#### Champaign County Department of

PLANNING & ZONING

## CASE NO. 162-S-25

PRELIMINARY MEMORANDUM February 20, 2025

Petitioners: Mahomet IL Solar 1, LLC, c/o Summit Ridge Energy LLC, via agent Moira Cronin, Senior Manager, Project Development, and participating landowners Paul Nurmi Trustee, and Greater Heritage Farms LLC

**Request**: Authorize a Community PV Solar Farm with a total nameplate capacity of 4.99 megawatts (MW), including access roads and wiring, in the AG-2 Zoning District, and including the following waivers of standard conditions:

- **Part A:** A waiver for not entering into a Roadway Upgrade and Maintenance Agreement or waiver therefrom with the relevant local highway authority prior to consideration of the Special Use Permit by the Zoning Board of Appeals, per Section 6.1.5 G.(1)
- **Part B:** A waiver for locating the PV Solar Farm less than one and one-half miles from an incorporated municipality per Section 6.1.5 B.(2)a.
- **Part C:** A waiver for locating the PV Solar Farm 65 feet from a nonparticipating lot that is 10 acres or less in area in lieu of the minimum required separation of 240 feet between the solar farm fencing and the property line, per Section 6.1.5 D.(3)a.
- **Part D:** A waiver for providing financial assurance for the Decommissioning and Site Reclamation Plan in the form of a surety bond, in-lieu of a letter of credit per Section 6.1.5 Q.

#### Other waivers may be necessary.

- Location: Approximately 36 acres on two tracts of land with PIN's 15-13-17-100-012 (52.66 acres) and 15-13-17-200-010 (43.17 acres), totaling 95.83 acres on the South side of US Highway 150, in the West Half of the Northeast Quarter and the East Half of the Northwest Quarter of Section 17 Township 20 North, Range 7 East of the Third Principal Meridian, in Mahomet Township, commonly known as farmland owned by Greater Heritage Farms LLC and Paul Nurmi Trustee.
- Site Area: Approximately 36 acres on two tracts of land totaling 95.83 acres

Time Schedule for Development: As soon as possible

Prepared by: Charlie Campo Senior Planner John Hall Zoning Administrator Trevor Partin Associate Planner

#### BACKGROUND

The petitioner applied for a Special Use Permit to construct a 4.99 (MW) Community Photovoltaic (PV) Solar Farm on a 36 area site on the south side of US-150 in Mahomet Township. The petitioners

Brookens Administrative Center 1776 E. Washington Street Urbana, Illinois 61802

(217) 384-3708 zoningdept@co.champa ign.il.us www.co.champaign.il.u s/zoning request waivers from standard conditions for the Special Use Permits. A PV Solar Farm requires approval by the County Board after recommendations are made by the ZBA and Environment and Land Use Committee

## **REQUESTED WAIVERS**

Waiver Part A is for not entering into a Roadway Upgrade and Maintenance Agreement with the relevant local highway authority prior to consideration of the Special Use Permit by the ZBA, per Section 6.1.5 G. The petitioner has coordinated with the Mahomet Township Highway Commissioner; however, a Roadway Upgrade and Maintenance Agreement has not been completed. A Special Condition has been added and states that a Roadway Upgrade and Maintenance Agreement signed by relevant County, township, and/or municipal authorities and approved by the Environment and Land Use Committee, shall be submitted at the time of application for a Zoning Use Permit.

Waiver Part B is for locating the PV Solar Farm less than one and one-half miles from an incorporated municipality per 6.1.5 B.(2)a. The subject property is within the one and one-half mile extraterritorial jurisdiction of the Village of Mahomet, a municipality with zoning. Zoned municipalities do not have protest rights in Special Use Permit cases. Notice was sent by the Department to the Village of Mahomet. A copy of the Special Use permit application was provided to the Village of Mahomet. A public hearing for a PV Solar Farm within one and one-half miles of a municipality with zoning shall occur at a minimum of two Board meetings no less than 28 days apart unless the requirement is waived by the relevant municipality.

Waiver Part C is for providing financial assurance for the Decommissioning and Site Reclamation Plan in the form of a surety bond, in-lieu of a letter of credit.

## FUNDAMENTAL CONSIDERATIONS

The application includes numerous details and reports that create an overall picture for the proposed solar farm. P&Z Staff provide a short summary below, and additional information can be found in the petitioner's submittals.

#### Separation distances

The solar farm meets or exceeds all required separation distances except for the instance for which the petitioner has requested a waiver. The proposed solar farm is approximately .55 miles from the Village of Mahomet. The proposed solar farm meets all other required separation distances from adjacent properties and roadways.

#### Noise results

Noise levels from the 40 proposed solar inverters is a primary concern. The inverters are centrally located within the project site. A sound study prepared by RWDL and received with the application on January 3, 2025, states that based on the measured background sound levels, the Project is expected to be inaudible during the daytime and nighttime hours, with US HWY 150 being the dominant noise source at all dwellings.

#### Landscaped Screening

The Site Plan received January 3, 2025, shows the location of the proposed landscape screening. Screening is proposed along the south and west sides of the project site. The north and east sides of

the project site will be screened by existing vegetation. A Vegetative Maintenance Plan was also submitted. The proposed landscape buffer appears to comply with screening requirements.

#### Drainage & tile

The petitioners submitted an "Existing Subsurface Agricultural Drain Tile Investigation Report" by Huddleston McBride Land Drainage, received January 3, 2025, which shows the location of existing drain tiles on project site.

Most requirements regarding drainage would occur during the construction permitting process, and a special condition has been added to ensure compliance with the requirements.

#### Decommissioning plan

A Decommissioning Plan for the proposed solar farm was received with the application on January 3, 2025. The applicant has acknowledged all ordinance requirements regarding the Decommissioning Plan. A special condition has been added to require a signed Decommissioning and Site Reclamation Plan that has been approved by the Environment and Land Use Committee is required at the time of application for a Zoning Use Permit that complies with Section 6.1.1 A. and Section 6.1.5 Q. of the Zoning Ordinance, including a decommissioning cost estimate prepared by an Illinois Professional Engineer. A waiver has been requested to provide financial assurance for the Decommissioning and Site Reclamation Plan in the form of a surety bond, in-lieu of a letter of credit.

#### Disturbance to Best Prime Farmland

The Petitioner will need to submit a seeding plan identifying the seed mix of native grass species to be used on the site that will serve as a secondary habitat for local wildlife.

## **PUBLIC COMMENTS**

P&Z Staff has received two comments with concerns regarding the project. A copy of the comments are included with this memo as Attachments D and E.

## **PROPOSED SPECIAL CONDITIONS**

The following special conditions, combined with the requested waivers, would ensure that the proposed solar farm is in compliance with the Zoning Ordinance.

## A. The approved site plan consists of the following documents:

• Sheet C01 of the Site Plan received January 3, 2025.

The special condition stated above is required to ensure the following: The constructed PV SOLAR FARM is consistent with the special use permit approval.

B. The Zoning Administrator shall not authorize a Zoning Use Permit Application or issue a Zoning Compliance Certificate on the subject property until the lighting specifications in Paragraph 6.1.2.A. of the Zoning Ordinance have been met.

The special condition stated above is required to ensure the following:

That exterior lighting for the proposed Special Use meets the requirements established for Special Uses in the Zoning Ordinance.

C. The Zoning Administrator shall not issue a Zoning Compliance Certificate for the proposed PV SOLAR FARM until the petitioner has demonstrated that the proposed Special Use complies with the Illinois Accessibility Code, if necessary.

The special condition stated above is necessary to ensure the following: That the proposed Special Use meets applicable state requirements for accessibility.

D. A signed Decommissioning and Site Reclamation Plan that has been approved by Environment and Land Use Committee is required at the time of application for a Zoning Use Permit that complies with Section 6.1.1 A. and Section 6.1.5 Q. of the Zoning Ordinance, including a decommissioning cost estimate prepared by an Illinois Professional Engineer.

The special condition stated above is required to ensure the following: That the Special Use Permit complies with Ordinance requirements and as authorized by waiver.

E. Roadway Upgrade and Maintenance Agreements signed by the County Highway Engineer Sidney Township Highway Commissioner and any other relevant highway jurisdiction, and approved by the Environment and Land Use Committee, or a waiver therefrom, shall be submitted at the time of application for a Zoning Use Permit.

The special condition stated above is required to ensure the following: To ensure full compliance with the intent of the Zoning Ordinance in a timely manner that meets the needs of the applicant.

- F. Underground drainage tile shall be investigated and identified with any necessary changes made to the solar array as follows:
  - 1. A qualified Drain Tile Contractor with experience in Illinois shall be employed to investigate, repair, and install any underground drain tile.
  - 2. Desktop mapping and field reconnaissance shall identify all areas where drain tile are expected to be located based on soils, topographic elevations, ground surface channels and/or depressions, wetlands, natural drainage ingress and egress locations, and knowledge of current owners and/or current farmers.
  - 3. Slit trenching shall be used to investigate the presence of mutual drainage tiles that serve upland areas under different ownership. All existing drain tiles encountered shall be logged on field mapping and repaired to the original state according to Illinois Department of Agriculture Impact Mitigation Agreement (AIMA) standards.
  - 4. Drain tile routes shall be located by surface probing or electronic detection and field staked at 20 feet intervals.
  - 5. All existing drain tile that are found shall be located in the field using GPS location systems and recorded on as-built plans. Record mapping shall be completed according to typical civil engineering mapping and AIMA standards.

- 6. Any tile found shall be protected from disturbance.
- 7. All mutual drain tiles shall be protected from construction disturbance and a 40feet wide no construction area shall be centered on all mutual drain tiles.
- 8. Future access shall be guaranteed for maintenance of all mutual drain tiles.

