Inverter Transformer	D_INVTR4	653519.4	4922426	2	0	0	77.3	77.3	1	2498.03	3.25	0	78.95	0	-2.57	0	0	1.44	0	0	0	0	0	0	-0.48	-0.48
	Discovery Inverter Transformer	D_INVTR7	653767.4	4922400	2	0	0	77.3	77.3	1	2516.36	3.25	0	79.02	0	-2.58	0	0	1.45	0	0	0	0	0	0	-0.55	-0.55

Value D/N: 0 0
Level D/N: 38.2977 38.2977

Receiver: Existing Potential Receptor
ID: R6
X: 653258
Y: 4923555
Z: 4.5
Ground: 0

ISO	Description	ID	X	Y	Z	Ground	ReflOrd	LxT	LxN	L/A	Dist.	hm	Freq	Adiv	K0b	Agr	Abar	z	Aatm	Afol	Ahous	Cmet	CmetN	Dc	RL	LtotT	LtotN
	Discovery Inverter enclosure 1	D_INV1	653434.4	4922792	2	0	0	100.3	100.3	1	782.89	3.25	0	68.87	0	-0.36	0	0	10.11	0	0	0	0	0	0	21.69	21.69
	Discovery Inverter enclosure 2	D_INV2	653465.5	4922673	2	0	0	100.3	100.3	1	905.84	3.25	0	70.14	0	-0.29	0	0	10.59	0	0	0	0	0	0	19.88	19.88
	Discovery Inverter enclosure 3	D_INV3	653511.4	4922537	2	0	0	100.3	100.3	1	1048.82	3.25	0	71.41	0	-0.22	0	0	11.07	0	0	0	0	0	0	18.05	18.05

Sparkle Inverter enclosure 4	S_INV4	654129.9	4924735	2	0	0	100.3	100.3	1	1467.34	3.25	0	74.33	0	-0.05	0	0	12.24	0	0	0	0	0	0	13.78	13.78
Discovery Inverter enclosure 5	D_INV5	653875	4922657	2	0	0	97.3	97.3	1	1089.45	3.25	0	71.74	0	-0.2	0	0	11.2	0	0	0	0	0	0	14.58	14.58
Sparkle Inverter enclosure 3	S_INV3	654137.8	4924883	2	0	0	100.3	100.3	1	1592.94	3.25	0	75.04	0	0	0	0	12.55	0	0	0	0	0	0	12.72	12.72
Sparkle Inverter enclosure 6	S_INV6	654146.3	4925027	2	0	0	100.3	100.3	1	1718.95	3.25	0	75.71	0	0.04	0	0	12.85	0	0	0	0	0	0	11.72	11.72
Sparkle Inverter enclosure 1	S_INV1	653943	4925042	2	0	0	97.3	97.3	1	1636.93	3.25	0	75.28	0	0.02	0	0	12.66	0	0	0	0	0	0	9.36	9.36
Discovery Substation Transforme	D_TRS	653484.4	4922253	2.5	0	0	92	92	1	1321.64	3.5	0	73.42	0	-0.31	0	0	3.15	0	0	0	0	0	0	15.72	15.72
Discovery Inverter enclosure 4	D_INV4	653513.6	4922427	2	0	0	89.1	89.1	1	1156.84	3.25	0	72.27	0	0.72	0	0	6.6	0	0	0	0	0	0	9.47	9.47
Discovery Inverter enclosure 6	D_INV6	653814.6	4922521	2	0	0	89.1	89.1	1	1174.7	3.25	0	72.4	0	0.72	0	0	6.64	0	0	0	0	0	0	9.3	9.3
Sparkle Substation Transformer	S_TRS	653933.6	4925172	2.5	0	0	92	92	1	1752.19	3.5	0	75.87	0	-0.22	0	0	3.94	0	0	0	0	0	0	12.39	12.39
Discovery Inverter enclosure 7	D_INV7	653773.3	4922400	2	0	0	89.1	89.1	1	1265.07	3.25	0	73.04	0	0.74	0	0	6.8	0	0	0	0	0	0	8.48	8.48
Sparkle Inverter enclosure 2	S_INV2	653973.9	4924893	2	0	0	89.1	89.1	1	1517.21	3.25	0	74.62	0	0.8	0	0	7.24	0	0	0	0	0	0	6.4	6.4
Sparkle Inverter enclosure 5	S_INV5	653978.3	4925039	2	0	0	89.1	89.1	1	1649.74	3.25	0	75.35	0	0.83	0	0	7.46	0	0	0	0	0	0	5.42	5.42
Sparkle Inverter enclosure 7	S_INV7	654153.1	4925178	2	0	0	89.1	89.1	1	1853.63	3.25	0	76.36	0	0.87	0	0	7.8	0	0	0	0	0	0	4.02	4.02
Discovery Inverter Transformer	D_INVTR1	653440.3	4922792	2	0	0	77.3	77.3	1	784.62	3.25	0	68.89	0	-1.79	0	0	0.55	0	0	0	0	0	0	9.68	9.68
Discovery Inverter Transformer	D_INVTR2	653471.4	4922673	2	0	0	77.3	77.3	1	907.59	3.25	0	70.16	0	-1.87	0	0	0.62	0	0	0	0	0	0	8.43	8.43
Discovery Inverter Transformer	D_INVTR5	653869.2	4922658	2	0	0	78.2	78.2	1	1085.81	3.25	0	71.72	0	-1.99	0	0	0.73	0	0	0	0	0	0	7.78	7.78
Discovery Inverter Transformer	D_INVTR3	653517.2	4922537	2	0	0	77.3	77.3	1	1050.63	3.25	0	71.43	0	-1.96	0	0	0.71	0	0	0	0	0	0	7.17	7.17
Discovery Inverter Transformer	D_INVTR4	653519.4	4922426	2	0	0	77.3	77.3	1	1158.53	3.25	0	72.28	0	-2.03	0	0	0.77	0	0	0	0	0	0	6.32	6.32
Discovery Inverter Transformer	D_INVTR6	653808.8	4922521	2	0	0	77.3	77.3	1	1171.6	3.25	0	72.38	0	-2.03	0	0	0.78	0	0	0	0	0	0	6.22	6.22
Discovery Inverter Transformer	D_INVTR7	653767.4	4922400	2	0	0	77.3	77.3	1	1262.33	3.25	0	73.02	0	-2.08	0	0	0.83	0	0	0	0	0	0	5.58	5.58
Sparkle Inverter transformer 4	S_INVTR4	654124	4924736	2	0	0	77.3	77.3	1	1464.19	3.25	0	74.31	0	-2.19	0	0	0.94	0	0	0	0	0	0	4.28	4.28
Sparkle Inverter transformer 1	S_INVTR1	653948.9	4925041	2	0	0	78.2	78.2	1	1639.04	3.25	0	75.29	0	-2.26	0	0	1.03	0	0	0	0	0	0	4.19	4.19
Sparkle Inverter transformer 2	S_INVTR2	653968	4924893	2	0	0	77.3	77.3	1	1514.8	3.25	0	74.61	0	-2.21	0	0	0.96	0	0	0	0	0	0	3.98	3.98
Sparkle Inverter transformer 3	S_INVTR3	654132	4924883	2	0	0	77.3	77.3	1	1590.04	3.25	0	75.03	0	-2.24	0	0	1	0	0	0	0	0	0	3.55	3.55
Sparkle Inverter transformer 5	S_INVTR5	653972.5	4925040	2	0	0	77.3	77.3	1	1647.54	3.25	0	75.34	0	-2.27	0	0	1.03	0	0	0	0	0	0	3.24	3.24
Sparkle Inverter transformer 6	S_INVTR6	654140.4	4925027	2	0	0	77.3	77.3	1	1716.27	3.25	0	75.69	0	-2.3	0	0	1.07	0	0	0	0	0	0	2.88	2.88
Sparkle Inverter transformer 7	S_INVTR7	654147.2	4925179	2	0	0	77.3	77.3	1	1851.15	3.25	0	76.35	0	-2.35	0	0	1.13	0	0	0	0	0	0	2.21	2.21

/alue D/N: 0 0
Level D/N: 27.3892 27.3892

Receiver: Existing Potential Receptor
ID: R7
X: 653438
Y: 4923542
Z: 4.5
Ground: 0

ISO	Description	ID	X	Y	Z	Ground	ReflOrd	LxT	LxN	L/A	Dist.	hm	Freq	Adiv	K0b	Agr	Abar	z	Aatm	Afol	Ahous	Cmet	CmetN	Dc	RL	LtotT	LtotN
	Discovery Inverter enclosure 1	D_INV1	653434.4	4922792	2	0	0	100.3	100.3	1	749.76	3.25	0	68.5	0	-0.38	0	0	9.97	0	0	0	0	0	0	22.23	22.23
	Discovery Inverter enclosure 2	D_INV2	653465.5	4922673	2	0	0	100.3	100.3	1	869.19	3.25	0	69.78	0	-0.31	0	0	10.45	0	0	0	0	0	0	20.39	20.39
	Discovery Inverter enclosure 3	D_INV3	653511.4	4922537	2	0	0	100.3	100.3	1	1007.43	3.25	0	71.06	0	-0.24	0	0	10.94	0	0	0	0	0	0	18.55	18.55
	Sparkle Inverter enclosure 4	S_INV4	654129.9	4924735	2	0	0	100.3	100.3	1	1379.3	3.25	0	73.79	0	-0.08	0	0	12.02	0	0	0	0	0	0	14.58	14.58
	Discovery Inverter enclosure 5	D_INV5	653875	4922657	2	0	0	97.3	97.3	1	986.91	3.25	0	70.89	0	-0.25	0	0	10.87	0	0	0	0	0	0	15.81	15.81
	Sparkle Inverter enclosure 3	S_INV3	654137.8	4924883	2	0	0	100.3	100.3	1	1512.55	3.25	0	74.59	0	-0.03	0	0	12.36	0	0	0	0	0	0	13.39	13.39
	Sparkle Inverter enclosure 6	S_INV6	654146.3	4925027	2	0	0	100.3	100.3	1	1644.95	3.25	0	75.32	0	0.02	0	0	12.67	0	0	0	0	0	0	12.3	12.3
	Sparkle Inverter enclosure 1	S_INV1	653943	4925042	2	0	0	97.3	97.3	1	1582.45	3.25	0	74.99	0	0	0	0	12.53	0	0	0	0	0	0	9.8	9.8
	Discovery Substation Transforme	D_TRS	653484.4	4922253	2.5	0	0	92	92	1	1289.94	3.5	0	73.21	0	-0.32	0	0	3.09	0	0	0	0	0	0	15.99	15.99
	Discovery Inverter enclosure 6	D_INV6	653814.6	4922521	2	0	0	89.1	89.1	1	1088.67	3.25	0	71.74	0	0.7	0	0	6.48	0	0	0	0	0	0	10.14	10.14
	Discovery Inverter enclosure 4	D_INV4	653513.6	4922427	2	0	0	89.1	89.1	1	1117.81	3.25	0	71.97	0	0.71	0	0	6.53	0	0	0	0	0	0	9.85	9.85
	Discovery Inverter enclosure 7	D_INV7	653773.3	4922400	2	0	0	89.1	89.1	1	1190.56	3.25	0	72.52	0	0.73	0	0	6.67	0	0	0	0	0	0	9.15	9.15
	Sparkle Substation Transformer	S_TRS	653933.6	4925172	2.5	0	0	92	92	1	1703.39	3.5	0	75.63	0	-0.23	0	0	3.85	0	0	0	0	0	0	12.73	12.73
	Sparkle Inverter enclosure 2	S_INV2	653973.9	4924893	2	0	0	89.1	89.1	1	1453.12	3.25	0	74.25	0	0.78	0	0	7.13	0	0	0	0	0	0	6.9	6.9
	Sparkle Inverter enclosure 5	S_INV5	653978.3	4925039	2	0	0	89.1	89.1	1	1591.69	3.25	0	75.04	0	0.81	0	0	7.37	0	0	0	0	0	0	5.84	5.84
	Sparkle Inverter enclosure 7	S_INV7	654153.1	4925178	2	0	0	89.1	89.1	1	1785.64	3.25	0	76.04	0	0.86	0	0	7.69	0	0	0	0	0	0	4.47	4.47
	Discovery Inverter Transformer	D_INVTR1	653440.3	4922792	2	0	0	77.3	77.3	1	750.15	3.25	0	68.5	0	-1.76	0	0	0.53	0	0	0	0	0	0	10.07	10.07
	Discovery Inverter Transformer	D_INVTR2	653471.4	4922673	2	0	0	77.3	77.3	1	869.79	3.25	0	69.79	0	-1.85	0	0	0.6	0	0	0	0	0	0	8.8	8.8
	Discovery Inverter Transformer	D_INVTR5	653869.2	4922658	2	0	0	78.2	78.2	1	983.97	3.25	0	70.86	0	-1.92	0	0	0.67	0	0	0	0	0	0	8.64	8.64
	Discovery Inverter Transformer	D_INVTR3	653517.2	4922537	2	0	0	77.3	77.3	1	1008.27	3.25	0	71.07	0	-1.94	0	0	0.68	0	0	0	0	0	0	7.52	7.52
	Discovery Inverter Transformer	D_INVTR6	653808.8	4922521	2	0	0	77.3	77.3	1	1086.3	3.25	0	71.72	0	-1.99	0	0	0.73	0	0	0	0	0	0	6.88	6.88
	Discovery Inverter Transformer	D_INVTR4	653519.4	4922426	2	0	0	77.3	77.3	1	1118.61	3.25	0	71.97	0	-2	0	0	0.75	0	0	0	0	0	0	6.63	6.63
	Discovery Inverter Transformer	D_INVTR7	653767.4	4922400	2	0	0	77.3	77.3	1	1188.55	3.25	0	72.5	0	-2.04	0	0	0.79	0	0	0	0	0	0	6.1	6.1
	Sparkle Inverter transformer 4	S_INVTR4	654124	4924736	2	0	0	77.3	77.3	1	1376.71	3.25	0	73.78	0	-2.14	0	0	0.89	0	0	0	0	0	0	4.82	4.82
	Sparkle Inverter transformer 1	S_INVTR1	653948.9	4925041	2	0	0	78.2	78.2	1	1583.96	3.25	0	74.99	0	-2.24	0	0	1	0	0	0	0	0	0	4.49	4.49
	Sparkle Inverter transformer 2	S_INVTR2	653968	4924893	2	0	0	77.3	77.3	1	1451.34	3.25	0	74.24	0	-2.18	0	0	0.93	0	0	0	0	0	0	4.36	4.36
	Sparkle Inverter transformer 3	S_INVTR3	654132	4924883	2	0	0	77.3	77.3	1	1510.2	3.25	0	74.58	0	-2.21	0	0	0.96	0	0	0	0	0	0	4.01	4.01
	Sparkle Inverter transformer 5	S_INVTR5	653972.5	4925040	2	0	0	77.3	77.3	1	1590.08	3.25	0	75.03	0	-2.24	0	0	1	0	0	0	0	0	0	3.55	3.55
	Sparkle Inverter transformer 6	S_INVTR6	654140.4	4925027	2	0	0	77.3	77.3	1	1642.79	3.25	0	75.31	0	-2.27	0	0	1.03	0	0	0	0	0	0	3.27	3.27
	Sparkle Inverter transformer 7	S_INVTR7	654147.2	4925179	2	0	0	77.3	77.3	1	1783.66	3.25	0	76.03	0	-2.32	0	0	1.1	0	0	0	0	0	0	2.54	2.54

/alue D/N: 0 0
Level D/N: 27.9457 27.9457

Receiver: Existing Potential Receptor

ID: R8
X: 653986
Y: 4922391
Z: 4.5
Ground: 0

ISO	Description	ID	X	Y	Z	Ground	ReflOrd	LxT	LxN	L/A	Dist.	hm	Freq	Adiv	K0b	Agr	Abar	z	Aatm	Afol	Ahous	Cmet	CmetN	Dc	RL	LtotT	LtotN
	Discovery Inverter enclosure 5	D_INV5	653875	4922657	2	0	0	97.3	97.3	1	288.35	3.25	0	60.2	0	-0.64	0	0	6.23	0	0	0	0	0	0	31.53	31.53
	Discovery Inverter enclosure 3	D_INV3	653511.4	4922537	2	0	0	100.3	100.3	1	496.64	3.25	0	64.92	0	-0.55	0	0	8.5	0	0	0	0	0	0	27.45	27.45
	Discovery Inverter enclosure 2	D_INV2	653465.5	4922673	2	0	0	100.3	100.3	1	592.09	3.25	0	66.45	0	-0.48	0	0	9.16	0	0	0	0	0	0	25.19	25.19
	Discovery Inverter enclosure 1	D_INV1	653434.4	4922792	2	0	0	100.3	100.3	1	682.08	3.25	0	67.68	0	-0.42	0	0	9.65	0	0	0	0	0	0	23.41	23.41
	Discovery Inverter enclosure 7	D_INV7	653773.3	4922400	2	0	0	89.1	89.1	1	212.93	3.25	0	57.56	0	0.34	0	0	3.36	0	0	0	0	0	0	27.8	27.8
	Discovery Inverter enclosure 6	D_INV6	653814.6	4922521	2	0	0	89.1	89.1	1	214.84	3.25	0	57.64	0	0.34	0	0	3.38	0	0	0	0	0	0	27.7	27.7
	Discovery Substation Transforme	D_TRS	653484.4	4922253	2.5	0	0	92	92	1	520.27	4.24	0	65.32	0	0.65	6.75	0.32	1.48	0	0	0	0	0	0	17.77	17.77
	Discovery Inverter enclosure 4	D_INV4	653513.6	4922427	2	0	0	89.1	89.1	1	473.78	3.25	0	64.51	0	0.51	0	0	5.05	0	0	0	0	0	0	18.99	18.99
	Sparkle Inverter enclosure 4	S_INV4	654129.9	4924735	2	0	0	100.3	100.3	1	2348.63	3.25	0	78.42	0	0.22	0	0	14.17	0	0	0	0	0	0	7.51	7.51
	Sparkle Inverter enclosure 3	S_INV3	654137.8	4924883	2	0	0	100.3	100.3	1	2496.53	3.25	0	78.95	0	0.26	0	0	14.45	0	0	0	0	0	0	6.66	6.66
	Sparkle Inverter enclosure 6	S_INV6	654146.3	4925027	2	0	0	100.3	100.3	1	2640.53	3.25	0	79.43	0	0.29	0	0	14.72	0	0	0	0	0	0	5.87	5.87
	Discovery Inverter Transformer	D_INVTR7	653767.4	4922400	2	0	0	77.3	77.3	1	218.81	3.25	0	57.8	0	-0.54	0	0	0.18	0	0	0	0	0	0	19.91	19.91
	Discovery Inverter Transformer	D_INVTR6	653808.8	4922521	2	0	0	77.3	77.3	1	219.76	3.25	0	57.84	0	-0.55	0	0	0.18	0	0	0	0	0	0	19.88	19.88
	Discovery Inverter Transformer	D_INVTR5	653869.2	4922658	2	0	0	78.2	78.2	1	291.02	3.25	0	60.28	0	-0.98	0	0	0.23	0	0	0	0	0	0	18.71	18.71
	Sparkle Inverter enclosure 1	S_INV1	653943	4925042	2	0	0	97.3	97.3	1	2651.05	3.25	0	79.47	0	0.29	0	0	14.74	0	0	0	0	0	0	2.81	2.81
	Discovery Inverter Transformer	D_INVTR4	653519.4	4922426	2	0	0	77.3	77.3	1	467.92	3.25	0	64.4	0	-1.46	0	0	0.35	0	0	0	0	0	0	14.05	14.05
	Discovery Inverter Transformer	D_INVTR3	653517.2	4922537	2	0	0	77.3	77.3	1	490.93	3.25	0	64.82	0	-1.5	0	0	0.37	0	0	0	0	0	0	13.65	13.65
	Sparkle Substation Transformer	S_TRS	653933.6	4925172	2.5	0	0	92	92	1	2781.19	3.5	0	79.88	0	0.03	0	0	5.63	0	0	0	0	0	0	6.44	6.44
	Discovery Inverter Transformer	D_INVTR2	653471.4	4922673	2	0	0	77.3	77.3	1	586.76	3.25	0	66.37	0	-1.62	0	0	0.43	0	0	0	0	0	0	12.16	12.16
	Sparkle Inverter enclosure 2	S_INV2	653973.9	4924893	2	0	0	89.1	89.1	1	2501.75	3.25	0	78.96	0	1.03	0	0	8.85	0	0	0	0	0	0	0.22	0.22
	Discovery Inverter Transformer	D_INVTR1	653440.3	4922792	2	0	0	77.3	77.3	1	677.12	3.25	0	67.61	0	-1.7	0	0	0.48	0	0	0	0	0	0	10.94	10.94
	Sparkle Inverter enclosure 5	S_INV5	653978.3	4925039	2	0	0	89.1	89.1	1	2648.19	3.25	0	79.46	0	1.06	0	0	9.08	0	0	0	0	0	0	-0.54	-0.54
	Sparkle Inverter enclosure 7	S_INV7	654153.1	4925178	2	0	0	89.1	89.1	1	2792.2	3.25	0	79.92	0	1.1	0	0	9.3	0	0	0	0	0	0	-1.26	-1.26
	Sparkle Inverter transformer 4	S_INVTR4	654124	4924736	2	0	0	77.3	77.3	1	2348.67	3.25	0	78.42	0	-2.52	0	0	1.37	0	0	0	0	0	0	0.08	0.08
	Sparkle Inverter transformer 1	S_INVTR1	653948.9	4925041	2	0	0	78.2	78.2	1	2650.57	3.25	0	79.47	0	-2.62	0	0	1.51	0	0	0	0	0	0	-0.12	-0.12
	Sparkle Inverter transformer 3	S_INVTR3	654132	4924883	2	0	0	77.3	77.3	1	2496.57	3.25	0	78.95	0	-2.57	0	0	1.44	0	0	0	0	0	0	-0.47	-0.47
	Sparkle Inverter transformer 2	S_INVTR2	653968	4924893	2	0	0	77.3	77.3	1	2502.17	3.25	0	78.97	0	-2.57	0	0	1.44	0	0	0	0	0	0	-0.49	-0.49
	Sparkle Inverter transformer 6	S_INVTR6	654140.4	4925027	2	0	0	77.3	77.3	1	2640.58	3.25	0	79.43	0	-2.61	0	0	1.5	0	0	0	0	0	0	-0.98	-0.98
	Sparkle Inverter transformer 5	S_INVTR5	653972.5	4925040	2	0	0	77.3	77.3	1	2648.6	3.25	0	79.46	0	-2.62	0	0	1.51	0	0	0	0	0	0	-1.01	-1.01
	Sparkle Inverter transformer 7	S_INVTR7	654147.2	4925179	2	0	0	77.3	77.3	1	2792.25	3.25	0	79.92	0	-2.66	0	0	1.57	0	0	0	0	0	0	-1.49	-1.49

Value D/N: 0 0
Level D/N: 36.2676 36.2676

Receiver: Existing Potential Receptor
ID: R9
X: 653289
Y: 4921945
Z: 4.5
Ground: 0

ISO	Description	ID	X	Y	Z	Ground	ReflOrd	LxT	LxN	L/A	Dist.	hm	Freq	Adiv	K0b	Agr	Abar	z	Aatm	Afol	Ahous	Cmet	CmetN	Dc	RL	LtotT	LtotN
	Discovery Inverter enclosure 3	D_INV3	653511.4	4922537	2	0	0	100.3	100.3	1	632.63	3.25	0	67.02	0	-0.46	0	0	9.39	0	0	0	0	0	0	24.35	24.35
	Discovery Inverter enclosure 2	D_INV2	653465.5	4922673	2	0	0	100.3	100.3	1	749.34	3.25	0	68.49	0	-0.38	0	0	9.96	0	0	0	0	0	0	22.23	22.23
	Discovery Inverter enclosure 1	D_INV1	653434.4	4922792	2	0	0	100.3	100.3	1	859.64	3.25	0	69.69	0	-0.32	0	0	10.42	0	0	0	0	0	0	20.53	20.53
	Discovery Substation Transforme	D_TRS	653484.4	4922253	2.5	0	0	92	92	1	364.67	4.23	0	62.24	0	0.54	6.03	0.18	1.1	0	0	0	0	0	0	22.07	22.07
	Discovery Inverter enclosure 5	D_INV5	653875	4922657	2	0	0	97.3	97.3	1	922.26	3.25	0	70.3	0	-0.29	0	0	10.65	0	0	0	0	0	0	16.66	16.66
	Discovery Inverter enclosure 4	D_INV4	653513.6	4922427	2	0	0	89.1	89.1	1	531.53	3.25	0	65.51	0	0.54	0	0	5.25	0	0	0	0	0	0	17.75	17.75
	Discovery Inverter enclosure 7	D_INV7	653773.3	4922400	2	0	0	89.1	89.1	1	664.22	3.25	0	67.45	0	0.6	0	0	5.62	0	0	0	0	0	0	15.4	15.4
	Discovery Inverter enclosure 6	D_INV6	653814.6	4922521	2	0	0	89.1	89.1	1	779.47	3.25	0	68.84	0	0.63	0	0	5.88	0	0	0	0	0	0	13.71	13.71
	Sparkle Inverter enclosure 4	S_INV4	654129.9	4924735	2	0	0	100.3	100.3	1	2914.17	3.25	0	80.29	0	0.35	0	0	15.22	0	0	0	0	0	0	4.46	4.46
	Sparkle Inverter enclosure 3	S_INV3	654137.8	4924883	2	0	0	100.3	100.3	1	3058.07	3.25	0	80.71	0	0.37	0	0	15.47	0	0	0	0	0	0	3.76	3.76
	Sparkle Inverter enclosure 6	S_INV6	654146.3	4925027	2	0	0	100.3	100.3	1	3198.68	3.25	0	81.1	0	0.4	0	0	15.72	0	0	0	0	0	0	3.09	3.09
	Sparkle Inverter enclosure 1	S_INV1	653943	4925042	2	0	0	97.3	97.3	1	3165.01	3.25	0	81.01	0	0.39	0	0	15.66	0	0	0	0	0	0	0.25	0.25
	Discovery Inverter Transformer	D_INVTR4	653519.4	4922426	2	0	0	77.3	77.3	1	533.67	3.25	0	65.55	0	-1.55	0	0	0.39	0	0	0	0	0	0	12.96	12.96
	Sparkle Substation Transformer	S_TRS	653933.6	4925172	2.5	0	0	92	92	1	3290.46	3.5	0	81.35	0	0.16	0	0	6.38	0	0	0	0	0	0	4.09	4.09
	Discovery Inverter Transformer	D_INVTR3	653517.2	4922537	2	0	0	77.3	77.3	1	634.35	3.25	0	67.05	0	-1.66	0	0	0.46	0	0	0	0	0	0	11.5	11.5
	Discovery Inverter Transformer	D_INVTR7	653767.4	4922400	2	0	0	77.3	77.3	1	660.22	3.25	0	67.39	0	-1.69	0	0	0.47	0	0	0	0	0	0	11.16	11.16
	Discovery Inverter Transformer	D_INVTR2	653471.4	4922673	2	0	0	77.3	77.3	1	750.36	3.25	0	68.51	0	-1.76	0	0	0.53	0	0	0	0	0	0	10.07	10.07
	Discovery Inverter Transformer	D_INVTR6	653808.8	4922521	2	0	0	77.3	77.3	1	775.82	3.25	0	68.8	0	-1.78	0	0	0.55	0	0	0	0	0	0	9.78	9.78
	Sparkle Inverter enclosure 2	S_INV2	653973.9	4924893	2	0	0	89.1	89.1	1	3026.23	3.25	0	80.62	0	1.15	0	0	9.66	0	0	0	0	0	0	-2.37	-2.37
	Sparkle Inverter enclosure 5	S_INV5	653978.3	4925039	2	0	0	89.1	89.1	1	3170.03	3.25	0	81.02	0	1.19	0	0	9.87	0	0	0	0	0	0	-3.02	-3.02
	Discovery Inverter Transformer	D_INVTR5	653869.2	4922658	2	0	0	78.2	78.2	1	918.84	3.25	0	70.26	0	-1.88	0	0	0.63	0	0	0	0	0	0	9.23	9.23
	Discovery Inverter Transformer	D_INVTR1	653440.3	4922792	2	0	0	77.3	77.3	1	860.27	3.25	0	69.69	0	-1.84	0	0	0.6	0	0	0	0	0	0	8.89	8.89
	Sparkle Inverter enclosure 7	S_INV7	654153.1	4925178	2	0	0	89.1	89.1	1	3346.67	3.25	0	81.49	0	1.23	0	0	10.14	0	0	0	0	0	0	-3.8	-3.8
	Sparkle Inverter transformer 1	S_INVTR1	653948.9	4925041	2	0	0	78.2	78.2	1	3165.85	3.25	0	81.01	0	-2.76	0	0	1.73	0	0	0	0	0	0	-1.74	-1.74

Sparkle Inverter transformer 4	S_INVTR4	654124	4924736	2	0	0	77.3	77.3	1	2912.86	3.25	0	80.29	0	-2.69	0	0	1.62	0	0	0	0	0	0	-1.87	-1.87
Sparkle Inverter transformer 2	S_INVTR2	653968	4924893	2	0	0	77.3	77.3	1	3025.29	3.25	0	80.62	0	-2.72	0	0	1.67	0	0	0	0	0	0	-2.22	-2.22
Sparkle Inverter transformer 3	S_INVTR3	654132	4924883	2	0	0	77.3	77.3	1	3056.83	3.25	0	80.71	0	-2.73	0	0	1.68	0	0	0	0	0	0	-2.31	-2.31
Sparkle Inverter transformer 5	S_INVTR5	653972.5	4925040	2	0	0	77.3	77.3	1	3169.14	3.25	0	81.02	0	-2.76	0	0	1.73	0	0	0	0	0	0	-2.65	-2.65
Sparkle Inverter transformer 6	S_INVTR6	654140.4	4925027	2	0	0	77.3	77.3	1	3197.49	3.25	0	81.1	0	-2.77	0	0	1.74	0	0	0	0	0	0	-2.73	-2.73
Sparkle Inverter transformer 7	S_INVTR7	654147.2	4925179	2	0	0	77.3	77.3	1	3345.54	3.25	0	81.49	0	-2.81	0	0	1.8	0	0	0	0	0	0	-3.14	-3.14

Value D/N: 0 0
Level D/N: 29.8995 29.8995

Receiver: Existing Potential Receptor
ID: R10
X: 653054
Y: 4922223
Z: 4.5
Ground: 0

ISO	Description	ID	X	Y	Z	Ground	ReflOrd	LxT	LxN	L/A	Dist.	hm	Freq	Adiv	K0b	Agr	Abar	z	Aatm	Afol	Ahous	Cmet	CmetN	Dc	RL	LtotT	LtotN
	Discovery Inverter enclosure 3	D_INV3	653511.4	4922537	2	0	0	100.3	100.3	1	554.95	3.25	0	65.89	0	-0.51	0	0	8.92	0	0	0	0	0	0	26.02	26.02
	Discovery Inverter enclosure 2	D_INV2	653465.5	4922673	2	0	0	100.3	100.3	1	609.98	3.25	0	66.71	0	-0.47	0	0	9.26	0	0	0	0	0	0	24.81	24.81
	Discovery Inverter enclosure 1	D_INV1	653434.4	4922792	2	0	0	100.3	100.3	1	684.67	3.25	0	67.71	0	-0.42	0	0	9.66	0	0	0	0	0	0	23.36	23.36
	Discovery Substation Transforme	D_TRS	653484.4	4922253	2.5	0	0	92	92	1	431.44	4.24	0	63.7	0	0.44	4.94	0.22	1.27	0	0	0	0	0	0	21.63	21.63
	Discovery Inverter enclosure 5	D_INV5	653875	4922657	2	0	0	97.3	97.3	1	928.74	3.25	0	70.36	0	-0.28	0	0	10.67	0	0	0	0	0	0	16.57	16.57
	Discovery Inverter enclosure 4	D_INV4	653513.6	4922427	2	0	0	89.1	89.1	1	502.73	3.25	0	65.03	0	0.53	0	0	5.15	0	0	0	0	0	0	18.35	18.35
	Discovery Inverter enclosure 7	D_INV7	653773.3	4922400	2	0	0	89.1	89.1	1	740.63	3.25	0	68.39	0	0.62	0	0	5.79	0	0	0	0	0	0	14.25	14.25
	Sparkle Inverter enclosure 4	S_INV4	654129.9	4924735	2	0	0	100.3	100.3	1	2732.9	3.25	0	79.73	0	0.31	0	0	14.89	0	0	0	0	0	0	5.38	5.38
	Sparkle Inverter enclosure 3	S_INV3	654137.8	4924883	2	0	0	100.3	100.3	1	2872.25	3.25	0	80.16	0	0.34	0	0	15.14	0	0	0	0	0	0	4.67	4.67
	Discovery Inverter enclosure 6	D_INV6	653814.6	4922521	2	0	0	89.1	89.1	1	816.78	3.25	0	69.24	0	0.64	0	0	5.96	0	0	0	0	0	0	13.22	13.22
	Sparkle Inverter enclosure 6	S_INV6	654146.3	4925027	2	0	0	100.3	100.3	1	3008.92	3.25	0	80.57	0	0.36	0	0	15.39	0	0	0	0	0	0	3.99	3.99
	Sparkle Inverter enclosure 1	S_INV1	653943	4925042	2	0	0	97.3	97.3	1	2955.57	3.25	0	80.41	0	0.35	0	0	15.29	0	0	0	0	0	0	1.25	1.25
	Discovery Inverter Transformer	D_INVTR4	653519.4	4922426	2	0	0	77.3	77.3	1	507.92	3.25	0	65.12	0	-1.52	0	0	0.38	0	0	0	0	0	0	13.37	13.37
	Discovery Inverter Transformer	D_INVTR3	653517.2	4922537	2	0	0	77.3	77.3	1	559.56	3.25	0	65.96	0	-1.59	0	0	0.41	0	0	0	0	0	0	12.56	12.56
	Sparkle Substation Transformer	S_TRS	653933.6	4925172	2.5	0	0	92	92	1	3077.1	3.5	0	80.76	0	0.1	0	0	6.07	0	0	0	0	0	0	5.04	5.04
	Discovery Inverter Transformer	D_INVTR2	653471.4	4922673	2	0	0	77.3	77.3	1	613.66	3.25	0	66.76	0	-1.64	0	0	0.44	0	0	0	0	0	0	11.78	11.78
	Discovery Inverter Transformer	D_INVTR1	653440.3	4922792	2	0	0	77.3	77.3	1	687.62	3.25	0	67.75	0	-1.71	0	0	0.49	0	0	0	0	0	0	10.81	10.81
	Sparkle Inverter enclosure 2	S_INV2	653973.9	4924893	2	0	0	89.1	89.1	1	2823.74	3.25	0	80.02	0	1.1	0	0	9.35	0	0	0	0	0	0	-1.41	-1.41
	Discovery Inverter Transformer	D_INVTR7	653767.4	4922400	2	0	0	77.3	77.3	1	735.02	3.25	0	68.33	0	-1.75	0	0	0.52	0	0	0	0	0	0	10.24	10.24
	Sparkle Inverter enclosure 5	S_INV5	653978.3	4925039	2	0	0	89.1	89.1	1	2963.99	3.25	0	80.44	0	1.14	0	0	9.56	0	0	0	0	0	0	-2.08	-2.08
	Discovery Inverter Transformer	D_INVTR6	653808.8	4922521	2	0	0	77.3	77.3	1	811.47	3.25	0	69.19	0	-1.81	0	0	0.57	0	0	0	0	0	0	9.4	9.4
	Sparkle Inverter enclosure 7	S_INV7	654153.1	4925178	2	0	0	89.1	89.1	1	3152.96	3.25	0	80.97	0	1.18	0	0	9.85	0	0	0	0	0	0	-2.95	-2.95
	Discovery Inverter Transformer	D_INVTR5	653869.2	4922658	2	0	0	78.2	78.2	1	923.74	3.25	0	70.31	0	-1.88	0	0	0.63	0	0	0	0	0	0	9.18	9.18
	Sparkle Inverter transformer 1	S_INVTR1	653948.9	4925041	2	0	0	78.2	78.2	1	2956.97	3.25	0	80.42	0	-2.7	0	0	1.64	0	0	0	0	0	0	-1.11	-1.11
	Sparkle Inverter transformer 4	S_INVTR4	654124	4924736	2	0	0	77.3	77.3	1	2730.96	3.25	0	79.73	0	-2.64	0	0	1.54	0	0	0	0	0	0	-1.29	-1.29
	Sparkle Inverter transformer 2	S_INVTR2	653968	4924893	2	0	0	77.3	77.3	1	2822.21	3.25	0	80.01	0	-2.67	0	0	1.58	0	0	0	0	0	0	-1.59	-1.59
	Sparkle Inverter transformer 3	S_INVTR3	654132	4924883	2	0	0	77.3	77.3	1	2870.41	3.25	0	80.16	0	-2.68	0	0	1.6	0	0	0	0	0	0	-1.74	-1.74
	Sparkle Inverter transformer 5	S_INVTR5	653972.5	4925040	2	0	0	77.3	77.3	1	2962.54	3.25	0	80.43	0	-2.7	0	0	1.64	0	0	0	0	0	0	-2.03	-2.03
	Sparkle Inverter transformer 6	S_INVTR6	654140.4	4925027	2	0	0	77.3	77.3	1	3007.16	3.25	0	80.56	0	-2.72	0	0	1.66	0	0	0	0	0	0	-2.17	-2.17
	Sparkle Inverter transformer 7	S_INVTR7	654147.2	4925179	2	0	0	77.3	77.3	1	3151.29	3.25	0	80.97	0	-2.75	0	0	1.72	0	0	0	0	0	0	-2.59	-2.59

Value D/N: 0 0
Level D/N: 31.274 31.274

Receiver: Existing Potential Receptor
ID: R11
X: 653091
Y: 4923395
Z: 4.5
Ground: 0