The special condition stated above is required to ensure the following:

The identification and protection of existing underground drainage tile and to allow ongoing maintenance of mutual drain tiles

- F. The following submittals are required prior to the approval of any Zoning Use Permit for a PV SOLAR FARM:
  - 1. Documentation of the solar module's unlimited 10-year warranty and the 25-year limited power warranty.
  - 2. An irrevocable letter of credit (or surety bond, if a waiver is received) to be drawn upon a federally insured financial institution with a minimum acceptable long term corporate debt (credit) rating of the proposed financial institution shall be a rating of "A" by S&P or a rating of "A2" by Moody's within 200 miles of Urbana or reasonable anticipated travel costs shall be added to the amount of the letter of credit.
  - 3. A permanent soil erosion and sedimentation plan for the PV SOLAR FARM including any access road that conforms to the relevant Natural Resources Conservation Service guidelines and that is prepared by an Illinois Licensed Professional Engineer.
  - 4. Documentation regarding the seed to be used for the pollinator planting, per 6.1.5 F.(9).
  - 5. A Transportation Impact Analysis provided by the applicant that is mutually acceptable to the Applicant and the County Engineer and State's Attorney; or Township Highway Commissioner; or municipality where relevant, as required by 6.1.5 G. 2.
  - 6. The telephone number for the complaint hotline required by 6.1.5 S.
  - 7. Any updates to the approved Site Plan from Case 162-S-25 per the Site Plan requirements provided in Section 6.1.5 U.1.c.

The special condition stated above is required to ensure the following: That the PV SOLAR FARM is constructed consistent with the Special Use Permit approval and in compliance with the Ordinance requirements.

G. A Zoning Compliance Certificate shall be required for the PV SOLAR FARM prior to going into commercial production of energy. Approval of a Zoning Compliance Certificate shall require the following:

- 1. An as-built site plan of the PV SOLAR FARM including structures, property lines (including identification of adjoining properties), as-built separations, public access road and turnout locations, substation(s), electrical cabling from the PV SOLAR FARM to the substations(s), and layout of all structures within the geographical boundaries of any applicable setback.
- 2. As-built documentation of all permanent soil erosion and sedimentation improvements for all PV SOLAR FARM including any access road prepared by an Illinois Licensed Professional Engineer.
- 3. An executed interconnection agreement with the appropriate electric utility as required by Section 6.1.5 B.(3)b.

The special condition stated above is required to ensure the following:

That the PV SOLAR FARM is constructed consistent with the special use permit approval and in compliance with the Ordinance requirements.

- H. The Applicant or Owner or Operator of the PV SOLAR FARM shall comply with the following specific requirements that apply even after the PV SOLAR FARM goes into commercial operation:
  - 1. Maintain the pollinator plantings and required visual screening in perpetuity.
  - 2. Cooperate with local Fire Protection District to develop the District's emergency response plan as required by 6.1.5 H.(2).
  - 3. Cooperate fully with Champaign County and in resolving any noise complaints including reimbursing Champaign County any costs for the services of a qualified noise consultant pursuant to any proven violation of the I.P.C.B. noise regulations as required by 6.1.5 I.(4).
  - 4. Maintain a current general liability policy as required by 6.1.5 O.
  - 5. Submit annual summary of operation and maintenance reports to the Environment and Land Use Committee as required by 6.1.5 P.(1)a.
  - 6. Maintain compliance with the approved Decommissioning and Site Reclamation Plan including financial assurances.
  - 7. Submit to the Zoning Administrator copies of all complaints to the telephone hotline on a monthly basis and take all necessary actions to resolve all legitimate complaints as required by 6.1.5 S.

The special condition stated above is required to ensure the following: That future requirements are clearly identified for all successors of title, lessees, any operator and/or owner of the PV SOLAR FARM.

I. The PV SOLAR FARM COUNTY Board SPECIAL USE Permit designation shall expire in 10 years if no Zoning Use Permit is granted.

The special condition stated above is required to ensure the following:

The PV SOLAR FARM is constructed in compliance with the Ordinance requirements.

J. The owners of the subject property hereby recognize and provide for the right of agricultural activities to continue on adjacent land consistent with the Right to Farm Resolution 3425.

The special condition stated above is required to ensure the following: Conformance with Policy 4.2.3 of the Land Resource Management Plan.

# K. The terms of approval are the requirements of the current Section 6.1.5 of the Zoning Ordinance as amended February 23, 2023.

The special condition stated above is required to ensure the following: That the current version of the Zoning Ordinance has been referenced.

## ATTACHMENTS

- A Case Maps (Location Map, Land Use, and Zoning)
- B Site plan received January 3, 2025
- C Select application exhibits received January 3, 2025:
  - 1 Decommissioning Plan
  - 2 Agricultural Impact Mitigation Agreement
  - 3 Vegetation Management Plan
  - 4 Noise Study
  - 5 Drainage Tile Survey
- D Comment from Chris Doenitz Mahomet Township Highway Commissioner rec'd 2/19/25
- E Email from Karen Hansen received 2/20/25
- F SUP Application (separate bound copy for ZBA members (available on ZBA webpage) and upon request at P&Z Department)

# Location Map Case 162-S-25 February 27, 2025

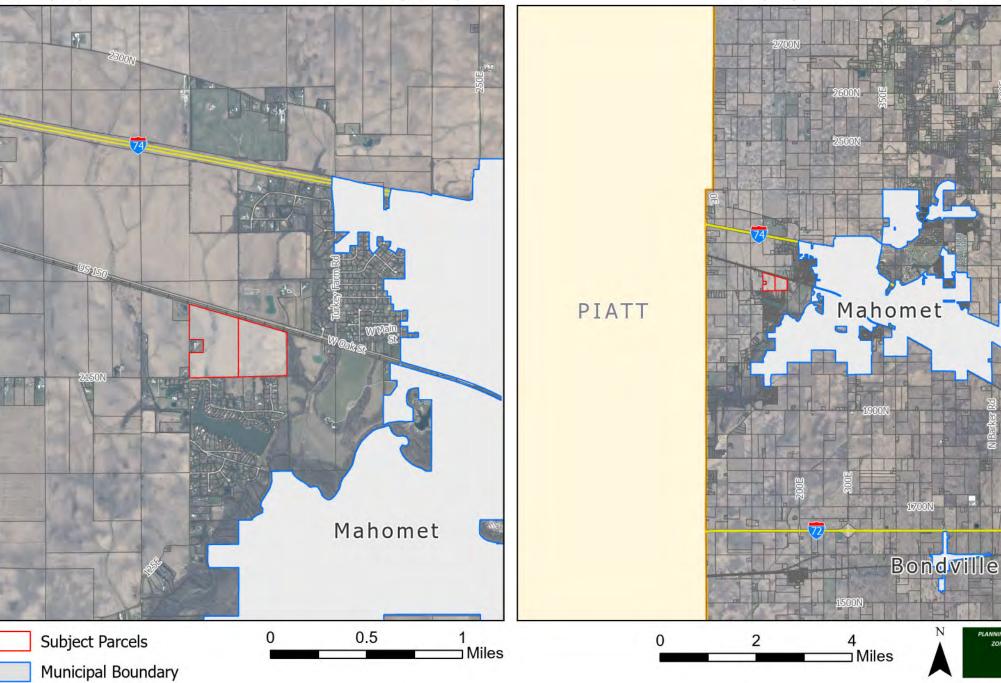
Subject Properties

Property Location in Champaign County

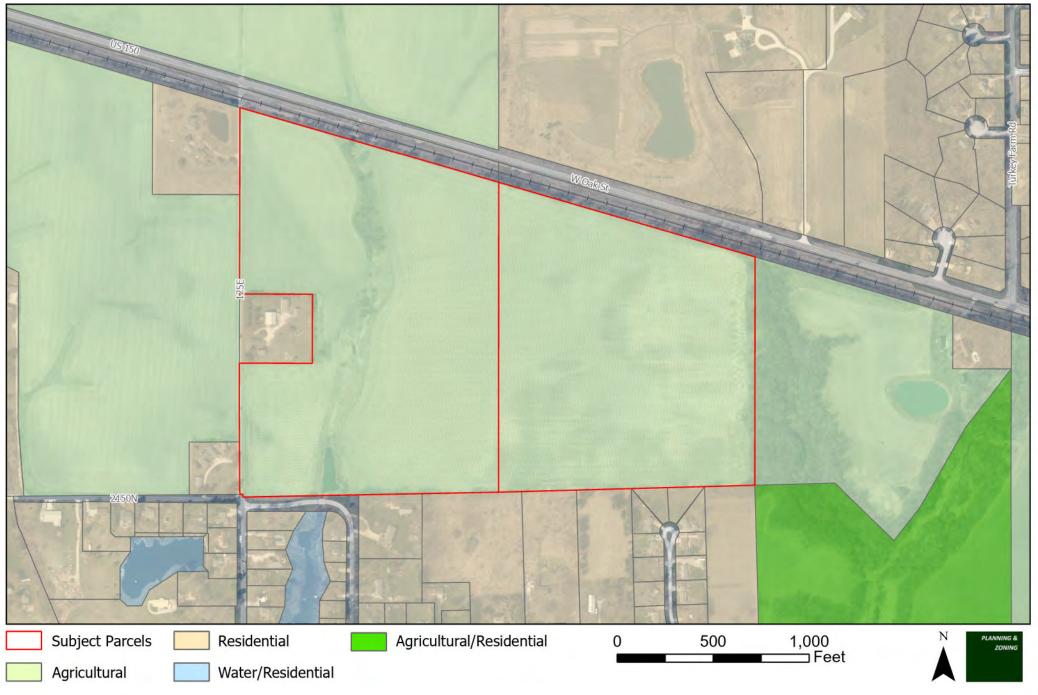
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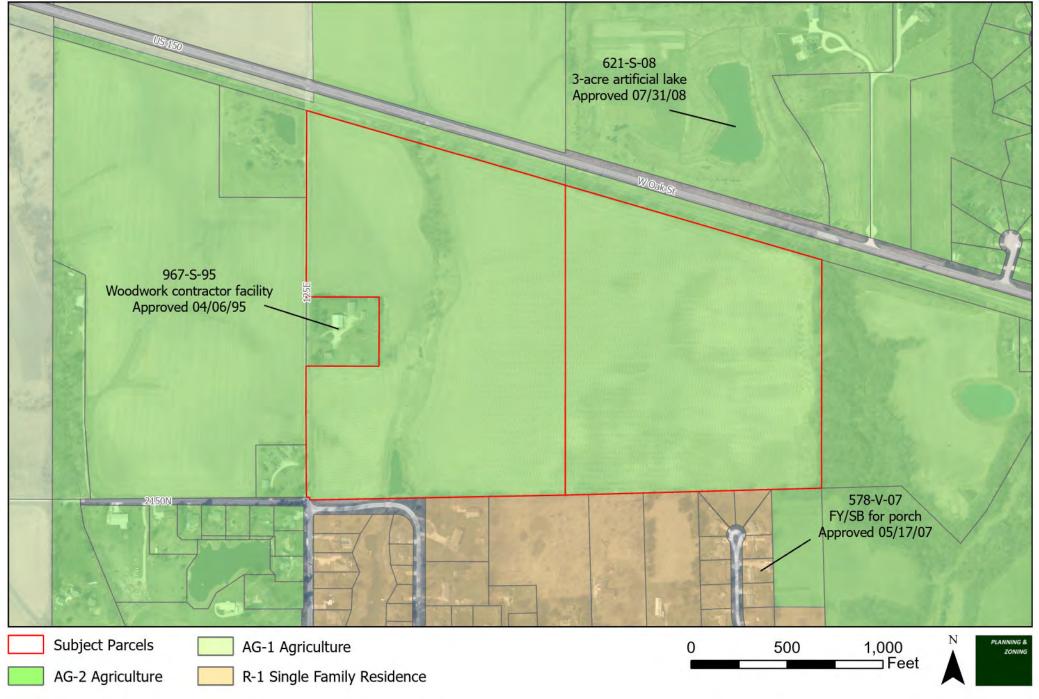
ZONING

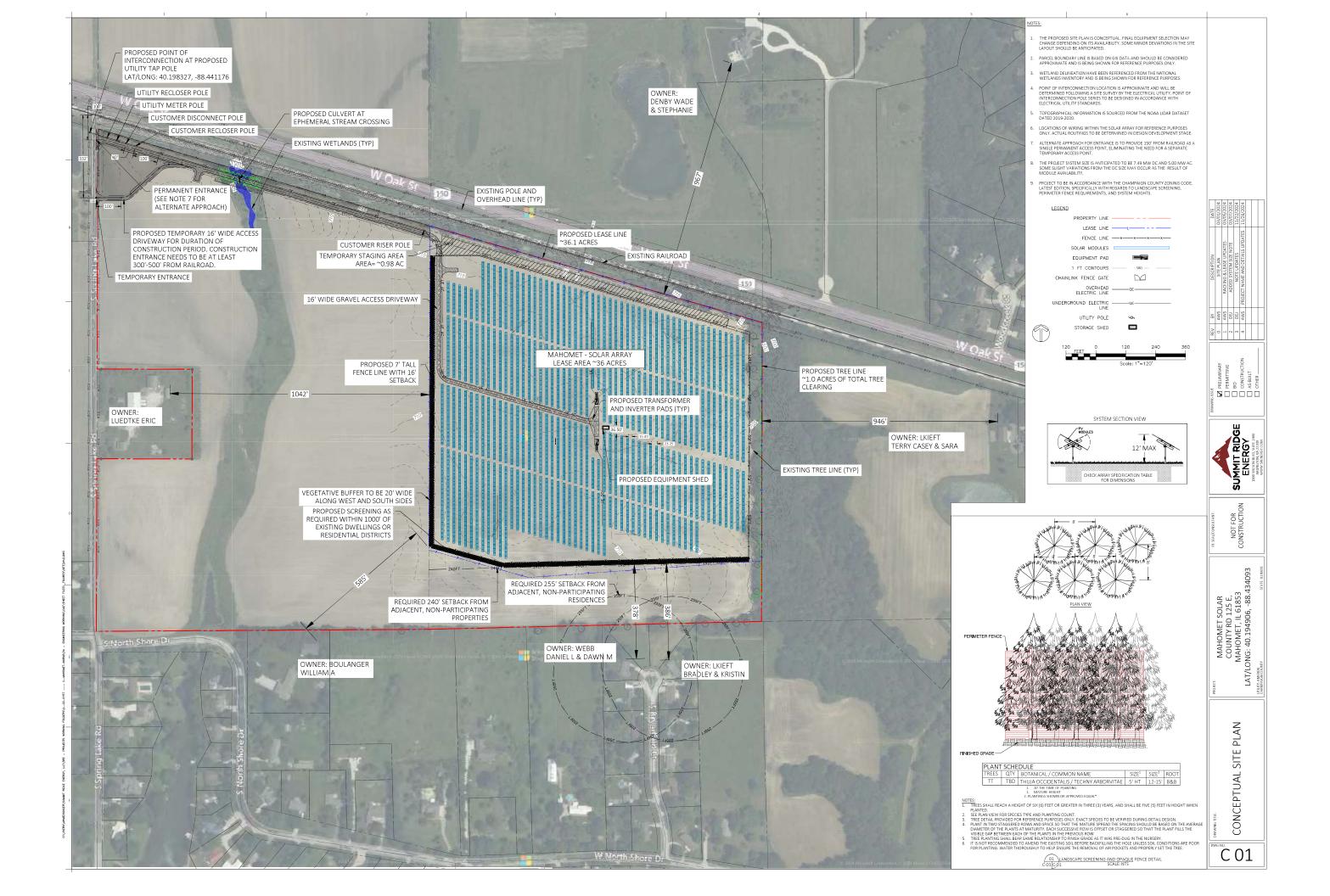


Land Use Map Case 162-S-25 February 27, 2025



## Zoning Map Case 162-S-25 February 27, 2025





## **DECOMMISSIONING PLAN**

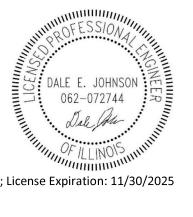
for

**PROPOSED SOLAR DEVELOPMENT** 

Mahomet Solar County Rd 125E Mahomet, IL 61853 **Champaign County** LAT/LONG: 40.194906, -88.434093

DATE: March 11, 2024

Prepared by: Summit Ridge Energy. 1000 Wilson Boulevard, Suite 2400 Arlington, VA 22209



Dale Johnson, PE; License Expiration: 11/30/2025



## **Table of Contents**

Overview	2
Decommissioning activities	2
Dismantlement, Demolition, and recycling	2
Site Stabilization and restoration	4
Current permitting requirements	4
Solar decommissioning estimate	5

#### **ATTACHMENTS**

Attachment 1	Decommissioning Estimate
Attachment 2	Site Plan
Attachment 3	<b>County Solar Farm Ordinance</b>



#### **OVERVIEW**

Summit Ridge Energy (SRE) has prepared this Decommissioning Plan for a proposed Solar Farm in Champaign County, IL called Nurmi. The proposed Solar Farm will be approximately 7.4 Megawatts (MW) direct current and 5.0 MW alternating current in size, and will have 10,920 modules mounted to single-axis-tracker type racking. The racking will track the sun's motion throughout the day and generate clean energy for interconnection to the public utility grid.

The location of the proposed solar facility is currently an agricultural field located approximately 1.5 miles west of Mahomet, Illinois off Highway 150. The project is located on an existing agricultural field that is cleared of major trees. The site topography is crowned such that the eastern side slopes to the east, and the west to the west an approximately 2% grade. The soils are predominantly silt loams.

The purpose of the Decommissioning Plan is to provide the general scope of work and construction cost estimate for the assurance/surety process. This document outlines the decommissioning activities required to restore the Solar Farm site to a meadow condition that existed prior to construction of the facility. The solar system has an anticipated design life of 40 years and is intended to be decommissioned after this period has ended.

The Solar Farm will produce power using photovoltaics (PV) panels mounted on ground supported galvanized metal piles. The facility will generally include equipment pads, perimeter security fencing, underground electrical conduits, overhead wires and utility poles, and a gravel access driveway. The major infrastructure quantities have summarized below, with the full detailed list provided in Attachment 1:

- Gravel Driveway 48,173 square feet
- Perimeter Fence 4,590 linear feet
- (2) Equipment Pads 1,082 square feet
- Solar Modules 12,696 Hanwah Q.peak

The reported costs include labor, materials, equipment, contractor's overhead, and profit; the labor costs have been estimated using regional labor rates.

#### **DECOMMISSIONING ACTIVITIES**

#### DISMANTLEMENT, DEMOLITION, AND RECYCLING

The dismantling and demolition of the Solar Farm shall generally include the removal of all solar electric systems, buildings, cabling, electrical components, roads, foundations, pilings, and any other associated facilities to a level not less than five feet below the surface.

Following coordination with the local utility company (Ameren) regarding timing and required procedures for disconnection, the Solar Farm connection will be removed from the electrical grid. All electrical connections to the system will be disconnected and all connections will be tested locally to confirm that no electric current is running through them before proceeding. All electrical connections to



the panels will be cut at the panel and then removed from their framework by cutting or dismantling the connections to the supports. Modules, inverters, transformers, meters, fans, lighting fixtures, and other electrical structures will be removed. The term "hazardous" will be defined by the laws and regulations in effect at the time of decommissioning. Disposal of these materials at a landfill will be governed by State and Public Local Laws of the County or Town and including the Code of Illinois Regulations (COILR) governing waste disposal at County area landfills, and as may be amended from time to time.

Acceptable waste facilities could include the County Landfill and could accept construction and demolition debris for the project. The Facility can accept non-recyclable waste; this estimate assumes a cost for the transport and disposal fee to this site. For the recyclable metal components, such as steel piles and racking and solar modules there are a selection of local metal recyclers/scrap yards, which are available to purchase the components upon decommissioning. We have assumed the transportation and delivery fee to a local recycler for the purposes of this estimate, and have excluded any salvage value.

All associated structures will be demolished and removed from the site for recycling or disposal, but no later than within 90 days after the end of energy production. The owner or operator shall notify the County Zoning Administrator by certified mail of the proposed date of discontinued operations and plans for removal.

Consultation with the landowner will determine if the access driveway should be left in place for their continued use. If the access driveway is deemed unnecessary by owner, the contractor will remove the gravel surface and base completely and backfilled with native soils. Clean aggregate can be disposed of offsite typically at landfills for no disposal cost. In the area of the former driveway, reuse native soils if possible for backfill and import additional topsoil, spread evenly to provide a smooth transition to existing grade. Stabilize soils with a native grassland seed mixture, unless otherwise specified by the local soil and water conservation district.