ISO	Description	ID	X	Y	Z	Ground	ReflOrd	LxT	LxN	L/A	Dist.	hm	Freq	Adiv	K0b	Agr	Abar	z	Aatm	Afol	Ahous	Cmet	CmetN	Dc	RL	LtotT	LtotN
	Discovery Inverter enclosure 1	D_INV1	653434.4	4922792	2	0	0	100.3	100.3	1	693.73	3.25	0	67.82	0	-0.42	0	0	9.71	0	0	0	0	0	0	23.2	23.2
	Discovery Inverter enclosure 2	D_INV2	653465.5	4922673	2	0	0	100.3	100.3	1	813.14	3.25	0	69.2	0	-0.34	0	0	10.23	0	0	0	0	0	0	21.22	21.22
	Discovery Inverter enclosure 3	D_INV3	653511.4	4922537	2	0	0	100.3	100.3	1	955.23	3.25	0	70.6	0	-0.27	0	0	10.76	0	0	0	0	0	0	19.22	19.22
	Discovery Inverter enclosure 5	D_INV5	653875	4922657	2	0	0	97.3	97.3	1	1076.64	3.25	0	71.64	0	-0.21	0	0	11.16	0	0	0	0	0	0	14.72	14.72
	Sparkle Inverter enclosure 4	S_INV4	654129.9	4924735	2	0	0	100.3	100.3	1	1695.72	3.25	0	75.59	0	0.04	0	0	12.79	0	0	0	0	0	0	11.9	11.9
	Sparkle Inverter enclosure 3	S_INV3	654137.8	4924883	2	0	0	100.3	100.3	1	1819.27	3.25	0	76.2	0	0.08	0	0	13.07	0	0	0	0	0	0	10.97	10.97
	Sparkle Inverter enclosure 6	S_INV6	654146.3	4925027	2	0	0	100.3	100.3	1	1943.17	3.25	0	76.77	0	0.11	0	0	13.34	0	0	0	0	0	0	10.09	10.09
	Sparkle Inverter enclosure 1	S_INV1	653943	4925042	2	0	0	97.3	97.3	1	1854.06	3.25	0	76.36	0	0.09	0	0	13.15	0	0	0	0	0	0	7.72	7.72
	Discovery Substation Transforme	D_TRS	653484.4	4922253	2.5	0	0	92	92	1	1207.96	3.5	0	72.64	0	-0.34	0	0	2.93	0	0	0	0	0	0	16.74	16.74
	Discovery Inverter enclosure 4	D_INV4	653513.6	4922427	2	0	0	89.1	89.1	1	1056.45	3.25	0	71.48	0	0.7	0	0	6.42	0	0	0	0	0	0	10.46	10.46
	Discovery Inverter enclosure 6	D_INV6	653814.6	4922521	2	0	0	89.1	89.1	1	1135.04	3.25	0	72.1	0	0.71	0	0	6.56	0	0	0	0	0	0	9.68	9.68
	Discovery Inverter enclosure 7	D_INV7	653773.3	4922400	2	0	0	89.1	89.1	1	1206.76	3.25	0	72.63	0	0.73	0	0	6.69	0	0	0	0	0	0	9	9
	Sparkle Substation Transformer	S_TRS	653933.6	4925172	2.5	0	0	92	92	1	1966.38	3.5	0	76.87	0	-0.17	0	0	4.31	0	0	0	0	0	0	10.97	10.97
	Sparkle Inverter enclosure 2	S_INV2	653973.9	4924893	2	0	0	89.1	89.1	1	1738.56	3.25	0	75.8	0	0.85	0	0	7.61	0	0	0	0	0	0	4.79	4.79

Sparkle Inverter enclosure 5	S_INV5	653978.3	4925039	2	0	0	89.1	89.1	1	1868.33	3.25	0	76.43	0	0.88	0	0	7.83	0	0	0	0	0	0	3.92	3.92
Sparkle Inverter enclosure 7	S_INV7	654153.1	4925178	2	0	0	89.1	89.1	1	2075.53	3.25	0	77.34	0	0.92	0	0	8.17	0	0	0	0	0	0	2.62	2.62
Discovery Inverter Transformer	D_INVTR1	653440.3	4922792	2	0	0	77.3	77.3	1	696.99	3.25	0	67.86	0	-1.72	0	0	0.5	0	0	0	0	0	0	10.7	10.7
Discovery Inverter Transformer	D_INVTR2	653471.4	4922673	2	0	0	77.3	77.3	1	816.2	3.25	0	69.24	0	-1.81	0	0	0.57	0	0	0	0	0	0	9.35	9.35
Discovery Inverter Transformer	D_INVTR3	653517.2	4922537	2	0	0	77.3	77.3	1	958.18	3.25	0	70.63	0	-1.91	0	0	0.65	0	0	0	0	0	0	7.96	7.96
Discovery Inverter Transformer	D_INVTR5	653869.2	4922658	2	0	0	78.2	78.2	1	1072.1	3.25	0	71.6	0	-1.98	0	0	0.72	0	0	0	0	0	0	7.89	7.89
Discovery Inverter Transformer	D_INVTR4	653519.4	4922426	2	0	0	77.3	77.3	1	1059.16	3.25	0	71.5	0	-1.97	0	0	0.71	0	0	0	0	0	0	7.1	7.1
Discovery Inverter Transformer	D_INVTR6	653808.8	4922521	2	0	0	77.3	77.3	1	1131.02	3.25	0	72.07	0	-2.01	0	0	0.75	0	0	0	0	0	0	6.53	6.53
Discovery Inverter Transformer	D_INVTR7	653767.4	4922400	2	0	0	77.3	77.3	1	1203.12	3.25	0	72.61	0	-2.05	0	0	0.79	0	0	0	0	0	0	5.99	5.99
Sparkle Inverter transformer 1	S_INVTR1	653948.9	4925041	2	0	0	78.2	78.2	1	1856.43	3.25	0	76.37	0	-2.35	0	0	1.14	0	0	0	0	0	0	3.08	3.08
Sparkle Inverter transformer 4	S_INVTR4	654124	4924736	2	0	0	77.3	77.3	1	1692.45	3.25	0	75.57	0	-2.29	0	0	1.05	0	0	0	0	0	0	3	3
Sparkle Inverter transformer 2	S_INVTR2	653968	4924893	2	0	0	77.3	77.3	1	1735.93	3.25	0	75.79	0	-2.3	0	0	1.08	0	0	0	0	0	0	2.78	2.78
Sparkle Inverter transformer 3	S_INVTR3	654132	4924883	2	0	0	77.3	77.3	1	1816.23	3.25	0	76.18	0	-2.34	0	0	1.12	0	0	0	0	0	0	2.38	2.38
Sparkle Inverter transformer 5	S_INVTR5	653972.5	4925040	2	0	0	77.3	77.3	1	1865.9	3.25	0	76.42	0	-2.36	0	0	1.14	0	0	0	0	0	0	2.14	2.14
Sparkle Inverter transformer 6	S_INVTR6	654140.4	4925027	2	0	0	77.3	77.3	1	1940.32	3.25	0	76.76	0	-2.38	0	0	1.18	0	0	0	0	0	0	1.79	1.79
Sparkle Inverter transformer 7	S_INVTR7	654147.2	4925179	2	0	0	77.3	77.3	1	2072.88	3.25	0	77.33	0	-2.43	0	0	1.24	0	0	0	0	0	0	1.2	1.2

/alue D/N: 0 0
Level D/N: 28.1444 28.1444

Receiver: Vacant Lot
ID: R12
X: 653693
Y: 4925211
Z: 4.5
Ground: 0

ISO	Description	ID	X	Y	Z	Ground	ReflOrd	LxT	LxN	L/A	Dist.	hm	Freq	Adiv	K0b	Agr	Abar	z	Aatm	Afol	Ahous	Cmet	CmetN	Dc	RL	LtotT	LtotN
	Sparkle Inverter enclosure 1	S_INV1	653943	4925042	2	0	0	97.3	97.3	1	301.96	3.25	0	60.6	0	-0.65	0	0	6.42	0	0	0	0	0	0	30.94	30.94
	Sparkle Inverter enclosure 6	S_INV6	654146.3	4925027	2	0	0	100.3	100.3	1	489.31	3.25	0	64.79	0	-0.56	0	0	8.44	0	0	0	0	0	0	27.64	27.64
	Sparkle Inverter enclosure 3	S_INV3	654137.8	4924883	2	0	0	100.3	100.3	1	552.75	3.25	0	65.85	0	-0.51	0	0	8.91	0	0	0	0	0	0	26.07	26.07
	Sparkle Substation Transformer	S_TRS	653933.6	4925172	2.5	0	0	92	92	1	243.8	3.5	0	58.74	0	-0.11	0	0	0.78	0	0	0	0	0	0	32.57	32.57
	Sparkle Inverter enclosure 4	S_INV4	654129.9	4924735	2	0	0	100.3	100.3	1	645.93	3.25	0	67.2	0	-0.45	0	0	9.46	0	0	0	0	0	0	24.09	24.09
	Sparkle Inverter enclosure 5	S_INV5	653978.3	4925039	2	0	0	89.1	89.1	1	333.06	3.25	0	61.45	0	0.4	0	0	4.36	0	0	0	0	0	0	22.85	22.85
	Sparkle Inverter enclosure 2	S_INV2	653973.9	4924893	2	0	0	89.1	89.1	1	424.48	3.25	0	63.56	0	0.47	0	0	4.85	0	0	0	0	0	0	20.18	20.18
	Sparkle Inverter enclosure 7	S_INV7	654153.1	4925178	2	0	0	89.1	89.1	1	461.25	3.25	0	64.28	0	0.5	0	0	5	0	0	0	0	0	0	19.28	19.28
	Discovery Inverter enclosure 1	D_INV1	653434.4	4922792	2	0	0	100.3	100.3	1	2432.53	3.25	0	78.72	0	0.24	0	0	14.33	0	0	0	0	0	0	7.02	7.02
	Discovery Inverter enclosure 2	D_INV2	653465.5	4922673	2	0	0	100.3	100.3	1	2547.93	3.25	0	79.12	0	0.27	0	0	14.55	0	0	0	0	0	0	6.37	6.37
	Discovery Inverter enclosure 3	D_INV3	653511.4	4922537	2	0	0	100.3	100.3	1	2679.91	3.25	0	79.56	0	0.3	0	0	14.79	0	0	0	0	0	0	5.66	5.66
	Discovery Inverter enclosure 5	D_INV5	653875	4922657	2	0	0	97.3	97.3	1	2560.35	3.25	0	79.17	0	0.27	0	0	14.57	0	0	0	0	0	0	3.3	3.3
	Sparkle Inverter transformer 1	S_INVTR1	653948.9	4925041	2	0	0	78.2	78.2	1	307.06	3.25	0	60.74	0	-1.05	0	0	0.24	0	0	0	0	0	0	18.3	18.3
	Sparkle Inverter transformer 5	S_INVTR5	653972.5	4925040	2	0	0	77.3	77.3	1	327.86	3.25	0	61.31	0	-1.13	0	0	0.25	0	0	0	0	0	0	16.9	16.9
	Sparkle Inverter transformer 2	S_INVTR2	653968	4924893	2	0	0	77.3	77.3	1	420.34	3.25	0	63.47	0	-1.37	0	0	0.32	0	0	0	0	0	0	14.93	14.93
	Sparkle Inverter transformer 7	S_INVTR7	654147.2	4925179	2	0	0	77.3	77.3	1	455.39	3.25	0	64.17	0	-1.44	0	0	0.34	0	0	0	0	0	0	14.27	14.27
	Sparkle Inverter transformer 6	S_INVTR6	654140.4	4925027	2	0	0	77.3	77.3	1	483.75	3.25	0	64.69	0	-1.49	0	0	0.36	0	0	0	0	0	0	13.77	13.77
	Sparkle Inverter transformer 3	S_INVTR3	654132	4924883	2	0	0	77.3	77.3	1	547.82	3.25	0	65.77	0	-1.57	0	0	0.4	0	0	0	0	0	0	12.74	12.74
	Discovery Substation Transforme	D_TRS	653484.4	4922253	2.5	0	0	92	92	1	2965.45	3.5	0	80.44	0	0.07	0	0	5.91	0	0	0	0	0	0	5.55	5.55
	Sparkle Inverter transformer 4	S_INVTR4	654124	4924736	2	0	0	77.3	77.3	1	641.7	3.25	0	67.15	0	-1.67	0	0	0.46	0	0	0	0	0	0	11.4	11.4
	Discovery Inverter enclosure 6	D_INV6	653814.6	4922521	2	0	0	89.1	89.1	1	2693.19	3.25	0	79.61	0	1.07	0	0	9.15	0	0	0	0	0	0	-0.77	-0.77
	Discovery Inverter enclosure 4	D_INV4	653513.6	4922427	2	0	0	89.1	89.1	1	2790.03	3.25	0	79.91	0	1.1	0	0	9.3	0	0	0	0	0	0	-1.25	-1.25
	Discovery Inverter enclosure 7	D_INV7	653773.3	4922400	2	0	0	89.1	89.1	1	2812.53	3.25	0	79.98	0	1.1	0	0	9.33	0	0	0	0	0	0	-1.36	-1.36
	Discovery Inverter Transformer	D_INVTR5	653869.2	4922658	2	0	0	78.2	78.2	1	2559.55	3.25	0	79.16	0	-2.59	0	0	1.47	0	0	0	0	0	0	0.2	0.2
	Discovery Inverter Transformer	D_INVTR1	653440.3	4922792	2	0	0	77.3	77.3	1	2432.31	3.25	0	78.72	0	-2.55	0	0	1.41	0	0	0	0	0	0	-0.24	-0.24
	Discovery Inverter Transformer	D_INVTR2	653471.4	4922673	2	0	0	77.3	77.3	1	2547.8	3.25	0	79.12	0	-2.58	0	0	1.46	0	0	0	0	0	0	-0.66	-0.66
	Discovery Inverter Transformer	D_INVTR3	653517.2	4922537	2	0	0	77.3	77.3	1	2679.91	3.25	0	79.56	0	-2.62	0	0	1.52	0	0	0	0	0	0	-1.12	-1.12
	Discovery Inverter Transformer	D_INVTR6	653808.8	4922521	2	0	0	77.3	77.3	1	2692.55	3.25	0	79.6	0	-2.63	0	0	1.52	0	0	0	0	0	0	-1.16	-1.16
	Discovery Inverter Transformer	D_INVTR4	653519.4	4922426	2	0	0	77.3	77.3	1	2790.05	3.25	0	79.91	0	-2.66	0	0	1.57	0	0	0	0	0	0	-1.48	-1.48
	Discovery Inverter Transformer	D_INVTR7	653767.4	4922400	2	0	0	77.3	77.3	1	2811.97	3.25	0	79.98	0	-2.66	0	0	1.58	0	0	0	0	0	0	-1.55	-1.55

/alue D/N: 0 0
Level D/N: 36.9275 36.9275

Receiver: Vacant Lot
ID: R13
X: 654272
Y: 4925416
Z: 4.5
Ground: 0

ISO	Description	ID	X	Y	Z	Ground	ReflOrd	LxT	LxN	L/A	Dist.	hm	Freq	Adiv	K0b	Agr	Abar	z	Aatm	Afol	Ahous	Cmet	CmetN	Dc	RL	LtotT	LtotN
	Sparkle Inverter enclosure 6	S_INV6	654146.3	4925027	2	0	0	100.3	100.3	1	409.14	3.25	0	63.24	0	-0.61	0	0	7.72	0	0	0	0	0	0	29.97	29.97
	Sparkle Inverter enclosure 3	S_INV3	654137.8	4924883	2	0	0	100.3	100.3	1	549.72	3.25	0	65.8	0	-0.51	0	0	8.88	0	0	0	0	0	0	26.14	26.14
	Sparkle Inverter enclosure 4	S_INV4	654129.9	4924735	2	0	0	100.3	100.3	1	695.46	3.25	0	67.85	0	-0.41	0	0	9.72	0	0	0	0	0	0	23.17	23.17
	Sparkle Inverter enclosure 1	S_INV1	653943	4925042	2	0	0	97.3	97.3	1	498.33	3.25	0	64.95	0	-0.55	0	0	8.51	0	0	0	0	0	0	24.4	24.4

	Sparkle Inverter enclosure 7	S_INV7	654153.1	4925178	2	0	0	89.1	89.1	1	265.89	3.25	0	59.49	0	0.35	0	0	3.86	0	0	0	0	0	0	25.35	25.35
	Sparkle Substation Transformer	S_TRS	653933.6	4925172	2.5	0	0	92	92	1	417.37	3.5	0	63.41	0	-0.35	0	0	1.23	0	0	0	0	0	0	27.69	27.69
	Sparkle Inverter enclosure 5	S_INV5	653978.3	4925039	2	0	0	89.1	89.1	1	477.76	3.25	0	64.58	0	0.51	0	0	5.06	0	0	0	0	0	0	18.9	18.9
	Sparkle Inverter enclosure 2	S_INV2	653973.9	4924893	2	0	0	89.1	89.1	1	602.27	3.25	0	66.6	0	0.58	0	0	5.46	0	0	0	0	0	0	16.43	16.43
	Discovery Inverter enclosure 1	D_INV1	653434.4	4922792	2	0	0	100.3	100.3	1	2754.2	3.25	0	79.8	0	0.31	0	0	14.93	0	0	0	0	0	0	5.27	5.27
	Discovery Inverter enclosure 2	D_INV2	653465.5	4922673	2	0	0	100.3	100.3	1	2858.86	3.25	0	80.12	0	0.33	0	0	15.12	0	0	0	0	0	0	4.73	4.73
	Discovery Inverter enclosure 3	D_INV3	653511.4	4922537	2	0	0	100.3	100.3	1	2977.54	3.25	0	80.48	0	0.36	0	0	15.33	0	0	0	0	0	0	4.14	4.14
	Sparkle Inverter transformer 7	S_INVTR7	654147.2	4925179	2	0	0	77.3	77.3	1	268.21	3.25	0	59.57	0	-0.87	0	0	0.21	0	0	0	0	0	0	18.43	18.43
	Discovery Inverter enclosure 5	D_INV5	653875	4922657	2	0	0	97.3	97.3	1	2787.28	3.25	0	79.9	0	0.32	0	0	14.99	0	0	0	0	0	0	2.1	2.1
	Sparkle Inverter transformer 6	S_INVTR6	654140.4	4925027	2	0	0	77.3	77.3	1	410.61	3.25	0	63.27	0	-1.35	0	0	0.31	0	0	0	0	0	0	15.12	15.12
	Sparkle Inverter transformer 1	S_INVTR1	653948.9	4925041	2	0	0	78.2	78.2	1	494.77	3.25	0	64.89	0	-1.5	0	0	0.37	0	0	0	0	0	0	14.49	14.49
	Sparkle Inverter transformer 5	S_INVTR5	653972.5	4925040	2	0	0	77.3	77.3	1	481.08	3.25	0	64.64	0	-1.48	0	0	0.36	0	0	0	0	0	0	13.82	13.82
	Sparkle Inverter transformer 3	S_INVTR3	654132	4924883	2	0	0	77.3	77.3	1	550.8	3.25	0	65.82	0	-1.58	0	0	0.4	0	0	0	0	0	0	12.69	12.69
	Discovery Substation Transforme	D_TRS	653484.4	4922253	2.5	0	0	92	92	1	3259.68	3.5	0	81.26	0	0.15	0	0	6.34	0	0	0	0	0	0	4.23	4.23
	Sparkle Inverter transformer 2	S_INVTR2	653968	4924893	2	0	0	77.3	77.3	1	604.85	3.25	0	66.63	0	-1.63	0	0	0.44	0	0	0	0	0	0	11.9	11.9
	Sparkle Inverter transformer 4	S_INVTR4	654124	4924736	2	0	0	77.3	77.3	1	696.3	3.25	0	67.86	0	-1.72	0	0	0.5	0	0	0	0	0	0	10.71	10.71
	Discovery Inverter enclosure 6	D_INV6	653814.6	4922521	2	0	0	89.1	89.1	1	2931.34	3.25	0	80.34	0	1.13	0	0	9.51	0	0	0	0	0	0	-1.93	-1.93
	Discovery Inverter enclosure 7	D_INV7	653773.3	4922400	2	0	0	89.1	89.1	1	3057.33	3.25	0	80.71	0	1.16	0	0	9.7	0	0	0	0	0	0	-2.51	-2.51
	Discovery Inverter enclosure 4	D_INV4	653513.6	4922427	2	0	0	89.1	89.1	1	3083.96	3.25	0	80.78	0	1.17	0	0	9.74	0	0	0	0	0	0	-2.64	-2.64
	Discovery Inverter Transformer	D_INVTR5	653869.2	4922658	2	0	0	78.2	78.2	1	2787.74	3.25	0	79.91	0	-2.66	0	0	1.57	0	0	0	0	0	0	-0.57	-0.57
	Discovery Inverter Transformer	D_INVTR1	653440.3	4922792	2	0	0	77.3	77.3	1	2752.79	3.25	0	79.8	0	-2.65	0	0	1.55	0	0	0	0	0	0	-1.36	-1.36
	Discovery Inverter Transformer	D_INVTR2	653471.4	4922673	2	0	0	77.3	77.3	1	2857.59	3.25	0	80.12	0	-2.68	0	0	1.6	0	0	0	0	0	0	-1.7	-1.7
	Discovery Inverter Transformer	D_INVTR6	653808.8	4922521	2	0	0	77.3	77.3	1	2931.88	3.25	0	80.34	0	-2.7	0	0	1.63	0	0	0	0	0	0	-1.93	-1.93
	Discovery Inverter Transformer	D_INVTR3	653517.2	4922537	2	0	0	77.3	77.3	1	2976.43	3.25	0	80.47	0	-2.71	0	0	1.65	0	0	0	0	0	0	-2.07	-2.07
	Discovery Inverter Transformer	D_INVTR7	653767.4	4922400	2	0	0	77.3	77.3	1	3057.91	3.25	0	80.71	0	-2.73	0	0	1.68	0	0	0	0	0	0	-2.32	-2.32
	Discovery Inverter Transformer	D_INVTR4	653519.4	4922426	2	0	0	77.3	77.3	1	3082.91	3.25	0	80.78	0	-2.74	0	0	1.69	0	0	0	0	0	0	-2.39	-2.39

Value D/N: 0 0
Level D/N: 34.995 34.995

Receiver: Vacant Lot
ID: R14
X: 653551
Y: 4922158
Z: 4.5
Ground: 0

ISO	Description	ID	X	Y	Z	Ground	ReflOrd	LxT	LxN	L/A	Dist.	hm	Freq	Adiv	K0b	Agr	Abar	z	Aatm	Afol	Ahous	Cmet	CmetN	Dc	RL	LtotT	LtotN
	Discovery Substation Transforme	D_TRS	653484.4	4922253	2.5	0	0	92	92	1	115.96	4.21	0	52.29	0	0.71	7.93	0.22	0.41	0	0	0	0	0	0	30.65	30.65
	Discovery Inverter enclosure 3	D_INV3	653511.4	4922537	2	0	0	100.3	100.3	1	381.32	3.25	0	62.63	0	-0.63	0	0	7.42	0	0	0	0	0	0	30.9	30.9
	Discovery Inverter enclosure 2	D_INV2	653465.5	4922673	2	0	0	100.3	100.3	1	522.3	3.25	0	65.36	0	-0.53	0	0	8.69	0	0	0	0	0	0	26.8	26.8
	Discovery Inverter enclosure 1	D_INV1	653434.4	4922792	2	0	0	100.3	100.3	1	644.88	3.25	0	67.19	0	-0.45	0	0	9.46	0	0	0	0	0	0	24.11	24.11
	Discovery Inverter enclosure 5	D_INV5	653875	4922657	2	0	0	97.3	97.3	1	595.09	3.25	0	66.49	0	-0.48	0	0	9.17	0	0	0	0	0	0	22.13	22.13
	Discovery Inverter enclosure 4	D_INV4	653513.6	4922427	2	0	0	89.1	89.1	1	271.35	3.25	0	59.67	0	0.35	0	0	3.91	0	0	0	0	0	0	25.13	25.13
	Discovery Inverter enclosure 7	D_INV7	653773.3	4922400	2	0	0	89.1	89.1	1	328.31	3.25	0	61.33	0	0.39	0	0	4.33	0	0	0	0	0	0	23.01	23.01
	Discovery Inverter enclosure 6	D_INV6	653814.6	4922521	2	0	0	89.1	89.1	1	448.29	3.25	0	64.03	0	0.49	0	0	4.95	0	0	0	0	0	0	19.59	19.59
	Sparkle Inverter enclosure 4	S_INV4	654129.9	4924735	2	0	0	100.3	100.3	1	2641.43	3.25	0	79.44	0	0.29	0	0	14.72	0	0	0	0	0	0	5.86	5.86
	Sparkle Inverter enclosure 3	S_INV3	654137.8	4924883	2	0	0	100.3	100.3	1	2787.38	3.25	0	79.9	0	0.32	0	0	14.99	0	0	0	0	0	0	5.1	5.1
	Sparkle Inverter enclosure 6	S_INV6	654146.3	4925027	2	0	0	100.3	100.3	1	2929.77	3.25	0	80.34	0	0.35	0	0	15.25	0	0	0	0	0	0	4.38	4.38
	Discovery Inverter Transformer	D_INVTR4	653519.4	4922426	2	0	0	77.3	77.3	1	270.22	3.25	0	59.63	0	-0.88	0	0	0.21	0	0	0	0	0	0	18.37	18.37
	Sparkle Inverter enclosure 1	S_INV1	653943	4925042	2	0	0	97.3	97.3	1	2910.22	3.25	0	80.28	0	0.34	0	0	15.21	0	0	0	0	0	0	1.48	1.48
	Discovery Inverter Transformer	D_INVTR7	653767.4	4922400	2	0	0	77.3	77.3	1	324.65	3.25	0	61.23	0	-1.12	0	0	0.25	0	0	0	0	0	0	16.98	16.98
	Discovery Inverter Transformer	D_INVTR3	653517.2	4922537	2	0	0	77.3	77.3	1	380.37	3.25	0	62.6	0	-1.28	0	0	0.29	0	0	0	0	0	0	15.73	15.73
	Discovery Inverter Transformer	D_INVTR6	653808.8	4922521	2	0	0	77.3	77.3	1	445.19	3.25	0	63.97	0	-1.42	0	0	0.33	0	0	0	0	0	0	14.46	14.46
	Discovery Inverter Transformer	D_INVTR2	653471.4	4922673	2	0	0	77.3	77.3	1	520.98	3.25	0	65.34	0	-1.54	0	0	0.39	0	0	0	0	0	0	13.16	13.16
	Discovery Inverter Transformer	D_INVTR5	653869.2	4922658	2	0	0	78.2	78.2	1	592.24	3.25	0	66.45	0	-1.62	0	0	0.43	0	0	0	0	0	0	12.98	12.98
	Sparkle Substation Transformer	S_TRS	653933.6	4925172	2.5	0	0	92	92	1	3037.89	3.5	0	80.65	0	0.09	0	0	6.01	0	0	0	0	0	0	5.22	5.22
	Discovery Inverter Transformer	D_INVTR1	653440.3	4922792	2	0	0	77.3	77.3	1	643.46	3.25	0	67.17	0	-1.67	0	0	0.46	0	0	0	0	0	0	11.38	11.38
	Sparkle Inverter enclosure 2	S_INV2	653973.9	4924893	2	0	0	89.1	89.1	1	2767.21	3.25	0	79.84	0	1.09	0	0	9.26	0	0	0	0	0	0	-1.13	-1.13
	Sparkle Inverter enclosure 5	S_INV5	653978.3	4925039	2	0	0	89.1	89.1	1	2912.69	3.25	0	80.29	0	1.13	0	0	9.48	0	0	0	0	0	0	-1.84	-1.84
	Sparkle Inverter enclosure 7	S_INV7	654153.1	4925178	2	0	0	89.1	89.1	1	3079.63	3.25	0	80.77	0	1.17	0	0	9.74	0	0	0	0	0	0	-2.62	-2.62
	Sparkle Inverter transformer 1	S_INVTR1	653948.9	4925041	2	0	0	78.2	78.2	1	2910.63	3.25	0	80.28	0	-2.69	0	0	1.62	0	0	0	0	0	0	-0.97	-0.97
	Sparkle Inverter transformer 4	S_INVTR4	654124	4924736	2	0	0	77.3	77.3	1	2640.54	3.25	0	79.43	0	-2.61	0	0	1.5	0	0	0	0	0	0	-0.98	-0.98
	Sparkle Inverter transformer 2	S_INVTR2	653968	4924893	2	0	0	77.3	77.3	1	2766.71	3.25	0	79.84	0	-2.65	0	0	1.56	0	0	0	0	0	0	-1.41	-1.41
	Sparkle Inverter transformer 3	S_INVTR3	654132	4924883	2	0	0	77.3	77.3	1	2786.54	3.25	0	79.9	0	-2.65	0	0	1.57	0	0	0	0	0	0	-1.47	-1.47
	Sparkle Inverter transformer 5	S_INVTR5	653972.5	4925040	2	0	0	77.3	77.3	1	2912.23	3.25	0	80.28	0	-2.69	0	0	1.62	0	0	0	0	0	0	-1.87	-1.87
	Sparkle Inverter transformer 6	S_INVTR6	654140.4	4925027	2	0	0	77.3	77.3	1	2928.97	3.25	0	80.33	0	-2.69	0	0	1.63	0	0	0	0	0	0	-1.92	-1.92
	Sparkle Inverter transformer 7	S_INVTR7	654147.2	4925179	2	0	0	77.3	77.3	1	3078.87	3.25	0	80.77	0	-2.74	0	0	1.69	0	0	0	0	0	0	-2.38	-2.38

Value D/N: 0 0
Level D/N: 36.1969 36.1969

Receiver: Existing Potential Receptor
ID: R15

X: 652094
Y: 4923158
Z: 4.5
Ground: 0

ISO	Description	ID	X	Y	Z	Ground	ReflOrd	LxT	LxN	L/A	Dist.	hm	Freq	Adiv	K0b	Agr	Abar	z	Aatm	Afol	Ahous	Cmet	CmetN	Dc	RL	LtotT	LtotN
	Discovery Inverter enclosure 1	D_INV1	653434.4	4922792	2	0	0	100.3	100.3	1	1389.44	3.25	0	73.86	0	-0.08	0	0	12.04	0	0	0	0	0	0	14.49	14.49
	Discovery Inverter enclosure 2	D_INV2	653465.5	4922673	2	0	0	100.3	100.3	1	1454.67	3.25	0	74.26	0	-0.05	0	0	12.21	0	0	0	0	0	0	13.9	13.9
	Discovery Inverter enclosure 3	D_INV3	653511.4	4922537	2	0	0	100.3	100.3	1	1547.36	3.25	0	74.79	0	-0.02	0	0	12.44	0	0	0	0	0	0	13.1	13.1
	Sparkle Inverter enclosure 4	S_INV4	654129.9	4924735	2	0	0	100.3	100.3	1	2575.35	3.25	0	79.22	0	0.27	0	0	14.6	0	0	0	0	0	0	6.22	6.22
	Discovery Inverter enclosure 5	D_INV5	653875	4922657	2	0	0	97.3	97.3	1	1850.12	3.25	0	76.34	0	0.08	0	0	13.14	0	0	0	0	0	0	7.74	7.74
	Sparkle Inverter enclosure 3	S_INV3	654137.8	4924883	2	0	0	100.3	100.3	1	2674.43	3.25	0	79.54	0	0.3	0	0	14.78	0	0	0	0	0	0	5.69	5.69
	Sparkle Inverter enclosure 6	S_INV6	654146.3	4925027	2	0	0	100.3	100.3	1	2775.55	3.25	0	79.87	0	0.32	0	0	14.97	0	0	0	0	0	0	5.16	5.16
	Sparkle Inverter enclosure 1	S_INV1	653943	4925042	2	0	0	97.3	97.3	1	2639.54	3.25	0	79.43	0	0.29	0	0	14.72	0	0	0	0	0	0	2.87	2.87
	Discovery Substation Transforme	D_TRS	653484.4	4922253	2.5	0	0	92	92	1	1659.04	3.5	0	75.4	0	-0.24	0	0	3.77	0	0	0	0	0	0	13.05	13.05
	Discovery Inverter enclosure 4	D_INV4	653513.6	4922427	2	0	0	89.1	89.1	1	1596.85	3.25	0	75.07	0	0.81	0	0	7.37	0	0	0	0	0	0	5.8	5.8
	Discovery Inverter enclosure 6	D_INV6	653814.6	4922521	2	0	0	89.1	89.1	1	1834.92	3.25	0	76.27	0	0.87	0	0	7.77	0	0	0	0	0	0	4.14	4.14
	Discovery Inverter enclosure 7	D_INV7	653773.3	4922400	2	0	0	89.1	89.1	1	1842.57	3.25	0	76.31	0	0.87	0	0	7.79	0	0	0	0	0	0	4.09	4.09
	Sparkle Substation Transformer	S_TRS	653933.6	4925172	2.5	0	0	92	92	1	2727.47	3.5	0	79.72	0	0.01	0	0	5.54	0	0	0	0	0	0	6.7	6.7
	Sparkle Inverter enclosure 2	S_INV2	653973.9	4924893	2	0	0	89.1	89.1	1	2557.94	3.25	0	79.16	0	1.04	0	0	8.94	0	0	0	0	0	0	-0.08	-0.08
	Sparkle Inverter enclosure 5	S_INV5	653978.3	4925039	2	0	0	89.1	89.1	1	2662.6	3.25	0	79.51	0	1.06	0	0	9.1	0	0	0	0	0	0	-0.61	-0.61
	Sparkle Inverter enclosure 7	S_INV7	654153.1	4925178	2	0	0	89.1	89.1	1	2884.62	3.25	0	80.2	0	1.12	0	0	9.44	0	0	0	0	0	0	-1.7	-1.7
	Discovery Inverter Transformer	D_INVTR1	653440.3	4922792	2	0	0	77.3	77.3	1	1395.19	3.25	0	73.89	0	-2.15	0	0	0.9	0	0	0	0	0	0	4.7	4.7
	Discovery Inverter Transformer	D_INVTR2	653471.4	4922673	2	0	0	77.3	77.3	1	1460.32	3.25	0	74.29	0	-2.18	0	0	0.93	0	0	0	0	0	0	4.3	4.3
	Discovery Inverter Transformer	D_INVTR3	653517.2	4922537	2	0	0	77.3	77.3	1	1552.88	3.25	0	74.82	0	-2.23	0	0	0.98	0	0	0	0	0	0	3.76	3.76
	Discovery Inverter Transformer	D_INVTR4	653519.4	4922426	2	0	0	77.3	77.3	1	1602.23	3.25	0	75.09	0	-2.25	0	0	1.01	0	0	0	0	0	0	3.49	3.49
	Discovery Inverter Transformer	D_INVTR5	653869.2	4922658	2	0	0	78.2	78.2	1	1844.36	3.25	0	76.32	0	-2.35	0	0	1.13	0	0	0	0	0	0	3.14	3.14
	Discovery Inverter Transformer	D_INVTR6	653808.8	4922521	2	0	0	77.3	77.3	1	1829.3	3.25	0	76.25	0	-2.34	0	0	1.12	0	0	0	0	0	0	2.31	2.31
	Discovery Inverter Transformer	D_INVTR7	653767.4	4922400	2	0	0	77.3	77.3	1	1837.06	3.25	0	76.28	0	-2.34	0	0	1.13	0	0	0	0	0	0	2.28	2.28
	Sparkle Inverter transformer 1	S_INVTR1	653948.9	4925041	2	0	0	78.2	78.2	1	2643.39	3.25	0	79.44	0	-2.61	0	0	1.5	0	0	0	0	0	0	-0.09	-0.09
	Sparkle Inverter transformer 2	S_INVTR2	653968	4924893	2	0	0	77.3	77.3	1	2553.91	3.25	0	79.14	0	-2.59	0	0	1.46	0	0	0	0	0	0	-0.68	-0.68
	Sparkle Inverter transformer 4	S_INVTR4	654124	4924736	2	0	0	77.3	77.3	1	2570.96	3.25	0	79.2	0	-2.59	0	0	1.47	0	0	0	0	0	0	-0.74	-0.74
	Sparkle Inverter transformer 5	S_INVTR5	653972.5	4925040	2	0	0	77.3	77.3	1	2658.74	3.25	0	79.49	0	-2.62	0	0	1.51	0	0	0	0	0	0	-1.04	-1.04
	Sparkle Inverter transformer 3	S_INVTR3	654132	4924883	2	0	0	77.3	77.3	1	2670.22	3.25	0	79.53	0	-2.62	0	0	1.51	0	0	0	0	0	0	-1.08	-1.08
	Sparkle Inverter transformer 6	S_INVTR6	654140.4	4925027	2	0	0	77.3	77.3	1	2771.49	3.25	0	79.85	0	-2.65	0	0	1.56	0	0	0	0	0	0	-1.42	-1.42
	Sparkle Inverter transformer 7	S_INVTR7	654147.2	4925179	2	0	0	77.3	77.3	1	2880.72	3.25	0	80.19	0	-2.68	0	0	1.61	0	0	0	0	0	0	-1.77	-1.77

Value D/N: 0 0
Level D/N: 21.7547 21.7547

Receiver: Vacant Lot
ID: R16
X: 652139
Y: 4923120
Z: 4.5
Ground: 0

ISO	Description	ID	X	Y	Z	Ground	ReflOrd	LxT	LxN	L/A	Dist.	hm	Freq	Adiv	K0b	Agr	Abar	z	Aatm	Afol	Ahous	Cmet	CmetN	Dc	RL	LtotT	LtotN
	Discovery Inverter enclosure 1	D_INV1	653434.4	4922792	2	0	0	100.3	100.3	1	1336.25	3.25	0	73.52	0	-0.1	0	0	11.9	0	0	0	0	0	0	14.99	14.99
	Discovery Inverter enclosure 2	D_INV2	653465.5	4922673	2	0	0	100.3	100.3	1	1399.73	3.25	0	73.92	0	-0.07	0	0	12.07	0	0	0	0	0	0	14.39	14.39
	Discovery Inverter enclosure 3	D_INV3	653511.4	4922537	2	0	0	100.3	100.3	1	1490.99	3.25	0	74.47	0	-0.04	0	0	12.3	0	0	0	0	0	0	13.58	13.58
	Discovery Inverter enclosure 5	D_INV5	653875	4922657	2	0	0	97.3	97.3	1	1796.68	3.25	0	76.09	0	0.07	0	0	13.02	0	0	0	0	0	0	8.13	8.13
	Sparkle Inverter enclosure 4	S_INV4	654129.9	4924735	2	0	0	100.3	100.3	1	2563.69	3.25	0	79.18	0	0.27	0	0	14.58	0	0	0	0	0	0	6.28	6.28
	Sparkle Inverter enclosure 3	S_INV3	654137.8	4924883	2	0	0	100.3	100.3	1	2665.18	3.25	0	79.51	0	0.29	0	0	14.77	0	0	0	0	0	0	5.74	5.74
	Sparkle Inverter enclosure 6	S_INV6	654146.3	4925027	2	0	0	100.3	100.3	1	2768.48	3.25	0	79.84	0	0.32	0	0	14.96	0	0	0	0	0	0	5.19	5.19
	Sparkle Inverter enclosure 1	S_INV1	653943	4925042	2	0	0	97.3	97.3	1	2635.79	3.25	0	79.42	0	0.29	0	0	14.71	0	0	0	0	0	0	2.89	2.89
	Discovery Substation Transforme	D_TRS	653484.4	4922253	2.5	0	0	92	92	1	1600.61	3.5	0	75.09	0	-0.26	0	0	3.67	0	0	0	0	0	0	13.48	13.48
	Discovery Inverter enclosure 4	D_INV4	653513.6	4922427	2	0	0	89.1	89.1	1	1539.5	3.25	0	74.75	0	0.8	0	0	7.28	0	0	0	0	0	0	6.23	6.23
	Discovery Inverter enclosure 6	D_INV6	653814.6	4922521	2	0	0	89.1	89.1	1	1779.64	3.25	0	76.01	0	0.86	0	0	7.68	0	0	0	0	0	0	4.51	4.51
	Discovery Inverter enclosure 7	D_INV7	653773.3	4922400	2	0	0	89.1	89.1	1	1785.99	3.25	0	76.04	0	0.86	0	0	7.69	0	0	0	0	0	0	4.47	4.47
	Sparkle Substation Transformer	S_TRS	653933.6	4925172	2.5	0	0	92	92	1	2725.81	3.5	0	79.71	0	0.01	0	0	5.54	0	0	0	0	0	0	6.71	6.71
	Sparkle Inverter enclosure 2	S_INV2	653973.9	4924893	2	0	0	89.1	89.1	1	2551.31	3.25	0	79.14	0	1.04	0	0	8.93	0	0	0	0	0	0	-0.04	-0.04
	Sparkle Inverter enclosure 5	S_INV5	653978.3	4925039	2	0	0	89.1	89.1	1	2658.25	3.25	0	79.49	0	1.06	0	0	9.09	0	0	0	0	0	0	-0.59	-0.59
	Sparkle Inverter enclosure 7	S_INV7	654153.1	4925178	2	0	0	89.1	89.1	1	2879.71	3.25	0	80.19	0	1.12	0	0	9.43	0	0	0	0	0	0	-1.68	-1.68
	Discovery Inverter Transformer	D_INVTR1	653440.3	4922792	2	0	0	77.3	77.3	1	1342.03	3.25	0	73.56	0	-2.13	0	0	0.87	0	0	0	0	0	0	5.04	5.04
	Discovery Inverter Transformer	D_INVTR2	653471.4	4922673	2	0	0	77.3	77.3	1	1405.41	3.25	0	73.96	0	-2.16	0	0	0.9	0	0	0	0	0	0	4.64	4.64
	Discovery Inverter Transformer	D_INVTR3	653517.2	4922537	2	0	0	77.3	77.3	1	1496.54	3.25	0	74.5	0	-2.2	0	0	0.95	0	0	0	0	0	0	4.09	4.09
	Discovery Inverter Transformer	D_INVTR4	653519.4	4922426	2	0	0	77.3	77.3	1	1544.9	3.25	0	74.78	0	-2.22	0	0	0.98	0	0	0	0	0	0	3.81	3.81
	Discovery Inverter Transformer	D_INVTR5	653869.2	4922658	2	0	0	78.2	78.2	1	1790.9	3.25	0	76.06	0	-2.33	0	0	1.1	0	0	0	0	0	0	3.4	3.4
	Discovery Inverter Transformer	D_INVTR6	653808.8	4922521	2	0	0	77.3	77.3	1	1774	3.25	0	75.98	0	-2.32	0	0	1.09	0	0	0	0	0	0	2.59	2.59
	Discovery Inverter Transformer	D_INVTR7	653767.4	4922400	2	0	0	77.3	77.3	1	1780.46	3.25	0	76.01	0	-2.32	0	0	1.1	0	0	0	0	0	0	2.55	2.55
	Sparkle Inverter transformer 1	S_INVTR1	653948.9	4925041	2	0	0	78.2	78.2	1	2639.54	3.25	0	79.43	0	-2.61	0	0	1.5	0	0	0	0	0	0	-0.08	-0.08
	Sparkle Inverter transformer 2	S_INVTR2	653968	4924893	2	0	0	77.3	77.3	1	2547.38	3.25	0	79.12	0	-2.58	0	0	1.46	0	0	0	0	0	0	-0.66	-0.66