Sanitary facilities will be provided on-site for the workers conducting the decommissioning of the Solar Farm. Underground conduits/raceways will be removed in their entirety. Wiring associated with above ground wire hanging systems, such as CAB, will be removed. Above ground power lines and poles that are not owned by the utility will be removed by the general contractor, along with associated equipment (isolation switches, fuses, metering) and holes will be filled with clean and compacted soil. Poles and equipment owned by Ameren will be removed by them and reimbursed for the work by SRE.

A significant amount of the components of the photovoltaic system at the facility will include recyclable or re-saleable components, including copper, aluminum, galvanized steel, and modules. Due to their resale monetary value, these components will be dismantled and disassembled rather than being demolished and disposed. It is anticipated that materials may be salvaged and some of the costs recovered. It is assumed that the galvanized steel components such as the racking, fencing, and foundation system can be recycled for a market value salvage value. The project general contractor will maximize recycling and reuse and will work with manufacturers, local subcontractors, and waste firms to segregate material to be recycled, reused, and/or disposed of properly. However, salvage value has been excluded from the decommissioning estimate to provide a conservative decommissioning estimate.



Erosion and sediment control measures are required during the decommissioning process. These measures include a stabilized construction entrance, silt fence, concrete washout stations, and ground stabilization practices. The owner/operator will restore the project location to a vegetated meadow condition.

As with the project's construction, noise levels during the decommission work will increase. Proper steps will be followed to minimize the disturbance, such as using proper equipment for removing the support piles. Work hours are assumed to be 8 hours a day, during daylight hours. Also, road traffic in the area may increase temporarily due to crews and equipment movements. It is the responsibility of the general contractor to provide a traffic control plan to the appropriate reviewing authority, as needed, for approval prior to decommissioning.

A final site walkthrough will be conducted to remove debris and/or trash generated within the site during the decommissioning process and will include removal and proper disposal of any debris that may have been wind-blown to areas outside the immediate footprint of the facility being removed.

#### SITE STABILIZATION AND RESTORATION

The areas of the Solar Farm that are disturbed (during decommissioning) will require minor grading activities to restore the site to a pre-development condition. Grading is required to establish a uniform and consistent slope; the ground will be stabilized via hydro seeding with the surface treatment approved by the building inspector/planning board, including application of a selected native grassland seed mix to surfaces disturbed during the decommissioning process. Additionally, minor volumes of soil material will be required to restore the access driveways and concrete equipment pad area. Repair any damage to the onsite drainage tile. All site stabilization activities will be completed in accordance with the approved Sediment and Erosion Control Plan issued by the local Authority Having Jurisdiction (AHJ). At the time of approval of this plan, it is unknown whether a permit will be required for decommissioning, however, it will be verified with the County prior to commencement.

#### **CURRENT PERMITTING REQUIREMENTS**

We anticipate the following permits may be required prior to commencement of the decommissioning work: National Pollution Discharge Elimination Systems (NPDES) and a local Building Permit. However, because the decommissioning is expected to occur later in the future, the permitting requirements will be reviewed and might be subject to revisions based on local, state, and federal regulations at the time.

#### **SCHEDULE**

The decommissioning process is estimated to take approximately sixteen to eighteen (16-18) weeks, but no longer than six (6) months, and is intended to occur outside of the winter season.

The decommissioning plan may require re-submission to the County Building and Zoning Department, and will be verified with the county. See attachment 3 for additional county requirements relating to the decommissioning of the solar facility, which the decommissioning activities must abide by.



#### SOLAR DECOMMISSIONING ESTIMATE

The decommissioning estimate is based on available regional labor rates and has neglected any credits for salvaging project material. It is estimated that the decommissioning of this project will cost approximately **\$496,257**. The terms set forth in this plan are binding.

We understand that the surety bond will be placed in an amount set at 125% of the estimate as required by the county ordinance. The detailed cost estimate is included below.



## ATTACHMENT 1: DECOMMISSIONING ESTIMATE



## **DECOMMISSIONING COST ANALYSIS**

MAHOMET SOLAR PROJECT DATE: 03.11.24



Standard Equipment and Work Crews Daily Rates			
Crew	Labor Hours, Daily total	Daily Cost (includes Sub O&P)	Comment
A-3C: Skid Steer78 HP, 1 Equip Operator	8	\$ 1,169.70	General Site Work/loading
A-3D: 1 Flatbed Trailer 25 ton, 1 pickup truck, 1 Truck Driver	8	\$ 1,088.24	Module Loading
B-10B: 1 Dozer 200 HP, 1 Equipment operator, 0.5 laborer,	12	\$ 2,648.93	Remove Driveway, Site restoration
B-12D: 1 Hydraulic Excavator 3.5 CY, 1 Equip operator, 1 Laboror,	16	\$ 3,761.86	Remove Piles, excavation etc
B-17: 1 Backhoe 48 HP, 1 Dump Truck 8 CY, 2 laborers, 1 Operator, 1 Driver	32	\$ 3,454.23	Material Loading
A-31: 1 Hydraulic Crane 40 ton, 1 Equip operator	8	\$ 3,337.44	Material Loading
A-3P: Forklift, 31' reach, 1 operator	8	\$ 1,431.37	Equipment and Operator
B-2: 1 Labor Foreman, 4 laborers	40	\$ 2,925.60	General Labor
R-1: 1 foreman, 3 electricians, 2 apprentice	48	\$ 4,767.60	Skilled Labor
Equip. Rent-Boom, 60', w/ Operator-1 day (sect. 0154-40-0075)	8	\$ 571.50	Rental for Overhead line removal

#### Material and Equipment Removal Unit Rates

Material and Equipment Removal Unit Rates					Hours	
	Hours		Pile R	Removal Rate, piles/day		50
Module Removal Rate, module/hour	ite, module/hour 144 Time to remove overhead line		Time to remove overhead lines, LF/hr		50	
Module Wire Removal Rate, hr	Module Wire Removal Rate, hr 0.5 Tim		Time to remove a utility pole/hr		1	
Time to remove AC/DC lines, LF/hr	100		Inverter Removal Rate, hr/inverter		0.5	
Rack Removal Rate (Rack,wire,motor), Strings/hour	6		Transformer/switchgear Removal Rate, hr/unit		2	
Grading Rate, CY/hour	Grading Rate, CY/hour 100 Racking Loading Rat		Racking Loading Rate, min/LF		0.1	
Fence Removal Rate, LF/Hr	300		Ground Seeding Rates, Ac/hr		1	
Silt Fence Install/Removal rates, LF/HR	100					

DISASSEMBLY & DISPOSAL			Time to Complete	Completed by	Labor Hours/	Cost, Ś
	QTY		Task, Days	Crew ID#	Total	COSI, Ş
Remove Modules	12,696	Modules	12	B-2, A-3D, A-3P	672	\$ 65,342.52
Remove Inverters	40	EA	3	B-2, R-1	264	\$ 23,079.60
Remove Transformer, Switchgear, and misc. electrical equipment(s) loading	2	EA	1	A-31	8	\$ 3,337.44
Remove Foundation Piles	2,300	EA	6	B-12D, A-3C, A-3D	192	\$ 36,118.80
Remove Racking (torque tubes, motor, & supports) Strings	529	Strings	12	A-3D, A-3C, B-12D	384	\$ 72,237.60
Remove DC Wiring	4,600	LF	6	R-1, B-12D	384	\$ 51,176.76
Remove AC Wiring	2,700	LF	4	R-1, B-12D	256	\$ 34,117.84
Remove Fence	4,590	LF	2	B-17	64	\$ 6,908.46
Remove Gravel Access Drive	1338	CY	2	A-3C, B-10B, B-12D	72	\$ 15,160.98
Removal Utility Poles	6	EA	1	Rent-Boom Lift	8	\$ 571.50
Remove Equipment Pad	2	LS	1	B-12D, B-2	56	\$ 6,687.46
SITE RESTORATION						
Re-Seeding and mulching and site cleanup/restoration	36	AC	5	A-3C, B-2	240	\$ 20,477
Temporary Erosion and Sediment Control / silt fence	2500	LF	4	B-12	64	\$ 15,047
Construction Entrance	1	EA	1	B-12	8	\$ 2,000.00
OTHER COSTS			Unit Cost			
Transportation to transfer station (assumes 10 truckloads regd)	120	\$/MILE	\$ 3.05			\$ 3,660.00
Panel Disposal (module weight 75 pounds)	476	Tons	\$ 200.00			\$ 95,220.00
Notes					Hours Total	2,600
1. The crew rates provided are based on regional labor and crew rates per the RS Means: Site Work					Subtotal	\$ 451,143
& Landscape Cost data book version 2024.				Mobilization C	Cost, \$ (10%)	\$ 45,114
					TOTAL	\$ 496,257

#### STANDARD AGRICULTURAL IMPACT MITIGATION AGREEMENT between Mahomet IL Solar 1, LLC

#### and the ILLINOIS DEPARTMENT OF AGRICULTURE Pertaining to the Construction of a Commercial Solar Energy Facility in Champaign County, Illinois

Pursuant to the Renewable Energy Facilities Agricultural Impact Mitigation Act (505 ILCS 147), the following standards and policies are required by the Illinois Department of Agriculture (IDOA) to help preserve the integrity of any Agricultural Land that is impacted by the Construction and Deconstruction of a Commercial Solar Energy Facility. They were developed with the cooperation of agricultural agencies, organizations, Landowners, Tenants, drainage contractors, and solar energy companies to comprise this Agricultural Impact Mitigation Agreement (AIMA).

<u>Mahomet IL Solar 1, LLC</u>, hereafter referred to as Commercial Solar Energy Facility Owner, or simply as Facility Owner, plans to develop and/or operate a <u>5 MW AC</u> Commercial Solar Energy Facility in <u>Champaign</u> County [GPS Coordinates: <u>40.1949, -88.4340</u>], which will consist of up to <u>37.95</u> acres that will be covered by solar facility related components, such as solar panel arrays, racking systems, access roads, an onsite underground collection system, inverters and transformers and any affiliated electric transmission lines. This AIMA is made and entered between the Facility Owner and the IDOA.

If Construction does not commence within four years after this AIMA has been fully executed, this AIMA shall be revised, with the Facility Owner's input, to reflect the IDOA's most current Solar Farm Construction and Deconstruction Standards and Policies. This AIMA, and any updated AIMA, shall be filed with the County Board by the Facility Owner prior to the commencement of Construction.

The below prescribed standards and policies are applicable to Construction and Deconstruction activities occurring partially or wholly on privately owned agricultural land.

#### **Conditions of the AIMA**

The mitigative actions specified in this AIMA shall be subject to the following conditions:

- A. All Construction or Deconstruction activities may be subject to County or other local requirements. However, the specifications outlined in this AIMA shall be the minimum standards applied to all Construction or Deconstruction activities. IDOA may utilize any legal means to enforce this AIMA.
- B. Except for Section 17. B. through F., all actions set forth in this AIMA are subject to modification through negotiation by Landowners and the Facility Owner, provided such changes are negotiated in advance of the respective Construction or Deconstruction activities.
- C. The Facility Owner may negotiate with Landowners to carry out the actions that Landowners wish to perform themselves. In such instances, the Facility Owner shall offer Landowners the area commercial rate for their machinery and labor costs.

- D. All provisions of this AIMA shall apply to associated future Construction, maintenance, repairs, and Deconstruction of the Facility referenced by this AIMA.
- E. The Facility Owner shall keep the Landowners and Tenants informed of the Facility's Construction and Deconstruction status, and other factors that may have an impact upon their farming operations.
- F. The Facility Owner shall include a statement of its adherence to this AIMA in any environmental assessment and/or environmental impact statement.
- G. Execution of this AIMA shall be made a condition of any Conditional/Special Use Permit. Not less than 30 days prior to the commencement of Construction, a copy of this AIMA shall be provided by the Facility Owner to each Landowner that is party to an Underlying Agreement. In addition, this AIMA shall be incorporated into each Underlying Agreement.
- H. The Facility Owner shall implement all actions to the extent that they do not conflict with the requirements of any applicable federal, state and local rules and regulations and other permits and approvals that are obtained by the Facility Owner for the Facility.
- I. No later than 45 days prior to the Construction and/or Deconstruction of a Facility, the Facility Owner shall provide the Landowner(s) with a telephone number the Landowner can call to alert the Facility Owner should the Landowner(s) have questions or concerns with the work which is being done or has been carried out on his/her property.
- J. If there is a change in ownership of the Facility, the Facility Owner assuming ownership of the Facility shall provide written notice within 90 days of ownership transfer, to the Department, the County, and to Landowners of such change. The Financial Assurance requirements and the other terms of this AIMA shall apply to the new Facility Owner.
- K. The Facility Owner shall comply with all local, state and federal laws and regulations, specifically including the worker protection standards to protect workers from pesticide exposure.
- L. Within 30 days of execution of this AIMA, the Facility Owner shall use Best Efforts to provide the IDOA with a list of all Landowners that are party to an Underlying Agreement and known Tenants of said Landowner who may be affected by the Facility. As the list of Landowners and Tenants is updated, the Facility Owner shall notify the IDOA of any additions or deletions.
- M. If any provision of this AIMA is held to be unenforceable, no other provision shall be affected by that holding, and the remainder of the AIMA shall be interpreted as if it did not contain the unenforceable provision.

#### **Definitions**

Abandonment When Deconstruction has not been completed within 12 months after the Commercial Solar Energy Facility reaches the end of its useful life. For purposes of this definition, a Commercial Solar Energy Facility shall be presumed to have reached the end of its useful life if the Commercial Solar Energy Facility Owner fails, for a period of 6 consecutive months, to pay the Landowner amounts owed in accordance with an Underlying Agreement.

Mahomet IL Solar 1, LLC Standard Solar Agricultural Impact Mitigation Agreement

Aboveground Cable Electrical power lines installed above ground surface to be utilized for conveyance of power from the solar panels to the solar facility inverter and/or point of interconnection to utility grid or customer electric meter.

Agricultural ImpactThe Agreement between the Facility Owner and the IllinoisMitigation AgreementDepartment of Agriculture (IDOA) described herein.(AIMA)Control of Agriculture (IDOA) described herein.

Agricultural Land Land used for Cropland, hayland, pastureland, managed woodlands, truck gardens, farmsteads, commercial ag-related facilities, feedlots, livestock confinement systems, land on which farm buildings are located, and land in government conservation programs used for purposes as set forth above.

Best Efforts Diligent, good faith, and commercially reasonable efforts to achieve a given objective or obligation.

Commercial Operation Date The calendar date of which the Facility Owner notifies the Landowner, County, and IDOA in writing that commercial operation of the facility has commenced. If the Facility Owner fails to provide such notifications, the Commercial Operation Date shall be the execution date of this AIMA plus 6 months.

- Commercial Solar Energy Facility (Facility) A solar energy conversion facility equal to or greater than 500 kilowatts in total nameplate capacity, including a solar energy conversion facility seeking an extension of a permit to construct granted by a county or municipality before June 29, 2018. "Commercial solar energy facility" does not include a solar energy conversion facility: (1) for which a permit to construct has been issued before June 29, 2018; (2) that is located on land owned by the commercial solar energy facility owner; (3) that was constructed before June 29, 2018; or (4) that is located on the customer side of the customer's electric meter and is primarily used to offset that customer's electricity load and is limited in nameplate capacity to less than or equal to 2,000 kilowatts.
- Commercial Solar Energy<br/>Facility OwnerA person or entity that owns a commercial solar energy facility. A<br/>Commercial Solar Energy Facility Owner is not nor shall it be<br/>to be a public utility as defined in the Public Utilities Act.

County The County or Counties where the Commercial Solar Energy Facility is located.

Construction The installation, preparation for installation and/or repair of a Facility.

Cropland Land used for growing row crops, small grains or hay; includes land which was formerly used as cropland, but is currently enrolled in a government conservation program; also includes pastureland that is classified as Prime Farmland.

Deconstruction	The removal of a Facility from the property of a Landowner and the restoration of that property as provided in the AIMA.			
Deconstruction Plan	A plan prepared by a Professional Engineer, at the Facility's expense, that includes:			
	(1) the estimated Deconstruction cost, in current dollars at the time of filing, for the Facility, considering among other things:			
	<ul> <li>i. the number of solar panels, racking, and related facilities involved;</li> <li>ii. the original Construction costs of the Facility;</li> <li>iii. the size and capacity, in megawatts of the Facility;</li> <li>iv. the salvage value of the facilities (if all interests in salvage value are subordinate to that of the Financial Assurance holder if abandonment occurs);</li> <li>v. the Construction method and techniques for the Facility and for other similar facilities; and</li> </ul>			
	(2) a comprehensive detailed description of how the Facility Owner plans to pay for the Deconstruction of the Facility.			
Department	The Illinois Department of Agriculture (IDOA).			
Financial Assurance	A reclamation or surety bond or other commercially available financial assurance that is acceptable to the County, with the County or Landowner as beneficiary.			
Landowner	Any person with an ownership interest in property that is used for agricultural purposes and that is party to an Underlying Agreement.			
Prime Farmland	Agricultural Land comprised of soils that are defined by the USDA Natural Resources Conservation Service (NRCS) as "Prime Farmland" (generally considered to be the most productive soils with the least input of nutrients and management).			
Professional Engineer	An engineer licensed to practice engineering in the State of Illinois.			
Soil and Water Conservation District (SWCD)	A unit of local government that provides technical and financial assistance to eligible Landowners for the conservation of soil and water resources.			
Tenant	Any person, apart from the Facility Owner, lawfully residing or leasing/renting land that is subject to an Underlying Agreement.			
Topsoil	The uppermost layer of the soil that has the darkest color or the highest content of organic matter; more specifically, it is defined as the "A" horizon.			
Underlying Agreement	The written agreement between the Facility Owner and the Landowner(s) including, but not limited to, an easement, option, lease, or license under the terms of which another person has constructed, constructs, or intends to construct a Facility on the property of the Landowner.			
Page 4 of 12	Standard Solar AIMA V.8.19.19			

Underground Cable	Electrical power lines installed below the ground surface to be utilized for conveyance of power within a Facility or from a Commercial Solar Energy Facility to the electric grid.
USDA Natural Resources Conservation Service (NRCS)	An agency of the United States Department of Agriculture that provides America's farmers with financial and technical assistance to aid with natural resources conservation.

#### **Construction and Deconstruction Standards and Policies**

#### 1. Support Structures

- A. Only single pole support structures shall be used for the Construction and operation of the Facility on Agricultural Land. Other types of support structures, such as lattice towers or H-frames, may be used on nonagricultural land.
- B. Where a Facility's Aboveground Cable will be adjacent and parallel to highway and/or railroad right-of-way, but on privately owned property, the support structures shall be placed as close as reasonably practicable and allowable by the applicable County Engineer or other applicable authorities to the highway or railroad right-of-way. The only exceptions may be at jogs or weaves on the highway alignment or along highways or railroads where transmission and distribution lines are already present.
- C. When it is not possible to locate Aboveground Cable next to highway or railroad rightof-way, Best Efforts shall be expended to place all support poles in such a manner to minimize their placement on Cropland (i.e., longer than normal above ground spans shall be utilized when traversing Cropland).

#### 2. Aboveground Facilities

Locations for facilities shall be selected in a manner that is as unobtrusive as reasonably possible to ongoing agricultural activities occurring on the land that contains or is adjacent to the Facility.

#### 3. Guy Wires and Anchors

Best Efforts shall be made to place guy wires and their anchors, if used, out of Cropland, pastureland and hayland, placing them instead along existing utilization lines and on land other than Cropland. Where this is not feasible, Best Efforts shall be made to minimize guy wire impact on Cropland. All guy wires shall be shielded with highly visible guards.

#### 4. Underground Cabling Depth

- A. Underground electrical cables located outside the perimeter of the (fence) of the solar panels shall be buried with:
  - 1. a minimum of 5 feet of top cover where they cross Cropland.
  - 2. a minimum of 5 feet of top cover where they cross pastureland or other non-Cropland classified as Prime Farmland.
  - 3. a minimum of 3 feet of top cover where they cross pastureland and other Agricultural Land not classified as Prime Farmland.