Sparkle Inverter transformer 4	S_INVTR4	654124	4924736	2	0	0	77.3	77.3	1	2559.4	3.25	0	79.16	0	-2.59	0	0	1.47	0	0	0	0	0	0	-0.7	-0.7
Sparkle Inverter transformer 5	S_INVTR5	653972.5	4925040	2	0	0	77.3	77.3	1	2654.49	3.25	0	79.48	0	-2.62	0	0	1.51	0	0	0	0	0	0	-1.03	-1.03
Sparkle Inverter transformer 3	S_INVTR3	654132	4924883	2	0	0	77.3	77.3	1	2661.06	3.25	0	79.5	0	-2.62	0	0	1.51	0	0	0	0	0	0	-1.05	-1.05
Sparkle Inverter transformer 6	S_INVTR6	654140.4	4925027	2	0	0	77.3	77.3	1	2764.5	3.25	0	79.83	0	-2.65	0	0	1.56	0	0	0	0	0	0	-1.4	-1.4
Sparkle Inverter transformer 7	S_INVTR7	654147.2	4925179	2	0	0	77.3	77.3	1	2875.89	3.25	0	80.18	0	-2.68	0	0	1.6	0	0	0	0	0	0	-1.76	-1.76

Value D/N: 0 0
Level D/N: 22.134 22.134

Receiver: Existing Potential Receptor
ID: R17
X: 652379
Y: 4923633
Z: 4.5
Ground: 0

ISO	Description	ID	X	Y	Z	Ground	ReflOrd	LxT	LxN	L/A	Dist.	hm	Freq	Adiv	K0b	Agr	Abar	z	Aatm	Afol	Ahous	Cmet	CmetN	Dc	RL	LtotT	LtotN
	Discovery Inverter enclosure 1	D_INV1	653434.4	4922792	2	0	0	100.3	100.3	1	1349.37	3.25	0	73.6	0	-0.09	0	0	11.94	0	0	0	0	0	0	14.86	14.86
	Discovery Inverter enclosure 2	D_INV2	653465.5	4922673	2	0	0	100.3	100.3	1	1449.71	3.25	0	74.23	0	-0.05	0	0	12.2	0	0	0	0	0	0	13.94	13.94
	Discovery Inverter enclosure 3	D_INV3	653511.4	4922537	2	0	0	100.3	100.3	1	1575.75	3.25	0	74.95	0	-0.01	0	0	12.51	0	0	0	0	0	0	12.86	12.86
	Sparkle Inverter enclosure 4	S_INV4	654129.9	4924735	2	0	0	100.3	100.3	1	2068.92	3.25	0	77.31	0	0.15	0	0	13.61	0	0	0	0	0	0	9.24	9.24
	Sparkle Inverter enclosure 3	S_INV3	654137.8	4924883	2	0	0	100.3	100.3	1	2157.73	3.25	0	77.68	0	0.17	0	0	13.79	0	0	0	0	0	0	8.67	8.67
	Sparkle Inverter enclosure 6	S_INV6	654146.3	4925027	2	0	0	100.3	100.3	1	2250.67	3.25	0	78.05	0	0.2	0	0	13.97	0	0	0	0	0	0	8.09	8.09
	Discovery Inverter enclosure 5	D_INV5	653875	4922657	2	0	0	97.3	97.3	1	1786.18	3.25	0	76.04	0	0.06	0	0	13	0	0	0	0	0	0	8.21	8.21
	Sparkle Inverter enclosure 1	S_INV1	653943	4925042	2	0	0	97.3	97.3	1	2104.9	3.25	0	77.46	0	0.16	0	0	13.68	0	0	0	0	0	0	6.01	6.01
	Discovery Substation Transforme	D_TRS	653484.4	4922253	2.5	0	0	92	92	1	1768.22	3.5	0	75.95	0	-0.22	0	0	3.97	0	0	0	0	0	0	12.28	12.28
	Sparkle Substation Transformer	S_TRS	653933.6	4925172	2.5	0	0	92	92	1	2187.32	3.5	0	77.8	0	-0.12	0	0	4.68	0	0	0	0	0	0	9.62	9.62
	Discovery Inverter enclosure 4	D_INV4	653513.6	4922427	2	0	0	89.1	89.1	1	1655.99	3.25	0	75.38	0	0.83	0	0	7.47	0	0	0	0	0	0	5.38	5.38
	Discovery Inverter enclosure 6	D_INV6	653814.6	4922521	2	0	0	89.1	89.1	1	1816.2	3.25	0	76.18	0	0.86	0	0	7.74	0	0	0	0	0	0	4.27	4.27
	Discovery Inverter enclosure 7	D_INV7	653773.3	4922400	2	0	0	89.1	89.1	1	1861.5	3.25	0	76.4	0	0.87	0	0	7.82	0	0	0	0	0	0	3.97	3.97
	Sparkle Inverter enclosure 2	S_INV2	653973.9	4924893	2	0	0	89.1	89.1	1	2032.35	3.25	0	77.16	0	0.91	0	0	8.1	0	0	0	0	0	0	2.89	2.89
	Sparkle Inverter enclosure 5	S_INV5	653978.3	4925039	2	0	0	89.1	89.1	1	2129.58	3.25	0	77.57	0	0.94	0	0	8.26	0	0	0	0	0	0	2.3	2.3
	Sparkle Inverter enclosure 7	S_INV7	654153.1	4925178	2	0	0	89.1	89.1	1	2352.66	3.25	0	78.43	0	0.99	0	0	8.61	0	0	0	0	0	0	1.02	1.02
	Discovery Inverter Transformer	D_INVTR1	653440.3	4922792	2	0	0	77.3	77.3	1	1354.2	3.25	0	73.63	0	-2.13	0	0	0.88	0	0	0	0	0	0	4.96	4.96
	Discovery Inverter Transformer	D_INVTR2	653471.4	4922673	2	0	0	77.3	77.3	1	1454.36	3.25	0	74.25	0	-2.18	0	0	0.93	0	0	0	0	0	0	4.34	4.34
	Discovery Inverter Transformer	D_INVTR3	653517.2	4922537	2	0	0	77.3	77.3	1	1580.23	3.25	0	74.97	0	-2.24	0	0	1	0	0	0	0	0	0	3.61	3.61
	Discovery Inverter Transformer	D_INVTR5	653869.2	4922658	2	0	0	78.2	78.2	1	1781.04	3.25	0	76.01	0	-2.32	0	0	1.1	0	0	0	0	0	0	3.45	3.45
	Discovery Inverter Transformer	D_INVTR4	653519.4	4922426	2	0	0	77.3	77.3	1	1660.29	3.25	0	75.4	0	-2.27	0	0	1.04	0	0	0	0	0	0	3.17	3.17
	Discovery Inverter Transformer	D_INVTR6	653808.8	4922521	2	0	0	77.3	77.3	1	1811.34	3.25	0	76.16	0	-2.33	0	0	1.11	0	0	0	0	0	0	2.4	2.4
	Discovery Inverter Transformer	D_INVTR7	653767.4	4922400	2	0	0	77.3	77.3	1	1856.85	3.25	0	76.38	0	-2.35	0	0	1.14	0	0	0	0	0	0	2.18	2.18
	Sparkle Inverter transformer 1	S_INVTR1	653948.9	4925041	2	0	0	78.2	78.2	1	2109.01	3.25	0	77.48	0	-2.44	0	0	1.26	0	0	0	0	0	0	1.94	1.94
	Sparkle Inverter transformer 2	S_INVTR2	653968	4924893	2	0	0	77.3	77.3	1	2028	3.25	0	77.14	0	-2.41	0	0	1.22	0	0	0	0	0	0	1.4	1.4
	Sparkle Inverter transformer 4	S_INVTR4	654124	4924736	2	0	0	77.3	77.3	1	2064.18	3.25	0	77.29	0	-2.43	0	0	1.24	0	0	0	0	0	0	1.24	1.24
	Sparkle Inverter transformer 5	S_INVTR5	653972.5	4925040	2	0	0	77.3	77.3	1	2125.45	3.25	0	77.55	0	-2.45	0	0	1.27	0	0	0	0	0	0	0.98	0.98
	Sparkle Inverter transformer 3	S_INVTR3	654132	4924883	2	0	0	77.3	77.3	1	2153.19	3.25	0	77.66	0	-2.46	0	0	1.28	0	0	0	0	0	0	0.86	0.86
	Sparkle Inverter transformer 6	S_INVTR6	654140.4	4925027	2	0	0	77.3	77.3	1	2246.32	3.25	0	78.03	0	-2.49	0	0	1.32	0	0	0	0	0	0	0.48	0.48
	Sparkle Inverter transformer 7	S_INVTR7	654147.2	4925179	2	0	0	77.3	77.3	1	2348.51	3.25	0	78.42	0	-2.52	0	0	1.37	0	0	0	0	0	0	0.08	0.08

Value D/N: 0 0
Level D/N: 22.3512 22.3512

Receiver: Existing Potential Receptor
ID: R18
X: 652406
Y: 4922025
Z: 4.5
Ground: 0

ISO	Description	ID	X	Y	Z	Ground	ReflOrd	LxT	LxN	L/A	Dist.	hm	Freq	Adiv	K0b	Agr	Abar	z	Aatm	Afol	Ahous	Cmet	CmetN	Dc	RL	LtotT	LtotN
	Discovery Inverter enclosure 3	D_INV3	653511.4	4922537	2	0	0	100.3	100.3	1	1218.32	3.25	0	72.72	0	-0.15	0	0	11.58	0	0	0	0	0	0	16.17	16.17
	Discovery Inverter enclosure 2	D_INV2	653465.5	4922673	2	0	0	100.3	100.3	1	1242.1	3.25	0	72.88	0	-0.14	0	0	11.65	0	0	0	0	0	0	15.92	15.92
	Discovery Inverter enclosure 1	D_INV1	653434.4	4922792	2	0	0	100.3	100.3	1	1283.1	3.25	0	73.17	0	-0.12	0	0	11.76	0	0	0	0	0	0	15.51	15.51
	Discovery Inverter enclosure 5	D_INV5	653875	4922657	2	0	0	97.3	97.3	1	1599.26	3.25	0	75.08	0	0	0	0	12.57	0	0	0	0	0	0	9.67	9.67
	Discovery Substation Transforme	D_TRS	653484.4	4922253	2.5	0	0	92	92	1	1102.22	4.25	0	71.85	0	0.66	4.52	0.23	2.73	0	0	0	0	0	0	12.23	12.23
	Sparkle Inverter enclosure 4	S_INV4	654129.9	4924735	2	0	0	100.3	100.3	1	3212.02	3.25	0	81.14	0	0.4	0	0	15.74	0	0	0	0	0	0	3.03	3.03
	Sparkle Inverter enclosure 3	S_INV3	654137.8	4924883	2	0	0	100.3	100.3	1	3341.69	3.25	0	81.48	0	0.42	0	0	15.96	0	0	0	0	0	0	2.44	2.44
	Sparkle Inverter enclosure 6	S_INV6	654146.3	4925027	2	0	0	100.3	100.3	1	3469.65	3.25	0	81.81	0	0.45	0	0	16.18	0	0	0	0	0	0	1.88	1.88
	Discovery Inverter enclosure 4	D_INV4	653513.6	4922427	2	0	0	89.1	89.1	1	1178.19	3.25	0	72.42	0	0.72	0	0	6.64	0	0	0	0	0	0	9.27	9.27
	Sparkle Inverter enclosure 1	S_INV1	653943	4925042	2	0	0	97.3	97.3	1	3385.69	3.25	0	81.59	0	0.43	0	0	16.04	0	0	0	0	0	0	-0.75	-0.75
	Discovery Inverter enclosure 7	D_INV7	653773.3	4922400	2	0	0	89.1	89.1	1	1417.66	3.25	0	74.03	0	0.77	0	0	7.07	0	0	0	0	0	0	7.19	7.19
	Discovery Inverter enclosure 6	D_INV6	653814.6	4922521	2	0	0	89.1	89.1	1	1493.27	3.25	0	74.48	0	0.79	0	0	7.2	0	0	0	0	0	0	6.59	6.59
	Sparkle Substation Transformer	S_TRS	653933.6	4925172	2.5	0	0	92	92	1	3497.9	3.5	0	81.88	0	0.21	0	0	6.68	0	0	0	0	0	0	3.21	3.21
	Sparkle Inverter enclosure 2	S_INV2	653973.9	4924893	2	0	0	89.1	89.1	1	3268.32	3.25	0	81.29	0	1.21	0	0	10.02	0	0	0	0	0	0	-3.46	-3.46
	Sparkle Inverter enclosure 5	S_INV5	653978.3	4925039	2	0	0	89.1	89.1	1	3399.62	3.25	0	81.63	0	1.24	0	0	10.21	0	0	0	0	0	0	-4.03	-4.03

Sparkle Inverter enclosure 7	S_INV7	654153.1	4925178	2	0	0	89.1	89.1	1	3604.85	3.25	0	82.14	0	1.29	0	0	10.52	0	0	0	0	0	0	-4.89	-4.89
Discovery Inverter Transformer	D_INVTR4	653519.4	4922426	2	0	0	77.3	77.3	1	1183.56	3.25	0	72.46	0	-2.04	0	0	0.78	0	0	0	0	0	0	6.14	6.14
Discovery Inverter Transformer	D_INVTR3	653517.2	4922537	2	0	0	77.3	77.3	1	1223.47	3.25	0	72.75	0	-2.06	0	0	0.81	0	0	0	0	0	0	5.85	5.85
Discovery Inverter Transformer	D_INVTR2	653471.4	4922673	2	0	0	77.3	77.3	1	1246.89	3.25	0	72.92	0	-2.08	0	0	0.82	0	0	0	0	0	0	5.68	5.68
Discovery Inverter Transformer	D_INVTR1	653440.3	4922792	2	0	0	77.3	77.3	1	1287.57	3.25	0	73.2	0	-2.1	0	0	0.84	0	0	0	0	0	0	5.4	5.4
Discovery Inverter Transformer	D_INVTR7	653767.4	4922400	2	0	0	77.3	77.3	1	1412.09	3.25	0	74	0	-2.16	0	0	0.91	0	0	0	0	0	0	4.6	4.6
Discovery Inverter Transformer	D_INVTR5	653869.2	4922658	2	0	0	78.2	78.2	1	1594.02	3.25	0	75.05	0	-2.24	0	0	1	0	0	0	0	0	0	4.43	4.43
Discovery Inverter Transformer	D_INVTR6	653808.8	4922521	2	0	0	77.3	77.3	1	1487.88	3.25	0	74.45	0	-2.2	0	0	0.95	0	0	0	0	0	0	4.14	4.14
Sparkle Inverter transformer 1	S_INVTR1	653948.9	4925041	2	0	0	78.2	78.2	1	3388.02	3.25	0	81.6	0	-2.82	0	0	1.82	0	0	0	0	0	0	-2.36	-2.36
Sparkle Inverter transformer 4	S_INVTR4	654124	4924736	2	0	0	77.3	77.3	1	3209.21	3.25	0	81.13	0	-2.77	0	0	1.74	0	0	0	0	0	0	-2.76	-2.76
Sparkle Inverter transformer 2	S_INVTR2	653968	4924893	2	0	0	77.3	77.3	1	3265.86	3.25	0	81.28	0	-2.78	0	0	1.77	0	0	0	0	0	0	-2.92	-2.92
Sparkle Inverter transformer 3	S_INVTR3	654132	4924883	2	0	0	77.3	77.3	1	3339	3.25	0	81.47	0	-2.8	0	0	1.8	0	0	0	0	0	0	-3.12	-3.12
Sparkle Inverter transformer 5	S_INVTR5	653972.5	4925040	2	0	0	77.3	77.3	1	3397.27	3.25	0	81.62	0	-2.82	0	0	1.82	0	0	0	0	0	0	-3.28	-3.28
Sparkle Inverter transformer 6	S_INVTR6	654140.4	4925027	2	0	0	77.3	77.3	1	3467.06	3.25	0	81.8	0	-2.84	0	0	1.85	0	0	0	0	0	0	-3.47	-3.47
Sparkle Inverter transformer 7	S_INVTR7	654147.2	4925179	2	0	0	77.3	77.3	1	3602.36	3.25	0	82.13	0	-2.87	0	0	1.9	0	0	0	0	0	0	-3.82	-3.82

Value D/N: 0 0
Level D/N: 22.9318 22.9318

Receiver: Vacant Lot
ID: R19
X: 652405
Y: 4923317
Z: 4.5
Ground: 0

ISO	Description	ID	X	Y	Z	Ground	ReflOrd	LxT	LxN	L/A	Dist.	hm	Freq	Adiv	K0b	Agr	Abar	z	Aatm	Afol	Ahous	Cmet	CmetN	Dc	RL	LtotT	LtotN
	Discovery Inverter enclosure 1	D_INV1	653434.4	4922792	2	0	0	100.3	100.3	1	1155.46	3.25	0	72.26	0	-0.17	0	0	11.4	0	0	0	0	0	0	16.83	16.83
	Discovery Inverter enclosure 2	D_INV2	653465.5	4922673	2	0	0	100.3	100.3	1	1240.61	3.25	0	72.87	0	-0.14	0	0	11.64	0	0	0	0	0	0	15.93	15.93
	Discovery Inverter enclosure 3	D_INV3	653511.4	4922537	2	0	0	100.3	100.3	1	1353.56	3.25	0	73.63	0	-0.09	0	0	11.95	0	0	0	0	0	0	14.82	14.82
	Sparkle Inverter enclosure 4	S_INV4	654129.9	4924735	2	0	0	100.3	100.3	1	2233.06	3.25	0	77.98	0	0.19	0	0	13.94	0	0	0	0	0	0	8.2	8.2
	Discovery Inverter enclosure 5	D_INV5	653875	4922657	2	0	0	97.3	97.3	1	1611.34	3.25	0	75.14	0	0.01	0	0	12.6	0	0	0	0	0	0	9.57	9.57
	Sparkle Inverter enclosure 3	S_INV3	654137.8	4924883	2	0	0	100.3	100.3	1	2335.55	3.25	0	78.37	0	0.22	0	0	14.14	0	0	0	0	0	0	7.58	7.58
	Sparkle Inverter enclosure 6	S_INV6	654146.3	4925027	2	0	0	100.3	100.3	1	2440.27	3.25	0	78.75	0	0.24	0	0	14.34	0	0	0	0	0	0	6.98	6.98
	Sparkle Inverter enclosure 1	S_INV1	653943	4925042	2	0	0	97.3	97.3	1	2310.86	3.25	0	78.28	0	0.21	0	0	14.09	0	0	0	0	0	0	4.73	4.73
	Discovery Substation Transforme	D_TRS	653484.4	4922253	2.5	0	0	92	92	1	1515.72	3.5	0	74.61	0	-0.27	0	0	3.51	0	0	0	0	0	0	14.13	14.13
	Discovery Inverter enclosure 4	D_INV4	653513.6	4922427	2	0	0	89.1	89.1	1	1421.79	3.25	0	74.06	0	0.78	0	0	7.07	0	0	0	0	0	0	7.15	7.15
	Discovery Inverter enclosure 6	D_INV6	653814.6	4922521	2	0	0	89.1	89.1	1	1619.08	3.25	0	75.19	0	0.82	0	0	7.41	0	0	0	0	0	0	5.64	5.64
	Discovery Inverter enclosure 7	D_INV7	653773.3	4922400	2	0	0	89.1	89.1	1	1647.34	3.25	0	75.34	0	0.83	0	0	7.46	0	0	0	0	0	0	5.44	5.44
	Sparkle Substation Transformer	S_TRS	653933.6	4925172	2.5	0	0	92	92	1	2403.44	3.5	0	78.62	0	-0.07	0	0	5.03	0	0	0	0	0	0	8.39	8.39
	Sparkle Inverter enclosure 2	S_INV2	653973.9	4924893	2	0	0	89.1	89.1	1	2223.55	3.25	0	77.94	0	0.96	0	0	8.41	0	0	0	0	0	0	1.75	1.75
	Sparkle Inverter enclosure 5	S_INV5	653978.3	4925039	2	0	0	89.1	89.1	1	2332.64	3.25	0	78.36	0	0.99	0	0	8.58	0	0	0	0	0	0	1.13	1.13
	Sparkle Inverter enclosure 7	S_INV7	654153.1	4925178	2	0	0	89.1	89.1	1	2553.4	3.25	0	79.14	0	1.04	0	0	8.93	0	0	0	0	0	0	-0.05	-0.05
	Discovery Inverter Transformer	D_INVTR1	653440.3	4922792	2	0	0	77.3	77.3	1	1160.86	3.25	0	72.3	0	-2.03	0	0	0.77	0	0	0	0	0	0	6.3	6.3
	Discovery Inverter Transformer	D_INVTR2	653471.4	4922673	2	0	0	77.3	77.3	1	1245.83	3.25	0	72.91	0	-2.08	0	0	0.82	0	0	0	0	0	0	5.69	5.69
	Discovery Inverter Transformer	D_INVTR3	653517.2	4922537	2	0	0	77.3	77.3	1	1358.57	3.25	0	73.66	0	-2.13	0	0	0.88	0	0	0	0	0	0	4.94	4.94
	Discovery Inverter Transformer	D_INVTR4	653519.4	4922426	2	0	0	77.3	77.3	1	1426.61	3.25	0	74.09	0	-2.17	0	0	0.92	0	0	0	0	0	0	4.51	4.51
	Discovery Inverter Transformer	D_INVTR5	653869.2	4922658	2	0	0	78.2	78.2	1	1605.82	3.25	0	75.11	0	-2.25	0	0	1.01	0	0	0	0	0	0	4.37	4.37
	Discovery Inverter Transformer	D_INVTR6	653808.8	4922521	2	0	0	77.3	77.3	1	1613.8	3.25	0	75.16	0	-2.25	0	0	1.01	0	0	0	0	0	0	3.42	3.42
	Discovery Inverter Transformer	D_INVTR7	653767.4	4922400	2	0	0	77.3	77.3	1	1642.25	3.25	0	75.31	0	-2.27	0	0	1.03	0	0	0	0	0	0	3.27	3.27
	Sparkle Inverter transformer 1	S_INVTR1	653948.9	4925041	2	0	0	78.2	78.2	1	2314.49	3.25	0	78.29	0	-2.51	0	0	1.35	0	0	0	0	0	0	1.11	1.11
	Sparkle Inverter transformer 2	S_INVTR2	653968	4924893	2	0	0	77.3	77.3	1	2219.7	3.25	0	77.93	0	-2.48	0	0	1.31	0	0	0	0	0	0	0.59	0.59
	Sparkle Inverter transformer 4	S_INVTR4	654124	4924736	2	0	0	77.3	77.3	1	2228.79	3.25	0	77.96	0	-2.48	0	0	1.31	0	0	0	0	0	0	0.55	0.55
	Sparkle Inverter transformer 5	S_INVTR5	653972.5	4925040	2	0	0	77.3	77.3	1	2328.98	3.25	0	78.34	0	-2.52	0	0	1.36	0	0	0	0	0	0	0.15	0.15
	Sparkle Inverter transformer 3	S_INVTR3	654132	4924883	2	0	0	77.3	77.3	1	2331.48	3.25	0	78.35	0	-2.52	0	0	1.36	0	0	0	0	0	0	0.14	0.14
	Sparkle Inverter transformer 6	S_INVTR6	654140.4	4925027	2	0	0	77.3	77.3	1	2436.37	3.25	0	78.73	0	-2.55	0	0	1.41	0	0	0	0	0	0	-0.25	-0.25
	Sparkle Inverter transformer 7	S_INVTR7	654147.2	4925179	2	0	0	77.3	77.3	1	2549.68	3.25	0	79.13	0	-2.59	0	0	1.46	0	0	0	0	0	0	-0.66	-0.66

Value D/N: 0 0
Level D/N: 23.5121 23.5121

Receiver: Existing Potential Receptor
ID: R20
X: 652710
Y: 4922106
Z: 4.5
Ground: 0

ISO	Description	ID	X	Y	Z	Ground	ReflOrd	LxT	LxN	L/A	Dist.	hm	Freq	Adiv	K0b	Agr	Abar	z	Aatm	Afol	Ahous	Cmet	CmetN	Dc	RL	LtotT	LtotN
	Discovery Inverter enclosure 3	D_INV3	653511.4	4922537	2	0	0	100.3	100.3	1	910.06	3.25	0	70.18	0	-0.29	0	0	10.6	0	0	0	0	0	0	19.82	19.82
	Discovery Inverter enclosure 2	D_INV2	653465.5	4922673	2	0	0	100.3	100.3	1	944.77	3.25	0	70.51	0	-0.27	0	0	10.72	0	0	0	0	0	0	19.36	19.36
	Discovery Inverter enclosure 1	D_INV1	653434.4	4922792	2	0	0	100.3	100.3	1	997.87	3.25	0	70.98	0	-0.25	0	0	10.9	0	0	0	0	0	0	18.67	18.67
	Discovery Inverter enclosure 5	D_INV5	653875	4922657	2	0	0	97.3	97.3	1	1288.82	3.25	0	73.2	0	-0.12	0	0	11.77	0	0	0	0	0	0	12.45	12.45
	Discovery Substation Transforme	D_TRS	653484.4	4922253	2.5	0	0	92	92	1	788.21	4.24	0	68.93	0	0.55	4.39	0.23	2.08	0	0	0	0	0	0	16.03	16.03

Sparkle Inverter enclosure 4	S_INV4	654129.9	4924735	2	0	0	100.3	100.3	1	2988.12	3.25	0	80.51	0	0.36	0	0	15.35	0	0	0	0	0	0	4.09	4.09
Sparkle Inverter enclosure 3	S_INV3	654137.8	4924883	2	0	0	100.3	100.3	1	3122.49	3.25	0	80.89	0	0.39	0	0	15.59	0	0	0	0	0	0	3.45	3.45
Discovery Inverter enclosure 4	D_INV4	653513.6	4922427	2	0	0	89.1	89.1	1	865.23	3.25	0	69.74	0	0.66	0	0	6.05	0	0	0	0	0	0	12.61	12.61
Sparkle Inverter enclosure 6	S_INV6	654146.3	4925027	2	0	0	100.3	100.3	1	3254.71	3.25	0	81.25	0	0.41	0	0	15.82	0	0	0	0	0	0	2.84	2.84
Discovery Inverter enclosure 7	D_INV7	653773.3	4922400	2	0	0	89.1	89.1	1	1103.06	3.25	0	71.85	0	0.71	0	0	6.51	0	0	0	0	0	0	9.99	9.99
Discovery Inverter enclosure 6	D_INV6	653814.6	4922521	2	0	0	89.1	89.1	1	1179.87	3.25	0	72.44	0	0.72	0	0	6.65	0	0	0	0	0	0	9.25	9.25
Sparkle Inverter enclosure 1	S_INV1	653943	4925042	2	0	0	97.3	97.3	1	3184.13	3.25	0	81.06	0	0.4	0	0	15.69	0	0	0	0	0	0	0.16	0.16
Sparkle Substation Transformer	S_TRS	653933.6	4925172	2.5	0	0	92	92	1	3300.87	3.5	0	81.37	0	0.16	0	0	6.4	0	0	0	0	0	0	4.05	4.05
Sparkle Inverter enclosure 2	S_INV2	653973.9	4924893	2	0	0	89.1	89.1	1	3059.92	3.25	0	80.71	0	1.16	0	0	9.71	0	0	0	0	0	0	-2.53	-2.53
Sparkle Inverter enclosure 5	S_INV5	653978.3	4925039	2	0	0	89.1	89.1	1	3195.65	3.25	0	81.09	0	1.19	0	0	9.91	0	0	0	0	0	0	-3.14	-3.14
Discovery Inverter Transformer	D_INVTR4	653519.4	4922426	2	0	0	77.3	77.3	1	870.52	3.25	0	69.8	0	-1.85	0	0	0.6	0	0	0	0	0	0	8.79	8.79
Sparkle Inverter enclosure 7	S_INV7	654153.1	4925178	2	0	0	89.1	89.1	1	3394.24	3.25	0	81.61	0	1.24	0	0	10.21	0	0	0	0	0	0	-4.01	-4.01
Discovery Inverter Transformer	D_INVTR3	653517.2	4922537	2	0	0	77.3	77.3	1	915.03	3.25	0	70.23	0	-1.88	0	0	0.63	0	0	0	0	0	0	8.36	8.36
Discovery Inverter Transformer	D_INVTR2	653471.4	4922673	2	0	0	77.3	77.3	1	949.22	3.25	0	70.55	0	-1.9	0	0	0.65	0	0	0	0	0	0	8.05	8.05
Discovery Inverter Transformer	D_INVTR1	653440.3	4922792	2	0	0	77.3	77.3	1	1001.86	3.25	0	71.02	0	-1.93	0	0	0.68	0	0	0	0	0	0	7.58	7.58
Discovery Inverter Transformer	D_INVTR7	653767.4	4922400	2	0	0	77.3	77.3	1	1097.5	3.25	0	71.81	0	-1.99	0	0	0.73	0	0	0	0	0	0	6.79	6.79
Discovery Inverter Transformer	D_INVTR5	653869.2	4922658	2	0	0	78.2	78.2	1	1283.67	3.25	0	73.17	0	-2.1	0	0	0.84	0	0	0	0	0	0	6.33	6.33
Discovery Inverter Transformer	D_INVTR6	653808.8	4922521	2	0	0	77.3	77.3	1	1174.53	3.25	0	72.4	0	-2.04	0	0	0.78	0	0	0	0	0	0	6.2	6.2
Sparkle Inverter transformer 1	S_INVTR1	653948.9	4925041	2	0	0	78.2	78.2	1	3186.05	3.25	0	81.07	0	-2.76	0	0	1.73	0	0	0	0	0	0	-1.79	-1.79
Sparkle Inverter transformer 4	S_INVTR4	654124	4924736	2	0	0	77.3	77.3	1	2985.68	3.25	0	80.5	0	-2.71	0	0	1.65	0	0	0	0	0	0	-2.1	-2.1
Sparkle Inverter transformer 2	S_INVTR2	653968	4924893	2	0	0	77.3	77.3	1	3057.86	3.25	0	80.71	0	-2.73	0	0	1.68	0	0	0	0	0	0	-2.32	-2.32
Sparkle Inverter transformer 3	S_INVTR3	654132	4924883	2	0	0	77.3	77.3	1	3120.16	3.25	0	80.88	0	-2.75	0	0	1.71	0	0	0	0	0	0	-2.5	-2.5
Sparkle Inverter transformer 5	S_INVTR5	653972.5	4925040	2	0	0	77.3	77.3	1	3193.68	3.25	0	81.09	0	-2.77	0	0	1.74	0	0	0	0	0	0	-2.72	-2.72
Sparkle Inverter transformer 6	S_INVTR6	654140.4	4925027	2	0	0	77.3	77.3	1	3252.48	3.25	0	81.24	0	-2.78	0	0	1.76	0	0	0	0	0	0	-2.88	-2.88
Sparkle Inverter transformer 7	S_INVTR7	654147.2	4925179	2	0	0	77.3	77.3	1	3392.11	3.25	0	81.61	0	-2.82	0	0	1.82	0	0	0	0	0	0	-3.27	-3.27

Value D/N: 0 0
Level D/N: 26.0805 26.0805

Receiver: Existing Potential Receptor
ID: R21
X: 652784
Y: 4923210
Z: 4.5
Ground: 0

ISO Description	ID	X	Y	Z	Ground	ReflOrd	LxT	LxN	L/A	Dist.	hm	Freq	Adiv	K0b	Agr	Abar	z	Aatm	Afol	Ahous	Cmet	CmetN	Dc	RL	LtotT	LtotN
Discovery Inverter enclosure 1	D_INV1	653434.4	4922792	2	0	0	100.3	100.3	1	773.03	3.25	0	68.76	0	-0.37	0	0	10.07	0	0	0	0	0	0	21.85	21.85
Discovery Inverter enclosure 2	D_INV2	653465.5	4922673	2	0	0	100.3	100.3	1	867.51	3.25	0	69.77	0	-0.31	0	0	10.45	0	0	0	0	0	0	20.42	20.42
Discovery Inverter enclosure 3	D_INV3	653511.4	4922537	2	0	0	100.3	100.3	1	990.81	3.25	0	70.92	0	-0.25	0	0	10.88	0	0	0	0	0	0	18.76	18.76
Discovery Inverter enclosure 5	D_INV5	653875	4922657	2	0	0	97.3	97.3	1	1223.12	3.25	0	72.75	0	-0.14	0	0	11.59	0	0	0	0	0	0	13.12	13.12
Sparkle Inverter enclosure 4	S_INV4	654129.9	4924735	2	0	0	100.3	100.3	1	2034.13	3.25	0	77.17	0	0.14	0	0	13.53	0	0	0	0	0	0	9.47	9.47
Sparkle Inverter enclosure 3	S_INV3	654137.8	4924883	2	0	0	100.3	100.3	1	2152.09	3.25	0	77.66	0	0.17	0	0	13.78	0	0	0	0	0	0	8.71	8.71
Sparkle Inverter enclosure 6	S_INV6	654146.3	4925027	2	0	0	100.3	100.3	1	2270.69	3.25	0	78.12	0	0.2	0	0	14.01	0	0	0	0	0	0	7.97	7.97
Sparkle Inverter enclosure 1	S_INV1	653943	4925042	2	0	0	97.3	97.3	1	2167.59	3.25	0	77.72	0	0.18	0	0	13.81	0	0	0	0	0	0	5.61	5.61
Discovery Substation Transforme	D_TRS	653484.4	4922253	2.5	0	0	92	92	1	1186	3.5	0	72.48	0	-0.34	0	0	2.89	0	0	0	0	0	0	16.94	16.94
Discovery Inverter enclosure 4	D_INV4	653513.6	4922427	2	0	0	89.1	89.1	1	1070.41	3.25	0	71.59	0	0.7	0	0	6.45	0	0	0	0	0	0	10.32	10.32
Discovery Inverter enclosure 6	D_INV6	653814.6	4922521	2	0	0	89.1	89.1	1	1239.98	3.25	0	72.87	0	0.74	0	0	6.75	0	0	0	0	0	0	8.7	8.7
Discovery Inverter enclosure 7	D_INV7	653773.3	4922400	2	0	0	89.1	89.1	1	1278.81	3.25	0	73.14	0	0.74	0	0	6.82	0	0	0	0	0	0	8.36	8.36
Sparkle Substation Transformer	S_TRS	653933.6	4925172	2.5	0	0	92	92	1	2273.73	3.5	0	78.13	0	-0.1	0	0	4.82	0	0	0	0	0	0	9.12	9.12
Sparkle Inverter enclosure 2	S_INV2	653973.9	4924893	2	0	0	89.1	89.1	1	2060.89	3.25	0	77.28	0	0.92	0	0	8.14	0	0	0	0	0	0	2.71	2.71
Sparkle Inverter enclosure 5	S_INV5	653978.3	4925039	2	0	0	89.1	89.1	1	2184.55	3.25	0	77.79	0	0.95	0	0	8.34	0	0	0	0	0	0	1.98	1.98
Sparkle Inverter enclosure 7	S_INV7	654153.1	4925178	2	0	0	89.1	89.1	1	2397.54	3.25	0	78.6	0	1	0	0	8.68	0	0	0	0	0	0	0.78	0.78
Discovery Inverter Transformer	D_INVTR1	653440.3	4922792	2	0	0	77.3	77.3	1	778.18	3.25	0	68.82	0	-1.78	0	0	0.55	0	0	0	0	0	0	9.76	9.76
Discovery Inverter Transformer	D_INVTR2	653471.4	4922673	2	0	0	77.3	77.3	1	872.36	3.25	0	69.81	0	-1.85	0	0	0.6	0	0	0	0	0	0	8.77	8.77
Discovery Inverter Transformer	D_INVTR3	653517.2	4922537	2	0	0	77.3	77.3	1	995.38	3.25	0	70.96	0	-1.93	0	0	0.68	0	0	0	0	0	0	7.64	7.64
Discovery Inverter Transformer	D_INVTR4	653519.4	4922426	2	0	0	77.3	77.3	1	1074.69	3.25	0	71.63	0	-1.98	0	0	0.72	0	0	0	0	0	0	6.97	6.97
Discovery Inverter Transformer	D_INVTR5	653869.2	4922658	2	0	0	78.2	78.2	1	1217.7	3.25	0	72.71	0	-2.06	0	0	0.8	0	0	0	0	0	0	6.79	6.79
Discovery Inverter Transformer	D_INVTR6	653808.8	4922521	2	0	0	77.3	77.3	1	1234.91	3.25	0	72.83	0	-2.07	0	0	0.81	0	0	0	0	0	0	5.77	5.77
Discovery Inverter Transformer	D_INVTR7	653767.4	4922400	2	0	0	77.3	77.3	1	1274.02	3.25	0	73.1	0	-2.09	0	0	0.83	0	0	0	0	0	0	5.5	5.5
Sparkle Inverter transformer 1	S_INVTR1	653948.9	4925041	2	0	0	78.2	78.2	1	2170.41	3.25	0	77.73	0	-2.46	0	0	1.29	0	0	0	0	0	0	1.69	1.69
Sparkle Inverter transformer 4	S_INVTR4	654124	4924736	2	0	0	77.3	77.3	1	2030.55	3.25	0	77.15	0	-2.42	0	0	1.22	0	0	0	0	0	0	1.38	1.38
Sparkle Inverter transformer 2	S_INVTR2	653968	4924893	2	0	0	77.3	77.3	1	2057.84	3.25	0	77.27	0	-2.43	0	0	1.23	0	0	0	0	0	0	1.26	1.26
Sparkle Inverter transformer 3	S_INVTR3	654132	4924883	2	0	0	77.3	77.3	1	2148.72	3.25	0	77.64	0	-2.46	0	0	1.28	0	0	0	0	0	0	0.88	0.88
Sparkle Inverter transformer 5	S_INVTR5	653972.5	4925040	2	0	0	77.3	77.3	1	2181.69	3.25	0	77.78	0	-2.47	0	0	1.29	0	0	0	0	0	0	0.74	0.74
Sparkle Inverter transformer 6	S_INVTR6	654140.4	4925027	2	0	0	77.3	77.3	1	2267.49	3.25	0	78.11	0	-2.5	0	0	1.33	0	0	0	0	0	0	0.39	0.39
Sparkle Inverter transformer 7	S_INVTR7	654147.2	4925179	2	0	0	77.3	77.3	1	2394.52	3.25	0	78.58	0	-2.54	0	0	1.39	0	0	0	0	0	0	-0.1	-0.1

Value D/N: 0 0
Level D/N: 27.1665 27.1665

Receiver: Existing Potential Receptor
ID: R22
X: 652796

Y: 4921990
Z: 4.5
Ground: 0

ISO	Description	ID	X	Y	Z	Ground	ReflOrd	LxT	LxN	L/A	Dist.	hm	Freq	Adiv	K0b	Agr	Abar	z	Aatm	Afol	Ahous	Cmet	CmetN	Dc	RL	LtotT	LtotN
	Discovery Inverter enclosure 3	D_INV3	653511.4	4922537	2	0	0	100.3	100.3	1	900.71	3.25	0	70.09	0	-0.3	0	0	10.57	0	0	0	0	0	0	19.95	19.95
	Discovery Inverter enclosure 2	D_INV2	653465.5	4922673	2	0	0	100.3	100.3	1	956.61	3.25	0	70.61	0	-0.27	0	0	10.76	0	0	0	0	0	0	19.2	19.2
	Discovery Inverter enclosure 1	D_INV1	653434.4	4922792	2	0	0	100.3	100.3	1	1025.28	3.25	0	71.22	0	-0.23	0	0	10.99	0	0	0	0	0	0	18.34	18.34
	Discovery Inverter enclosure 5	D_INV5	653875	4922657	2	0	0	97.3	97.3	1	1268.61	3.25	0	73.07	0	-0.12	0	0	11.72	0	0	0	0	0	0	12.65	12.65
	Discovery Substation Transforme	D_TRS	653484.4	4922253	2.5	0	0	92	92	1	736.9	4.24	0	68.35	0	0.57	4.91	0.23	1.97	0	0	0	0	0	0	16.18	16.18
	Sparkle Inverter enclosure 4	S_INV4	654129.9	4924735	2	0	0	100.3	100.3	1	3052.12	3.25	0	80.69	0	0.37	0	0	15.46	0	0	0	0	0	0	3.78	3.78
	Discovery Inverter enclosure 4	D_INV4	653513.6	4922427	2	0	0	89.1	89.1	1	840.05	3.25	0	69.49	0	0.65	0	0	6	0	0	0	0	0	0	12.92	12.92
	Sparkle Inverter enclosure 3	S_INV3	654137.8	4924883	2	0	0	100.3	100.3	1	3188.96	3.25	0	81.07	0	0.4	0	0	15.7	0	0	0	0	0	0	3.14	3.14
	Sparkle Inverter enclosure 6	S_INV6	654146.3	4925027	2	0	0	100.3	100.3	1	3323.33	3.25	0	81.43	0	0.42	0	0	15.93	0	0	0	0	0	0	2.53	2.53
	Discovery Inverter enclosure 7	D_INV7	653773.3	4922400	2	0	0	89.1	89.1	1	1059.64	3.25	0	71.5	0	0.7	0	0	6.43	0	0	0	0	0	0	10.43	10.43
	Discovery Inverter enclosure 6	D_INV6	653814.6	4922521	2	0	0	89.1	89.1	1	1148.53	3.25	0	72.2	0	0.72	0	0	6.59	0	0	0	0	0	0	9.55	9.55
	Sparkle Inverter enclosure 1	S_INV1	653943	4925042	2	0	0	97.3	97.3	1	3260.14	3.25	0	81.26	0	0.41	0	0	15.83	0	0	0	0	0	0	-0.19	-0.19
	Sparkle Substation Transformer	S_TRS	653933.6	4925172	2.5	0	0	92	92	1	3378.96	3.5	0	81.58	0	0.18	0	0	6.51	0	0	0	0	0	0	3.71	3.71
	Sparkle Inverter enclosure 2	S_INV2	653973.9	4924893	2	0	0	89.1	89.1	1	3132.58	3.25	0	80.92	0	1.18	0	0	9.82	0	0	0	0	0	0	-2.86	-2.86
	Discovery Inverter Transformer	D_INVTR4	653519.4	4922426	2	0	0	77.3	77.3	1	844.84	3.25	0	69.54	0	-1.83	0	0	0.59	0	0	0	0	0	0	9.05	9.05
	Sparkle Inverter enclosure 5	S_INV5	653978.3	4925039	2	0	0	89.1	89.1	1	3270.37	3.25	0	81.29	0	1.21	0	0	10.02	0	0	0	0	0	0	-3.47	-3.47
	Sparkle Inverter enclosure 7	S_INV7	654153.1	4925178	2	0	0	89.1	89.1	1	3465.01	3.25	0	81.79	0	1.26	0	0	10.31	0	0	0	0	0	0	-4.31	-4.31
	Discovery Inverter Transformer	D_INVTR3	653517.2	4922537	2	0	0	77.3	77.3	1	905.13	3.25	0	70.13	0	-1.87	0	0	0.62	0	0	0	0	0	0	8.46	8.46
	Discovery Inverter Transformer	D_INVTR2	653471.4	4922673	2	0	0	77.3	77.3	1	960.43	3.25	0	70.65	0	-1.91	0	0	0.66	0	0	0	0	0	0	7.94	7.94
	Discovery Inverter Transformer	D_INVTR1	653440.3	4922792	2	0	0	77.3	77.3	1	1028.63	3.25	0	71.25	0	-1.95	0	0	0.7	0	0	0	0	0	0	7.35	7.35
	Discovery Inverter Transformer	D_INVTR7	653767.4	4922400	2	0	0	77.3	77.3	1	1054.37	3.25	0	71.46	0	-1.97	0	0	0.71	0	0	0	0	0	0	7.14	7.14
	Discovery Inverter Transformer	D_INVTR5	653869.2	4922658	2	0	0	78.2	78.2	1	1263.82	3.25	0	73.03	0	-2.09	0	0	0.83	0	0	0	0	0	0	6.47	6.47
	Discovery Inverter Transformer	D_INVTR6	653808.8	4922521	2	0	0	77.3	77.3	1	1143.53	3.25	0	72.16	0	-2.02	0	0	0.76	0	0	0	0	0	0	6.43	6.43
	Sparkle Inverter transformer 1	S_INVTR1	653948.9	4925041	2	0	0	78.2	78.2	1	3261.85	3.25	0	81.27	0	-2.78	0	0	1.77	0	0	0	0	0	0	-2.01	-2.01
	Sparkle Inverter transformer 4	S_INVTR4	654124	4924736	2	0	0	77.3	77.3	1	3049.92	3.25	0	80.69	0	-2.73	0	0	1.68	0	0	0	0	0	0	-2.29	-2.29
	Sparkle Inverter transformer 2	S_INVTR2	653968	4924893	2	0	0	77.3	77.3	1	3130.75	3.25	0	80.91	0	-2.75	0	0	1.71	0	0	0	0	0	0	-2.53	-2.53
	Sparkle Inverter transformer 3	S_INVTR3	654132	4924883	2	0	0	77.3	77.3	1	3186.85	3.25	0	81.07	0	-2.76	0	0	1.73	0	0	0	0	0	0	-2.7	-2.7
	Sparkle Inverter transformer 5	S_INVTR5	653972.5	4925040	2	0	0	77.3	77.3	1	3268.63	3.25	0	81.29	0	-2.79	0	0	1.77	0	0	0	0	0	0	-2.93	-2.93
	Sparkle Inverter transformer 6	S_INVTR6	654140.4	4925027	2	0	0	77.3	77.3	1	3321.32	3.25	0	81.43	0	-2.8	0	0	1.79	0	0	0	0	0	0	-3.08	-3.08
	Sparkle Inverter transformer 7	S_INVTR7	654147.2	4925179	2	0	0	77.3	77.3	1	3463.08	3.25	0	81.79	0	-2.83	0	0	1.85	0	0	0	0	0	0	-3.46	-3.46

Value D/N: 0 0
Level D/N: 26.0752 26.0752

Receiver: Vacant Lot
ID: R23
X: 652884
Y: 4921903
Z: 4.5
Ground: 0

ISO	Description	ID	X	Y	Z	Ground	ReflOrd	LxT	LxN	L/A	Dist.	hm	Freq	Adiv	K0b	Agr	Abar	z	Aatm	Afol	Ahous	Cmet	CmetN	Dc	RL	LtotT	LtotN
	Discovery Inverter enclosure 3	D_INV3	653511.4	4922537	2	0	0	100.3	100.3	1	892.13	3.25	0	70.01	0	-0.3	0	0	10.54	0	0	0	0	0	0	20.07	20.07
	Discovery Inverter enclosure 2	D_INV2	653465.5	4922673	2	0	0	100.3	100.3	1	965.12	3.25	0	70.69	0	-0.26	0	0	10.79	0	0	0	0	0	0	19.09	19.09
	Discovery Inverter enclosure 1	D_INV1	653434.4	4922792	2	0	0	100.3	100.3	1	1045.82	3.25	0	71.39	0	-0.22	0	0	11.06	0	0	0	0	0	0	18.09	18.09
	Discovery Inverter enclosure 5	D_INV5	653875	4922657	2	0	0	97.3	97.3	1	1245.33	3.25	0	72.91	0	-0.13	0	0	11.65	0	0	0	0	0	0	12.89	12.89
	Discovery Substation Transforme	D_TRS	653484.4	4922253	2.5	0	0	92	92	1	694.92	4.24	0	67.84	0	0.57	5.18	0.23	1.87	0	0	0	0	0	0	16.52	16.52
	Discovery Inverter enclosure 4	D_INV4	653513.6	4922427	2	0	0	89.1	89.1	1	818.96	3.25	0	69.27	0	0.64	0	0	5.96	0	0	0	0	0	0	13.19	13.19
	Sparkle Inverter enclosure 4	S_INV4	654129.9	4924735	2	0	0	100.3	100.3	1	3094.14	3.25	0	80.81	0	0.38	0	0	15.54	0	0	0	0	0	0	3.58	3.58
	Sparkle Inverter enclosure 3	S_INV3	654137.8	4924883	2	0	0	100.3	100.3	1	3232.95	3.25	0	81.19	0	0.41	0	0	15.78	0	0	0	0	0	0	2.94	2.94
	Sparkle Inverter enclosure 6	S_INV6	654146.3	4925027	2	0	0	100.3	100.3	1	3369.06	3.25	0	81.55	0	0.43	0	0	16.01	0	0	0	0	0	0	2.32	2.32
	Discovery Inverter enclosure 7	D_INV7	653773.3	4922400	2	0	0	89.1	89.1	1	1018.54	3.25	0	71.16	0	0.69	0	0	6.35	0	0	0	0	0	0	10.86	10.86
	Discovery Inverter enclosure 6	D_INV6	653814.6	4922521	2	0	0	89.1	89.1	1	1116.91	3.25	0	71.96	0	0.71	0	0	6.53	0	0	0	0	0	0	9.86	9.86
	Sparkle Inverter enclosure 1	S_INV1	653943	4925042	2	0	0	97.3	97.3	1	3312.54	3.25	0	81.4	0	0.42	0	0	15.91	0	0	0	0	0	0	-0.43	-0.43
	Sparkle Substation Transformer	S_TRS	653933.6	4925172	2.5	0	0	92	92	1	3433.08	3.5	0	81.71	0	0.19	0	0	6.59	0	0	0	0	0	0	3.48	3.48
	Discovery Inverter Transformer	D_INVTR4	653519.4	4922426	2	0	0	77.3	77.3	1	823.21	3.25	0	69.31	0	-1.82	0	0	0.57	0	0	0	0	0	0	9.27	9.27
	Sparkle Inverter enclosure 2	S_INV2	653973.9	4924893	2	0	0	89.1	89.1	1	3182.16	3.25	0	81.05	0	1.19	0	0	9.89	0	0	0	0	0	0	-3.08	-3.08
	Sparkle Inverter enclosure 5	S_INV5	653978.3	4925039	2	0	0	89.1	89.1	1	3321.62	3.25	0	81.43	0	1.23	0	0	10.1	0	0	0	0	0	0	-3.69	-3.69
	Discovery Inverter Transformer	D_INVTR3	653517.2	4922537	2	0	0	77.3	77.3	1	895.98	3.25	0	70.05	0	-1.87	0	0	0.62	0	0	0	0	0	0	8.54	8.54
	Sparkle Inverter enclosure 7	S_INV7	654153.1	4925178	2	0	0	89.1	89.1	1	3512.48	3.25	0	81.91	0	1.27	0	0	10.38	0	0	0	0	0	0	-4.51	-4.51
	Discovery Inverter Transformer	D_INVTR2	653471.4	4922673	2	0	0	77.3	77.3	1	968.35	3.25	0	70.72	0	-1.91	0	0	0.66	0	0	0	0	0	0	7.87	7.87
	Discovery Inverter Transformer	D_INVTR7	653767.4	4922400	2	0	0	77.3	77.3	1	1013.61	3.25	0	71.12	0	-1.94	0	0	0.69	0	0	0	0	0	0	7.48	7.48
	Discovery Inverter Transformer	D_INVTR1	653440.3	4922792	2	0	0	77.3	77.3	1	1048.58	3.25	0	71.41	0	-1.96	0	0	0.71	0	0	0	0	0	0	7.19	7.19
	Discovery Inverter Transformer	D_INVTR6	653808.8	4922521	2	0	0	77.3	77.3	1	1112.25	3.25	0	71.92	0	-2	0	0	0.74	0	0	0	0	0	0	6.68	6.68
	Discovery Inverter Transformer	D_INVTR5	653869.2	4922658	2	0	0	78.2	78.2	1	1240.9	3.25	0	72.87	0	-2.07	0	0	0.81	0	0	0	0	0	0	6.62	6.62
	Sparkle Inverter transformer 1	S_INVTR1	653948.9	4925041	2	0	0	78.2	78.2	1	3314.06	3.25	0	81.41	0	-2.8	0	0	1.79	0	0	0	0	0	0	-2.16	-2.16
	Sparkle Inverter transformer 4	S_INVTR4	654124	4924736	2	0	0	77.3	77.3	1	3092.14	3.25	0	80.81	0	-2.74	0	0	1.7	0	0	0	0	0	0	-2.42	-2.42
	Sparkle Inverter transformer 2	S_INVTR2	653968	4924893	2	0	0	77.3	77.3	1	3180.53	3.25	0	81.05	0	-2.76	0	0	1.73	0	0	0	0	0	0	-2.68	-2.68

	Sparkle Inverter transformer 3	S_INVTR3	654132	4924883	2	0	0	77.3	77.3	1	3231.04	3.25	0	81.19	0	-2.78	0	0	1.75	0	0	0	0	0	0	-2.82	-2.82
	Sparkle Inverter transformer 5	S_INVTR5	653972.5	4925040	2	0	0	77.3	77.3	1	3320.06	3.25	0	81.42	0	-2.8	0	0	1.79	0	0	0	0	0	0	-3.07	-3.07
	Sparkle Inverter transformer 6	S_INVTR6	654140.4	4925027	2	0	0	77.3	77.3	1	3367.24	3.25	0	81.55	0	-2.81	0	0	1.81	0	0	0	0	0	0	-3.2	-3.2
	Sparkle Inverter transformer 7	S_INVTR7	654147.2	4925179	2	0	0	77.3	77.3	1	3510.73	3.25	0	81.91	0	-2.85	0	0	1.87	0	0	0	0	0	0	-3.59	-3.59

Value D/N: 0 0
Level D/N: 26.1266 26.1266

Receiver: Existing Potential Receptor
ID: R24
X: 652898
Y: 4924892
Z: 4.5
Ground: 0

ISO	Description	ID	X	Y	Z	Ground	ReflOrd	LxT	LxN	L/A	Dist.	hm	Freq	Adiv	K0b	Agr	Abar	z	Aatm	Afol	Ahous	Cmet	CmetN	Dc	RL	LtotT	LtotN
	Sparkle Inverter enclosure 3	S_INV3	654137.8	4924883	2	0	0	100.3	100.3	1	1239.88	3.25	0	72.87	0	-0.14	0	0	11.64	0	0	0	0	0	0	15.94	15.94
	Sparkle Inverter enclosure 4	S_INV4	654129.9	4924735	2	0	0	100.3	100.3	1	1241.81	3.25	0	72.88	0	-0.14	0	0	11.64	0	0	0	0	0	0	15.92	15.92
	Sparkle Inverter enclosure 6	S_INV6	654146.3	4925027	2	0	0	100.3	100.3	1	1255.5	3.25	0	72.98	0	-0.13	0	0	11.68	0	0	0	0	0	0	15.78	15.78
	Sparkle Inverter enclosure 1	S_INV1	653943	4925042	2	0	0	97.3	97.3	1	1055.69	3.25	0	71.47	0	-0.22	0	0	11.09	0	0	0	0	0	0	14.97	14.97
	Discovery Inverter enclosure 1	D_INV1	653434.4	4922792	2	0	0	100.3	100.3	1	2167.19	3.25	0	77.72	0	0.18	0	0	13.81	0	0	0	0	0	0	8.61	8.61
	Discovery Inverter enclosure 2	D_INV2	653465.5	4922673	2	0	0	100.3	100.3	1	2290.18	3.25	0	78.2	0	0.21	0	0	14.05	0	0	0	0	0	0	7.86	7.86
	Discovery Inverter enclosure 3	D_INV3	653511.4	4922537	2	0	0	100.3	100.3	1	2433.33	3.25	0	78.72	0	0.24	0	0	14.33	0	0	0	0	0	0	7.02	7.02
	Sparkle Substation Transformer	S_TRS	653933.6	4925172	2.5	0	0	92	92	1	1072.71	3.5	0	71.61	0	-0.36	0	0	2.67	0	0	0	0	0	0	18.06	18.06
	Discovery Inverter enclosure 5	D_INV5	653875	4922657	2	0	0	97.3	97.3	1	2439.11	3.25	0	78.74	0	0.24	0	0	14.34	0	0	0	0	0	0	3.98	3.98
	Sparkle Inverter enclosure 2	S_INV2	653973.9	4924893	2	0	0	89.1	89.1	1	1075.85	3.25	0	71.64	0	0.7	0	0	6.46	0	0	0	0	0	0	10.27	10.27
	Sparkle Inverter enclosure 5	S_INV5	653978.3	4925039	2	0	0	89.1	89.1	1	1090.29	3.25	0	71.75	0	0.7	0	0	6.48	0	0	0	0	0	0	10.12	10.12
	Sparkle Inverter enclosure 7	S_INV7	654153.1	4925178	2	0	0	89.1	89.1	1	1287.3	3.25	0	73.19	0	0.75	0	0	6.84	0	0	0	0	0	0	8.28	8.28
	Discovery Substation Transforme	D_TRS	653484.4	4922253	2.5	0	0	92	92	1	2703.46	3.5	0	79.64	0	0.01	0	0	5.51	0	0	0	0	0	0	6.82	6.82
	Discovery Inverter enclosure 4	D_INV4	653513.6	4922427	2	0	0	89.1	89.1	1	2540.95	3.25	0	79.1	0	1.04	0	0	8.91	0	0	0	0	0	0	0.01	0.01
	Discovery Inverter enclosure 6	D_INV6	653814.6	4922521	2	0	0	89.1	89.1	1	2542.43	3.25	0	79.1	0	1.04	0	0	8.91	0	0	0	0	0	0	0	0
	Discovery Inverter enclosure 7	D_INV7	653773.3	4922400	2	0	0	89.1	89.1	1	2641.6	3.25	0	79.44	0	1.06	0	0	9.07	0	0	0	0	0	0	-0.51	-0.51
	Sparkle Inverter transformer 1	S_INVTR1	653948.9	4925041	2	0	0	78.2	78.2	1	1061.46	3.25	0	71.52	0	-1.97	0	0	0.71	0	0	0	0	0	0	7.98	7.98
	Sparkle Inverter transformer 2	S_INVTR2	653968	4924893	2	0	0	77.3	77.3	1	1070	3.25	0	71.59	0	-1.98	0	0	0.72	0	0	0	0	0	0	7.01	7.01
	Sparkle Inverter transformer 5	S_INVTR5	653972.5	4925040	2	0	0	77.3	77.3	1	1084.54	3.25	0	71.7	0	-1.98	0	0	0.73	0	0	0	0	0	0	6.89	6.89
	Sparkle Inverter transformer 3	S_INVTR3	654132	4924883	2	0	0	77.3	77.3	1	1234.02	3.25	0	72.83	0	-2.07	0	0	0.81	0	0	0	0	0	0	5.77	5.77
	Sparkle Inverter transformer 4	S_INVTR4	654124	4924736	2	0	0	77.3	77.3	1	1235.95	3.25	0	72.84	0	-2.07	0	0	0.81	0	0	0	0	0	0	5.76	5.76
	Sparkle Inverter transformer 6	S_INVTR6	654140.4	4925027	2	0	0	77.3	77.3	1	1249.72	3.25	0	72.94	0	-2.08	0	0	0.82	0	0	0	0	0	0	5.66	5.66
	Sparkle Inverter transformer 7	S_INVTR7	654147.2	4925179	2	0	0	77.3	77.3	1	1281.68	3.25	0	73.16	0	-2.09	0	0	0.84	0	0	0	0	0	0	5.44	5.44
	Discovery Inverter Transformer	D_INVTR1	653440.3	4922792	2	0	0	77.3	77.3	1	2169.03	3.25	0	77.73	0	-2.46	0	0	1.29	0	0	0	0	0	0	0.79	0.79
	Discovery Inverter Transformer	D_INVTR5	653869.2	4922658	2	0	0	78.2	78.2	1	2436.4	3.25	0	78.73	0	-2.55	0	0	1.41	0	0	0	0	0	0	0.65	0.65
	Discovery Inverter Transformer	D_INVTR2	653471.4	4922673	2	0	0	77.3	77.3	1	2292.02	3.25	0	78.2	0	-2.5	0	0	1.34	0	0	0	0	0	0	0.3	0.3
	Discovery Inverter Transformer	D_INVTR3	653517.2	4922537	2	0	0	77.3	77.3	1	2435.19	3.25	0	78.73	0	-2.55	0	0	1.41	0	0	0	0	0	0	-0.25	-0.25
	Discovery Inverter Transformer	D_INVTR6	653808.8	4922521	2	0	0	77.3	77.3	1	2539.97	3.25	0	79.1	0	-2.58	0	0	1.46	0	0	0	0	0	0	-0.63	-0.63
	Discovery Inverter Transformer	D_INVTR4	653519.4	4922426	2	0	0	77.3	77.3	1	2542.75	3.25	0	79.11	0	-2.58	0	0	1.46	0	0	0	0	0	0	-0.64	-0.64
	Discovery Inverter Transformer	D_INVTR7	653767.4	4922400	2	0	0	77.3	77.3	1	2639.29	3.25	0	79.43	0	-2.61	0	0	1.5	0	0	0	0	0	0	-0.98	-0.98

Value D/N: 0 0
Level D/N: 24.8531 24.8531

Receiver: Existing Potential Receptor
ID: R25
X: 653041
Y: 4923564
Z: 4.5
Ground: 0

ISO	Description	ID	X	Y	Z	Ground	ReflOrd	LxT	LxN	L/A	Dist.	hm	Freq	Adiv	K0b	Agr	Abar	z	Aatm	Afol	Ahous	Cmet	CmetN	Dc	RL	LtotT	LtotN
	Discovery Inverter enclosure 1	D_INV1	653434.4	4922792	2	0	0	100.3	100.3	1	866.25	3.25	0	69.75	0	-0.31	0	0	10.44	0	0	0	0	0	0	20.43	20.43
	Discovery Inverter enclosure 2	D_INV2	653465.5	4922673	2	0	0	100.3	100.3	1	986.74	3.25	0	70.88	0	-0.25	0	0	10.87	0	0	0	0	0	0	18.81	18.81
	Discovery Inverter enclosure 3	D_INV3	653511.4	4922537	2	0	0	100.3	100.3	1	1129.38	3.25	0	72.06	0	-0.19	0	0	11.32	0	0	0	0	0	0	17.12	17.12
	Sparkle Inverter enclosure 4	S_INV4	654129.9	4924735	2	0	0	100.3	100.3	1	1599.19	3.25	0	75.08	0	0	0	0	12.57	0	0	0	0	0	0	12.67	12.67
	Sparkle Inverter enclosure 3	S_INV3	654137.8	4924883	2	0	0	100.3	100.3	1	1715.39	3.25	0	75.69	0	0.04	0	0	12.84	0	0	0	0	0	0	11.75	11.75
	Discovery Inverter enclosure 5	D_INV5	653875	4922657	2	0	0	97.3	97.3	1	1232.08	3.25	0	72.81	0	-0.14	0	0	11.62	0	0	0	0	0	0	13.02	13.02
	Sparkle Inverter enclosure 6	S_INV6	654146.3	4925027	2	0	0	100.3	100.3	1	1833.3	3.25	0	76.26	0	0.08	0	0	13.1	0	0	0	0	0	0	10.86	10.86
	Sparkle Inverter enclosure 1	S_INV1	653943	4925042	2	0	0	97.3	97.3	1	1731.25	3.25	0	75.77	0	0.05	0	0	12.87	0	0	0	0	0	0	8.62	8.62
	Discovery Substation Transforme	D_TRS	653484.4	4922253	2.5	0	0	92	92	1	1384.05	3.5	0	73.82	0	-0.3	0	0	3.27	0	0	0	0	0	0	15.19	15.19
	Discovery Inverter enclosure 4	D_INV4	653513.6	4922427	2	0	0	89.1	89.1	1	1231.53	3.25	0	72.81	0	0.73	0	0	6.74	0	0	0	0	0	0	8.78	8.78
	Discovery Inverter enclosure 6	D_INV6	653814.6	4922521	2	0	0	89.1	89.1	1	1298.96	3.25	0	73.27	0	0.75	0	0	6.86	0	0	0	0	0	0	8.18	8.18
	Sparkle Substation Transformer	S_TRS	653933.6	4925172	2.5	0	0	92	92	1	1838.87	3.5	0	76.29	0	-0.2	0	0	4.09	0	0	0	0	0	0	11.8	11.8
	Discovery Inverter enclosure 7	D_INV7	653773.3	4922400	2	0	0	89.1	89.1	1	1375.5	3.25	0	73.77	0	0.76	0	0	6.99	0	0	0	0	0	0	7.53	7.53
	Sparkle Inverter enclosure 2	S_INV2	653973.9	4924893	2	0	0	89.1	89.1	1	1623.48	3.25	0	75.21	0	0.82	0	0	7.42	0	0	0	0	0	0	5.61	5.61
	Sparkle Inverter enclosure 5	S_INV5	653978.3	4925039	2	0	0	89.1	89.1	1	1747.77	3.25	0	75.85	0	0.85	0	0	7.63	0	0	0	0	0	0	4.73	4.73
	Sparkle Inverter enclosure 7	S_INV7	654153.1	4925178	2	0	0	89.1	89.1	1	1960.2	3.25	0	76.85	0	0.9	0	0	7.98	0	0	0	0	0	0	3.33	3.33

Discovery Inverter Transformer	D_INVTR1	653440.3	4922792	2	0	0	77.3	77.3	1	869.28	3.25	0	69.78	0	-1.85	0	0	0.6	0	0	0	0	0	0	8.8	8.8
Discovery Inverter Transformer	D_INVTR2	653471.4	4922673	2	0	0	77.3	77.3	1	989.63	3.25	0	70.91	0	-1.93	0	0	0.67	0	0	0	0	0	0	7.69	7.69
Discovery Inverter Transformer	D_INVTR5	653869.2	4922658	2	0	0	78.2	78.2	1	1227.82	3.25	0	72.78	0	-2.07	0	0	0.81	0	0	0	0	0	0	6.72	6.72
Discovery Inverter Transformer	D_INVTR3	653517.2	4922537	2	0	0	77.3	77.3	1	1132.18	3.25	0	72.08	0	-2.01	0	0	0.75	0	0	0	0	0	0	6.52	6.52
Discovery Inverter Transformer	D_INVTR4	653519.4	4922426	2	0	0	77.3	77.3	1	1234.15	3.25	0	72.83	0	-2.07	0	0	0.81	0	0	0	0	0	0	5.77	5.77
Discovery Inverter Transformer	D_INVTR6	653808.8	4922521	2	0	0	77.3	77.3	1	1295.17	3.25	0	73.25	0	-2.1	0	0	0.84	0	0	0	0	0	0	5.35	5.35
Discovery Inverter Transformer	D_INVTR7	653767.4	4922400	2	0	0	77.3	77.3	1	1372.05	3.25	0	73.75	0	-2.14	0	0	0.89	0	0	0	0	0	0	4.85	4.85
Sparkle Inverter transformer 1	S_INVTR1	653948.9	4925041	2	0	0	78.2	78.2	1	1733.99	3.25	0	75.78	0	-2.3	0	0	1.07	0	0	0	0	0	0	3.69	3.69
Sparkle Inverter transformer 4	S_INVTR4	654124	4924736	2	0	0	77.3	77.3	1	1595.5	3.25	0	75.06	0	-2.25	0	0	1	0	0	0	0	0	0	3.52	3.52
Sparkle Inverter transformer 2	S_INVTR2	653968	4924893	2	0	0	77.3	77.3	1	1620.45	3.25	0	75.19	0	-2.26	0	0	1.02	0	0	0	0	0	0	3.39	3.39
Sparkle Inverter transformer 3	S_INVTR3	654132	4924883	2	0	0	77.3	77.3	1	1711.96	3.25	0	75.67	0	-2.29	0	0	1.06	0	0	0	0	0	0	2.9	2.9
Sparkle Inverter transformer 5	S_INVTR5	653972.5	4925040	2	0	0	77.3	77.3	1	1744.97	3.25	0	75.84	0	-2.31	0	0	1.08	0	0	0	0	0	0	2.73	2.73
Sparkle Inverter transformer 6	S_INVTR6	654140.4	4925027	2	0	0	77.3	77.3	1	1830.09	3.25	0	76.25	0	-2.34	0	0	1.12	0	0	0	0	0	0	2.31	2.31
Sparkle Inverter transformer 7	S_INVTR7	654147.2	4925179	2	0	0	77.3	77.3	1	1957.2	3.25	0	76.83	0	-2.39	0	0	1.19	0	0	0	0	0	0	1.71	1.71

Value D/N: 0 0
Level D/N: 26.3799 26.3799

Receiver: Existing Potential Receptor
ID: R26
X: 653148
Y: 4925012
Z: 4.5
Ground: 0

ISO	Description	ID	X	Y	Z	Ground	ReflOrd	LxT	LxN	L/A	Dist.	hm	Freq	Adiv	K0b	Agr	Abar	z	Aatm	Afol	Ahous	Cmet	CmetN	Dc	RL	LtotT	LtotN
	Sparkle Inverter enclosure 3	S_INV3	654137.8	4924883	2	0	0	100.3	100.3	1	998.23	3.25	0	70.98	0	-0.25	0	0	10.91	0	0	0	0	0	0	18.67	18.67
	Sparkle Inverter enclosure 6	S_INV6	654146.3	4925027	2	0	0	100.3	100.3	1	998.37	3.25	0	70.99	0	-0.25	0	0	10.91	0	0	0	0	0	0	18.67	18.67
	Sparkle Inverter enclosure 4	S_INV4	654129.9	4924735	2	0	0	100.3	100.3	1	1020.14	3.25	0	71.17	0	-0.24	0	0	10.98	0	0	0	0	0	0	18.4	18.4
	Sparkle Inverter enclosure 1	S_INV1	653943	4925042	2	0	0	97.3	97.3	1	795.58	3.25	0	69.01	0	-0.35	0	0	10.16	0	0	0	0	0	0	18.49	18.49
	Sparkle Substation Transformer	S_TRS	653933.6	4925172	2.5	0	0	92	92	1	801.67	3.5	0	69.08	0	-0.4	0	0	2.11	0	0	0	0	0	0	21.19	21.19
	Discovery Inverter enclosure 1	D_INV1	653434.4	4922792	2	0	0	100.3	100.3	1	2238.16	3.25	0	78	0	0.19	0	0	13.95	0	0	0	0	0	0	8.17	8.17
	Discovery Inverter enclosure 2	D_INV2	653465.5	4922673	2	0	0	100.3	100.3	1	2360.21	3.25	0	78.46	0	0.22	0	0	14.19	0	0	0	0	0	0	7.44	7.44
	Discovery Inverter enclosure 3	D_INV3	653511.4	4922537	2	0	0	100.3	100.3	1	2501.29	3.25	0	78.96	0	0.26	0	0	14.46	0	0	0	0	0	0	6.63	6.63
	Sparkle Inverter enclosure 5	S_INV5	653978.3	4925039	2	0	0	89.1	89.1	1	830.76	3.25	0	69.39	0	0.65	0	0	5.98	0	0	0	0	0	0	13.04	13.04
	Sparkle Inverter enclosure 2	S_INV2	653973.9	4924893	2	0	0	89.1	89.1	1	834.42	3.25	0	69.43	0	0.65	0	0	5.99	0	0	0	0	0	0	12.99	12.99
	Discovery Inverter enclosure 5	D_INV5	653875	4922657	2	0	0	97.3	97.3	1	2464.55	3.25	0	78.83	0	0.25	0	0	14.39	0	0	0	0	0	0	3.84	3.84
	Sparkle Inverter enclosure 7	S_INV7	654153.1	4925178	2	0	0	89.1	89.1	1	1018.73	3.25	0	71.16	0	0.69	0	0	6.35	0	0	0	0	0	0	10.86	10.86
	Discovery Substation Transforme	D_TRS	653484.4	4922253	2.5	0	0	92	92	1	2779.53	3.5	0	79.88	0	0.03	0	0	5.62	0	0	0	0	0	0	6.45	6.45
	Discovery Inverter enclosure 6	D_INV6	653814.6	4922521	2	0	0	89.1	89.1	1	2579.09	3.25	0	79.23	0	1.04	0	0	8.97	0	0	0	0	0	0	-0.19	-0.19
	Discovery Inverter enclosure 4	D_INV4	653513.6	4922427	2	0	0	89.1	89.1	1	2610.97	3.25	0	79.34	0	1.05	0	0	9.02	0	0	0	0	0	0	-0.35	-0.35
	Discovery Inverter enclosure 7	D_INV7	653773.3	4922400	2	0	0	89.1	89.1	1	2686.17	3.25	0	79.58	0	1.07	0	0	9.14	0	0	0	0	0	0	-0.73	-0.73
	Sparkle Inverter transformer 1	S_INVTR1	653948.9	4925041	2	0	0	78.2	78.2	1	801.44	3.25	0	69.08	0	-1.8	0	0	0.56	0	0	0	0	0	0	10.4	10.4
	Sparkle Inverter transformer 5	S_INVTR5	653972.5	4925040	2	0	0	77.3	77.3	1	824.92	3.25	0	69.33	0	-1.82	0	0	0.58	0	0	0	0	0	0	9.25	9.25
	Sparkle Inverter transformer 2	S_INVTR2	653968	4924893	2	0	0	77.3	77.3	1	828.57	3.25	0	69.37	0	-1.82	0	0	0.58	0	0	0	0	0	0	9.22	9.22
	Sparkle Inverter transformer 3	S_INVTR3	654132	4924883	2	0	0	77.3	77.3	1	992.37	3.25	0	70.93	0	-1.93	0	0	0.67	0	0	0	0	0	0	7.66	7.66
	Sparkle Inverter transformer 6	S_INVTR6	654140.4	4925027	2	0	0	77.3	77.3	1	992.52	3.25	0	70.93	0	-1.93	0	0	0.67	0	0	0	0	0	0	7.66	7.66
	Sparkle Inverter transformer 7	S_INVTR7	654147.2	4925179	2	0	0	77.3	77.3	1	1013.02	3.25	0	71.11	0	-1.94	0	0	0.69	0	0	0	0	0	0	7.48	7.48
	Sparkle Inverter transformer 4	S_INVTR4	654124	4924736	2	0	0	77.3	77.3	1	1014.4	3.25	0	71.12	0	-1.94	0	0	0.69	0	0	0	0	0	0	7.47	7.47
	Discovery Inverter Transformer	D_INVTR5	653869.2	4922658	2	0	0	78.2	78.2	1	2462.45	3.25	0	78.83	0	-2.56	0	0	1.42	0	0	0	0	0	0	0.55	0.55
	Discovery Inverter Transformer	D_INVTR1	653440.3	4922792	2	0	0	77.3	77.3	1	2239.3	3.25	0	78	0	-2.49	0	0	1.32	0	0	0	0	0	0	0.51	0.51
	Discovery Inverter Transformer	D_INVTR2	653471.4	4922673	2	0	0	77.3	77.3	1	2361.39	3.25	0	78.46	0	-2.53	0	0	1.38	0	0	0	0	0	0	0.03	0.03
	Discovery Inverter Transformer	D_INVTR3	653517.2	4922537	2	0	0	77.3	77.3	1	2502.53	3.25	0	78.97	0	-2.57	0	0	1.44	0	0	0	0	0	0	-0.5	-0.5
	Discovery Inverter Transformer	D_INVTR6	653808.8	4922521	2	0	0	77.3	77.3	1	2577.21	3.25	0	79.22	0	-2.59	0	0	1.47	0	0	0	0	0	0	-0.76	-0.76
	Discovery Inverter Transformer	D_INVTR4	653519.4	4922426	2	0	0	77.3	77.3	1	2612.19	3.25	0	79.34	0	-2.6	0	0	1.49	0	0	0	0	0	0	-0.88	-0.88
	Discovery Inverter Transformer	D_INVTR7	653767.4	4922400	2	0	0	77.3	77.3	1	2684.42	3.25	0	79.58	0	-2.63	0	0	1.52	0	0	0	0	0	0	-1.13	-1.13

Value D/N: 0 0
Level D/N: 27.4356 27.4356

Receiver: Existing Potential Receptor
ID: R27
X: 653429
Y: 4923635
Z: 4.5
Ground: 0

ISO	Description	ID	X	Y	Z	Ground	ReflOrd	LxT	LxN	L/A	Dist.	hm	Freq	Adiv	K0b	Agr	Abar	z	Aatm	Afol	Ahous	Cmet	CmetN	Dc	RL	LtotT	LtotN
	Discovery Inverter enclosure 1	D_INV1	653434.4	4922792	2	0	0	100.3	100.3	1	842.77	3.25	0	69.51	0	-0.33	0	0	10.35	0	0	0	0	0	0	20.77	20.77
	Discovery Inverter enclosure 2	D_INV2	653465.5	4922673	2	0	0	100.3	100.3	1	962.45	3.25	0	70.67	0	-0.26	0	0	10.78	0	0	0	0	0	0	19.12	19.12
	Discovery Inverter enclosure 3	D_INV3	653511.4	4922537	2	0	0	100.3	100.3	1	1100.84	3.25	0	71.83	0	-0.2	0	0	11.23	0	0	0	0	0	0	17.44	17.44
	Sparkle Inverter enclosure 4	S_INV4	654129.9	4924735	2	0	0	100.3	100.3	1	1304.5	3.25	0	73.31	0	-0.11	0	0	11.82	0	0	0	0	0	0	15.3	15.3
	Sparkle Inverter enclosure 3	S_INV3	654137.8	4924883	2	0	0	100.3	100.3	1	1435.18	3.25	0	74.14	0	-0.06	0	0	12.16	0	0	0	0	0	0	14.07	14.07
	Discovery Inverter enclosure 5	D_INV5	653875	4922657	2	0	0	97.3	97.3	1	1074.79	3.25	0	71.63	0	-0.21	0	0	11.15	0	0	0	0	0	0	14.75	14.75