- 4. a minimum of 3 feet of top cover where they cross wooded/brushy land.
- B. Provided that the Facility Owner removes the cables during Deconstruction, underground electric cables may be installed to a minimum depth of 18 inches:
  - 1. Within the fenced perimeter of the Facility; or
  - 2. When buried under an access road associated with the Facility provided that the location and depth of cabling is clearly marked at the surface.
- C. If Underground Cables within the fenced perimeter of the solar panels are installed to a minimum depth of 5 feet, they may remain in place after Deconstruction.

#### 5. Topsoil Removal and Replacement

- A. Any excavation shall be performed in a manner to preserve topsoil. Best Efforts shall be made to store the topsoil near the excavation site in such a manner that it will not become intermixed with subsoil materials.
- B. Best Efforts shall be made to store all disturbed subsoil material near the excavation site and separate from the topsoil.
- C. When backfilling an excavation site, Best Efforts shall be used to ensure the stockpiled subsoil material will be placed back into the excavation site before replacing the topsoil.
- D. Refer to Section 7 for procedures pertaining to rock removal from the subsoil and topsoil.
- E. Refer to Section 8 for procedures pertaining to the repair of compaction and rutting of the topsoil.
- F. Best Efforts shall be performed to place the topsoil in a manner so that after settling occurs, the topsoil's original depth and contour will be restored as close as reasonably practicable. The same shall apply where excavations are made for road, stream, drainage ditch, or other crossings. In no instance shall the topsoil materials be used for any other purpose unless agreed to explicitly and in writing by the Landowner.
- G. Based on the mutual agreement of the landowner and Facility Owner, excess soil material resulting from solar facility excavation shall either be removed or stored on the Landowner's property and reseeded per the applicable National Pollution Discharge Elimination System (NPDES) permit/Stormwater Pollution Prevention Plan (SWPPP). After the Facility reaches the end of its Useful Life, the excess subsoil material shall be returned to an excavation site or removed from the Landowner's property, unless otherwise agreed to by Landowner.

#### 6. Rerouting and Permanent Repair of Agricultural Drainage Tiles

The following standards and policies shall apply to underground drainage tile line(s) directly or indirectly affected by Construction and/or Deconstruction:

A. Prior to Construction, the Facility Owner shall work with the Landowner to identify drainage tile lines traversing the property subject to the Underlying Agreement to the extent reasonably practicable. All drainage tile lines identified in this manner shall be shown on the Construction and Deconstruction Plans.

B. The location of all drainage tile lines located adjacent to or within the footprint of the Facility shall be recorded using Global Positioning Systems (GPS) technology. Within 60 days after Construction is complete, the Facility Owner shall provide the Landowner, the IDOA, and the respective County Soil and Water Conservation District (SWCD) with "as built" drawings (strip maps) showing the location of all drainage tile lines by survey station encountered in the Construction of the Facility, including any tile line repair location(s), and any underground cable installed as part of the Facility.

#### C. Maintaining Surrounding Area Subsurface Drainage

If drainage tile lines are damaged by the Facility, the Facility Owner shall repair the lines or install new drainage tile line(s) of comparable quality and cost to the original(s), and of sufficient size and appropriate slope in locations that limit direct impact from the Facility. If the damaged tile lines cause an unreasonable disruption to the drainage system, as determined by the Landowner, then such repairs shall be made promptly to ensure appropriate drainage. Any new line(s) may be located outside of, but adjacent to the perimeter of the Facility. Disrupted adjacent drainage tile lines shall be attached thereto to provide an adequate outlet for the disrupted adjacent tile lines.

#### D. Re-establishing Subsurface Drainage Within Facility Footprint

Following Deconstruction and using Best Efforts, if underground drainage tile lines were present within the footprint of the facility and were severed or otherwise damaged during original Construction, facility operation, and/or facility Deconstruction, the Facility Owner shall repair existing drainage tiles or install new drainage tile lines of comparable quality and cost to the original, within the footprint of the Facility with sufficient capacity to restore the underground drainage capacity that existed within the footprint of the Facility prior to Construction. Such installation shall be completed within 12 months after the end of the useful life of the Facility and shall be compliant with Figures 1 and 2 to this Agreement or based on prudent industry standards if agreed to by Landowner.

- E. If there is any dispute between the Landowner and the Facility Owner on the method of permanent drainage tile line repair, the appropriate County SWCD's opinion shall be considered by the Facility Owner and the Landowner.
- F. During Deconstruction, all additional permanent drainage tile line repairs beyond those included above in Section 6.D. must be made within 30 days of identification or notification of the damage, weather and soil conditions permitting. At other times, such repairs must be made at a time mutually agreed upon by the Facility Owner and the Landowner. If the Facility Owner and Landowner cannot agree upon a reasonable method to complete this restoration, the Facility Owner may implement the recommendations of the appropriate County SWCD and such implementation constitutes compliance with this provision.
- G. Following completion of the work required pursuant to this Section, the Facility Owner shall be responsible for correcting all drainage tile line repairs that fail due to Construction and/or Deconstruction for one year following the completion of Construction or Deconstruction, provided those repairs were made by the Facility Owner. The Facility Owner shall not be responsible for drainage tile repairs that the Facility Owner pays the Landowner to perform.

#### 7. Rock Removal

With any excavations, the following rock removal procedures pertain only to rocks found in the uppermost 42 inches of soil, the common freeze zone in Illinois, which emerged or were brought to the site as a result of Construction and/or Deconstruction.

- A. Before replacing any topsoil, Best Efforts shall be taken to remove all rocks greater than 3 inches in any dimension from the surface of exposed subsoil which emerged or were brought to the site as a result of Construction and/or Deconstruction.
- B. If trenching, blasting, or boring operations are required through rocky terrain, precautions shall be taken to minimize the potential for oversized rocks to become interspersed in adjacent soil material.
- C. Rocks and soil containing rocks removed from the subsoil areas, topsoil, or from any excavations, shall be removed from the Landowner's premises or disposed of on the Landowner's premises at a location that is mutually acceptable to the Landowner and the Facility Owner.

#### 8. Repair of Compaction and Rutting

- A. Unless the Landowner opts to do the restoration work on compaction and rutting, after the topsoil has been replaced post-Deconstruction, all areas within the boundaries of the Facility that were traversed by vehicles and Construction and/or Deconstruction equipment that exhibit compaction and rutting shall be restored by the Facility Owner. All prior Cropland shall be ripped at least 18 inches deep or to the extent practicable, and all pasture and woodland shall be ripped at least 12 inches deep or to the extent practicable. The existence of drainage tile lines or underground utilities may necessitate less ripping depth. The disturbed area shall then be disked.
- B. All ripping and disking shall be done at a time when the soil is dry enough for normal tillage operations to occur on Cropland adjacent to the Facility.
- C. The Facility Owner shall restore all rutted land to a condition as close as possible to its original condition upon Deconstruction, unless necessary earlier as determined by the Landowner.
- D. If there is any dispute between the Landowner and the Facility Owner as to what areas need to be ripped/disked or the depth at which compacted areas should be ripped/disked, the appropriate County SWCD's opinion shall be considered by the Facility Owner and the Landowner.

#### 9. Construction During Wet Weather

Except as provided below, construction activities are not allowed on agricultural land during times when normal farming operations, such as plowing, disking, planting or harvesting, cannot take place due to excessively wet soils. With input from the landowner, wet weather conditions may be determined on a field by field basis.

A. Construction activities on prepared surfaces, surfaces where topsoil and subsoil have been removed, heavily compacted in preparation, or otherwise stabilized (e.g. through cement mixing) may occur at the discretion of the Facility Owner in wet weather conditions.

B. Construction activities on unprepared surfaces will be done only when work will not result in rutting which may mix subsoil and topsoil. Determination as to the potential of subsoil and topsoil mixing will be made in consultation with the underlying Landowner, or, if approved by the Landowner, his/her designated tenant or designee.

#### 10. Prevention of Soil Erosion

- A. The Facility Owner shall work with Landowners and create and follow a SWPPP to prevent excessive erosion on land that has been disturbed by Construction or Deconstruction of a Facility.
- B. If the Landowner and Facility Owner cannot agree upon a reasonable method to control erosion on the Landowner's property, the Facility Owner shall consider the recommendations of the appropriate County SWCD to resolve the disagreement.
- C. The Facility Owner may, per the requirements of the project SWPPP and in consultation with the Landowner, seed appropriate vegetation around all panels and other facility components to prevent erosion. The Facility Owner must utilize Best Efforts to ensure that all seed mixes will be as free of any noxious weed seeds as possible. The Facility Owner shall consult with the Landowner regarding appropriate varieties to seed.

#### 11. Repair of Damaged Soil Conservation Practices

Consultation with the appropriate County SWCD by the Facility Owner shall be carried out to determine if there are soil conservation practices (such as terraces, grassed waterways, etc.) that will be damaged by the Construction and/or Deconstruction of the Facility. Those conservation practices shall be restored to their preconstruction condition as close as reasonably practicable following Deconstruction in accordance with USDA NRCS technical standards. All repair costs shall be the responsibility of the Facility Owner.

#### 12. Compensation for Damages to Private Property

The Facility Owner shall reasonably compensate Landowners for damages caused by the Facility Owner. Damage to Agricultural Land shall be reimbursed to the Landowner as prescribed in the applicable Underlying Agreement.

#### 13. Clearing of Trees and Brush

- A. If trees are to be removed for the Construction or Deconstruction of a Facility, the Facility Owner shall consult with the Landowner to determine if there are trees of commercial or other value to the Landowner.
- B. If there are trees of commercial or other value to the Landowner, the Facility Owner shall allow the Landowner the right to retain ownership of the trees to be removed and the disposition of the removed trees shall be negotiated prior to the commencement of land clearing.

#### 14. Access Roads

A. To the extent practicable, access roads shall be designed to not impede surface drainage and shall be built to minimize soil erosion on or near the access roads.