Sparkle Inverter enclosure 6	S_INV6	654146.3	4925027	2	0	0	100.3	100.3	1	1565.63	3.25	0	74.89	0	-0.01	0	0	12.49	0	0	0	0	0	0	12.94	12.94
Sparkle Inverter enclosure 1	S_INV1	653943	4925042	2	0	0	97.3	97.3	1	1497.67	3.25	0	74.51	0	-0.03	0	0	12.32	0	0	0	0	0	0	10.52	10.52
Discovery Substation Transforme	D_TRS	653484.4	4922253	2.5	0	0	92	92	1	1383.21	3.5	0	73.82	0	-0.3	0	0	3.27	0	0	0	0	0	0	15.19	15.19
Sparkle Substation Transformer	S_TRS	653933.6	4925172	2.5	0	0	92	92	1	1617.43	3.5	0	75.18	0	-0.25	0	0	3.7	0	0	0	0	0	0	13.36	13.36
Discovery Inverter enclosure 6	D_INV6	653814.6	4922521	2	0	0	89.1	89.1	1	1179.28	3.25	0	72.43	0	0.72	0	0	6.64	0	0	0	0	0	0	9.26	9.26
Discovery Inverter enclosure 4	D_INV4	653513.6	4922427	2	0	0	89.1	89.1	1	1211.21	3.25	0	72.66	0	0.73	0	0	6.7	0	0	0	0	0	0	8.96	8.96
Discovery Inverter enclosure 7	D_INV7	653773.3	4922400	2	0	0	89.1	89.1	1	1282.45	3.25	0	73.16	0	0.74	0	0	6.83	0	0	0	0	0	0	8.32	8.32
Sparkle Inverter enclosure 2	S_INV2	653973.9	4924893	2	0	0	89.1	89.1	1	1370.66	3.25	0	73.74	0	0.76	0	0	6.98	0	0	0	0	0	0	7.57	7.57
Sparkle Inverter enclosure 5	S_INV5	653978.3	4925039	2	0	0	89.1	89.1	1	1507.8	3.25	0	74.57	0	0.79	0	0	7.22	0	0	0	0	0	0	6.48	6.48
Sparkle Inverter enclosure 7	S_INV7	654153.1	4925178	2	0	0	89.1	89.1	1	1704.63	3.25	0	75.63	0	0.84	0	0	7.56	0	0	0	0	0	0	5.03	5.03
Discovery Inverter Transformer	D_INVTR1	653440.3	4922792	2	0	0	77.3	77.3	1	843.22	3.25	0	69.52	0	-1.83	0	0	0.59	0	0	0	0	0	0	9.07	9.07
Discovery Inverter Transformer	D_INVTR2	653471.4	4922673	2	0	0	77.3	77.3	1	963.08	3.25	0	70.67	0	-1.91	0	0	0.66	0	0	0	0	0	0	7.92	7.92
Discovery Inverter Transformer	D_INVTR5	653869.2	4922658	2	0	0	78.2	78.2	1	1072.01	3.25	0	71.6	0	-1.98	0	0	0.72	0	0	0	0	0	0	7.89	7.89
Discovery Inverter Transformer	D_INVTR3	653517.2	4922537	2	0	0	77.3	77.3	1	1101.69	3.25	0	71.84	0	-1.99	0	0	0.74	0	0	0	0	0	0	6.76	6.76
Discovery Inverter Transformer	D_INVTR6	653808.8	4922521	2	0	0	77.3	77.3	1	1177.01	3.25	0	72.42	0	-2.04	0	0	0.78	0	0	0	0	0	0	6.18	6.18
Discovery Inverter Transformer	D_INVTR4	653519.4	4922426	2	0	0	77.3	77.3	1	1212.02	3.25	0	72.67	0	-2.06	0	0	0.8	0	0	0	0	0	0	5.93	5.93
Discovery Inverter Transformer	D_INVTR7	653767.4	4922400	2	0	0	77.3	77.3	1	1280.51	3.25	0	73.15	0	-2.09	0	0	0.84	0	0	0	0	0	0	5.45	5.45
Sparkle Inverter transformer 4	S_INVTR4	654124	4924736	2	0	0	77.3	77.3	1	1301.69	3.25	0	73.29	0	-2.11	0	0	0.85	0	0	0	0	0	0	5.31	5.31
Sparkle Inverter transformer 1	S_INVTR1	653948.9	4925041	2	0	0	78.2	78.2	1	1499.33	3.25	0	74.52	0	-2.2	0	0	0.95	0	0	0	0	0	0	4.97	4.97
Sparkle Inverter transformer 2	S_INVTR2	653968	4924893	2	0	0	77.3	77.3	1	1368.7	3.25	0	73.73	0	-2.14	0	0	0.88	0	0	0	0	0	0	4.87	4.87
Sparkle Inverter transformer 3	S_INVTR3	654132	4924883	2	0	0	77.3	77.3	1	1432.63	3.25	0	74.12	0	-2.17	0	0	0.92	0	0	0	0	0	0	4.47	4.47
Sparkle Inverter transformer 5	S_INVTR5	653972.5	4925040	2	0	0	77.3	77.3	1	1506.04	3.25	0	74.56	0	-2.2	0	0	0.96	0	0	0	0	0	0	4.03	4.03
Sparkle Inverter transformer 6	S_INVTR6	654140.4	4925027	2	0	0	77.3	77.3	1	1563.3	3.25	0	74.88	0	-2.23	0	0	0.99	0	0	0	0	0	0	3.7	3.7
Sparkle Inverter transformer 7	S_INVTR7	654147.2	4925179	2	0	0	77.3	77.3	1	1702.51	3.25	0	75.62	0	-2.29	0	0	1.06	0	0	0	0	0	0	2.95	2.95

/alue D/N: 0 0
Level D/N: 27.1941 27.1941

Receiver: Existing Potential Receptor
ID: R28
X: 653603
Y: 4923768
Z: 4.5
Ground: 0

ISO	Description	ID	X	Y	Z	Ground	ReflOrd	LxT	LxN	L/A	Dist.	hm	Freq	Adiv	K0b	Agr	Abar	z	Aatm	Afol	Ahous	Cmet	CmetN	Dc	RL	LtotT	LtotN
	Discovery Inverter enclosure 1	D_INV1	653434.4	4922792	2	0	0	100.3	100.3	1	990.21	3.25	0	70.91	0	-0.25	0	0	10.88	0	0	0	0	0	0	18.77	18.77
	Sparkle Inverter enclosure 4	S_INV4	654129.9	4924735	2	0	0	100.3	100.3	1	1101.42	3.25	0	71.84	0	-0.2	0	0	11.23	0	0	0	0	0	0	17.44	17.44
	Discovery Inverter enclosure 2	D_INV2	653465.5	4922673	2	0	0	100.3	100.3	1	1103.35	3.25	0	71.85	0	-0.2	0	0	11.24	0	0	0	0	0	0	17.42	17.42
	Discovery Inverter enclosure 3	D_INV3	653511.4	4922537	2	0	0	100.3	100.3	1	1234.16	3.25	0	72.83	0	-0.14	0	0	11.62	0	0	0	0	0	0	16	16
	Sparkle Inverter enclosure 3	S_INV3	654137.8	4924883	2	0	0	100.3	100.3	1	1236.56	3.25	0	72.84	0	-0.14	0	0	11.63	0	0	0	0	0	0	15.98	15.98
	Sparkle Inverter enclosure 6	S_INV6	654146.3	4925027	2	0	0	100.3	100.3	1	1370.9	3.25	0	73.74	0	-0.08	0	0	11.99	0	0	0	0	0	0	14.66	14.66
	Discovery Inverter enclosure 5	D_INV5	653875	4922657	2	0	0	97.3	97.3	1	1143.7	3.25	0	72.17	0	-0.18	0	0	11.36	0	0	0	0	0	0	13.96	13.96
	Sparkle Inverter enclosure 1	S_INV1	653943	4925042	2	0	0	97.3	97.3	1	1318.3	3.25	0	73.4	0	-0.1	0	0	11.85	0	0	0	0	0	0	12.16	12.16
	Sparkle Substation Transformer	S_TRS	653933.6	4925172	2.5	0	0	92	92	1	1442.11	3.5	0	74.18	0	-0.29	0	0	3.38	0	0	0	0	0	0	14.71	14.71
	Discovery Substation Transforme	D_TRS	653484.4	4922253	2.5	0	0	92	92	1	1519.74	3.5	0	74.64	0	-0.27	0	0	3.52	0	0	0	0	0	0	14.09	14.09
	Sparkle Inverter enclosure 2	S_INV2	653973.9	4924893	2	0	0	89.1	89.1	1	1184.28	3.25	0	72.47	0	0.72	0	0	6.65	0	0	0	0	0	0	9.21	9.21
	Discovery Inverter enclosure 6	D_INV6	653814.6	4922521	2	0	0	89.1	89.1	1	1265.27	3.25	0	73.04	0	0.74	0	0	6.8	0	0	0	0	0	0	8.47	8.47
	Sparkle Inverter enclosure 5	S_INV5	653978.3	4925039	2	0	0	89.1	89.1	1	1325.43	3.25	0	73.45	0	0.75	0	0	6.9	0	0	0	0	0	0	7.95	7.95
	Discovery Inverter enclosure 4	D_INV4	653513.6	4922427	2	0	0	89.1	89.1	1	1344.23	3.25	0	73.57	0	0.76	0	0	6.94	0	0	0	0	0	0	7.79	7.79
	Discovery Inverter enclosure 7	D_INV7	653773.3	4922400	2	0	0	89.1	89.1	1	1378.93	3.25	0	73.79	0	0.77	0	0	7	0	0	0	0	0	0	7.5	7.5
	Sparkle Inverter enclosure 7	S_INV7	654153.1	4925178	2	0	0	89.1	89.1	1	1513.69	3.25	0	74.6	0	0.8	0	0	7.23	0	0	0	0	0	0	6.43	6.43
	Discovery Inverter Transformer	D_INVTR1	653440.3	4922792	2	0	0	77.3	77.3	1	989.61	3.25	0	70.91	0	-1.93	0	0	0.67	0	0	0	0	0	0	7.69	7.69
	Discovery Inverter Transformer	D_INVTR5	653869.2	4922658	2	0	0	78.2	78.2	1	1141.93	3.25	0	72.15	0	-2.02	0	0	0.76	0	0	0	0	0	0	7.35	7.35
	Sparkle Inverter transformer 4	S_INVTR4	654124	4924736	2	0	0	77.3	77.3	1	1098.97	3.25	0	71.82	0	-1.99	0	0	0.74	0	0	0	0	0	0	6.78	6.78
	Discovery Inverter Transformer	D_INVTR2	653471.4	4922673	2	0	0	77.3	77.3	1	1103.03	3.25	0	71.85	0	-2	0	0	0.74	0	0	0	0	0	0	6.75	6.75
	Sparkle Inverter transformer 2	S_INVTR2	653968	4924893	2	0	0	77.3	77.3	1	1182.83	3.25	0	72.46	0	-2.04	0	0	0.78	0	0	0	0	0	0	6.14	6.14
	Sparkle Inverter transformer 1	S_INVTR1	653948.9	4925041	2	0	0	78.2	78.2	1	1319.45	3.25	0	73.41	0	-2.11	0	0	0.86	0	0	0	0	0	0	6.09	6.09
	Discovery Inverter Transformer	D_INVTR3	653517.2	4922537	2	0	0	77.3	77.3	1	1234.13	3.25	0	72.83	0	-2.07	0	0	0.81	0	0	0	0	0	0	5.77	5.77
	Sparkle Inverter transformer 3	S_INVTR3	654132	4924883	2	0	0	77.3	77.3	1	1234.39	3.25	0	72.83	0	-2.07	0	0	0.81	0	0	0	0	0	0	5.77	5.77
	Discovery Inverter Transformer	D_INVTR6	653808.8	4922521	2	0	0	77.3	77.3	1	1263.92	3.25	0	73.03	0	-2.09	0	0	0.83	0	0	0	0	0	0	5.56	5.56
	Sparkle Inverter transformer 5	S_INVTR5	653972.5	4925040	2	0	0	77.3	77.3	1	1324.16	3.25	0	73.44	0	-2.12	0	0	0.86	0	0	0	0	0	0	5.16	5.16
	Discovery Inverter Transformer	D_INVTR4	653519.4	4922426	2	0	0	77.3	77.3	1	1344.25	3.25	0	73.57	0	-2.13	0	0	0.87	0	0	0	0	0	0	5.03	5.03
	Sparkle Inverter transformer 6	S_INVTR6	654140.4	4925027	2	0	0	77.3	77.3	1	1368.95	3.25	0	73.73	0	-2.14	0	0	0.88	0	0	0	0	0	0	4.87	4.87
	Discovery Inverter Transformer	D_INVTR7	653767.4	4922400	2	0	0	77.3	77.3	1	1377.83	3.25	0	73.78	0	-2.14	0	0	0.89	0	0	0	0	0	0	4.81	4.81
	Sparkle Inverter transformer 7	S_INVTR7	654147.2	4925179	2	0	0	77.3	77.3	1	1511.94	3.25	0	74.59	0	-2.21	0	0	0.96	0	0	0	0	0	0	4	4

/alue D/N: 0 0
Level D/N: 26.8488 26.8488

Receiver: Existing Potential Receptor
ID: R29
X: 653610
Y: 4922176

Z: 4.5
Ground: 0

ISO	Description	ID	X	Y	Z	Ground	ReflOrd	LxT	LxN	L/A	Dist.	hm	Freq	Adiv	K0b	Agr	Abar	z	Aatm	Afol	Ahous	Cmet	CmetN	Dc	RL	LtotT	LtotN
	Discovery Inverter enclosure 3	D_INV3	653511.4	4922537	2	0	0	100.3	100.3	1	374.48	3.25	0	62.47	0	-0.63	0	0	7.34	0	0	0	0	0	0	31.13	31.13
	Discovery Substation Transforme	D_TRS	653484.4	4922253	2.5	0	0	92	92	1	147.29	4.21	0	54.36	0	0.79	7.28	0.19	0.51	0	0	0	0	0	0	29.04	29.04
	Discovery Inverter enclosure 2	D_INV2	653465.5	4922673	2	0	0	100.3	100.3	1	517.82	3.25	0	65.28	0	-0.54	0	0	8.66	0	0	0	0	0	0	26.91	26.91
	Discovery Inverter enclosure 1	D_INV1	653434.4	4922792	2	0	0	100.3	100.3	1	640.78	3.25	0	67.13	0	-0.45	0	0	9.44	0	0	0	0	0	0	24.19	24.19
	Discovery Inverter enclosure 5	D_INV5	653875	4922657	2	0	0	97.3	97.3	1	549.3	3.25	0	65.8	0	-0.51	0	0	8.88	0	0	0	0	0	0	23.15	23.15
	Discovery Inverter enclosure 4	D_INV4	653513.6	4922427	2	0	0	89.1	89.1	1	268.66	3.25	0	59.58	0	0.35	0	0	3.89	0	0	0	0	0	0	25.24	25.24
	Discovery Inverter enclosure 7	D_INV7	653773.3	4922400	2	0	0	89.1	89.1	1	276.89	3.25	0	59.85	0	0.35	0	0	3.95	0	0	0	0	0	0	24.91	24.91
	Discovery Inverter enclosure 6	D_INV6	653814.6	4922521	2	0	0	89.1	89.1	1	400.76	3.25	0	63.06	0	0.46	0	0	4.73	0	0	0	0	0	0	20.81	20.81
	Sparkle Inverter enclosure 4	S_INV4	654129.9	4924735	2	0	0	100.3	100.3	1	2611.49	3.25	0	79.34	0	0.28	0	0	14.67	0	0	0	0	0	0	6.02	6.02
	Sparkle Inverter enclosure 3	S_INV3	654137.8	4924883	2	0	0	100.3	100.3	1	2757.89	3.25	0	79.81	0	0.31	0	0	14.94	0	0	0	0	0	0	5.25	5.25
	Sparkle Inverter enclosure 6	S_INV6	654146.3	4925027	2	0	0	100.3	100.3	1	2900.67	3.25	0	80.25	0	0.34	0	0	15.2	0	0	0	0	0	0	4.52	4.52
	Discovery Inverter Transformer	D_INVTR4	653519.4	4922426	2	0	0	77.3	77.3	1	266.25	3.25	0	59.51	0	-0.86	0	0	0.21	0	0	0	0	0	0	18.48	18.48
	Discovery Inverter Transformer	D_INVTR7	653767.4	4922400	2	0	0	77.3	77.3	1	273.78	3.25	0	59.75	0	-0.9	0	0	0.22	0	0	0	0	0	0	18.27	18.27
	Sparkle Inverter enclosure 1	S_INV1	653943	4925042	2	0	0	97.3	97.3	1	2884.98	3.25	0	80.2	0	0.34	0	0	15.17	0	0	0	0	0	0	1.6	1.6
	Discovery Inverter Transformer	D_INVTR3	653517.2	4922537	2	0	0	77.3	77.3	1	372.6	3.25	0	62.42	0	-1.26	0	0	0.29	0	0	0	0	0	0	15.89	15.89
	Discovery Inverter Transformer	D_INVTR6	653808.8	4922521	2	0	0	77.3	77.3	1	398.13	3.25	0	63	0	-1.33	0	0	0.3	0	0	0	0	0	0	15.36	15.36
	Discovery Inverter Transformer	D_INVTR5	653869.2	4922658	2	0	0	78.2	78.2	1	546.84	3.25	0	65.76	0	-1.57	0	0	0.4	0	0	0	0	0	0	13.65	13.65
	Discovery Inverter Transformer	D_INVTR2	653471.4	4922673	2	0	0	77.3	77.3	1	515.84	3.25	0	65.25	0	-1.53	0	0	0.38	0	0	0	0	0	0	13.24	13.24
	Sparkle Substation Transformer	S_TRS	653933.6	4925172	2.5	0	0	92	92	1	3013.13	3.5	0	80.58	0	0.09	0	0	5.98	0	0	0	0	0	0	5.33	5.33
	Discovery Inverter Transformer	D_INVTR1	653440.3	4922792	2	0	0	77.3	77.3	1	638.82	3.25	0	67.11	0	-1.67	0	0	0.46	0	0	0	0	0	0	11.44	11.44
	Sparkle Inverter enclosure 2	S_INV2	653973.9	4924893	2	0	0	89.1	89.1	1	2740.97	3.25	0	79.76	0	1.08	0	0	9.22	0	0	0	0	0	0	-1	-1
	Sparkle Inverter enclosure 5	S_INV5	653978.3	4925039	2	0	0	89.1	89.1	1	2886.77	3.25	0	80.21	0	1.12	0	0	9.44	0	0	0	0	0	0	-1.71	-1.71
	Sparkle Inverter enclosure 7	S_INV7	654153.1	4925178	2	0	0	89.1	89.1	1	3050.92	3.25	0	80.69	0	1.16	0	0	9.69	0	0	0	0	0	0	-2.48	-2.48
	Sparkle Inverter transformer 1	S_INVTR1	653948.9	4925041	2	0	0	78.2	78.2	1	2885.28	3.25	0	80.2	0	-2.68	0	0	1.61	0	0	0	0	0	0	-0.89	-0.89
	Sparkle Inverter transformer 4	S_INVTR4	654124	4924736	2	0	0	77.3	77.3	1	2610.72	3.25	0	79.34	0	-2.6	0	0	1.49	0	0	0	0	0	0	-0.88	-0.88
	Sparkle Inverter transformer 2	S_INVTR2	653968	4924893	2	0	0	77.3	77.3	1	2740.59	3.25	0	79.76	0	-2.64	0	0	1.55	0	0	0	0	0	0	-1.32	-1.32
	Sparkle Inverter transformer 3	S_INVTR3	654132	4924883	2	0	0	77.3	77.3	1	2757.16	3.25	0	79.81	0	-2.65	0	0	1.55	0	0	0	0	0	0	-1.37	-1.37
	Sparkle Inverter transformer 5	S_INVTR5	653972.5	4925040	2	0	0	77.3	77.3	1	2886.42	3.25	0	80.21	0	-2.68	0	0	1.61	0	0	0	0	0	0	-1.79	-1.79
	Sparkle Inverter transformer 6	S_INVTR6	654140.4	4925027	2	0	0	77.3	77.3	1	2899.97	3.25	0	80.25	0	-2.69	0	0	1.61	0	0	0	0	0	0	-1.83	-1.83
	Sparkle Inverter transformer 7	S_INVTR7	654147.2	4925179	2	0	0	77.3	77.3	1	3050.27	3.25	0	80.69	0	-2.73	0	0	1.68	0	0	0	0	0	0	-2.3	-2.3

Value D/N: 0 0
Level D/N: 36.1435 36.1435

Receiver: Existing Potential Receptor
ID: R30a
X: 653670
Y: 4922263
Z: 4.5
Ground: 0

ISO	Description	ID	X	Y	Z	Ground	ReflOrd	LxT	LxN	L/A	Dist.	hm	Freq	Adiv	K0b	Agr	Abar	z	Aatm	Afol	Ahous	Cmet	CmetN	Dc	RL	LtotT	LtotN
	Discovery Inverter enclosure 3	D_INV3	653511.4	4922537	2	0	0	100.3	100.3	1	316.82	3.25	0	61.02	0	-0.65	0	0	6.63	0	0	0	0	0	0	33.32	33.32
	Discovery Inverter enclosure 2	D_INV2	653465.5	4922673	2	0	0	100.3	100.3	1	458.39	3.25	0	64.22	0	-0.58	0	0	8.18	0	0	0	0	0	0	28.49	28.49
	Discovery Substation Transforme	D_TRS	653484.4	4922253	2.5	0	0	92	92	1	185.89	4.23	0	56.38	0	0.95	8	0.3	0.62	0	0	0	0	0	0	26.02	26.02
	Discovery Inverter enclosure 1	D_INV1	653434.4	4922792	2	0	0	100.3	100.3	1	579.31	3.25	0	66.26	0	-0.49	0	0	9.08	0	0	0	0	0	0	25.47	25.47
	Discovery Inverter enclosure 7	D_INV7	653773.3	4922400	2	0	0	89.1	89.1	1	171.27	3.25	0	55.67	0	0.25	0	0	2.89	0	0	0	0	0	0	30.24	30.24
	Discovery Inverter enclosure 5	D_INV5	653875	4922657	2	0	0	97.3	97.3	1	444.28	3.25	0	63.95	0	-0.59	0	0	8.06	0	0	0	0	0	0	25.89	25.89
	Discovery Inverter enclosure 4	D_INV4	653513.6	4922427	2	0	0	89.1	89.1	1	226.47	3.25	0	58.1	0	0.33	0	0	3.5	0	0	0	0	0	0	27.12	27.12
	Discovery Inverter enclosure 6	D_INV6	653814.6	4922521	2	0	0	89.1	89.1	1	295.41	3.25	0	60.41	0	0.37	0	0	4.1	0	0	0	0	0	0	24.19	24.19
	Discovery Inverter Transformer	D_INVTR7	653767.4	4922400	2	0	0	77.3	77.3	1	168.11	3.25	0	55.51	0	-0.36	0	0	0.14	0	0	0	0	0	0	22.05	22.05
	Sparkle Inverter enclosure 4	S_INV4	654129.9	4924735	2	0	0	100.3	100.3	1	2514.63	3.25	0	79.01	0	0.26	0	0	14.49	0	0	0	0	0	0	6.56	6.56
	Sparkle Inverter enclosure 3	S_INV3	654137.8	4924883	2	0	0	100.3	100.3	1	2661.35	3.25	0	79.5	0	0.29	0	0	14.76	0	0	0	0	0	0	5.76	5.76
	Sparkle Inverter enclosure 6	S_INV6	654146.3	4925027	2	0	0	100.3	100.3	1	2804.4	3.25	0	79.96	0	0.32	0	0	15.02	0	0	0	0	0	0	5.01	5.01
	Discovery Inverter Transformer	D_INVTR4	653519.4	4922426	2	0	0	77.3	77.3	1	222.18	3.25	0	57.93	0	-0.57	0	0	0.18	0	0	0	0	0	0	19.8	19.8
	Sparkle Inverter enclosure 1	S_INV1	653943	4925042	2	0	0	97.3	97.3	1	2792.08	3.25	0	79.92	0	0.32	0	0	15	0	0	0	0	0	0	2.07	2.07
	Discovery Inverter Transformer	D_INVTR6	653808.8	4922521	2	0	0	77.3	77.3	1	292.92	3.25	0	60.34	0	-0.99	0	0	0.23	0	0	0	0	0	0	17.76	17.76
	Discovery Inverter Transformer	D_INVTR3	653517.2	4922537	2	0	0	77.3	77.3	1	313.59	3.25	0	60.93	0	-1.07	0	0	0.24	0	0	0	0	0	0	17.24	17.24
	Discovery Inverter Transformer	D_INVTR5	653869.2	4922658	2	0	0	78.2	78.2	1	441.94	3.25	0	63.91	0	-1.42	0	0	0.33	0	0	0	0	0	0	15.42	15.42
	Discovery Inverter Transformer	D_INVTR2	653471.4	4922673	2	0	0	77.3	77.3	1	455.46	3.25	0	64.17	0	-1.44	0	0	0.34	0	0	0	0	0	0	14.27	14.27
	Sparkle Substation Transformer	S_TRS	653933.6	4925172	2.5	0	0	92	92	1	2920.62	3.5	0	80.31	0	0.06	0	0	5.84	0	0	0	0	0	0	5.77	5.77
	Discovery Inverter Transformer	D_INVTR1	653440.3	4922792	2	0	0	77.3	77.3	1	576.6	3.25	0	66.22	0	-1.6	0	0	0.42	0	0	0	0	0	0	12.31	12.31
	Sparkle Inverter enclosure 2	S_INV2	653973.9	4924893	2	0	0	89.1	89.1	1	2647.21	3.25	0	79.46	0	1.06	0	0	9.08	0	0	0	0	0	0	-0.53	-0.53
	Sparkle Inverter enclosure 5	S_INV5	653978.3	4925039	2	0	0	89.1	89.1	1	2793.25	3.25	0	79.92	0	1.1	0	0	9.3	0	0	0	0	0	0	-1.26	-1.26
	Sparkle Inverter enclosure 7	S_INV7	654153.1	4925178	2	0	0	89.1	89.1	1	2954.95	3.25	0	80.41	0	1.14	0	0	9.55	0	0	0	0	0	0	-2.04	-2.04
	Sparkle Inverter transformer 4	S_INVTR4	654124	4924736	2	0	0	77.3	77.3	1	2513.95	3.25	0	79.01	0	-2.57	0	0	1.45	0	0	0	0	0	0	-0.54	-0.54
	Sparkle Inverter transformer 1	S_INVTR1	653948.9	4925041	2	0	0	78.2	78.2	1	2792.27	3.25	0	79.92	0	-2.66	0	0	1.57	0	0	0	0	0	0	-0.59	-0.59
	Sparkle Inverter transformer 2	S_INVTR2	653968	4924893	2	0	0	77.3	77.3	1	2646.93	3.25	0	79.45	0	-2.61	0	0	1.5	0	0	0	0	0	0	-1	-1
	Sparkle Inverter transformer 3	S_INVTR3	654132	4924883	2	0	0	77.3	77.3	1	2660.71	3.25	0	79.5	0	-2.62	0	0	1.51	0	0	0	0	0	0	-1.05	-1.05

	Sparkle Inverter transformer 5	S_INVTR5	653972.5	4925040	2	0	0	77.3	77.3	1	2792.99	3.25	0	79.92	0	-2.66	0	0	1.57	0	0	0	0	0	0	-1.49	-1.49
	Sparkle Inverter transformer 6	S_INVTR6	654140.4	4925027	2	0	0	77.3	77.3	1	2803.8	3.25	0	79.95	0	-2.66	0	0	1.57	0	0	0	0	0	0	-1.53	-1.53
	Sparkle Inverter transformer 7	S_INVTR7	654147.2	4925179	2	0	0	77.3	77.3	1	2954.39	3.25	0	80.41	0	-2.7	0	0	1.64	0	0	0	0	0	0	-2	-2

Value D/N: 0 0
Level D/N: 37.9934 37.9934

Receiver: Existing Potential Receptor
ID: R30b
X: 653646
Y: 4922257
Z: 1.5
Ground: 0

ISO	Description	ID	X	Y	Z	Ground	ReflOrd	LxT	LxN	L/A	Dist.	hm	Freq	Adiv	K0b	Agr	Abar	z	Aatm	Afol	Ahous	Cmet	CmetN	Dc	RL	LtotT	LtotN
	Discovery Inverter enclosure 3	D_INV3	653511.4	4922537	2	0	0	100.3	100.3	1	310.9	1.75	0	60.85	0	-0.3	0	0	6.55	0	0	0	0	0	0	33.21	33.21
	Discovery Substation Transforme	D_TRS	653484.4	4922253	2.5	0	0	92	92	1	161.66	2.76	0	55.17	0	3.17	6.38	0.32	0.55	0	0	0	0	0	0	26.7	26.7
	Discovery Inverter enclosure 2	D_INV2	653465.5	4922673	2	0	0	100.3	100.3	1	453.69	1.75	0	64.14	0	0.14	0	0	8.14	0	0	0	0	0	0	27.89	27.89
	Discovery Inverter enclosure 1	D_INV1	653434.4	4922792	2	0	0	100.3	100.3	1	575.55	1.75	0	66.2	0	0.49	0	0	9.05	0	0	0	0	0	0	24.56	24.56
	Discovery Inverter enclosure 5	D_INV5	653875	4922657	2	0	0	97.3	97.3	1	461.04	1.75	0	64.27	0	0.16	0	0	8.21	0	0	0	0	0	0	24.67	24.67
	Discovery Inverter enclosure 7	D_INV7	653773.3	4922400	2	0	0	89.1	89.1	1	191.14	1.75	0	56.63	0	1.13	0	0	3.12	0	0	0	0	0	0	28.18	28.18
	Discovery Inverter enclosure 4	D_INV4	653513.6	4922427	2	0	0	89.1	89.1	1	215.29	1.75	0	57.66	0	1.26	0	0	3.39	0	0	0	0	0	0	26.75	26.75
	Discovery Inverter enclosure 6	D_INV6	653814.6	4922521	2	0	0	89.1	89.1	1	312.9	1.75	0	60.91	0	1.84	0	0	4.22	0	0	0	0	0	0	22.09	22.09
	Sparkle Inverter enclosure 4	S_INV4	654129.9	4924735	2	0	0	100.3	100.3	1	2525.02	1.75	0	79.05	0	2.69	0	0	14.51	0	0	0	0	0	0	4.07	4.07
	Discovery Inverter Transformer	D_INVTR7	653767.4	4922400	2	0	0	77.3	77.3	1	187.58	1.75	0	56.46	0	-1.29	0	0	0.15	0	0	0	0	0	0	22.02	22.02
	Sparkle Inverter enclosure 3	S_INV3	654137.8	4924883	2	0	0	100.3	100.3	1	2671.57	1.75	0	79.54	0	2.76	0	0	14.78	0	0	0	0	0	0	3.24	3.24
	Sparkle Inverter enclosure 6	S_INV6	654146.3	4925027	2	0	0	100.3	100.3	1	2814.48	1.75	0	79.99	0	2.82	0	0	15.04	0	0	0	0	0	0	2.46	2.46
	Discovery Inverter Transformer	D_INVTR4	653519.4	4922426	2	0	0	77.3	77.3	1	211.43	1.75	0	57.5	0	-1.4	0	0	0.17	0	0	0	0	0	0	21.07	21.07
	Sparkle Inverter enclosure 1	S_INV1	653943	4925042	2	0	0	97.3	97.3	1	2800.49	1.75	0	79.94	0	2.81	0	0	15.02	0	0	0	0	0	0	-0.46	-0.46
	Discovery Inverter Transformer	D_INVTR3	653517.2	4922537	2	0	0	77.3	77.3	1	308.06	1.75	0	60.77	0	-1.62	0	0	0.24	0	0	0	0	0	0	17.95	17.95
	Discovery Inverter Transformer	D_INVTR6	653808.8	4922521	2	0	0	77.3	77.3	1	310.11	1.75	0	60.83	0	-1.62	0	0	0.24	0	0	0	0	0	0	17.89	17.89
	Discovery Inverter Transformer	D_INVTR5	653869.2	4922658	2	0	0	78.2	78.2	1	458.49	1.75	0	64.23	0	-1.7	0	0	0.34	0	0	0	0	0	0	15.37	15.37
	Discovery Inverter Transformer	D_INVTR2	653471.4	4922673	2	0	0	77.3	77.3	1	451.03	1.75	0	64.08	0	-1.7	0	0	0.34	0	0	0	0	0	0	14.62	14.62
	Sparkle Substation Transformer	S_TRS	653933.6	4925172	2.5	0	0	92	92	1	2928.85	2	0	80.33	0	2.59	0	0	5.85	0	0	0	0	0	0	3.2	3.2
	Discovery Inverter Transformer	D_INVTR1	653440.3	4922792	2	0	0	77.3	77.3	1	573.05	1.75	0	66.16	0	-1.72	0	0	0.42	0	0	0	0	0	0	12.48	12.48
	Sparkle Inverter enclosure 2	S_INV2	653973.9	4924893	2	0	0	89.1	89.1	1	2656.03	1.75	0	79.48	0	4.19	0	0	9.09	0	0	0	0	0	0	-3.7	-3.7
	Sparkle Inverter enclosure 5	S_INV5	653978.3	4925039	2	0	0	89.1	89.1	1	2801.95	1.75	0	79.95	0	4.24	0	0	9.31	0	0	0	0	0	0	-4.45	-4.45
	Sparkle Inverter enclosure 7	S_INV7	654153.1	4925178	2	0	0	89.1	89.1	1	2964.88	1.75	0	80.44	0	4.3	0	0	9.56	0	0	0	0	0	0	-5.25	-5.25
	Sparkle Inverter transformer 4	S_INVTR4	654124	4924736	2	0	0	77.3	77.3	1	2524.29	1.75	0	79.04	0	-2.45	0	0	1.45	0	0	0	0	0	0	-0.7	-0.7
	Sparkle Inverter transformer 1	S_INVTR1	653948.9	4925041	2	0	0	78.2	78.2	1	2800.73	1.75	0	79.95	0	-2.53	0	0	1.57	0	0	0	0	0	0	-0.74	-0.74
	Sparkle Inverter transformer 2	S_INVTR2	653968	4924893	2	0	0	77.3	77.3	1	2655.7	1.75	0	79.48	0	-2.49	0	0	1.51	0	0	0	0	0	0	-1.16	-1.16
	Sparkle Inverter transformer 3	S_INVTR3	654132	4924883	2	0	0	77.3	77.3	1	2670.88	1.75	0	79.53	0	-2.5	0	0	1.52	0	0	0	0	0	0	-1.21	-1.21
	Sparkle Inverter transformer 5	S_INVTR5	653972.5	4925040	2	0	0	77.3	77.3	1	2801.65	1.75	0	79.95	0	-2.53	0	0	1.57	0	0	0	0	0	0	-1.64	-1.64
	Sparkle Inverter transformer 6	S_INVTR6	654140.4	4925027	2	0	0	77.3	77.3	1	2813.83	1.75	0	79.99	0	-2.54	0	0	1.58	0	0	0	0	0	0	-1.68	-1.68
	Sparkle Inverter transformer 7	S_INVTR7	654147.2	4925179	2	0	0	77.3	77.3	1	2964.27	1.75	0	80.44	0	-2.58	0	0	1.64	0	0	0	0	0	0	-2.16	-2.16

Value D/N: 0 0
Level D/N: 37.4501 37.4501

Receiver: Existing Potential Receptor
ID: R31
X: 654182
Y: 4924023
Z: 4.5
Ground: 0

ISO	Description	ID	X	Y	Z	Ground	ReflOrd	LxT	LxN	L/A	Dist.	hm	Freq	Adiv	K0b	Agr	Abar	z	Aatm	Afol	Ahous	Cmet	CmetN	Dc	RL	LtotT	LtotN
	Sparkle Inverter enclosure 4	S_INV4	654129.9	4924735	2	0	0	100.3	100.3	1	714.13	3.25	0	68.08	0	-0.4	0	0	9.8	0	0	0	0	0	0	22.83	22.83
	Sparkle Inverter enclosure 3	S_INV3	654137.8	4924883	2	0	0	100.3	100.3	1	861.04	3.25	0	69.7	0	-0.32	0	0	10.42	0	0	0	0	0	0	20.51	20.51
	Sparkle Inverter enclosure 6	S_INV6	654146.3	4925027	2	0	0	100.3	100.3	1	1004.31	3.25	0	71.04	0	-0.24	0	0	10.93	0	0	0	0	0	0	18.59	18.59
	Discovery Inverter enclosure 1	D_INV1	653434.4	4922792	2	0	0	100.3	100.3	1	1440	3.25	0	74.17	0	-0.06	0	0	12.17	0	0	0	0	0	0	14.03	14.03
	Sparkle Inverter enclosure 1	S_INV1	653943	4925042	2	0	0	97.3	97.3	1	1046.35	3.25	0	71.39	0	-0.22	0	0	11.06	0	0	0	0	0	0	15.08	15.08
	Discovery Inverter enclosure 2	D_INV2	653465.5	4922673	2	0	0	100.3	100.3	1	1528.13	3.25	0	74.68	0	-0.02	0	0	12.39	0	0	0	0	0	0	13.26	13.26
	Discovery Inverter enclosure 3	D_INV3	653511.4	4922537	2	0	0	100.3	100.3	1	1630.08	3.25	0	75.24	0	0.01	0	0	12.64	0	0	0	0	0	0	12.42	12.42
	Discovery Inverter enclosure 5	D_INV5	653875	4922657	2	0	0	97.3	97.3	1	1399.94	3.25	0	73.92	0	-0.07	0	0	12.07	0	0	0	0	0	0	11.39	11.39
	Sparkle Substation Transformer	S_TRS	653933.6	4925172	2.5	0	0	92	92	1	1175.25	3.5	0	72.4	0	-0.34	0	0	2.87	0	0	0	0	0	0	17.05	17.05
	Sparkle Inverter enclosure 2	S_INV2	653973.9	4924893	2	0	0	89.1	89.1	1	894.28	3.25	0	70.03	0	0.66	0	0	6.11	0	0	0	0	0	0	12.26	12.26
	Sparkle Inverter enclosure 5	S_INV5	653978.3	4925039	2	0	0	89.1	89.1	1	1036.4	3.25	0	71.31	0	0.69	0	0	6.38	0	0	0	0	0	0	10.67	10.67
	Sparkle Inverter enclosure 7	S_INV7	654153.1	4925178	2	0	0	89.1	89.1	1	1155.56	3.25	0	72.26	0	0.72	0	0	6.6	0	0	0	0	0	0	9.48	9.48
	Discovery Substation Transforme	D_TRS	653484.4	4922253	2.5	0	0	92	92	1	1902.6	3.5	0	76.59	0	-0.19	0	0	4.2	0	0	0	0	0	0	11.38	11.38
	Discovery Inverter enclosure 6	D_INV6	653814.6	4922521	2	0	0	89.1	89.1	1	1546.7	3.25	0	74.79	0	0.8	0	0	7.29	0	0	0	0	0	0	6.18	6.18
	Discovery Inverter enclosure 7	D_INV7	653773.3	4922400	2	0	0	89.1	89.1	1	1674.05	3.25	0	75.48	0	0.83	0	0	7.5	0	0	0	0	0	0	5.25	5.25
	Discovery Inverter enclosure 4	D_INV4	653513.6	4922427	2	0	0	89.1	89.1	1	1730.55	3.25	0	75.76	0	0.84	0	0	7.6	0	0	0	0	0	0	4.85	4.85
	Sparkle Inverter transformer 4	S_INVTR4	654124	4924736	2	0	0	77.3	77.3	1	714.97	3.25	0	68.09	0	-1.73	0	0	0.51	0	0	0	0	0	0	10.48	10.48