- B. Access roads may be left intact during Construction, operation or Deconstruction through mutual agreement of the Landowner and the Facility Owner unless otherwise restricted by federal, state, or local regulations.
- C. If the access roads are removed, Best Efforts shall be expended to assure that the land shall be restored to equivalent condition(s) as existed prior to their construction, or as otherwise agreed to by the Facility Owner and the Landowner. All access roads that are removed shall be ripped to a depth of 18 inches. All ripping shall be performed consistent with Section 8.

#### 15. Weed/Vegetation Control

- A. The Facility Owner shall provide for weed control in a manner that prevents the spread of weeds. Chemical control, if used, shall be done by an appropriately licensed pesticide applicator.
- B. The Facility Owner shall be responsible for the reimbursement of all reasonable costs incurred by owners of agricultural land where it has been determined by the appropriate state or county entity that weeds have spread from the Facility to their property. Reimbursement is contingent upon written notice to the Facility Owner. Facility Owner shall reimburse the property owner within 45 days after notice is received.
- C. The Facility Owner shall ensure that all vegetation growing within the perimeter of the Facility is properly and appropriately maintained. Maintenance may include, but not be limited to, mowing, trimming, chemical control, or the use of livestock as agreed to by the Landowner.
- D. The Deconstruction plans must include provisions for the removal of all weed control equipment used in the Facility, including weed-control fabrics or other ground covers.

#### 16. Indemnification of Landowners

The Facility Owner shall indemnify all Landowners, their heirs, successors, legal representatives, and assigns from and against all claims, injuries, suits, damages, costs, losses, and reasonable expenses resulting from or arising out of the Commercial Solar Energy Facility, including Construction and Deconstruction thereof, and also including damage to such Facility or any of its appurtenances, except where claims, injuries, suits, damages, costs, losses, and expenses are caused by the negligence or intentional acts, or willful omissions of such Landowners, and/or the Landowners heirs, successors, legal representatives, and assigns.

#### 17. Deconstruction Plans and Financial Assurance of Commercial Solar Energy Facilities

- A. Deconstruction of a Facility shall include the removal/disposition of all solar related equipment/facilities, including the following utilized for operation of the Facility and located on Landowner property:
  - 1. Solar panels, cells and modules;
  - 2. Solar panel mounts and racking, including any helical piles, ground screws, ballasts, or other anchoring systems;
  - 3. Solar panel foundations, if used (to depth of 5 feet);

- 4. Transformers, inverters, energy storage facilities, or substations, including all components and foundations; however, Underground Cables at a depth of 5 feet or greater may be left in place;
- 5. Overhead collection system components;
- 6. Operations/maintenance buildings, spare parts buildings and substation/switching gear buildings unless otherwise agreed to by the Landowner;
- Access Road(s) unless Landowner requests in writing that the access road is to remain;
- 8. Operation/maintenance yard/staging area unless otherwise agreed to by the Landowner; and
- 9. Debris and litter generated by Deconstruction and Deconstruction crews.
- B. The Facility Owner shall, at its expense, complete Deconstruction of a Facility within twelve (12) months after the end of the useful life of the Facility.
- C. During the County permit process, or if none, then prior to the commencement of construction, the Facility Owner shall file with the County a Deconstruction Plan. The Facility Owner shall file an updated Deconstruction Plan with the County on or before the end of the tenth year of commercial operation.
- D. The Facility Owner shall provide the County with Financial Assurance to cover the estimated costs of Deconstruction of the Facility. Provision of this Financial Assurance shall be phased in over the first 11 years of the Project's operation as follows:
  - 1. On or before the first anniversary of the Commercial Operation Date, the Facility Owner shall provide the County with Financial Assurance to cover ten (10) percent of the estimated costs of Deconstruction of the Facility as determined in the Deconstruction Plan.
  - 2. On or before the sixth anniversary of the Commercial Operation Date, the Facility Owner shall provide the County with Financial Assurance to cover fifty (50) percent of the estimated costs of Deconstruction of the Facility as determined in the Deconstruction Plan.
  - 3. On or before the eleventh anniversary of the Commercial Operation Date, the Facility Owner shall provide the County with Financial Assurance to cover one hundred (100) percent of the estimated costs of Deconstruction of the Facility as determined in the updated Deconstruction Plan provided during the tenth year of commercial operation.

The Financial Assurance shall not release the surety from liability until the Financial Assurance is replaced. The salvage value of the Facility may only be used to reduce the estimated costs of Deconstruction if the County agrees that all interests in the salvage value are subordinate or have been subordinated to that of the County if Abandonment occurs.

- E. The County may, but is not required to, reevaluate the estimated costs of Deconstruction of any Facility after the tenth anniversary, and every five years thereafter, of the Commercial Operation Date. Based on any reevaluation, the County may require changes in the level of Financial Assurance used to calculate the phased Financial Assurance levels described in Section 17.D. required from the Facility Owner. If the County is unable to its satisfaction to perform the investigations necessary to approve the Deconstruction Plan filed by the Facility Owner, then the County and Facility may mutually agree on the selection of a Professional Engineer independent of the Facility Owner to conduct any necessary investigations. The Facility Owner shall be responsible for the cost of any such investigations.
- F. Upon Abandonment, the County may take all appropriate actions for Deconstruction including drawing upon the Financial Assurance.

#### **Concurrence of the Parties to this AIMA**

The Illinois Department of Agriculture and <u>Mahomet IL Solar 1, LLC</u> concur that this AIMA is the complete AIMA governing the mitigation of agricultural impacts that may result from the Construction and Deconstruction of the solar farm project in <u>Champaign</u> County within the State of Illinois.

The effective date of this AIMA commences on the date of execution.

STATE OF ILLINOIS DEPARTMENT OF AGRICULTURE

By: Jerry Costello II, Director

By Clay Nordsiek, Deputy General Counsel

Bridget Callahan By Bridget Callahan

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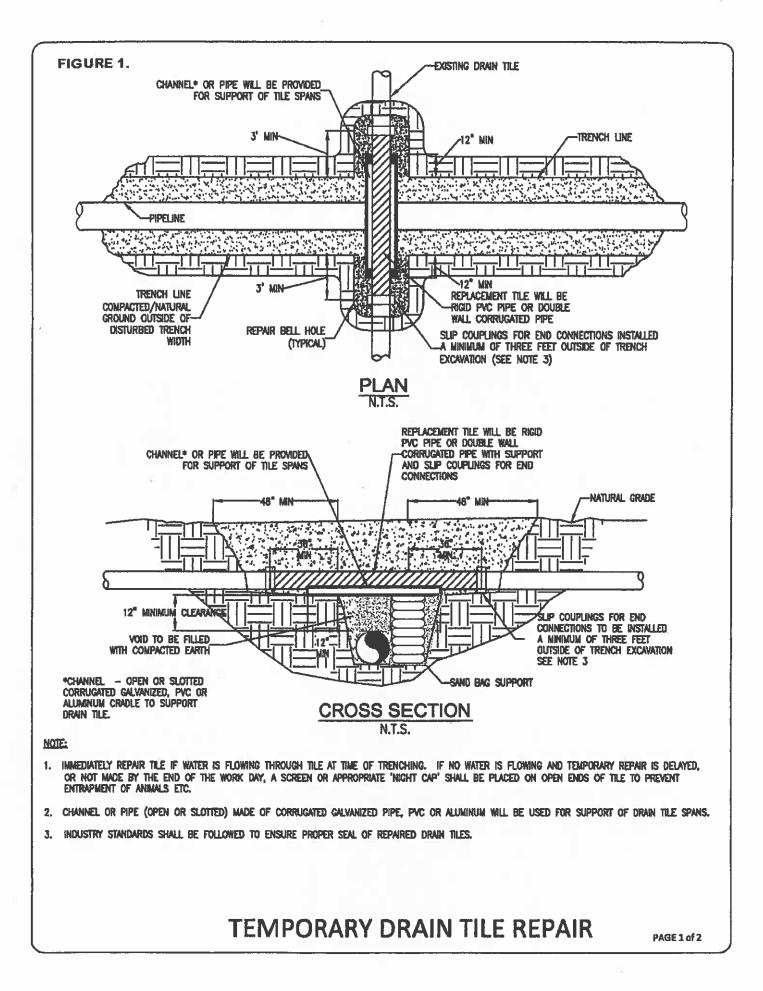
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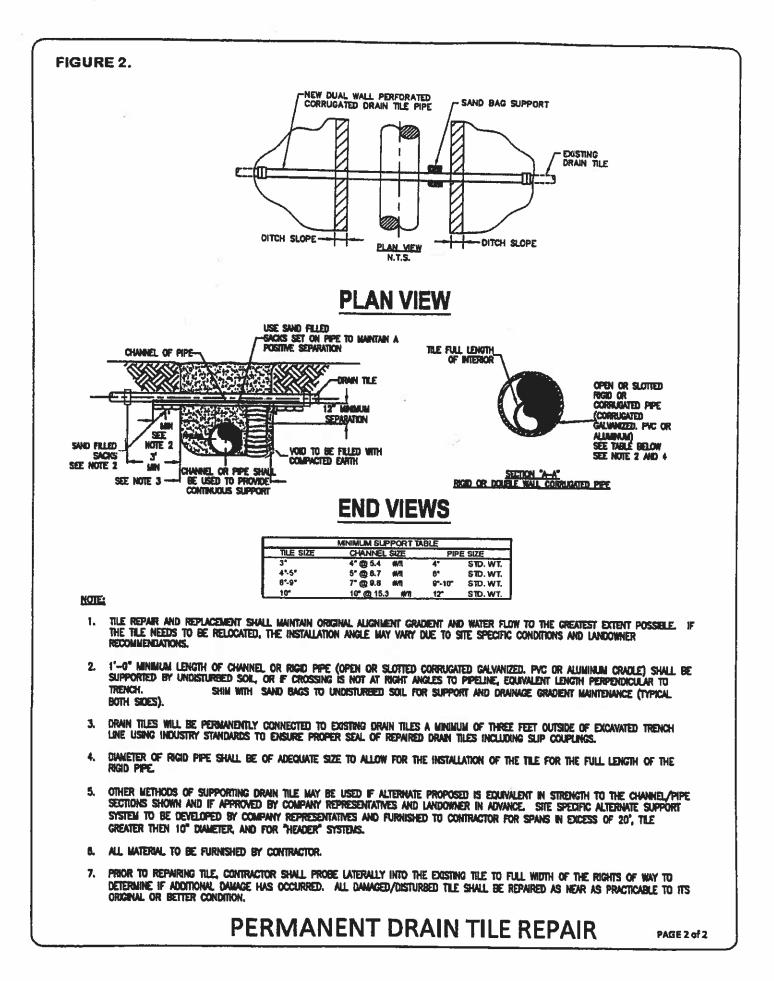
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Standard Solar AIMA V.8.19.19

Mahomet IL Solar 1, LLC







## **VEGETATIVE MAINTENANCE PLAN**

#### **Project Information**

Project Name: Mahomet Solar Address: County Road 125 E, Mahomet, Illinois 61853 Project Area: Approximately 36-acre project area

#### Background

The proposed Mahomet Solar solar project involves the construction of a 5.00 megawatt alternating current single axis tracker photovoltaic system and supporting infrastructure such as access roads, electrical lines, and perimeter fence.