Sparkle Inverter transformer 3	S_INVTR3	654132	4924883	2	0	0	77.3	77.3	1	861.75	3.25	0	69.71	0	-1.84	0	0	0.6	0	0	0	0	0	0	8.88	8.88
Sparkle Inverter transformer 2	S_INVTR2	653968	4924893	2	0	0	77.3	77.3	1	896.04	3.25	0	70.05	0	-1.87	0	0	0.62	0	0	0	0	0	0	8.54	8.54
Sparkle Inverter transformer 1	S_INVTR1	653948.9	4925041	2	0	0	78.2	78.2	1	1044.65	3.25	0	71.38	0	-1.96	0	0	0.7	0	0	0	0	0	0	8.12	8.12
Sparkle Inverter transformer 6	S_INVTR6	654140.4	4925027	2	0	0	77.3	77.3	1	1004.92	3.25	0	71.04	0	-1.94	0	0	0.68	0	0	0	0	0	0	7.55	7.55
Sparkle Inverter transformer 5	S_INVTR5	653972.5	4925040	2	0	0	77.3	77.3	1	1037.94	3.25	0	71.32	0	-1.96	0	0	0.7	0	0	0	0	0	0	7.27	7.27
Sparkle Inverter transformer 7	S_INVTR7	654147.2	4925179	2	0	0	77.3	77.3	1	1156.11	3.25	0	72.26	0	-2.03	0	0	0.77	0	0	0	0	0	0	6.34	6.34
Discovery Inverter Transformer	D_INVTR5	653869.2	4922658	2	0	0	78.2	78.2	1	1400.86	3.25	0	73.93	0	-2.16	0	0	0.9	0	0	0	0	0	0	5.57	5.57
Discovery Inverter Transformer	D_INVTR1	653440.3	4922792	2	0	0	77.3	77.3	1	1437.31	3.25	0	74.15	0	-2.17	0	0	0.92	0	0	0	0	0	0	4.44	4.44
Discovery Inverter Transformer	D_INVTR2	653471.4	4922673	2	0	0	77.3	77.3	1	1525.74	3.25	0	74.67	0	-2.21	0	0	0.97	0	0	0	0	0	0	3.92	3.92
Discovery Inverter Transformer	D_INVTR6	653808.8	4922521	2	0	0	77.3	77.3	1	1547.73	3.25	0	74.79	0	-2.22	0	0	0.98	0	0	0	0	0	0	3.79	3.79
Discovery Inverter Transformer	D_INVTR3	653517.2	4922537	2	0	0	77.3	77.3	1	1628.04	3.25	0	75.23	0	-2.26	0	0	1.02	0	0	0	0	0	0	3.35	3.35
Discovery Inverter Transformer	D_INVTR7	653767.4	4922400	2	0	0	77.3	77.3	1	1675.11	3.25	0	75.48	0	-2.28	0	0	1.04	0	0	0	0	0	0	3.09	3.09
Discovery Inverter Transformer	D_INVTR4	653519.4	4922426	2	0	0	77.3	77.3	1	1728.66	3.25	0	75.75	0	-2.3	0	0	1.07	0	0	0	0	0	0	2.82	2.82

/alue D/N: 0 0
Level D/N: 28.2231 28.2231

Receiver: Existing Potential Receptor
ID: R32
X: 654393
Y: 4922592
Z: 4.5
Ground: 0

ISO	Description	ID	X	Y	Z	Ground	ReflOrd	LxT	LxN	L/A	Dist.	hm	Freq	Adiv	K0b	Agr	Abar	z	Aatm	Afol	Ahous	Cmet	CmetN	Dc	RL	LtotT	LtotN
	Discovery Inverter enclosure 5	D_INV5	653875	4922657	2	0	0	97.3	97.3	1	522.05	3.25	0	65.35	0	-0.53	0	0	8.69	0	0	0	0	0	0	23.8	23.8
	Discovery Inverter enclosure 3	D_INV3	653511.4	4922537	2	0	0	100.3	100.3	1	883.31	3.25	0	69.92	0	-0.31	0	0	10.5	0	0	0	0	0	0	20.19	20.19
	Discovery Inverter enclosure 2	D_INV2	653465.5	4922673	2	0	0	100.3	100.3	1	931.04	3.25	0	70.38	0	-0.28	0	0	10.68	0	0	0	0	0	0	19.54	19.54
	Discovery Inverter enclosure 1	D_INV1	653434.4	4922792	2	0	0	100.3	100.3	1	979.27	3.25	0	70.82	0	-0.26	0	0	10.84	0	0	0	0	0	0	18.91	18.91
	Discovery Inverter enclosure 6	D_INV6	653814.6	4922521	2	0	0	89.1	89.1	1	582.76	3.25	0	66.31	0	0.57	0	0	5.4	0	0	0	0	0	0	16.78	16.78
	Sparkle Inverter enclosure 4	S_INV4	654129.9	4924735	2	0	0	100.3	100.3	1	2159.32	3.25	0	77.69	0	0.17	0	0	13.79	0	0	0	0	0	0	8.66	8.66
	Sparkle Inverter enclosure 3	S_INV3	654137.8	4924883	2	0	0	100.3	100.3	1	2305.07	3.25	0	78.25	0	0.21	0	0	14.08	0	0	0	0	0	0	7.77	7.77
	Discovery Inverter enclosure 7	D_INV7	653773.3	4922400	2	0	0	89.1	89.1	1	648.92	3.25	0	67.24	0	0.59	0	0	5.58	0	0	0	0	0	0	15.64	15.64
	Sparkle Inverter enclosure 6	S_INV6	654146.3	4925027	2	0	0	100.3	100.3	1	2447.14	3.25	0	78.77	0	0.24	0	0	14.36	0	0	0	0	0	0	6.94	6.94
	Discovery Substation Transforme	D_TRS	653484.4	4922253	2.5	0	0	92	92	1	969.82	4.25	0	70.73	0	0.78	5.26	0.32	2.46	0	0	0	0	0	0	12.74	12.74
	Discovery Inverter enclosure 4	D_INV4	653513.6	4922427	2	0	0	89.1	89.1	1	894.81	3.25	0	70.03	0	0.66	0	0	6.11	0	0	0	0	0	0	12.25	12.25
	Sparkle Inverter enclosure 1	S_INV1	653943	4925042	2	0	0	97.3	97.3	1	2490.68	3.25	0	78.93	0	0.25	0	0	14.44	0	0	0	0	0	0	3.69	3.69
	Discovery Inverter Transformer	D_INVTR5	653869.2	4922658	2	0	0	78.2	78.2	1	527.93	3.25	0	65.45	0	-1.55	0	0	0.39	0	0	0	0	0	0	13.95	13.95
	Sparkle Substation Transformer	S_TRS	653933.6	4925172	2.5	0	0	92	92	1	2620.29	3.5	0	79.37	0	-0.01	0	0	5.38	0	0	0	0	0	0	7.25	7.25
	Discovery Inverter Transformer	D_INVTR6	653808.8	4922521	2	0	0	77.3	77.3	1	588.52	3.25	0	66.4	0	-1.62	0	0	0.43	0	0	0	0	0	0	12.14	12.14
	Sparkle Inverter enclosure 2	S_INV2	653973.9	4924893	2	0	0	89.1	89.1	1	2338.59	3.25	0	78.38	0	0.99	0	0	8.59	0	0	0	0	0	0	1.1	1.1
	Sparkle Inverter enclosure 5	S_INV5	653978.3	4925039	2	0	0	89.1	89.1	1	2482.07	3.25	0	78.9	0	1.02	0	0	8.82	0	0	0	0	0	0	0.32	0.32
	Discovery Inverter Transformer	D_INVTR7	653767.4	4922400	2	0	0	77.3	77.3	1	654.42	3.25	0	67.32	0	-1.68	0	0	0.47	0	0	0	0	0	0	11.24	11.24
	Sparkle Inverter enclosure 7	S_INV7	654153.1	4925178	2	0	0	89.1	89.1	1	2597.3	3.25	0	79.29	0	1.05	0	0	9	0	0	0	0	0	0	-0.28	-0.28
	Discovery Inverter Transformer	D_INVTR3	653517.2	4922537	2	0	0	77.3	77.3	1	877.49	3.25	0	69.86	0	-1.85	0	0	0.61	0	0	0	0	0	0	8.72	8.72
	Discovery Inverter Transformer	D_INVTR4	653519.4	4922426	2	0	0	77.3	77.3	1	889.14	3.25	0	69.98	0	-1.86	0	0	0.61	0	0	0	0	0	0	8.61	8.61
	Discovery Inverter Transformer	D_INVTR2	653471.4	4922673	2	0	0	77.3	77.3	1	925.17	3.25	0	70.32	0	-1.88	0	0	0.64	0	0	0	0	0	0	8.27	8.27
	Discovery Inverter Transformer	D_INVTR1	653440.3	4922792	2	0	0	77.3	77.3	1	973.45	3.25	0	70.77	0	-1.92	0	0	0.66	0	0	0	0	0	0	7.83	7.83
	Sparkle Inverter transformer 4	S_INVTR4	654124	4924736	2	0	0	77.3	77.3	1	2160.42	3.25	0	77.69	0	-2.46	0	0	1.28	0	0	0	0	0	0	0.83	0.83
	Sparkle Inverter transformer 1	S_INVTR1	653948.9	4925041	2	0	0	78.2	78.2	1	2489.24	3.25	0	78.92	0	-2.57	0	0	1.43	0	0	0	0	0	0	0.45	0.45
	Sparkle Inverter transformer 3	S_INVTR3	654132	4924883	2	0	0	77.3	77.3	1	2306.11	3.25	0	78.26	0	-2.51	0	0	1.35	0	0	0	0	0	0	0.24	0.24
	Sparkle Inverter transformer 2	S_INVTR2	653968	4924893	2	0	0	77.3	77.3	1	2340.03	3.25	0	78.38	0	-2.52	0	0	1.37	0	0	0	0	0	0	0.11	0.11
	Sparkle Inverter transformer 6	S_INVTR6	654140.4	4925027	2	0	0	77.3	77.3	1	2448.12	3.25	0	78.78	0	-2.55	0	0	1.42	0	0	0	0	0	0	-0.3	-0.3
	Sparkle Inverter transformer 5	S_INVTR5	653972.5	4925040	2	0	0	77.3	77.3	1	2483.44	3.25	0	78.9	0	-2.57	0	0	1.43	0	0	0	0	0	0	-0.43	-0.43
	Sparkle Inverter transformer 7	S_INVTR7	654147.2	4925179	2	0	0	77.3	77.3	1	2598.24	3.25	0	79.29	0	-2.6	0	0	1.48	0	0	0	0	0	0	-0.84	-0.84

/alue D/N: 0 0
Level D/N: 28.7517 28.7517

Receiver: Existing Potential Receptor
ID: R33
X: 654649
Y: 4924388
Z: 4.5
Ground: 0

ISO	Description	ID	X	Y	Z	Ground	ReflOrd	LxT	LxN	L/A	Dist.	hm	Freq	Adiv	K0b	Agr	Abar	z	Aatm	Afol	Ahous	Cmet	CmetN	Dc	RL	LtotT	LtotN
	Sparkle Inverter enclosure 4	S_INV4	654129.9	4924735	2	0	0	100.3	100.3	1	624.55	3.25	0	66.91	0	-0.46	0	0	9.35	0	0	0	0	0	0	24.52	24.52
	Sparkle Inverter enclosure 3	S_INV3	654137.8	4924883	2	0	0	100.3	100.3	1	711.49	3.25	0	68.04	0	-0.4	0	0	9.79	0	0	0	0	0	0	22.88	22.88
	Sparkle Inverter enclosure 6	S_INV6	654146.3	4925027	2	0	0	100.3	100.3	1	812.81	3.25	0	69.2	0	-0.34	0	0	10.23	0	0	0	0	0	0	21.22	21.22
	Sparkle Inverter enclosure 1	S_INV1	653943	4925042	2	0	0	97.3	97.3	1	962.15	3.25	0	70.66	0	-0.26	0	0	10.78	0	0	0	0	0	0	16.13	16.13
	Discovery Inverter enclosure 1	D_INV1	653434.4	4922792	2	0	0	100.3	100.3	1	2005.39	3.25	0	77.04	0	0.13	0	0	13.47	0	0	0	0	0	0	9.66	9.66
	Discovery Inverter enclosure 2	D_INV2	653465.5	4922673	2	0	0	100.3	100.3	1	2083.51	3.25	0	77.38	0	0.15	0	0	13.64	0	0	0	0	0	0	9.15	9.15
	Discovery Inverter enclosure 3	D_INV3	653511.4	4922537	2	0	0	100.3	100.3	1	2172.43	3.25	0	77.74	0	0.18	0	0	13.82	0	0	0	0	0	0	8.58	8.58

Discovery Inverter enclosure 5	D_INV5	653875	4922657	2	0	0	97.3	97.3	1	1896.03	3.25	0	76.56	0	0.1	0	0	13.24	0	0	0	0	0	0	7.42	7.42
Sparkle Substation Transformer	S_TRS	653933.6	4925172	2.5	0	0	92	92	1	1061.13	3.5	0	71.52	0	-0.36	0	0	2.64	0	0	0	0	0	0	18.18	18.18
Sparkle Inverter enclosure 2	S_INV2	653973.9	4924893	2	0	0	89.1	89.1	1	842.96	3.25	0	69.52	0	0.65	0	0	6.01	0	0	0	0	0	0	12.88	12.88
Sparkle Inverter enclosure 7	S_INV7	654153.1	4925178	2	0	0	89.1	89.1	1	932.93	3.25	0	70.4	0	0.67	0	0	6.19	0	0	0	0	0	0	11.8	11.8
Sparkle Inverter enclosure 5	S_INV5	653978.3	4925039	2	0	0	89.1	89.1	1	934.81	3.25	0	70.41	0	0.67	0	0	6.19	0	0	0	0	0	0	11.78	11.78
Discovery Substation Transforme	D_TRS	653484.4	4922253	2.5	0	0	92	92	1	2432.07	4.25	0	78.72	0	0.89	3.19	0.25	5.08	0	0	0	0	0	0	4.1	4.1
Discovery Inverter enclosure 6	D_INV6	653814.6	4922521	2	0	0	89.1	89.1	1	2045.36	3.25	0	77.22	0	0.92	0	0	8.12	0	0	0	0	0	0	2.81	2.81
Discovery Inverter enclosure 7	D_INV7	653773.3	4922400	2	0	0	89.1	89.1	1	2172.69	3.25	0	77.74	0	0.95	0	0	8.33	0	0	0	0	0	0	2.04	2.04
Discovery Inverter enclosure 4	D_INV4	653513.6	4922427	2	0	0	89.1	89.1	1	2266.21	3.25	0	78.11	0	0.97	0	0	8.48	0	0	0	0	0	0	1.51	1.51
Sparkle Inverter transformer 4	S_INVTR4	654124	4924736	2	0	0	77.3	77.3	1	629.64	3.25	0	66.98	0	-1.66	0	0	0.45	0	0	0	0	0	0	11.56	11.56
Sparkle Inverter transformer 3	S_INVTR3	654132	4924883	2	0	0	77.3	77.3	1	715.98	3.25	0	68.1	0	-1.73	0	0	0.51	0	0	0	0	0	0	10.47	10.47
Sparkle Inverter transformer 6	S_INVTR6	654140.4	4925027	2	0	0	77.3	77.3	1	816.74	3.25	0	69.24	0	-1.81	0	0	0.57	0	0	0	0	0	0	9.34	9.34
Sparkle Inverter transformer 2	S_INVTR2	653968	4924893	2	0	0	77.3	77.3	1	847.88	3.25	0	69.57	0	-1.83	0	0	0.59	0	0	0	0	0	0	9.02	9.02
Sparkle Inverter transformer 1	S_INVTR1	653948.9	4925041	2	0	0	78.2	78.2	1	957.58	3.25	0	70.62	0	-1.91	0	0	0.65	0	0	0	0	0	0	8.87	8.87
Sparkle Inverter transformer 7	S_INVTR7	654147.2	4925179	2	0	0	77.3	77.3	1	936.38	3.25	0	70.43	0	-1.89	0	0	0.64	0	0	0	0	0	0	8.16	8.16
Sparkle Inverter transformer 5	S_INVTR5	653972.5	4925040	2	0	0	77.3	77.3	1	939.29	3.25	0	70.46	0	-1.89	0	0	0.64	0	0	0	0	0	0	8.14	8.14
Discovery Inverter Transformer	D_INVTR5	653869.2	4922658	2	0	0	78.2	78.2	1	1898.08	3.25	0	76.57	0	-2.37	0	0	1.16	0	0	0	0	0	0	2.89	2.89
Discovery Inverter Transformer	D_INVTR1	653440.3	4922792	2	0	0	77.3	77.3	1	2002.16	3.25	0	77.03	0	-2.41	0	0	1.21	0	0	0	0	0	0	1.51	1.51
Discovery Inverter Transformer	D_INVTR6	653808.8	4922521	2	0	0	77.3	77.3	1	2047.4	3.25	0	77.22	0	-2.42	0	0	1.23	0	0	0	0	0	0	1.31	1.31
Discovery Inverter Transformer	D_INVTR2	653471.4	4922673	2	0	0	77.3	77.3	1	2080.51	3.25	0	77.36	0	-2.43	0	0	1.24	0	0	0	0	0	0	1.17	1.17
Discovery Inverter Transformer	D_INVTR3	653517.2	4922537	2	0	0	77.3	77.3	1	2169.7	3.25	0	77.73	0	-2.46	0	0	1.29	0	0	0	0	0	0	0.79	0.79
Discovery Inverter Transformer	D_INVTR7	653767.4	4922400	2	0	0	77.3	77.3	1	2174.71	3.25	0	77.75	0	-2.47	0	0	1.29	0	0	0	0	0	0	0.77	0.77
Discovery Inverter Transformer	D_INVTR4	653519.4	4922426	2	0	0	77.3	77.3	1	2263.62	3.25	0	78.1	0	-2.5	0	0	1.33	0	0	0	0	0	0	0.41	0.41

Value D/N: 0 0
Level D/N: 29.425 29.425

Receiver: Existing Potential Receptor
ID: R34
X: 654709
Y: 4924410
Z: 4.5
Ground: 0

ISO	Description	ID	X	Y	Z	Ground	ReflOrd	LxT	LxN	L/A	Dist.	hm	Freq	Adiv	K0b	Agr	Abar	z	Aatm	Afol	Ahous	Cmet	CmetN	Dc	RL	LtotT	LtotN
	Sparkle Inverter enclosure 4	S_INV4	654129.9	4924735	2	0	0	100.3	100.3	1	664.2	3.25	0	67.45	0	-0.43	0	0	9.56	0	0	0	0	0	0	23.74	23.74
	Sparkle Inverter enclosure 3	S_INV3	654137.8	4924883	2	0	0	100.3	100.3	1	741.53	3.25	0	68.4	0	-0.39	0	0	9.93	0	0	0	0	0	0	22.37	22.37
	Sparkle Inverter enclosure 6	S_INV6	654146.3	4925027	2	0	0	100.3	100.3	1	834.84	3.25	0	69.43	0	-0.33	0	0	10.32	0	0	0	0	0	0	20.89	20.89
	Sparkle Inverter enclosure 1	S_INV1	653943	4925042	2	0	0	97.3	97.3	1	992.86	3.25	0	70.94	0	-0.25	0	0	10.89	0	0	0	0	0	0	15.74	15.74
	Discovery Inverter enclosure 1	D_INV1	653434.4	4922792	2	0	0	100.3	100.3	1	2059.53	3.25	0	77.28	0	0.15	0	0	13.59	0	0	0	0	0	0	9.3	9.3
	Discovery Inverter enclosure 2	D_INV2	653465.5	4922673	2	0	0	100.3	100.3	1	2136.01	3.25	0	77.59	0	0.17	0	0	13.74	0	0	0	0	0	0	8.81	8.81
	Discovery Inverter enclosure 3	D_INV3	653511.4	4922537	2	0	0	100.3	100.3	1	2222.94	3.25	0	77.94	0	0.19	0	0	13.92	0	0	0	0	0	0	8.26	8.26
	Discovery Inverter enclosure 5	D_INV5	653875	4922657	2	0	0	97.3	97.3	1	1941.15	3.25	0	76.76	0	0.11	0	0	13.34	0	0	0	0	0	0	7.1	7.1
	Sparkle Substation Transformer	S_TRS	653933.6	4925172	2.5	0	0	92	92	1	1086.94	3.5	0	71.72	0	-0.36	0	0	2.69	0	0	0	0	0	0	17.91	17.91
	Sparkle Inverter enclosure 2	S_INV2	653973.9	4924893	2	0	0	89.1	89.1	1	879.47	3.25	0	69.88	0	0.66	0	0	6.08	0	0	0	0	0	0	12.43	12.43
	Sparkle Inverter enclosure 7	S_INV7	654153.1	4925178	2	0	0	89.1	89.1	1	948.25	3.25	0	70.54	0	0.67	0	0	6.22	0	0	0	0	0	0	11.63	11.63
	Sparkle Inverter enclosure 5	S_INV5	653978.3	4925039	2	0	0	89.1	89.1	1	964.25	3.25	0	70.68	0	0.68	0	0	6.25	0	0	0	0	0	0	11.45	11.45
	Discovery Substation Transforme	D_TRS	653484.4	4922253	2.5	0	0	92	92	1	2480.47	4.25	0	78.89	0	0.9	3.18	0.25	5.16	0	0	0	0	0	0	3.85	3.85
	Discovery Inverter enclosure 6	D_INV6	653814.6	4922521	2	0	0	89.1	89.1	1	2090.42	3.25	0	77.4	0	0.93	0	0	8.19	0	0	0	0	0	0	2.53	2.53
	Discovery Inverter enclosure 7	D_INV7	653773.3	4922400	2	0	0	89.1	89.1	1	2217.49	3.25	0	77.92	0	0.96	0	0	8.4	0	0	0	0	0	0	1.79	1.79
	Discovery Inverter enclosure 4	D_INV4	653513.6	4922427	2	0	0	89.1	89.1	1	2315.67	3.25	0	78.29	0	0.98	0	0	8.55	0	0	0	0	0	0	1.23	1.23
	Sparkle Inverter transformer 4	S_INVTR4	654124	4924736	2	0	0	77.3	77.3	1	669.5	3.25	0	67.52	0	-1.69	0	0	0.48	0	0	0	0	0	0	11.04	11.04
	Sparkle Inverter transformer 3	S_INVTR3	654132	4924883	2	0	0	77.3	77.3	1	746.29	3.25	0	68.46	0	-1.76	0	0	0.53	0	0	0	0	0	0	10.11	10.11
	Sparkle Inverter transformer 6	S_INVTR6	654140.4	4925027	2	0	0	77.3	77.3	1	839.09	3.25	0	69.48	0	-1.83	0	0	0.58	0	0	0	0	0	0	9.11	9.11
	Sparkle Inverter transformer 2	S_INVTR2	653968	4924893	2	0	0	77.3	77.3	1	884.58	3.25	0	69.93	0	-1.86	0	0	0.61	0	0	0	0	0	0	8.65	8.65
	Sparkle Inverter transformer 1	S_INVTR1	653948.9	4925041	2	0	0	78.2	78.2	1	988.08	3.25	0	70.9	0	-1.93	0	0	0.67	0	0	0	0	0	0	8.6	8.6
	Sparkle Inverter transformer 7	S_INVTR7	654147.2	4925179	2	0	0	77.3	77.3	1	952.01	3.25	0	70.57	0	-1.9	0	0	0.65	0	0	0	0	0	0	8.02	8.02
	Sparkle Inverter transformer 5	S_INVTR5	653972.5	4925040	2	0	0	77.3	77.3	1	968.95	3.25	0	70.73	0	-1.91	0	0	0.66	0	0	0	0	0	0	7.87	7.87
	Discovery Inverter Transformer	D_INVTR5	653869.2	4922658	2	0	0	78.2	78.2	1	1943.33	3.25	0	76.77	0	-2.38	0	0	1.18	0	0	0	0	0	0	2.68	2.68
	Discovery Inverter Transformer	D_INVTR1	653440.3	4922792	2	0	0	77.3	77.3	1	2056.22	3.25	0	77.26	0	-2.42	0	0	1.23	0	0	0	0	0	0	1.27	1.27
	Discovery Inverter Transformer	D_INVTR6	653808.8	4922521	2	0	0	77.3	77.3	1	2092.58	3.25	0	77.41	0	-2.44	0	0	1.25	0	0	0	0	0	0	1.12	1.12
	Discovery Inverter Transformer	D_INVTR2	653471.4	4922673	2	0	0	77.3	77.3	1	2132.93	3.25	0	77.58	0	-2.45	0	0	1.27	0	0	0	0	0	0	0.94	0.94
	Discovery Inverter Transformer	D_INVTR7	653767.4	4922400	2	0	0	77.3	77.3	1	2219.62	3.25	0	77.93	0	-2.48	0	0	1.31	0	0	0	0	0	0	0.59	0.59
	Discovery Inverter Transformer	D_INVTR3	653517.2	4922537	2	0	0	77.3	77.3	1	2220.12	3.25	0	77.93	0	-2.48	0	0	1.31	0	0	0	0	0	0	0.58	0.58
	Discovery Inverter Transformer	D_INVTR4	653519.4	4922426	2	0	0	77.3	77.3	1	2312.99	3.25	0	78.28	0	-2.51	0	0	1.35	0	0	0	0	0	0	0.22	0.22

Value D/N: 0 0
Level D/N: 28.9179 28.9179

Receiver: Existing Potential Receptor
ID: R35
X: 654712
Y: 4922436
Z: 4.5

Ground: 0

ISO	Description	ID	X	Y	Z	Ground	ReflOrd	LxT	LxN	L/A	Dist.	hm	Freq	Adiv	K0b	Agr	Abar	z	Aatm	Afol	Ahous	Cmet	CmetN	Dc	RL	LtotT	LtotN
	Discovery Inverter enclosure 3	D_INV3	653511.4	4922537	2	0	0	100.3	100.3	1	1204.87	3.25	0	72.62	0	-0.15	0	0	11.54	0	0	0	0	0	0	16.31	16.31
	Discovery Inverter enclosure 5	D_INV5	653875	4922657	2	0	0	97.3	97.3	1	865.69	3.25	0	69.75	0	-0.32	0	0	10.44	0	0	0	0	0	0	17.44	17.44
	Discovery Inverter enclosure 2	D_INV2	653465.5	4922673	2	0	0	100.3	100.3	1	1268.86	3.25	0	73.07	0	-0.12	0	0	11.72	0	0	0	0	0	0	15.65	15.65
	Discovery Inverter enclosure 1	D_INV1	653434.4	4922792	2	0	0	100.3	100.3	1	1326.31	3.25	0	73.45	0	-0.1	0	0	11.88	0	0	0	0	0	0	15.08	15.08
	Sparkle Inverter enclosure 4	S_INV4	654129.9	4924735	2	0	0	100.3	100.3	1	2371.77	3.25	0	78.5	0	0.23	0	0	14.21	0	0	0	0	0	0	7.37	7.37
	Sparkle Inverter enclosure 3	S_INV3	654137.8	4924883	2	0	0	100.3	100.3	1	2513.37	3.25	0	79.01	0	0.26	0	0	14.48	0	0	0	0	0	0	6.56	6.56
	Sparkle Inverter enclosure 6	S_INV6	654146.3	4925027	2	0	0	100.3	100.3	1	2651.72	3.25	0	79.47	0	0.29	0	0	14.74	0	0	0	0	0	0	5.81	5.81
	Discovery Substation Transforme	D_TRS	653484.4	4922253	2.5	0	0	92	92	1	1241.18	4.25	0	72.88	0	0.85	5.1	0.32	3	0	0	0	0	0	0	10.15	10.15
	Discovery Inverter enclosure 6	D_INV6	653814.6	4922521	2	0	0	89.1	89.1	1	901.34	3.25	0	70.1	0	0.66	0	0	6.13	0	0	0	0	0	0	12.17	12.17
	Discovery Inverter enclosure 7	D_INV7	653773.3	4922400	2	0	0	89.1	89.1	1	939.45	3.25	0	70.46	0	0.67	0	0	6.2	0	0	0	0	0	0	11.73	11.73
	Sparkle Inverter enclosure 1	S_INV1	653943	4925042	2	0	0	97.3	97.3	1	2716.8	3.25	0	79.68	0	0.3	0	0	14.86	0	0	0	0	0	0	2.46	2.46
	Discovery Inverter enclosure 4	D_INV4	653513.6	4922427	2	0	0	89.1	89.1	1	1198.46	3.25	0	72.57	0	0.73	0	0	6.68	0	0	0	0	0	0	9.08	9.08
	Sparkle Substation Transformer	S_TRS	653933.6	4925172	2.5	0	0	92	92	1	2844.29	3.5	0	80.08	0	0.04	0	0	5.72	0	0	0	0	0	0	6.13	6.13
	Sparkle Inverter enclosure 2	S_INV2	653973.9	4924893	2	0	0	89.1	89.1	1	2565.21	3.25	0	79.18	0	1.04	0	0	8.95	0	0	0	0	0	0	-0.11	-0.11
	Sparkle Inverter enclosure 5	S_INV5	653978.3	4925039	2	0	0	89.1	89.1	1	2704.6	3.25	0	79.64	0	1.08	0	0	9.16	0	0	0	0	0	0	-0.82	-0.82
	Sparkle Inverter enclosure 7	S_INV7	654153.1	4925178	2	0	0	89.1	89.1	1	2798.58	3.25	0	79.94	0	1.1	0	0	9.31	0	0	0	0	0	0	-1.29	-1.29
	Discovery Inverter Transformer	D_INVTR5	653869.2	4922658	2	0	0	78.2	78.2	1	871.48	3.25	0	69.81	0	-1.85	0	0	0.6	0	0	0	0	0	0	9.68	9.68
	Discovery Inverter Transformer	D_INVTR6	653808.8	4922521	2	0	0	77.3	77.3	1	907.2	3.25	0	70.15	0	-1.87	0	0	0.62	0	0	0	0	0	0	8.44	8.44
	Discovery Inverter Transformer	D_INVTR7	653767.4	4922400	2	0	0	77.3	77.3	1	945.3	3.25	0	70.51	0	-1.9	0	0	0.65	0	0	0	0	0	0	8.08	8.08
	Discovery Inverter Transformer	D_INVTR4	653519.4	4922426	2	0	0	77.3	77.3	1	1192.61	3.25	0	72.53	0	-2.05	0	0	0.79	0	0	0	0	0	0	6.07	6.07
	Discovery Inverter Transformer	D_INVTR3	653517.2	4922537	2	0	0	77.3	77.3	1	1199.01	3.25	0	72.58	0	-2.05	0	0	0.79	0	0	0	0	0	0	6.02	6.02
	Discovery Inverter Transformer	D_INVTR2	653471.4	4922673	2	0	0	77.3	77.3	1	1263.04	3.25	0	73.03	0	-2.08	0	0	0.83	0	0	0	0	0	0	5.57	5.57
	Discovery Inverter Transformer	D_INVTR1	653440.3	4922792	2	0	0	77.3	77.3	1	1320.57	3.25	0	73.42	0	-2.11	0	0	0.86	0	0	0	0	0	0	5.18	5.18
	Sparkle Inverter transformer 4	S_INVTR4	654124	4924736	2	0	0	77.3	77.3	1	2373.59	3.25	0	78.51	0	-2.53	0	0	1.38	0	0	0	0	0	0	-0.02	-0.02
	Sparkle Inverter transformer 1	S_INVTR1	653948.9	4925041	2	0	0	78.2	78.2	1	2714.76	3.25	0	79.67	0	-2.63	0	0	1.53	0	0	0	0	0	0	-0.33	-0.33
	Sparkle Inverter transformer 3	S_INVTR3	654132	4924883	2	0	0	77.3	77.3	1	2515.09	3.25	0	79.01	0	-2.58	0	0	1.45	0	0	0	0	0	0	-0.54	-0.54
	Sparkle Inverter transformer 2	S_INVTR2	653968	4924893	2	0	0	77.3	77.3	1	2567.28	3.25	0	79.19	0	-2.59	0	0	1.47	0	0	0	0	0	0	-0.73	-0.73
	Sparkle Inverter transformer 6	S_INVTR6	654140.4	4925027	2	0	0	77.3	77.3	1	2653.36	3.25	0	79.48	0	-2.62	0	0	1.51	0	0	0	0	0	0	-1.03	-1.03
	Sparkle Inverter transformer 5	S_INVTR5	653972.5	4925040	2	0	0	77.3	77.3	1	2706.57	3.25	0	79.65	0	-2.63	0	0	1.53	0	0	0	0	0	0	-1.21	-1.21
	Sparkle Inverter transformer 7	S_INVTR7	654147.2	4925179	2	0	0	77.3	77.3	1	2800.14	3.25	0	79.94	0	-2.66	0	0	1.57	0	0	0	0	0	0	-1.51	-1.51

Value D/N: 0 0

Level D/N: 24.5138 24.5138

Receiver: Existing Potential Receptor

ID: R36

X: 654725

Y: 4924558

Z: 4.5

Ground: 0

ISO	Description	ID	X	Y	Z	Ground	ReflOrd	LxT	LxN	L/A	Dist.	hm	Freq	Adiv	K0b	Agr	Abar	z	Aatm	Afol	Ahous	Cmet	CmetN	Dc	RL	LtotT	LtotN
	Sparkle Inverter enclosure 4	S_INV4	654129.9	4924735	2	0	0	100.3	100.3	1	620.96	3.25	0	66.86	0	-0.46	0	0	9.33	0	0	0	0	0	0	24.59	24.59
	Sparkle Inverter enclosure 3	S_INV3	654137.8	4924883	2	0	0	100.3	100.3	1	671.06	3.25	0	67.54	0	-0.43	0	0	9.59	0	0	0	0	0	0	23.61	23.61
	Sparkle Inverter enclosure 6	S_INV6	654146.3	4925027	2	0	0	100.3	100.3	1	744.71	3.25	0	68.44	0	-0.38	0	0	9.94	0	0	0	0	0	0	22.31	22.31
	Sparkle Inverter enclosure 1	S_INV1	653943	4925042	2	0	0	97.3	97.3	1	919.49	3.25	0	70.27	0	-0.29	0	0	10.64	0	0	0	0	0	0	16.69	16.69
	Discovery Inverter enclosure 1	D_INV1	653434.4	4922792	2	0	0	100.3	100.3	1	2187.11	3.25	0	77.8	0	0.18	0	0	13.85	0	0	0	0	0	0	8.49	8.49
	Discovery Inverter enclosure 2	D_INV2	653465.5	4922673	2	0	0	100.3	100.3	1	2266.84	3.25	0	78.11	0	0.2	0	0	14.01	0	0	0	0	0	0	8	8
	Discovery Inverter enclosure 3	D_INV3	653511.4	4922537	2	0	0	100.3	100.3	1	2357.18	3.25	0	78.45	0	0.22	0	0	14.18	0	0	0	0	0	0	7.46	7.46
	Sparkle Substation Transformer	S_TRS	653933.6	4925172	2.5	0	0	92	92	1	1001.47	3.5	0	71.01	0	-0.37	0	0	2.52	0	0	0	0	0	0	18.81	18.81
	Discovery Inverter enclosure 5	D_INV5	653875	4922657	2	0	0	97.3	97.3	1	2082.25	3.25	0	77.37	0	0.15	0	0	13.63	0	0	0	0	0	0	6.16	6.16
	Sparkle Inverter enclosure 2	S_INV2	653973.9	4924893	2	0	0	89.1	89.1	1	822.36	3.25	0	69.3	0	0.64	0	0	5.97	0	0	0	0	0	0	13.14	13.14
	Sparkle Inverter enclosure 7	S_INV7	654153.1	4925178	2	0	0	89.1	89.1	1	843.65	3.25	0	69.52	0	0.65	0	0	6.01	0	0	0	0	0	0	12.87	12.87
	Sparkle Inverter enclosure 5	S_INV5	653978.3	4925039	2	0	0	89.1	89.1	1	888.31	3.25	0	69.97	0	0.66	0	0	6.1	0	0	0	0	0	0	12.33	12.33
	Discovery Substation Transforme	D_TRS	653484.4	4922253	2.5	0	0	92	92	1	2617.74	4.25	0	79.36	0	0.94	3.09	0.25	5.37	0	0	0	0	0	0	3.21	3.21
	Discovery Inverter enclosure 6	D_INV6	653814.6	4922521	2	0	0	89.1	89.1	1	2231.57	3.25	0	77.97	0	0.96	0	0	8.42	0	0	0	0	0	0	1.7	1.7
	Discovery Inverter enclosure 7	D_INV7	653773.3	4922400	2	0	0	89.1	89.1	1	2358.9	3.25	0	78.45	0	0.99	0	0	8.62	0	0	0	0	0	0	0.99	0.99
	Sparkle Inverter transformer 4	S_INVTR4	654124	4924736	2	0	0	77.3	77.3	1	626.68	3.25	0	66.94	0	-1.66	0	0	0.45	0	0	0	0	0	0	11.6	11.6
	Discovery Inverter enclosure 4	D_INV4	653513.6	4922427	2	0	0	89.1	89.1	1	2451.48	3.25	0	78.79	0	1.01	0	0	8.77	0	0	0	0	0	0	0.49	0.49
	Sparkle Inverter transformer 3	S_INVTR3	654132	4924883	2	0	0	77.3	77.3	1	676.38	3.25	0	67.6	0	-1.7	0	0	0.48	0	0	0	0	0	0	10.95	10.95
	Sparkle Inverter transformer 6	S_INVTR6	654140.4	4925027	2	0	0	77.3	77.3	1	749.52	3.25	0	68.5	0	-1.76	0	0	0.53	0	0	0	0	0	0	10.08	10.08
	Sparkle Inverter transformer 1	S_INVTR1	653948.9	4925041	2	0	0	78.2	78.2	1	914.29	3.25	0	70.22	0	-1.88	0	0	0.63	0	0	0	0	0	0	9.27	9.27
	Sparkle Inverter transformer 2	S_INVTR2	653968	4924893	2	0	0	77.3	77.3	1	827.86	3.25	0	69.36	0	-1.82	0	0	0.58	0	0	0	0	0	0	9.22	9.22
	Sparkle Inverter transformer 7	S_INVTR7	654147.2	4925179	2	0	0	77.3	77.3	1	847.91	3.25	0	69.57	0	-1.83	0	0	0.59	0	0	0	0	0	0	9.02	9.02
	Sparkle Inverter transformer 5	S_INVTR5	653972.5	4925040	2	0	0	77.3	77.3	1	893.44	3.25	0	70.02	0	-1.86	0	0	0.62	0	0	0	0	0	0	8.57	8.57
	Discovery Inverter Transformer	D_INVTR5	653869.2	4922658	2	0	0	78.2	78.2	1	2084.3	3.25	0	77.38	0	-2.43	0	0	1.25	0	0	0	0	0	0	2.05	2.05
	Discovery Inverter Transformer	D_INVTR1	653440.3	4922792	2	0	0	77.3	77.3	1	2183.98	3.25	0	77.78	0	-2.47	0	0	1.29	0	0	0	0	0	0	0.73	0.73
	Discovery Inverter Transformer	D_INVTR6	653808.8	4922521	2	0	0	77.3	77.3	1	2233.62	3.25	0	77.98	0	-2.49	0	0	1.32	0	0	0	0	0	0	0.53	0.53
	Discovery Inverter Transformer	D_INVTR2	653471.4	4922673	2	0	0	77.3	77.3	1	2263.92	3.25	0	78.1	0	-2.5	0	0	1.33	0	0	0	0	0	0	0.41	0.41
	Discovery Inverter Transformer	D_INVTR3	653517.2	4922537	2	0	0	77.3	77.3	1	2354.51	3.25	0	78.44	0	-2.52	0	0	1.37	0	0	0	0	0	0	0.06	0.06

	Discovery Inverter Transformer	D_INVTR7	653767.4	4922400	2	0	0	77.3	77.3	1	2360.92	3.25	0	78.46	0	-2.53	0	0	1.38	0	0	0	0	0	0	0.03	0.03
	Discovery Inverter Transformer	D_INVTR4	653519.4	4922426	2	0	0	77.3	77.3	1	2448.94	3.25	0	78.78	0	-2.55	0	0	1.42	0	0	0	0	0	0	-0.3	-0.3

Value D/N: 0 0
Level D/N: 29.884 29.884

Receiver: Existing Potential Receptor
ID: R37
X: 654861
Y: 4924100
Z: 4.5
Ground: 0

ISO	Description	ID	X	Y	Z	Ground	ReflOrd	LxT	LxN	L/A	Dist.	hm	Freq	Adiv	K0b	Agr	Abar	z	Aatm	Afol	Ahous	Cmet	CmetN	Dc	RL	LtotT	LtotN
	Sparkle Inverter enclosure 4	S_INV4	654129.9	4924735	2	0	0	100.3	100.3	1	968.54	3.25	0	70.72	0	-0.26	0	0	10.81	0	0	0	0	0	0	19.05	19.05
	Sparkle Inverter enclosure 3	S_INV3	654137.8	4924883	2	0	0	100.3	100.3	1	1065.79	3.25	0	71.55	0	-0.21	0	0	11.12	0	0	0	0	0	0	17.85	17.85
	Sparkle Inverter enclosure 6	S_INV6	654146.3	4925027	2	0	0	100.3	100.3	1	1170.29	3.25	0	72.37	0	-0.17	0	0	11.44	0	0	0	0	0	0	16.67	16.67
	Sparkle Inverter enclosure 1	S_INV1	653943	4925042	2	0	0	97.3	97.3	1	1315.1	3.25	0	73.38	0	-0.11	0	0	11.85	0	0	0	0	0	0	12.19	12.19
	Discovery Inverter enclosure 1	D_INV1	653434.4	4922792	2	0	0	100.3	100.3	1	1935.28	3.25	0	76.73	0	0.11	0	0	13.32	0	0	0	0	0	0	10.14	10.14
	Discovery Inverter enclosure 2	D_INV2	653465.5	4922673	2	0	0	100.3	100.3	1	1995.74	3.25	0	77	0	0.13	0	0	13.45	0	0	0	0	0	0	9.73	9.73
	Discovery Inverter enclosure 3	D_INV3	653511.4	4922537	2	0	0	100.3	100.3	1	2064.86	3.25	0	77.3	0	0.15	0	0	13.6	0	0	0	0	0	0	9.27	9.27
	Discovery Inverter enclosure 5	D_INV5	653875	4922657	2	0	0	97.3	97.3	1	1747.57	3.25	0	75.85	0	0.05	0	0	12.91	0	0	0	0	0	0	8.5	8.5
	Sparkle Substation Transformer	S_TRS	653933.6	4925172	2.5	0	0	92	92	1	1417.26	3.5	0	74.03	0	-0.29	0	0	3.33	0	0	0	0	0	0	14.91	14.91
	Sparkle Inverter enclosure 2	S_INV2	653973.9	4924893	2	0	0	89.1	89.1	1	1189.72	3.25	0	72.51	0	0.73	0	0	6.66	0	0	0	0	0	0	9.16	9.16
	Sparkle Inverter enclosure 5	S_INV5	653978.3	4925039	2	0	0	89.1	89.1	1	1288.88	3.25	0	73.2	0	0.75	0	0	6.84	0	0	0	0	0	0	8.27	8.27
	Sparkle Inverter enclosure 7	S_INV7	654153.1	4925178	2	0	0	89.1	89.1	1	1289.83	3.25	0	73.21	0	0.75	0	0	6.84	0	0	0	0	0	0	8.26	8.26
	Discovery Substation Transforme	D_TRS	653484.4	4922253	2.5	0	0	92	92	1	2303.65	4.25	0	78.25	0	0.88	3.37	0.27	4.87	0	0	0	0	0	0	4.6	4.6
	Discovery Inverter enclosure 6	D_INV6	653814.6	4922521	2	0	0	89.1	89.1	1	1894.6	3.25	0	76.55	0	0.88	0	0	7.87	0	0	0	0	0	0	3.75	3.75
	Discovery Inverter enclosure 7	D_INV7	653773.3	4922400	2	0	0	89.1	89.1	1	2018.53	3.25	0	77.1	0	0.91	0	0	8.08	0	0	0	0	0	0	2.97	2.97
	Discovery Inverter enclosure 4	D_INV4	653513.6	4922427	2	0	0	89.1	89.1	1	2148.33	3.25	0	77.64	0	0.94	0	0	8.29	0	0	0	0	0	0	2.19	2.19
	Sparkle Inverter transformer 4	S_INVTR4	654124	4924736	2	0	0	77.3	77.3	1	973.22	3.25	0	70.76	0	-1.92	0	0	0.66	0	0	0	0	0	0	7.83	7.83
	Sparkle Inverter transformer 3	S_INVTR3	654132	4924883	2	0	0	77.3	77.3	1	1070.05	3.25	0	71.59	0	-1.98	0	0	0.72	0	0	0	0	0	0	7.01	7.01
	Sparkle Inverter transformer 6	S_INVTR6	654140.4	4925027	2	0	0	77.3	77.3	1	1174.18	3.25	0	72.39	0	-2.04	0	0	0.78	0	0	0	0	0	0	6.21	6.21
	Sparkle Inverter transformer 1	S_INVTR1	653948.9	4925041	2	0	0	78.2	78.2	1	1310.72	3.25	0	73.35	0	-2.11	0	0	0.85	0	0	0	0	0	0	6.15	6.15
	Sparkle Inverter transformer 2	S_INVTR2	653968	4924893	2	0	0	77.3	77.3	1	1194.35	3.25	0	72.54	0	-2.05	0	0	0.79	0	0	0	0	0	0	6.06	6.06
	Sparkle Inverter transformer 5	S_INVTR5	653972.5	4925040	2	0	0	77.3	77.3	1	1293.18	3.25	0	73.23	0	-2.1	0	0	0.84	0	0	0	0	0	0	5.37	5.37
	Sparkle Inverter transformer 7	S_INVTR7	654147.2	4925179	2	0	0	77.3	77.3	1	1293.38	3.25	0	73.23	0	-2.1	0	0	0.84	0	0	0	0	0	0	5.36	5.36
	Discovery Inverter Transformer	D_INVTR5	653869.2	4922658	2	0	0	78.2	78.2	1	1750.58	3.25	0	75.86	0	-2.31	0	0	1.08	0	0	0	0	0	0	3.6	3.6
	Discovery Inverter Transformer	D_INVTR6	653808.8	4922521	2	0	0	77.3	77.3	1	1897.52	3.25	0	76.56	0	-2.37	0	0	1.16	0	0	0	0	0	0	1.99	1.99
	Discovery Inverter Transformer	D_INVTR1	653440.3	4922792	2	0	0	77.3	77.3	1	1931.23	3.25	0	76.72	0	-2.38	0	0	1.17	0	0	0	0	0	0	1.83	1.83
	Discovery Inverter Transformer	D_INVTR2	653471.4	4922673	2	0	0	77.3	77.3	1	1991.93	3.25	0	76.99	0	-2.4	0	0	1.2	0	0	0	0	0	0	1.56	1.56
	Discovery Inverter Transformer	D_INVTR7	653767.4	4922400	2	0	0	77.3	77.3	1	2021.38	3.25	0	77.11	0	-2.41	0	0	1.22	0	0	0	0	0	0	1.42	1.42
	Discovery Inverter Transformer	D_INVTR3	653517.2	4922537	2	0	0	77.3	77.3	1	2061.34	3.25	0	77.28	0	-2.43	0	0	1.24	0	0	0	0	0	0	1.25	1.25
	Discovery Inverter Transformer	D_INVTR4	653519.4	4922426	2	0	0	77.3	77.3	1	2144.97	3.25	0	77.63	0	-2.46	0	0	1.28	0	0	0	0	0	0	0.89	0.89

Value D/N: 0 0
Level D/N: 25.3423 25.3423

Receiver: Existing Potential Receptor
ID: R38
X: 654854
Y: 4924026
Z: 4.5
Ground: 0

ISO	Description	ID	X	Y	Z	Ground	ReflOrd	LxT	LxN	L/A	Dist.	hm	Freq	Adiv	K0b	Agr	Abar	z	Aatm	Afol	Ahous	Cmet	CmetN	Dc	RL	LtotT	LtotN
	Sparkle Inverter enclosure 4	S_INV4	654129.9	4924735	2	0	0	100.3	100.3	1	1013.59	3.25	0	71.12	0	-0.24	0	0	10.96	0	0	0	0	0	0	18.48	18.48
	Sparkle Inverter enclosure 3	S_INV3	654137.8	4924883	2	0	0	100.3	100.3	1	1116.77	3.25	0	71.96	0	-0.19	0	0	11.28	0	0	0	0	0	0	17.26	17.26
	Sparkle Inverter enclosure 6	S_INV6	654146.3	4925027	2	0	0	100.3	100.3	1	1225.66	3.25	0	72.77	0	-0.14	0	0	11.6	0	0	0	0	0	0	16.09	16.09
	Discovery Inverter enclosure 1	D_INV1	653434.4	4922792	2	0	0	100.3	100.3	1	1880.78	3.25	0	76.49	0	0.09	0	0	13.21	0	0	0	0	0	0	10.52	10.52
	Sparkle Inverter enclosure 1	S_INV1	653943	4925042	2	0	0	97.3	97.3	1	1364.38	3.25	0	73.7	0	-0.09	0	0	11.98	0	0	0	0	0	0	11.72	11.72
	Discovery Inverter enclosure 2	D_INV2	653465.5	4922673	2	0	0	100.3	100.3	1	1938.51	3.25	0	76.75	0	0.11	0	0	13.33	0	0	0	0	0	0	10.12	10.12
	Discovery Inverter enclosure 3	D_INV3	653511.4	4922537	2	0	0	100.3	100.3	1	2004.74	3.25	0	77.04	0	0.13	0	0	13.47	0	0	0	0	0	0	9.67	9.67
	Discovery Inverter enclosure 5	D_INV5	653875	4922657	2	0	0	97.3	97.3	1	1682.91	3.25	0	75.52	0	0.03	0	0	12.76	0	0	0	0	0	0	9	9
	Sparkle Substation Transformer	S_TRS	653933.6	4925172	2.5	0	0	92	92	1	1469.62	3.5	0	74.34	0	-0.28	0	0	3.43	0	0	0	0	0	0	14.49	14.49
	Sparkle Inverter enclosure 2	S_INV2	653973.9	4924893	2	0	0	89.1	89.1	1	1235.26	3.25	0	72.84	0	0.73	0	0	6.75	0	0	0	0	0	0	8.74	8.74
	Sparkle Inverter enclosure 5	S_INV5	653978.3	4925039	2	0	0	89.1	89.1	1	1339.17	3.25	0	73.54	0	0.76	0	0	6.93	0	0	0	0	0	0	7.84	7.84
	Sparkle Inverter enclosure 7	S_INV7	654153.1	4925178	2	0	0	89.1	89.1	1	1348.65	3.25	0	73.6	0	0.76	0	0	6.95	0	0	0	0	0	0	7.76	7.76
	Discovery Substation Transforme	D_TRS	653484.4	4922253	2.5	0	0	92	92	1	2240.47	4.25	0	78.01	0	0.87	3.43	0.28	4.77	0	0	0	0	0	0	4.9	4.9
	Discovery Inverter enclosure 6	D_INV6	653814.6	4922521	2	0	0	89.1	89.1	1	1829.38	3.25	0	76.25	0	0.87	0	0	7.76	0	0	0	0	0	0	4.18	4.18
	Discovery Inverter enclosure 7	D_INV7	653773.3	4922400	2	0	0	89.1	89.1	1	1952.72	3.25	0	76.81	0	0.9	0	0	7.97	0	0	0	0	0	0	3.38	3.38
	Discovery Inverter enclosure 4	D_INV4	653513.6	4922427	2	0	0	89.1	89.1	1	2086.7	3.25	0	77.39	0	0.93	0	0	8.19	0	0	0	0	0	0	2.55	2.55
	Sparkle Inverter transformer 4	S_INVTR4	654124	4924736	2	0	0	77.3	77.3	1	1018.05	3.25	0	71.16	0	-1.94	0	0	0.69	0	0	0	0	0	0	7.44	7.44
	Sparkle Inverter transformer 3	S_INVTR3	654132	4924883	2	0	0	77.3	77.3	1	1120.83	3.25	0	71.99	0	-2.01	0	0	0.75	0	0	0	0	0	0	6.61	6.61

Sparkle Inverter transformer 1	S_INVTR1	653948.9	4925041	2	0	0	78.2	78.2	1	1360.17	3.25	0	73.67	0	-2.13	0	0	0.88	0	0	0	0	0	0	5.82	5.82
Sparkle Inverter transformer 6	S_INVTR6	654140.4	4925027	2	0	0	77.3	77.3	1	1229.37	3.25	0	72.79	0	-2.07	0	0	0.81	0	0	0	0	0	0	5.81	5.81
Sparkle Inverter transformer 2	S_INVTR2	653968	4924893	2	0	0	77.3	77.3	1	1239.71	3.25	0	72.87	0	-2.07	0	0	0.81	0	0	0	0	0	0	5.73	5.73
Sparkle Inverter transformer 5	S_INVTR5	653972.5	4925040	2	0	0	77.3	77.3	1	1343.3	3.25	0	73.56	0	-2.13	0	0	0.87	0	0	0	0	0	0	5.03	5.03
Sparkle Inverter transformer 7	S_INVTR7	654147.2	4925179	2	0	0	77.3	77.3	1	1352.03	3.25	0	73.62	0	-2.13	0	0	0.88	0	0	0	0	0	0	4.98	4.98
Discovery Inverter Transformer	D_INVTR5	653869.2	4922658	2	0	0	78.2	78.2	1	1686.02	3.25	0	75.54	0	-2.28	0	0	1.05	0	0	0	0	0	0	3.94	3.94
Discovery Inverter Transformer	D_INVTR6	653808.8	4922521	2	0	0	77.3	77.3	1	1832.39	3.25	0	76.26	0	-2.34	0	0	1.12	0	0	0	0	0	0	2.3	2.3
Discovery Inverter Transformer	D_INVTR1	653440.3	4922792	2	0	0	77.3	77.3	1	1876.62	3.25	0	76.47	0	-2.36	0	0	1.15	0	0	0	0	0	0	2.09	2.09
Discovery Inverter Transformer	D_INVTR2	653471.4	4922673	2	0	0	77.3	77.3	1	1934.59	3.25	0	76.73	0	-2.38	0	0	1.17	0	0	0	0	0	0	1.82	1.82
Discovery Inverter Transformer	D_INVTR7	653767.4	4922400	2	0	0	77.3	77.3	1	1955.65	3.25	0	76.83	0	-2.39	0	0	1.18	0	0	0	0	0	0	1.72	1.72
Discovery Inverter Transformer	D_INVTR3	653517.2	4922537	2	0	0	77.3	77.3	1	2001.12	3.25	0	77.03	0	-2.41	0	0	1.21	0	0	0	0	0	0	1.51	1.51
Discovery Inverter Transformer	D_INVTR4	653519.4	4922426	2	0	0	77.3	77.3	1	2083.25	3.25	0	77.37	0	-2.43	0	0	1.25	0	0	0	0	0	0	1.16	1.16
Value D/N: 0	0																									
Level D/N: 24.9782	24.9782																									

Receiver: Existing Potential Receptor
ID: R30a
X: 653670
Y: 4922263
Z: 4.5
Ground: 0

Octave Spectrum for most impacted receptor: R30a

ISO	Description	ID	X	Y	Z	Ground	ReflOrd	LxT	LxN	L/A	Dist.	hm	Freq	Adiv	K0b	Agr	Abar	z	Aatm	Afol	Ahous	Cmet	CmetN	Dc	RL	LtotT	LtotN
	Discovery Inverter enclosure 3	D_INV3	653511	4922537	2	0	0	59.8	59.8	1	316.82	3.25	32	61.02	0	-4.15	0	0	0.01	0	0	0	0	0	0	2.93	2.93
	Discovery Inverter enclosure 3	D_INV3	653511	4922537	2	0	0	65.9	65.9	1	316.82	3.25	63	61.02	0	-4.15	0	0	0.04	0	0	0	0	0	0	9	9
	Discovery Inverter enclosure 3	D_INV3	653511	4922537	2	0	0	73.6	73.6	1	316.82	3.25	125	61.02	0	2.34	0	0	0.13	0	0	0	0	0	0	10.11	10.11
	Discovery Inverter enclosure 3	D_INV3	653511	4922537	2	0	0	82.6	82.6	1	316.82	3.25	250	61.02	0	3.92	0	0	0.33	0	0	0	0	0	0	17.34	17.34
	Discovery Inverter enclosure 3	D_INV3	653511	4922537	2	0	0	88.1	88.1	1	316.82	3.25	500	61.02	0	0.31	0	0	0.61	0	0	0	0	0	0	26.16	26.16
	Discovery Inverter enclosure 3	D_INV3	653511	4922537	2	0	0	85.7	85.7	1	316.82	3.25	1000	61.02	0	-1.15	0	0	1.16	0	0	0	0	0	0	24.68	24.68
	Discovery Inverter enclosure 3	D_INV3	653511	4922537	2	0	0	90.6	90.6	1	316.82	3.25	2000	61.02	0	-1.25	0	0	3.06	0	0	0	0	0	0	27.77	27.77
	Discovery Inverter enclosure 3	D_INV3	653511	4922537	2	0	0	99	99	1	316.82	3.25	4000	61.02	0	-1.25	0	0	10.38	0	0	0	0	0	0	28.85	28.85
	Discovery Inverter enclosure 3	D_INV3	653511	4922537	2	0	0	86.3	86.3	1	316.82	3.25	8000	61.02	0	-1.25	0	0	37.03	0	0	0	0	0	0	-10.5	-10.5
	Discovery Inverter enclosure 2	D_INV2	653466	4922673	2	0	0	59.8	59.8	1	458.39	3.25	32	64.22	0	-4.72	0	0	0.01	0	0	0	0	0	0	0.28	0.28
	Discovery Inverter enclosure 2	D_INV2	653466	4922673	2	0	0	65.9	65.9	1	458.39	3.25	63	64.22	0	-4.72	0	0	0.06	0	0	0	0	0	0	6.34	6.34
	Discovery Inverter enclosure 2	D_INV2	653466	4922673	2	0	0	73.6	73.6	1	458.39	3.25	125	64.22	0	2.86	0	0	0.19	0	0	0	0	0	0	6.33	6.33
	Discovery Inverter enclosure 2	D_INV2	653466	4922673	2	0	0	82.6	82.6	1	458.39	3.25	250	64.22	0	3.76	0	0	0.48	0	0	0	0	0	0	14.14	14.14
	Discovery Inverter enclosure 2	D_INV2	653466	4922673	2	0	0	88.1	88.1	1	458.39	3.25	500	64.22	0	0.14	0	0	0.88	0	0	0	0	0	0	22.85	22.85
	Discovery Inverter enclosure 2	D_INV2	653466	4922673	2	0	0	85.7	85.7	1	458.39	3.25	1000	64.22	0	-1.32	0	0	1.68	0	0	0	0	0	0	21.12	21.12
	Discovery Inverter enclosure 2	D_INV2	653466	4922673	2	0	0	90.6	90.6	1	458.39	3.25	2000	64.22	0	-1.42	0	0	4.43	0	0	0	0	0	0	23.36	23.36
	Discovery Inverter enclosure 2	D_INV2	653466	4922673	2	0	0	99	99	1	458.39	3.25	4000	64.22	0	-1.42	0	0	15.02	0	0	0	0	0	0	21.17	21.17
	Discovery Inverter enclosure 2	D_INV2	653466	4922673	2	0	0	86.3	86.3	1	458.39	3.25	8000	64.22	0	-1.42	0	0	53.58	0	0	0	0	0	0	-30.09	-30.09
	Discovery Substation Transforme	D_TRS	653484	4922253	2.5	0	0	49.2	49.2	1	185.89	4.23	32	56.38	0	-3	3.42	0.3	0.01	0	0	0	0	0	0	-7.61	-7.61
	Discovery Substation Transforme	D_TRS	653484	4922253	2.5	0	0	68.4	68.4	1	185.89	4.23	63	56.38	0	-3	4.47	0.3	0.02	0	0	0	0	0	0	10.53	10.53
	Discovery Substation Transforme	D_TRS	653484	4922253	2.5	0	0	80.5	80.5	1	185.89	4.23	125	56.38	0	2.33	3.81	0.3	0.08	0	0	0	0	0	0	17.91	17.91
	Discovery Substation Transforme	D_TRS	653484	4922253	2.5	0	0	83	83	1	185.89	4.23	250	56.38	0	3.4	4.36	0.3	0.19	0	0	0	0	0	0	18.66	18.66
	Discovery Substation Transforme	D_TRS	653484	4922253	2.5	0	0	88.4	88.4	1	185.89	4.23	500	56.38	0	-0.36	9.37	0.3	0.36	0	0	0	0	0	0	22.65	22.65
	Discovery Substation Transforme	D_TRS	653484	4922253	2.5	0	0	85.6	85.6	1	185.89	4.23	1000	56.38	0	-0.89	11.76	0.3	0.68	0	0	0	0	0	0	17.67	17.67
	Discovery Substation Transforme	D_TRS	653484	4922253	2.5	0	0	81.8	81.8	1	185.89	4.23	2000	56.38	0	-0.9	14.41	0.3	1.8	0	0	0	0	0	0	10.11	10.11
	Discovery Substation Transforme	D_TRS	653484	4922253	2.5	0	0	76.6	76.6	1	185.89	4.23	4000	56.38	0	-0.9	17.22	0.3	6.09	0	0	0	0	0	0	-2.2	-2.2
	Discovery Substation Transforme	D_TRS	653484	4922253	2.5	0	0	67.5	67.5	1	185.89	4.23	8000	56.38	0	-0.9	19.58	0.3	21.73	0	0	0	0	0	0	-29.29	-29.29
	Discovery Inverter enclosure 1	D_INV1	653434	4922792	2	0	0	59.8	59.8	1	579.31	3.25	32	66.26	0	-4.99	0	0	0.02	0	0	0	0	0	0	-1.49	-1.49
	Discovery Inverter enclosure 1	D_INV1	653434	4922792	2	0	0	65.9	65.9	1	579.31	3.25	63	66.26	0	-4.99	0	0	0.07	0	0	0	0	0	0	4.56	4.56
	Discovery Inverter enclosure 1	D_INV1	653434	4922792	2	0	0	73.6	73.6	1	579.31	3.25	125	66.26	0	3.34	0	0	0.24	0	0	0	0	0	0	3.76	3.76
	Discovery Inverter enclosure 1	D_INV1	653434	4922792	2	0	0	82.6	82.6	1	579.31	3.25	250	66.26	0	3.68	0	0	0.6	0	0	0	0	0	0	12.06	12.06
	Discovery Inverter enclosure 1	D_INV1	653434	4922792	2	0	0	88.1	88.1	1	579.31	3.25	500	66.26	0	0.06	0	0	1.12	0	0	0	0	0	0	20.66	20.66
	Discovery Inverter enclosure 1	D_INV1	653434	4922792	2	0	0	85.7	85.7	1	579.31	3.25	1000	66.26	0	-1.4	0	0	2.12	0	0	0	0	0	0	18.72	18.72
	Discovery Inverter enclosure 1	D_INV1	653434	4922792	2	0	0	90.6	90.6	1	579.31	3.25	2000	66.26	0	-1.5	0	0	5.6	0	0	0	0	0	0	20.24	20.24
	Discovery Inverter enclosure 1	D_INV1	653434	4922792	2	0	0	99	99	1	579.31	3.25	4000	66.26	0	-1.5	0	0	18.98	0	0	0	0	0	0	15.25	15.25
	Discovery Inverter enclosure 1	D_INV1	653434	4922792	2	0	0	86.3	86.3	1	579.31	3.25	8000	66.26	0	-1.5	0	0	67.71	0	0	0	0	0	0	-46.17	-46.17
	Discovery Inverter enclosure 7	D_INV7	653773	4922400	2	0	0	69.6	69.6	1	171.27	3.25	125	55.67	0	2.03	0	0	0.07	0	0	0	0	0	0	11.82	11.82
	Discovery Inverter enclosure 7	D_INV7	653773	4922400	2	0	0	78.6	78.6	1	171.27	3.25	250	55.67	0	4.1	0	0	0.18	0	0	0	0	0	0	18.64	18.64
	Discovery Inverter enclosure 7	D_INV7	653773	4922400	2	0	0	82.1	82.1	1	171.27	3.25	500	55.67	0	0.61	0	0	0.33	0	0	0	0	0	0	25.49	25.49
	Discovery Inverter enclosure 7	D_INV7	653773	4922400	2	0	0	75.7	75.7	1	171.27	3.25	1000	55.67	0	-0.81	0	0	0.63	0	0	0	0	0	0	20.21	20.21
	Discovery Inverter enclosure 7	D_INV7	653773	4922400	2	0	0	73.6	73.6	1	171.27	3.25	2000	55.67	0	-0.9	0	0	1.66	0	0	0	0	0	0	17.17	17.17
	Discovery Inverter enclosure 7	D_INV7	653773	4922400	2	0	0	87	87	1	171.27	3.25	4000	55.67	0	-0.9	0	0	5.61	0	0	0	0	0	0	26.61	26.61
	Discovery Inverter enclosure 5	D_INV5	653875	4922657	2	0	0	56.8	56.8	1	444.28	3.25	32	63.95	0	-4.68	0	0	0.01	0	0	0	0	0	0	-2.48	-2.48
	Discovery Inverter enclosure 5	D_INV5	653875	4922657	2	0	0	62.9	62.9	1	444.28	3.25	63	63.95	0	-4.68	0	0	0.05	0	0	0	0	0	0	3.58	3.58
	Discovery Inverter enclosure 5	D_INV5	653875	4922657	2	0	0	70.6	70.6	1	444.28	3.25	125	63.95	0	2.8	0	0	0.18	0	0	0	0	0	0	3.66	3.66
	Discovery Inverter enclosure 5	D_INV5	653875	4922657	2	0	0	79.6	79.6	1	444.28	3.25	250	63.95	0	3.77	0	0	0.46	0	0	0	0	0	0	11.42	11.42
	Discovery Inverter enclosure 5	D_INV5	653875	4922657	2	0	0	85.1	85.1	1	444.28	3.25	500	63.95	0	0.15	0	0	0.86	0	0	0	0	0	0	20.14	20.14
	Discovery Inverter enclosure 5	D_INV5	653875	4922657	2	0	0	82.7	82.7	1	444.28	3.25	1000	63.95	0	-1.31	0	0	1.63	0	0	0	0	0	0	18.43	18.43
	Discovery Inverter enclosure 5	D_INV5	653875	4922657	2	0	0	87.6	87.6	1	444.28	3.25	2000	63.95	0	-1.4	0	0	4.29	0	0	0	0	0	0	20.76	20.76
	Discovery Inverter enclosure 5	D_INV5	653875	4922657	2	0	0	96	96	1	444.28	3.25	4000	63.95	0	-1.4	0	0	14.56	0	0	0	0	0	0	18.89	18.89
	Discovery Inverter enclosure 5	D_INV5	653875	4922657	2	0	0	83.3	83.3	1	444.28	3.25	8000	63.95	0	-1.4	0	0	51.93	0	0	0	0	0	0	-31.18	-31.18
	Discovery Inverter enclosure 4	D_INV4	653514	4922427	2	0	0	69.6	69.6	1	226.47	3.25	125	58.1	0	2.15	0	0	0.09	0	0	0	0	0	0	9.25	9.25
	Discovery Inverter enclosure 4	D_INV4	653514	4922427	2	0	0	78.6	78.6	1	226.47	3.25	250	58.1	0	4.09	0	0	0.24	0	0	0	0	0	0	16.17	16.17
	Discovery Inverter enclosure 4	D_INV4	653514	4922427	2	0	0	82.1	82.1	1	226.47	3.25	500	58.1	0	0.52	0	0	0.44	0	0	0	0	0	0	23.05	23.05
	Discovery Inverter enclosure 4	D_INV4	653514	4922427	2	0	0	75.7	75.7	1	226.47	3.25	1000	58.1	0	-0.93	0	0	0.83	0	0	0	0	0	0	17.7	17.7
	Discovery Inverter enclosure 4	D_INV4	653514	4922427	2	0	0	73.6	73.6	1	226.47	3.25	2000	58.1	0	-1.03	0	0	2.19	0	0	0	0	0	0	14.34	14.34
	Discovery Inverter enclosure 4	D_INV4	653514	4922427	2	0	0	87	87	1	226.47	3.25	4000	58.1	0	-1.03	0	0	7.42	0	0	0	0	0	0	22.5	22.5
	Discovery Inverter enclosure 6	D_INV6	653815	4922521	2	0	0	69.6	69.6	1	295.41	3.25	125	60.41	0	2.28	0	0	0.12	0	0	0	0	0	0	6.79	6.79
	Discovery Inverter enclosure 6	D_INV6	653815	4922521	2	0	0	78.6	78.6	1	295.41	3.25	250	60.41	0	3.95	0	0	0.31	0	0	0	0	0	0	13.93	13.93
	Discovery Inverter enclosure 6	D_INV6	653815	4922521	2	0	0	82.1	82.1	1	295.41	3.25	500	60.41	0	0.35	0	0	0.57	0	0	0	0	0	0	20.77	20.77
	Discovery Inverter enclosure 6	D_INV6	653815	4922521	2	0	0	75.7	75.7	1	295.41	3.25	1000	60.41	0	-1.11	0	0	1.08	0	0	0	0	0	0	15.32	15.32
	Discovery Inverter enclosure 6	D_INV6	653815	4922521	2	0	0	73.6	73.6	1	295.41	3.25	2000	60.41	0	-1.21	0	0	2.85	0	0	0	0	0	0	11.54	11.54
	Discovery Inverter enclosure 6	D_INV6	653815	4922521	2	0	0	87	87	1	295.41	3.25	4000	60.41	0	-1.21	0	0	9.68	0	0	0	0	0	0	18.12	18.12

Discovery Inverter Transformer	D_INVTR7	653767	4922400	2	0	0	65.3	65.3	1	168.11	3.25	32	55.51	0	-3	0	0	0.01	0	0	0	0	0	0	12.78	12.78
Discovery Inverter Transformer	D_INVTR7	653767	4922400	2	0	0	71.3	71.3	1	168.11	3.25	63	55.51	0	-3	0	0	0.02	0	0	0	0	0	0	18.77	18.77
Discovery Inverter Transformer	D_INVTR7	653767	4922400	2	0	0	73.3	73.3	1	168.11	3.25	125	55.51	0	2.02	0	0	0.07	0	0	0	0	0	0	15.7	15.7
Discovery Inverter Transformer	D_INVTR7	653767	4922400	2	0	0	68.3	68.3	1	168.11	3.25	250	55.51	0	4.09	0	0	0.18	0	0	0	0	0	0	8.52	8.52
Discovery Inverter Transformer	D_INVTR7	653767	4922400	2	0	0	68.3	68.3	1	168.11	3.25	500	55.51	0	0.6	0	0	0.32	0	0	0	0	0	0	11.86	11.86
Discovery Inverter Transformer	D_INVTR7	653767	4922400	2	0	0	62.3	62.3	1	168.11	3.25	1000	55.51	0	-0.81	0	0	0.61	0	0	0	0	0	0	6.98	6.98
Discovery Inverter Transformer	D_INVTR7	653767	4922400	2	0	0	57.3	57.3	1	168.11	3.25	2000	55.51	0	-0.9	0	0	1.62	0	0	0	0	0	0	1.06	1.06
Discovery Inverter Transformer	D_INVTR7	653767	4922400	2	0	0	52.3	52.3	1	168.11	3.25	4000	55.51	0	-0.9	0	0	5.51	0	0	0	0	0	0	-7.82	-7.82
Discovery Inverter Transformer	D_INVTR7	653767	4922400	2	0	0	45.3	45.3	1	168.11	3.25	8000	55.51	0	-0.9	0	0	19.65	0	0	0	0	0	0	-28.96	-28.96
Sparkle Inverter enclosure 4	S_INV4	654130	4924735	2	0	0	59.8	59.8	1	2514.63	3.25	32	79.01	0	-5.77	0	0	0.08	0	0	0	0	0	0	-13.52	-13.52
Sparkle Inverter enclosure 4	S_INV4	654130	4924735	2	0	0	65.9	65.9	1	2514.63	3.25	63	79.01	0	-5.77	0	0	0.31	0	0	0	0	0	0	-7.65	-7.65
Sparkle Inverter enclosure 4	S_INV4	654130	4924735	2	0	0	73.6	73.6	1	2514.63	3.25	125	79.01	0	4.45	0	0	1.03	0	0	0	0	0	0	-10.89	-10.89
Sparkle Inverter enclosure 4	S_INV4	654130	4924735	2	0	0	82.6	82.6	1	2514.63	3.25	250	79.01	0	3.44	0	0	2.62	0	0	0	0	0	0	-2.48	-2.48
Sparkle Inverter enclosure 4	S_INV4	654130	4924735	2	0	0	88.1	88.1	1	2514.63	3.25	500	79.01	0	-0.17	0	0	4.85	0	0	0	0	0	0	4.42	4.42
Sparkle Inverter enclosure 4	S_INV4	654130	4924735	2	0	0	85.7	85.7	1	2514.63	3.25	1000	79.01	0	-1.63	0	0	9.2	0	0	0	0	0	0	-0.87	-0.87
Sparkle Inverter enclosure 4	S_INV4	654130	4924735	2	0	0	90.6	90.6	1	2514.63	3.25	2000	79.01	0	-1.73	0	0	24.3	0	0	0	0	0	0	-10.98	-10.98
Sparkle Inverter enclosure 4	S_INV4	654130	4924735	2	0	0	99	99	1	2514.63	3.25	4000	79.01	0	-1.73	0	0	82.4	0	0	0	0	0	0	-60.68	-60.68
Sparkle Inverter enclosure 4	S_INV4	654130	4924735	2	0	0	86.3	86.3	1	2514.63	3.25	8000	79.01	0	-1.73	0	0	293.92	0	0	0	0	0	0	-284.89	-284.89
Sparkle Inverter enclosure 3	S_INV3	654138	4924883	2	0	0	59.8	59.8	1	2661.35	3.25	32	79.5	0	-5.78	0	0	0.09	0	0	0	0	0	0	-14.01	-14.01
Sparkle Inverter enclosure 3	S_INV3	654138	4924883	2	0	0	65.9	65.9	1	2661.35	3.25	63	79.5	0	-5.78	0	0	0.32	0	0	0	0	0	0	-8.15	-8.15
Sparkle Inverter enclosure 3	S_INV3	654138	4924883	2	0	0	73.6	73.6	1	2661.35	3.25	125	79.5	0	4.45	0	0	1.09	0	0	0	0	0	0	-11.44	-11.44
Sparkle Inverter enclosure 3	S_INV3	654138	4924883	2	0	0	82.6	82.6	1	2661.35	3.25	250	79.5	0	3.44	0	0	2.78	0	0	0	0	0	0	-3.12	-3.12
Sparkle Inverter enclosure 3	S_INV3	654138	4924883	2	0	0	88.1	88.1	1	2661.35	3.25	500	79.5	0	-0.18	0	0	5.13	0	0	0	0	0	0	3.64	3.64
Sparkle Inverter enclosure 3	S_INV3	654138	4924883	2	0	0	85.7	85.7	1	2661.35	3.25	1000	79.5	0	-1.64	0	0	9.73	0	0	0	0	0	0	-1.9	-1.9
Sparkle Inverter enclosure 3	S_INV3	654138	4924883	2	0	0	90.6	90.6	1	2661.35	3.25	2000	79.5	0	-1.73	0	0	25.72	0	0	0	0	0	0	-12.89	-12.89
Sparkle Inverter enclosure 3	S_INV3	654138	4924883	2	0	0	99	99	1	2661.35	3.25	4000	79.5	0	-1.73	0	0	87.21	0	0	0	0	0	0	-65.98	-65.98
Sparkle Inverter enclosure 3	S_INV3	654138	4924883	2	0	0	86.3	86.3	1	2661.35	3.25	8000	79.5	0	-1.73	0	0	311.06	0	0	0	0	0	0	-302.53	-302.53
Sparkle Inverter enclosure 6	S_INV6	654146	4925027	2	0	0	59.8	59.8	1	2804.4	3.25	32	79.96	0	-5.79	0	0	0.09	0	0	0	0	0	0	-14.46	-14.46
Sparkle Inverter enclosure 6	S_INV6	654146	4925027	2	0	0	65.9	65.9	1	2804.4	3.25	63	79.96	0	-5.79	0	0	0.34	0	0	0	0	0	0	-8.61	-8.61
Sparkle Inverter enclosure 6	S_INV6	654146	4925027	2	0	0	73.6	73.6	1	2804.4	3.25	125	79.96	0	4.44	0	0	1.15	0	0	0	0	0	0	-11.95	-11.95
Sparkle Inverter enclosure 6	S_INV6	654146	4925027	2	0	0	82.6	82.6	1	2804.4	3.25	250	79.96	0	3.44	0	0	2.93	0	0	0	0	0	0	-3.72	-3.72
Sparkle Inverter enclosure 6	S_INV6	654146	4925027	2	0	0	88.1	88.1	1	2804.4	3.25	500	79.96	0	-0.18	0	0	5.41	0	0	0	0	0	0	2.92	2.92
Sparkle Inverter enclosure 6	S_INV6	654146	4925027	2	0	0	85.7	85.7	1	2804.4	3.25	1000	79.96	0	-1.64	0	0	10.26	0	0	0	0	0	0	-2.87	-2.87
Sparkle Inverter enclosure 6	S_INV6	654146	4925027	2	0	0	90.6	90.6	1	2804.4	3.25	2000	79.96	0	-1.74	0	0	27.1	0	0	0	0	0	0	-14.72	-14.72
Sparkle Inverter enclosure 6	S_INV6	654146	4925027	2	0	0	99	99	1	2804.4	3.25	4000	79.96	0	-1.74	0	0	91.9	0	0	0	0	0	0	-71.12	-71.12
Sparkle Inverter enclosure 6	S_INV6	654146	4925027	2	0	0	86.3	86.3	1	2804.4	3.25	8000	79.96	0	-1.74	0	0	327.78	0	0	0	0	0	0	-319.7	-319.7
Discovery Inverter Transformer	D_INVTR4	653519	4922426	2	0	0	65.3	65.3	1	222.18	3.25	32	57.93	0	-3.37	0	0	0.01	0	0	0	0	0	0	10.73	10.73
Discovery Inverter Transformer	D_INVTR4	653519	4922426	2	0	0	71.3	71.3	1	222.18	3.25	63	57.93	0	-3.37	0	0	0.03	0	0	0	0	0	0	16.71	16.71
Discovery Inverter Transformer	D_INVTR4	653519	4922426	2	0	0	73.3	73.3	1	222.18	3.25	125	57.93	0	2.15	0	0	0.09	0	0	0	0	0	0	13.12	13.12
Discovery Inverter Transformer	D_INVTR4	653519	4922426	2	0	0	68.3	68.3	1	222.18	3.25	250	57.93	0	4.1	0	0	0.23	0	0	0	0	0	0	6.03	6.03
Discovery Inverter Transformer	D_INVTR4	653519	4922426	2	0	0	68.3	68.3	1	222.18	3.25	500	57.93	0	0.53	0	0	0.43	0	0	0	0	0	0	9.41	9.41
Discovery Inverter Transformer	D_INVTR4	653519	4922426	2	0	0	62.3	62.3	1	222.18	3.25	1000	57.93	0	-0.92	0	0	0.81	0	0	0	0	0	0	4.47	4.47
Discovery Inverter Transformer	D_INVTR4	653519	4922426	2	0	0	57.3	57.3	1	222.18	3.25	2000	57.93	0	-1.01	0	0	2.15	0	0	0	0	0	0	-1.77	-1.77
Discovery Inverter Transformer	D_INVTR4	653519	4922426	2	0	0	52.3	52.3	1	222.18	3.25	4000	57.93	0	-1.01	0	0	7.28	0	0	0	0	0	0	-11.9	-11.9
Discovery Inverter Transformer	D_INVTR4	653519	4922426	2	0	0	45.3	45.3	1	222.18	3.25	8000	57.93	0	-1.01	0	0	25.97	0	0	0	0	0	0	-37.59	-37.59
Sparkle Inverter enclosure 1	S_INV1	653943	4925042	2	0	0	56.8	56.8	1	2792.08	3.25	32	79.92	0	-5.79	0	0	0.09	0	0	0	0	0	0	-17.42	-17.42
Sparkle Inverter enclosure 1	S_INV1	653943	4925042	2	0	0	62.9	62.9	1	2792.08	3.25	63	79.92	0	-5.79	0	0	0.34	0	0	0	0	0	0	-11.57	-11.57
Sparkle Inverter enclosure 1	S_INV1	653943	4925042	2	0	0	70.6	70.6	1	2792.08	3.25	125	79.92	0	4.44	0	0	1.15	0	0	0	0	0	0	-14.91	-14.91
Sparkle Inverter enclosure 1	S_INV1	653943	4925042	2	0	0	79.6	79.6	1	2792.08	3.25	250	79.92	0	3.44	0	0	2.91	0	0	0	0	0	0	-6.67	-6.67
Sparkle Inverter enclosure 1	S_INV1	653943	4925042	2	0	0	85.1	85.1	1	2792.08	3.25	500	79.92	0	-0.18	0	0	5.38	0	0	0	0	0	0	-0.02	-0.02
Sparkle Inverter enclosure 1	S_INV1	653943	4925042	2	0	0	82.7	82.7	1	2792.08	3.25	1000	79.92	0	-1.64	0	0	10.21	0	0	0	0	0	0	-5.79	-5.79
Sparkle Inverter enclosure 1	S_INV1	653943	4925042	2	0	0	87.6	87.6	1	2792.08	3.25	2000	79.92	0	-1.74	0	0	26.98	0	0	0	0	0	0	-17.56	-17.56
Sparkle Inverter enclosure 1	S_INV1	653943	4925042	2	0	0	96	96	1	2792.08	3.25	4000	79.92	0	-1.74	0	0	91.5	0	0	0	0	0	0	-73.68	-73.68
Sparkle Inverter enclosure 1	S_INV1	653943	4925042	2	0	0	83.3	83.3	1	2792.08	3.25	8000	79.92	0	-1.74	0	0	326.34	0	0	0	0	0	0	-321.22	-321.22
Discovery Inverter Transformer	D_INVTR6	653809	4922521	2	0	0	65.3	65.3	1	292.92	3.25	32	60.34	0	-4	0	0	0.01	0	0	0	0	0	0	8.96	8.96
Discovery Inverter Transformer	D_INVTR6	653809	4922521	2	0	0	71.3	71.3	1	292.92	3.25	63	60.34	0	-4	0	0	0.04	0	0	0	0	0	0	14.93	14.93
Discovery Inverter Transformer	D_INVTR6	653809	4922521	2	0	0	73.3	73.3	1	292.92	3.25	125	60.34	0	2.27	0	0	0.12	0	0	0	0	0	0	10.57	10.57
Discovery Inverter Transformer	D_INVTR6	653809	4922521	2	0	0	68.3	68.3	1	292.92	3.25	250	60.34	0	3.96	0	0	0.31	0	0	0	0	0	0	3.7	3.7
Discovery Inverter Transformer	D_INVTR6	653809	4922521	2	0	0	68.3	68.3	1	292.92	3.25	500	60.34	0	0.35	0	0	0.56	0	0	0	0	0	0	7.05	7.05
Discovery Inverter Transformer	D_INVTR6	653809	4922521	2	0	0	62.3	62.3	1	292.92	3.25	1000	60.34	0	-1.11	0	0	1.07	0	0	0	0	0	0	2	2
Discovery Inverter Transformer	D_INVTR6	653809	4922521	2	0	0	57.3	57.3	1	292.92	3.25	2000	60.34	0	-1.2	0	0	2.83	0	0	0	0	0	0	-4.67	-4.67
Discovery Inverter Transformer	D_INVTR6	653809	4922521	2	0	0	52.3	52.3	1	292.92	3.25	4000	60.34	0	-1.2	0	0	9.6	0	0	0	0	0	0	-16.43	-16.43
Discovery Inverter Transformer	D_INVTR6	653809	4922521	2	0	0	45.3	45.3	1	292.92	3.25	8000	60.34	0	-1.2	0	0	34.24	0	0	0	0	0	0	-48.07	-48.07
Discovery Inverter Transformer	D_INVTR3	653517	4922537	2	0	0	65.3	65.3	1	313.59	3.25	32	60.93	0	-4.13	0	0	0.01	0	0	0	0	0	0	8.5	8.5
Discovery Inverter Transformer	D_INVTR3	653517	4922537	2	0	0	71.3	71.3	1	313.59	3.25	63	60.93	0	-4.13	0	0	0.04	0	0	0	0	0	0	14.47	14.47
Discovery Inverter Transformer	D_INVTR3	653517	4922537	2	0	0	73.3	73.3	1	313.59	3.25	125	60.93	0	2.33	0	0	0.13	0	0	0	0	0	0	9.91	9.91
Discovery Inverter Transformer	D_INVTR3	653517	4922537	2	0	0	68.3	68.3	1	313.59	3.25	250	60.93	0	3.92	0	0	0.33	0	0	0	0	0	0	3.12	3.12
Discovery Inverter Transformer	D_INVTR3	653517	4922537	2	0	0	68.3	68.3	1	313.59	3.25	500	60.93	0	0.31	0	0	0.6	0	0	0	0	0	0	6.45	6.45
Discovery Inverter Transformer	D_INVTR3	653517	4922537	2	0	0	62.3	62.3	1	313.59	3.25	1000	60.93	0	-1.14	0	0	1.15	0	0	0	0	0	0	1.37	1.37
Discovery Inverter Transformer	D_INVTR3	653517	4922537	2	0	0	57.3	57.3	1	313.59	3.25	2000	60.93	0	-1.24	0	0	3.03	0	0	0	0	0	0	-5.42	-5.42
Discovery Inverter Transformer	D_INVTR3	653517	4922537	2	0	0	52.3	52.3	1	313.59	3.25	4000	60.93	0	-1.24	0	0	10.28	0	0	0	0	0	0	-17.66	-17.66

Discovery Inverter Transformer	D_INVTR3	653517	4922537	2	0	0	45.3	45.3	1	313.59	3.25	8000	60.93	0	-1.24	0	0	36.65	0	0	0	0	0	0	-51.04	-51.04
Discovery Inverter Transformer	D_INVTR5	653869	4922658	2	0	0	66.2	66.2	1	441.94	3.25	32	63.91	0	-4.68	0	0	0.01	0	0	0	0	0	0	6.95	6.95
Discovery Inverter Transformer	D_INVTR5	653869	4922658	2	0	0	72.2	72.2	1	441.94	3.25	63	63.91	0	-4.68	0	0	0.05	0	0	0	0	0	0	12.92	12.92
Discovery Inverter Transformer	D_INVTR5	653869	4922658	2	0	0	74.2	74.2	1	441.94	3.25	125	63.91	0	2.79	0	0	0.18	0	0	0	0	0	0	7.32	7.32
Discovery Inverter Transformer	D_INVTR5	653869	4922658	2	0	0	69.2	69.2	1	441.94	3.25	250	63.91	0	3.77	0	0	0.46	0	0	0	0	0	0	1.06	1.06
Discovery Inverter Transformer	D_INVTR5	653869	4922658	2	0	0	69.2	69.2	1	441.94	3.25	500	63.91	0	0.15	0	0	0.85	0	0	0	0	0	0	4.29	4.29
Discovery Inverter Transformer	D_INVTR5	653869	4922658	2	0	0	63.2	63.2	1	441.94	3.25	1000	63.91	0	-1.31	0	0	1.62	0	0	0	0	0	0	-1.02	-1.02
Discovery Inverter Transformer	D_INVTR5	653869	4922658	2	0	0	58.2	58.2	1	441.94	3.25	2000	63.91	0	-1.4	0	0	4.27	0	0	0	0	0	0	-8.58	-8.58
Discovery Inverter Transformer	D_INVTR5	653869	4922658	2	0	0	53.2	53.2	1	441.94	3.25	4000	63.91	0	-1.4	0	0	14.48	0	0	0	0	0	0	-23.79	-23.79
Discovery Inverter Transformer	D_INVTR5	653869	4922658	2	0	0	46.2	46.2	1	441.94	3.25	8000	63.91	0	-1.4	0	0	51.66	0	0	0	0	0	0	-67.96	-67.96
Discovery Inverter Transformer	D_INVTR2	653471	4922673	2	0	0	65.3	65.3	1	455.46	3.25	32	64.17	0	-4.72	0	0	0.01	0	0	0	0	0	0	5.83	5.83
Discovery Inverter Transformer	D_INVTR2	653471	4922673	2	0	0	71.3	71.3	1	455.46	3.25	63	64.17	0	-4.72	0	0	0.06	0	0	0	0	0	0	11.79	11.79
Discovery Inverter Transformer	D_INVTR2	653471	4922673	2	0	0	73.3	73.3	1	455.46	3.25	125	64.17	0	2.85	0	0	0.19	0	0	0	0	0	0	6.1	6.1
Discovery Inverter Transformer	D_INVTR2	653471	4922673	2	0	0	68.3	68.3	1	455.46	3.25	250	64.17	0	3.76	0	0	0.48	0	0	0	0	0	0	-0.1	-0.1
Discovery Inverter Transformer	D_INVTR2	653471	4922673	2	0	0	68.3	68.3	1	455.46	3.25	500	64.17	0	0.14	0	0	0.88	0	0	0	0	0	0	3.11	3.11
Discovery Inverter Transformer	D_INVTR2	653471	4922673	2	0	0	62.3	62.3	1	455.46	3.25	1000	64.17	0	-1.32	0	0	1.67	0	0	0	0	0	0	-2.22	-2.22
Discovery Inverter Transformer	D_INVTR2	653471	4922673	2	0	0	57.3	57.3	1	455.46	3.25	2000	64.17	0	-1.41	0	0	4.4	0	0	0	0	0	0	-9.86	-9.86
Discovery Inverter Transformer	D_INVTR2	653471	4922673	2	0	0	52.3	52.3	1	455.46	3.25	4000	64.17	0	-1.41	0	0	14.93	0	0	0	0	0	0	-25.38	-25.38
Discovery Inverter Transformer	D_INVTR2	653471	4922673	2	0	0	45.3	45.3	1	455.46	3.25	8000	64.17	0	-1.41	0	0	53.23	0	0	0	0	0	0	-70.69	-70.69
Sparkle Substation Transformer	S_TRS	653934	4925172	2.5	0	0	49.2	49.2	1	2920.62	3.5	32	80.31	0	-5.78	0	0	0.09	0	0	0	0	0	0	-25.42	-25.42
Sparkle Substation Transformer	S_TRS	653934	4925172	2.5	0	0	68.4	68.4	1	2920.62	3.5	63	80.31	0	-5.78	0	0	0.36	0	0	0	0	0	0	-6.48	-6.48
Sparkle Substation Transformer	S_TRS	653934	4925172	2.5	0	0	80.5	80.5	1	2920.62	3.5	125	80.31	0	4.21	0	0	1.2	0	0	0	0	0	0	-5.22	-5.22
Sparkle Substation Transformer	S_TRS	653934	4925172	2.5	0	0	83	83	1	2920.62	3.5	250	80.31	0	2.67	0	0	3.05	0	0	0	0	0	0	-3.02	-3.02
Sparkle Substation Transformer	S_TRS	653934	4925172	2.5	0	0	88.4	88.4	1	2920.62	3.5	500	80.31	0	-1.18	0	0	5.63	0	0	0	0	0	0	3.64	3.64
Sparkle Substation Transformer	S_TRS	653934	4925172	2.5	0	0	85.6	85.6	1	2920.62	3.5	1000	80.31	0	-1.72	0	0	10.68	0	0	0	0	0	0	-3.67	-3.67
Sparkle Substation Transformer	S_TRS	653934	4925172	2.5	0	0	81.8	81.8	1	2920.62	3.5	2000	80.31	0	-1.74	0	0	28.22	0	0	0	0	0	0	-25	-25
Sparkle Substation Transformer	S_TRS	653934	4925172	2.5	0	0	76.6	76.6	1	2920.62	3.5	4000	80.31	0	-1.74	0	0	95.71	0	0	0	0	0	0	-97.68	-97.68
Sparkle Substation Transformer	S_TRS	653934	4925172	2.5	0	0	67.5	67.5	1	2920.62	3.5	8000	80.31	0	-1.74	0	0	341.37	0	0	0	0	0	0	-352.44	-352.44
Discovery Inverter Transformer	D_INVTR1	653440	4922792	2	0	0	65.3	65.3	1	576.6	3.25	32	66.22	0	-4.99	0	0	0.02	0	0	0	0	0	0	4.05	4.05
Discovery Inverter Transformer	D_INVTR1	653440	4922792	2	0	0	71.3	71.3	1	576.6	3.25	63	66.22	0	-4.99	0	0	0.07	0	0	0	0	0	0	10	10
Discovery Inverter Transformer	D_INVTR1	653440	4922792	2	0	0	73.3	73.3	1	576.6	3.25	125	66.22	0	3.33	0	0	0.24	0	0	0	0	0	0	3.51	3.51
Discovery Inverter Transformer	D_INVTR1	653440	4922792	2	0	0	68.3	68.3	1	576.6	3.25	250	66.22	0	3.68	0	0	0.6	0	0	0	0	0	0	-2.2	-2.2
Discovery Inverter Transformer	D_INVTR1	653440	4922792	2	0	0	68.3	68.3	1	576.6	3.25	500	66.22	0	0.06	0	0	1.11	0	0	0	0	0	0	0.91	0.91
Discovery Inverter Transformer	D_INVTR1	653440	4922792	2	0	0	62.3	62.3	1	576.6	3.25	1000	66.22	0	-1.4	0	0	2.11	0	0	0	0	0	0	-4.63	-4.63
Discovery Inverter Transformer	D_INVTR1	653440	4922792	2	0	0	57.3	57.3	1	576.6	3.25	2000	66.22	0	-1.5	0	0	5.57	0	0	0	0	0	0	-12.99	-12.99
Discovery Inverter Transformer	D_INVTR1	653440	4922792	2	0	0	52.3	52.3	1	576.6	3.25	4000	66.22	0	-1.5	0	0	18.9	0	0	0	0	0	0	-31.32	-31.32
Discovery Inverter Transformer	D_INVTR1	653440	4922792	2	0	0	45.3	45.3	1	576.6	3.25	8000	66.22	0	-1.5	0	0	67.39	0	0	0	0	0	0	-86.82	-86.82
Sparkle Inverter enclosure 2	S_INV2	653974	4924893	2	0	0	69.6	69.6	1	2647.21	3.25	125	79.46	0	4.45	0	0	1.09	0	0	0	0	0	0	-15.39	-15.39
Sparkle Inverter enclosure 2	S_INV2	653974	4924893	2	0	0	78.6	78.6	1	2647.21	3.25	250	79.46	0	3.44	0	0	2.76	0	0	0	0	0	0	-7.06	-7.06
Sparkle Inverter enclosure 2	S_INV2	653974	4924893	2	0	0	82.1	82.1	1	2647.21	3.25	500	79.46	0	-0.18	0	0	5.1	0	0	0	0	0	0	-2.28	-2.28
Sparkle Inverter enclosure 2	S_INV2	653974	4924893	2	0	0	75.7	75.7	1	2647.21	3.25	1000	79.46	0	-1.64	0	0	9.68	0	0	0	0	0	0	-11.8	-11.8
Sparkle Inverter enclosure 2	S_INV2	653974	4924893	2	0	0	73.6	73.6	1	2647.21	3.25	2000	79.46	0	-1.73	0	0	25.58	0	0	0	0	0	0	-29.7	-29.7
Sparkle Inverter enclosure 2	S_INV2	653974	4924893	2	0	0	87	87	1	2647.21	3.25	4000	79.46	0	-1.73	0	0	86.75	0	0	0	0	0	0	-77.47	-77.47
Sparkle Inverter enclosure 5	S_INV5	653978	4925039	2	0	0	69.6	69.6	1	2793.25	3.25	125	79.92	0	4.44	0	0	1.15	0	0	0	0	0	0	-15.91	-15.91
Sparkle Inverter enclosure 5	S_INV5	653978	4925039	2	0	0	78.6	78.6	1	2793.25	3.25	250	79.92	0	3.44	0	0	2.91	0	0	0	0	0	0	-7.67	-7.67
Sparkle Inverter enclosure 5	S_INV5	653978	4925039	2	0	0	82.1	82.1	1	2793.25	3.25	500	79.92	0	-0.18	0	0	5.39	0	0	0	0	0	0	-3.03	-3.03
Sparkle Inverter enclosure 5	S_INV5	653978	4925039	2	0	0	75.7	75.7	1	2793.25	3.25	1000	79.92	0	-1.64	0	0	10.22	0	0	0	0	0	0	-12.8	-12.8
Sparkle Inverter enclosure 5	S_INV5	653978	4925039	2	0	0	73.6	73.6	1	2793.25	3.25	2000	79.92	0	-1.74	0	0	26.99	0	0	0	0	0	0	-31.58	-31.58
Sparkle Inverter enclosure 5	S_INV5	653978	4925039	2	0	0	87	87	1	2793.25	3.25	4000	79.92	0	-1.74	0	0	91.53	0	0	0	0	0	0	-82.72	-82.72
Sparkle Inverter enclosure 7	S_INV7	654153	4925178	2	0	0	69.6	69.6	1	2954.95	3.25	125	80.41	0	4.44	0	0	1.21	0	0	0	0	0	0	-16.46	-16.46
Sparkle Inverter enclosure 7	S_INV7	654153	4925178	2	0	0	78.6	78.6	1	2954.95	3.25	250	80.41	0	3.43	0	0	3.08	0	0	0	0	0	0	-8.33	-8.33
Sparkle Inverter enclosure 7	S_INV7	654153	4925178	2	0	0	82.1	82.1	1	2954.95	3.25	500	80.41	0	-0.18	0	0	5.7	0	0	0	0	0	0	-3.82	-3.82
Sparkle Inverter enclosure 7	S_INV7	654153	4925178	2	0	0	75.7	75.7	1	2954.95	3.25	1000	80.41	0	-1.64	0	0	10.81	0	0	0	0	0	0	-13.87	-13.87
Sparkle Inverter enclosure 7	S_INV7	654153	4925178	2	0	0	73.6	73.6	1	2954.95	3.25	2000	80.41	0	-1.74	0	0	28.56	0	0	0	0	0	0	-33.63	-33.63
Sparkle Inverter enclosure 7	S_INV7	654153	4925178	2	0	0	87	87	1	2954.95	3.25	4000	80.41	0	-1.74	0	0	96.83	0	0	0	0	0	0	-88.5	-88.5
Sparkle Inverter transformer 4	S_INVTR4	654124	4924736	2	0	0	65.3	65.3	1	2513.95	3.25	32	79.01	0	-5.77	0	0	0.08	0	0	0	0	0	0	-8.02	-8.02
Sparkle Inverter transformer 4	S_INVTR4	654124	4924736	2	0	0	71.3	71.3	1	2513.95	3.25	63	79.01	0	-5.77	0	0	0.31	0	0	0	0	0	0	-2.25	-2.25
Sparkle Inverter transformer 4	S_INVTR4	654124	4924736	2	0	0	73.3	73.3	1	2513.95	3.25	125	79.01	0	4.45	0	0	1.03	0	0	0	0	0	0	-11.19	-11.19
Sparkle Inverter transformer 4	S_INVTR4	654124	4924736	2	0	0	68.3	68.3	1	2513.95	3.25	250	79.01	0	3.44	0	0	2.62	0	0	0	0	0	0	-16.77	-16.77
Sparkle Inverter transformer 4	S_INVTR4	654124	4924736	2	0	0	68.3	68.3	1	2513.95	3.25	500	79.01	0	-0.17	0	0	4.85	0	0	0	0	0	0	-15.38	-15.38
Sparkle Inverter transformer 4	S_INVTR4	654124	4924736	2	0	0	62.3	62.3	1	2513.95	3.25	1000	79.01	0	-1.63	0	0	9.2	0	0	0	0	0	0	-24.27	-24.27
Sparkle Inverter transformer 4	S_INVTR4	654124	4924736	2	0	0	57.3	57.3	1	2513.95	3.25	2000	79.01	0	-1.73	0	0	24.29	0	0	0	0	0	0	-44.27	-44.27
Sparkle Inverter transformer 4	S_INVTR4	654124	4924736	2	0	0	52.3	52.3	1	2513.95	3.25	4000	79.01	0	-1.73	0	0	82.38	0	0	0	0	0	0	-107.36	-107.36
Sparkle Inverter transformer 4	S_INVTR4	654124	4924736	2	0	0	45.3	45.3	1	2513.95	3.25	8000	79.01	0	-1.73	0	0	293.84	0	0	0	0	0	0	-325.81	-325.81
Sparkle Inverter transformer 1	S_INVTR1	653949	4925041	2	0	0	66.2	66.2	1	2792.27	3.25	32	79.92	0	-5.79	0	0	0.09	0	0	0	0	0	0	-8.02	-8.02
Sparkle Inverter transformer 1	S_INVTR1	653949	4925041	2	0	0	72.2	72.2	1	2792.27	3.25	63	79.92	0	-5.79	0	0	0.34	0	0	0	0	0	0	-2.27	-2.27
Sparkle Inverter transformer 1	S_INVTR1	653949	4925041	2	0	0	74.2	74.2	1	2792.27	3.25	125	79.92	0	4.44	0	0	1.15	0	0	0	0	0	0	-11.31	-11.31
Sparkle Inverter transformer 1	S_INVTR1	653949	4925041	2	0	0	69.2	69.2	1	2792.27	3.25	250	79.92	0	3.44	0	0	2.91	0	0	0	0	0	0	-17.07	-17.07
Sparkle Inverter transformer 1	S_INVTR1	653949	4925041	2	0	0	69.2	69.2	1	2792.27	3.25	500	79.92	0	-0.18	0	0	5.38	0	0	0	0	0	0	-15.92	-15.92
Sparkle Inverter transformer 1	S_INVTR1	653949	4925041	2	0	0	63.2	63.2	1	2792.27	3.25	1000	79.92	0	-1.64	0	0	10.21	0	0	0	0	0	0	-25.29	-25.29
Sparkle Inverter transformer 1	S_INVTR1	653949	4925041	2	0	0	58.2	58.2	1	2792.27	3.25	2000	79.92	0	-1.74	0	0	26.98	0	0	0	0	0	0	-46.97	-46.97

Sparkle Inverter transformer 1	S_INVTR1	653949	4925041	2	0	0	53.2	53.2	1	2792.27	3.25	4000	79.92	0	-1.74	0	0	91.5	0	0	0	0	0	0	-116.48	-116.48
Sparkle Inverter transformer 1	S_INVTR1	653949	4925041	2	0	0	46.2	46.2	1	2792.27	3.25	8000	79.92	0	-1.74	0	0	326.37	0	0	0	0	0	0	-358.35	-358.35
Sparkle Inverter transformer 2	S_INVTR2	653968	4924893	2	0	0	65.3	65.3	1	2646.93	3.25	32	79.45	0	-5.78	0	0	0.08	0	0	0	0	0	0	-8.46	-8.46
Sparkle Inverter transformer 2	S_INVTR2	653968	4924893	2	0	0	71.3	71.3	1	2646.93	3.25	63	79.45	0	-5.78	0	0	0.32	0	0	0	0	0	0	-2.7	-2.7
Sparkle Inverter transformer 2	S_INVTR2	653968	4924893	2	0	0	73.3	73.3	1	2646.93	3.25	125	79.45	0	4.45	0	0	1.09	0	0	0	0	0	0	-11.69	-11.69
Sparkle Inverter transformer 2	S_INVTR2	653968	4924893	2	0	0	68.3	68.3	1	2646.93	3.25	250	79.45	0	3.44	0	0	2.76	0	0	0	0	0	0	-17.36	-17.36
Sparkle Inverter transformer 2	S_INVTR2	653968	4924893	2	0	0	68.3	68.3	1	2646.93	3.25	500	79.45	0	-0.18	0	0	5.1	0	0	0	0	0	0	-16.08	-16.08
Sparkle Inverter transformer 2	S_INVTR2	653968	4924893	2	0	0	62.3	62.3	1	2646.93	3.25	1000	79.45	0	-1.64	0	0	9.68	0	0	0	0	0	0	-25.2	-25.2
Sparkle Inverter transformer 2	S_INVTR2	653968	4924893	2	0	0	57.3	57.3	1	2646.93	3.25	2000	79.45	0	-1.73	0	0	25.58	0	0	0	0	0	0	-46	-46
Sparkle Inverter transformer 2	S_INVTR2	653968	4924893	2	0	0	52.3	52.3	1	2646.93	3.25	4000	79.45	0	-1.73	0	0	86.74	0	0	0	0	0	0	-112.16	-112.16
Sparkle Inverter transformer 2	S_INVTR2	653968	4924893	2	0	0	45.3	45.3	1	2646.93	3.25	8000	79.45	0	-1.73	0	0	309.38	0	0	0	0	0	0	-341.8	-341.8
Sparkle Inverter transformer 3	S_INVTR3	654132	4924883	2	0	0	65.3	65.3	1	2660.71	3.25	32	79.5	0	-5.78	0	0	0.09	0	0	0	0	0	0	-8.51	-8.51
Sparkle Inverter transformer 3	S_INVTR3	654132	4924883	2	0	0	71.3	71.3	1	2660.71	3.25	63	79.5	0	-5.78	0	0	0.32	0	0	0	0	0	0	-2.74	-2.74
Sparkle Inverter transformer 3	S_INVTR3	654132	4924883	2	0	0	73.3	73.3	1	2660.71	3.25	125	79.5	0	4.45	0	0	1.09	0	0	0	0	0	0	-11.74	-11.74
Sparkle Inverter transformer 3	S_INVTR3	654132	4924883	2	0	0	68.3	68.3	1	2660.71	3.25	250	79.5	0	3.44	0	0	2.78	0	0	0	0	0	0	-17.42	-17.42
Sparkle Inverter transformer 3	S_INVTR3	654132	4924883	2	0	0	68.3	68.3	1	2660.71	3.25	500	79.5	0	-0.18	0	0	5.13	0	0	0	0	0	0	-16.15	-16.15
Sparkle Inverter transformer 3	S_INVTR3	654132	4924883	2	0	0	62.3	62.3	1	2660.71	3.25	1000	79.5	0	-1.64	0	0	9.73	0	0	0	0	0	0	-25.29	-25.29
Sparkle Inverter transformer 3	S_INVTR3	654132	4924883	2	0	0	57.3	57.3	1	2660.71	3.25	2000	79.5	0	-1.73	0	0	25.71	0	0	0	0	0	0	-46.18	-46.18
Sparkle Inverter transformer 3	S_INVTR3	654132	4924883	2	0	0	52.3	52.3	1	2660.71	3.25	4000	79.5	0	-1.73	0	0	87.19	0	0	0	0	0	0	-112.66	-112.66
Sparkle Inverter transformer 3	S_INVTR3	654132	4924883	2	0	0	45.3	45.3	1	2660.71	3.25	8000	79.5	0	-1.73	0	0	310.99	0	0	0	0	0	0	-343.46	-343.46
Sparkle Inverter transformer 5	S_INVTR5	653972	4925040	2	0	0	65.3	65.3	1	2792.99	3.25	32	79.92	0	-5.79	0	0	0.09	0	0	0	0	0	0	-8.92	-8.92
Sparkle Inverter transformer 5	S_INVTR5	653972	4925040	2	0	0	71.3	71.3	1	2792.99	3.25	63	79.92	0	-5.79	0	0	0.34	0	0	0	0	0	0	-3.17	-3.17
Sparkle Inverter transformer 5	S_INVTR5	653972	4925040	2	0	0	73.3	73.3	1	2792.99	3.25	125	79.92	0	4.44	0	0	1.15	0	0	0	0	0	0	-12.21	-12.21
Sparkle Inverter transformer 5	S_INVTR5	653972	4925040	2	0	0	68.3	68.3	1	2792.99	3.25	250	79.92	0	3.44	0	0	2.91	0	0	0	0	0	0	-17.97	-17.97
Sparkle Inverter transformer 5	S_INVTR5	653972	4925040	2	0	0	68.3	68.3	1	2792.99	3.25	500	79.92	0	-0.18	0	0	5.38	0	0	0	0	0	0	-16.83	-16.83
Sparkle Inverter transformer 5	S_INVTR5	653972	4925040	2	0	0	62.3	62.3	1	2792.99	3.25	1000	79.92	0	-1.64	0	0	10.22	0	0	0	0	0	0	-26.2	-26.2
Sparkle Inverter transformer 5	S_INVTR5	653972	4925040	2	0	0	57.3	57.3	1	2792.99	3.25	2000	79.92	0	-1.74	0	0	26.99	0	0	0	0	0	0	-47.88	-47.88
Sparkle Inverter transformer 5	S_INVTR5	653972	4925040	2	0	0	52.3	52.3	1	2792.99	3.25	4000	79.92	0	-1.74	0	0	91.53	0	0	0	0	0	0	-117.41	-117.41
Sparkle Inverter transformer 5	S_INVTR5	653972	4925040	2	0	0	45.3	45.3	1	2792.99	3.25	8000	79.92	0	-1.74	0	0	326.45	0	0	0	0	0	0	-359.33	-359.33
Sparkle Inverter transformer 6	S_INVTR6	654140	4925027	2	0	0	65.3	65.3	1	2803.8	3.25	32	79.95	0	-5.79	0	0	0.09	0	0	0	0	0	0	-8.95	-8.95
Sparkle Inverter transformer 6	S_INVTR6	654140	4925027	2	0	0	71.3	71.3	1	2803.8	3.25	63	79.95	0	-5.79	0	0	0.34	0	0	0	0	0	0	-3.2	-3.2
Sparkle Inverter transformer 6	S_INVTR6	654140	4925027	2	0	0	73.3	73.3	1	2803.8	3.25	125	79.95	0	4.44	0	0	1.15	0	0	0	0	0	0	-12.25	-12.25
Sparkle Inverter transformer 6	S_INVTR6	654140	4925027	2	0	0	68.3	68.3	1	2803.8	3.25	250	79.95	0	3.44	0	0	2.93	0	0	0	0	0	0	-18.02	-18.02
Sparkle Inverter transformer 6	S_INVTR6	654140	4925027	2	0	0	68.3	68.3	1	2803.8	3.25	500	79.95	0	-0.18	0	0	5.41	0	0	0	0	0	0	-16.88	-16.88
Sparkle Inverter transformer 6	S_INVTR6	654140	4925027	2	0	0	62.3	62.3	1	2803.8	3.25	1000	79.95	0	-1.64	0	0	10.26	0	0	0	0	0	0	-26.27	-26.27
Sparkle Inverter transformer 6	S_INVTR6	654140	4925027	2	0	0	57.3	57.3	1	2803.8	3.25	2000	79.95	0	-1.74	0	0	27.1	0	0	0	0	0	0	-48.01	-48.01
Sparkle Inverter transformer 6	S_INVTR6	654140	4925027	2	0	0	52.3	52.3	1	2803.8	3.25	4000	79.95	0	-1.74	0	0	91.88	0	0	0	0	0	0	-117.8	-117.8
Sparkle Inverter transformer 6	S_INVTR6	654140	4925027	2	0	0	45.3	45.3	1	2803.8	3.25	8000	79.95	0	-1.74	0	0	327.71	0	0	0	0	0	0	-360.63	-360.63
Sparkle Inverter transformer 7	S_INVTR7	654147	4925179	2	0	0	65.3	65.3	1	2954.39	3.25	32	80.41	0	-5.8	0	0	0.09	0	0	0	0	0	0	-9.4	-9.4
Sparkle Inverter transformer 7	S_INVTR7	654147	4925179	2	0	0	71.3	71.3	1	2954.39	3.25	63	80.41	0	-5.8	0	0	0.36	0	0	0	0	0	0	-3.67	-3.67
Sparkle Inverter transformer 7	S_INVTR7	654147	4925179	2	0	0	73.3	73.3	1	2954.39	3.25	125	80.41	0	4.44	0	0	1.21	0	0	0	0	0	0	-12.76	-12.76
Sparkle Inverter transformer 7	S_INVTR7	654147	4925179	2	0	0	68.3	68.3	1	2954.39	3.25	250	80.41	0	3.43	0	0	3.08	0	0	0	0	0	0	-18.62	-18.62
Sparkle Inverter transformer 7	S_INVTR7	654147	4925179	2	0	0	68.3	68.3	1	2954.39	3.25	500	80.41	0	-0.18	0	0	5.7	0	0	0	0	0	0	-17.62	-17.62
Sparkle Inverter transformer 7	S_INVTR7	654147	4925179	2	0	0	62.3	62.3	1	2954.39	3.25	1000	80.41	0	-1.64	0	0	10.81	0	0	0	0	0	0	-27.27	-27.27
Sparkle Inverter transformer 7	S_INVTR7	654147	4925179	2	0	0	57.3	57.3	1	2954.39	3.25	2000	80.41	0	-1.74	0	0	28.55	0	0	0	0	0	0	-49.92	-49.92
Sparkle Inverter transformer 7	S_INVTR7	654147	4925179	2	0	0	52.3	52.3	1	2954.39	3.25	4000	80.41	0	-1.74	0	0	96.82	0	0	0	0	0	0	-123.18	-123.18
Sparkle Inverter transformer 7	S_INVTR7	654147	4925179	2	0	0	45.3	45.3	1	2954.39	3.25	8000	80.41	0	-1.74	0	0	345.31	0	0	0	0	0	0	-378.68	-378.68
Limit. Value D/N: 0	0																									
Level D/N: 37.9934	37.9934																									

CanadianSolar

UTM Coordinates – Noise Sources

Noise Source ID	Centre of Cluster – UTM Coordinates (NAD 83)	
	X(m)	Y(m)
INV1	653943	4925042
INV2	653974	4924893
INV3	654138	4924883
INV4	654130	4924735
INV5	653978	4925039
INV6	654146	4925027
INV7	654153	4925178
INVTR1	653949	4925041
INVTR2	653968	4924893
INVTR3	654132	4924883
INVTR4	654124	4924736
INVTR5	653972	4925040
INVTR6	654140	4925027
INVTR7	654147	4925179
TRS	653934	4925172

Appendix H

NOTICE OF REA AMENDMENT

NOTICE OF A PROPOSED CHANGE TO AN APPROVED RENEWABLE ENERGY PROJECT (REA No. 0399-99ESCE)

For SparkleLight
By Canadian Solar Solutions Inc.

Project Name: SparkleLight
OPA Reference Number: FIT-F8YD638
Project Location: North Half Lot 1, Concession 6, Township of Brock, Ontario
Dated at the Township of Brock this 29 day of May, 2014

SparkleLight LP was issued a Renewable Energy Approval on August 15, 2013 in respect of the SparkleLight project. Information with respect to the decision on this project can be viewed on the Environmental Registry by searching 011-8080.

SparkleLight LP (a subsidiary of Canadian Solar Solutions Inc.) is proposing to make a change to the project and the project itself is subject to the provisions of the *Environmental Protection Act (Act)* Part V.0.1 and Ontario Regulation 359/09 (Regulation). This notice must be distributed in accordance with section 32.2 of the Regulation. This notice is being distributed to make the public aware of a **proposed chance to the project**.

Project Description and Proposed Changes:
Pursuant to the Act and Regulation, the project in respect of which the Renewable Energy Approval was issued, is a Class 3 Solar Facility. An application has been made to the Ministry of the Environment to **change the project** and alter the terms and conditions of the existing Renewable Energy Approval. The proposed changes consist of minor technical changes to the preliminary design, including a reduction of the area inside the perimeter fence, an adjustment to the panel module mix (with fewer total modules to be installed), reconfiguration of internal access roads, change to the location of the Point of Common Coupling and laydown area, a change to the substation manufacturer and location, and a change to the inverter station model and location and reduction in the number of inverters from 10 to 7.

If approved with these changes, the facility would have a total nameplate capacity of 10 MW. The project location, taking the change into account, is described in the map below.

Documents for Public Inspection:
SparkleLight LP has been required to update the supporting documents that are required to form part of the application or which must be otherwise submitted to the Ministry of the Environment available to the public (entitled *Modifications Document for SparkleLight*). Written copies of the draft supporting documents will be made available for public inspection on May 30, 2014 on the project website at http://sparklelightsolar.com/.

Project Contacts and Information:
To learn more about the project proposal or to communicate concerns, please contact:

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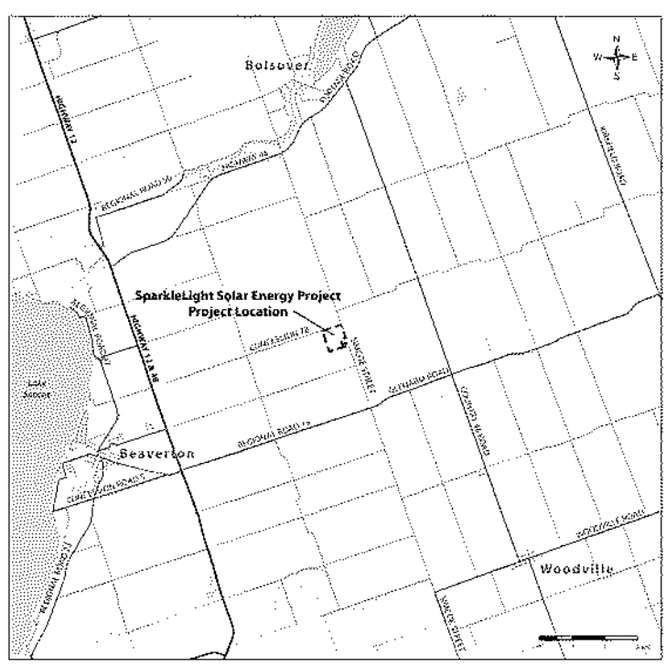
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