Following construction of the solar facility, disturbed grounds will be re-established with pollinator-friendly low growth/low maintenance ground cover. The vegetative maintenance contractor will be responsible for inspecting and maintaining the vegetative integrity of the solar facility. The contractor will conduct on-site activities during growing months at the frequency of approximately 2-3 times per year. The contractor is expected to adjust site maintenance frequency based on time of year and weather conditions. To avoid rutting, erosion, and soil compaction, weather forecasts will be consulted, and on-site field inspections will be conducted prior to mowing or cutting to ensure that these practices occur when the site is able to withstand this type of activity.

Around portions of the perimeter of the project, a row of evergreen trees will be planted to provide a visual buffer for some of the adjacent landowners. The trees will be approximately 5-feet-tall at planting and are anticipated to be of the evergreen species Thuja Occidentalis, or approved equal.

The vegetative plantings will be in accordance with Illinois Department of Natural Resources (IDNR) guidelines, which are intended to maintain native and non-invasive naturalized perennial vegetation that protect the health and well-being of the pollinators.

It is important to note this scope of work covers work along the access road and within the fence line of the project. Remaining lands outside the fence will continue to be utilized for agricultural purposes and maintained by the landowner or their representative.

#### **Site Activities**

• Perimeter Maintenance

o The 7-foot perimeter chain link fence line will be inspected for items of trash, that may have accumulated since the previous site visit. These items will be collected and disposed of offsite. Vegetative growth along the fence line will also be trimmed and maintained to prevent the growth of weeds or tall grasses.



#### • Mowing

o Mowing is a three-step process. First, the mower or bush hog trims the large areas. Second, trimmers are used to cut around structural elements and other places the mower couldn't reach.

o Finally, any vegetation that was thrown and stuck to the modules will be cleaned off. Additionally, spot-mowing is recommended for reducing invasive plants while native species are becoming established. Spot-mowing should be done at a raised height to avoid damaging native plants.

#### • Site Inspections

o During each maintenance visit, the site will be inspected for signs of erosion. Any areas of concern will be immediately communicated to the project owner/developer to evaluate and implement corrective measures. Should the contractor observe a non-typical condition or change in site conditions the project owner/developer will be immediately notified.

o The perimeter tree buffer/visual screen will be inspected to ensure the trees are healthy. Any trees that have died will replaced in-kind in a timeframe that is mutually agreed upon by the AHJ and owner.

• Access Road Maintenance

o During maintenance activities, the access road will be inspected and maintained to ensure that vegetative creep does not occur. This will include the mowing of at least a 3-foot strip paralleling each side of the road. Additionally, any observed vegetative creep within the road will be removed. Design corridors for emergency vehicle access will be maintained.

#### Table 1: Scope of Work

Activity	Frequency	Timing
Perimeter Maintenance	8-12 Weeks	May - October
Mowing	8-12 Weeks	May - October
Site Inspections	8-12 Weeks	May - October
Screening Maintenance*	4-8 Weeks	May - October
Access Road Maintenance	8-12 Weeks	May - October

Note: Dead or diseased trees removed and replaced on an annual basis, or as otherwise required in writing by the Building and Zoning supervisor or his/her designee.





# MAHOMET SOLAR AMBIENT NOISE STUDY

MAHOMET, ILLINOIS

NOISE - AMBIENT SURVEY RWDI # 2506209 December 31, 2024

#### SUBMITTED TO

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# TABLE OF CONTENTS

1		1
2	APPLICABLE NOISE REGULATIONS.	1
2.1	IPCB Noise Limits	1
2.2	Village of Mahomet, Illinois Code of Ordinances	2
3	MEASUREMENT APPROACH	.2
3.1	Equipment	2
3.2	Monitoring Locations	3
3.3	Monitoring Program	5
4	RESULTS AND DISCUSSION	.5
4.1	Summary Results	5
4.2	Comparison to Project Predictions and Potential Audibility	6
5	CONCLUSIONS AND RECOMMENDATIONS	.7
6	STATEMENT OF LIMITATIONS	.8
7	REFERENCES	.9

### STUDY TYPE: NOISE - AMBIENT SURVEY MAHOMET SOLAR AMBIENT NOISE STUDY

RWDI#2506209 December 31, 2024



# LIST OF TABLES

Table 1:	Allowable Sound Emitted to Class A Land During Daytime Hours	1
Table 2:	Measurement Results	5
Table 3:	Comparison of Measured Ambient Sound with the Predicted Worst Case Project	
	Contributions	6

# LIST OF FIGURES

Figure 1:	Photo of the Monitoring Location	3
Figure 2:	Location of Monitors and Assessed Receptors	4

# **APPENDICES**

- Appendix A: Sound Level Meter Calibration Certificates
- Appendix B: Measured 1-Minute Sound Levels at Measurement Location

# **1** INTRODUCTION

RWDI was retained by Summit Ridge Energy to conduct an ambient background measurement for the lands adjacent to the proposed Mahomet IL Solar 1, LLC Project (the Project) near Mahomet, Illinois. This report was prepared to present measured background ambient sound levels at adjacent receptors to the proposed project, and follows the methodology specified in the Illinois Pollution Control Board (IPCB) Title 35, Subtitle H (Noise), Chapter I (Pollution Control Board), Part 901 Sound Emission Standards and Limitations for Property Line-Noise Sources (IPCB, 2018b).

Noise impacts from the Mahomet IL Solar 1, LLC Project were previously assessed by RWDI (RWDI, 2024) and sound levels compared IPCB sound level limits. The assessment found that the Project would meet the sound level limits and demonstrated that audibility from the Project was unlikely. This prediction used the conservative assumed ambient background sound levels provided in IPCB Section 910 Appendices A Tables C and D, for a Category 5 location defined as Very Quiet, Sparse Suburban or Rural Area.

Audibility is assessed for the Project using the measured background levels for daytime hours.

# 2 APPLICABLE NOISE REGULATIONS

# 2.1 IPCB Noise Limits

Table 1 lists the various octave band limits for a Class A Land classification from various noise source land uses for both daytime and nighttime hours. Table 1 also shows the calculated overall sound levels in linear and A-weighted sound levels based on the octave band limits.

The Project is classified as a Class C Land use. The bolded limits are the applicable levels for the Project to the adjacent Class A receiver locations. As noted in Section 901.102, the noise emissions should be evaluated at a distance of 25 ft from the property line noise source.

					<u> </u>						
Noise Source Land		Allowable Octave Band (Hz) Sound Levels (dB) Overall									
Classification	31.5	63	125	250	500	1000	2000	4000	8000	dB	dBA
Daytime Hours (07:00 - 22:00)											
Class C Land	75	74	69	64	58	52	47	43	40	78	61
Class B Land	72	71	65	57	51	45	39	34	32	75	55
Class A Land	72	71	65	57	51	45	39	34	32	75	55
Nighttime Hours (22:00 - 07:00)											
Class C Land	69	67	62	54	47	41	36	32	32	72	51
Class B Land	63	61	55	47	40	35	30	25	25	66	44
Class A Land	63	61	55	47	40	35	30	25	25	66	44

## Table 1: Allowable Sound Emitted to Class A Land During Daytime Hours



Section 901.104 of the IPCB limits also specifies daytime and nighttime noise limits for highly impulsive sound. The Project contains no noise sources that are impulsive or highly impulsive, as the inverters and transformers operate in a continuous steady state manner. Therefore, the Project has not been assessed for impulsive noise sources.

# 2.2 Village of Mahomet, Illinois Code of Ordinances

The Village of Mahomet, Illinois Code of Ordinances (VMCO, 2003) has no specific noise limits, instead provides subjective quantification of unwanted noise in Chapter 131.19 (2) Nonvehicular Noise Prohibitions as the following:

No person shall conduct any of the following activities if any activity produces clearly audible sound beyond the boundary line of the property or residential unit on which or in which the activity is conducted:

(2) The operation of power tools or power equipment, except that the tools or equipment may be used between the hours of 7:00 a.m. and 10:00 p.m. for reasonable lengths of time.

The Project noise sources may be considered as power equipment with respect to the VMCO and should be considered for audibility.

# **3** MEASUREMENT APPROACH

# 3.1 Equipment

The measurements used a Bruel and Kjaer Class 1 integrating sound level meter that meets the definitions of ANSI/ASA S1.4-2014 - National Standard Electroacoustics – Sound Level Meters – Part 1, as required in the IPCB Section 900.103 Measurement procedures. The sound level meter is capable of recording overall and octave band filtered sound pressure levels required for the measurement procedure.

The sound level meter was field calibrated before and after the measurement period to ensure accuracy of the measurement. A copy of the unit's calibration records is presented in Appendix A. The meter was set to record overall sound pressure levels on a minute basis for the following metrics:

- Overall sound levels (linear and A-weighted),
- 1/1 octave band levels (Max, min, overall),
- Sound level percentiles (L90, L50, and L10),
- Audio of the measurement.

The microphone of the sound level meter was placed on a tripod at a height of 5 ft (1.5 m), representative of a human listener. Audio data was recorded and reviewed. Invalid data from the recording was excluded from the record. Examples of invalid data was RWDI staff, close proximity sound sources such as bird cawing near the microphone, and honking noises from the highway.

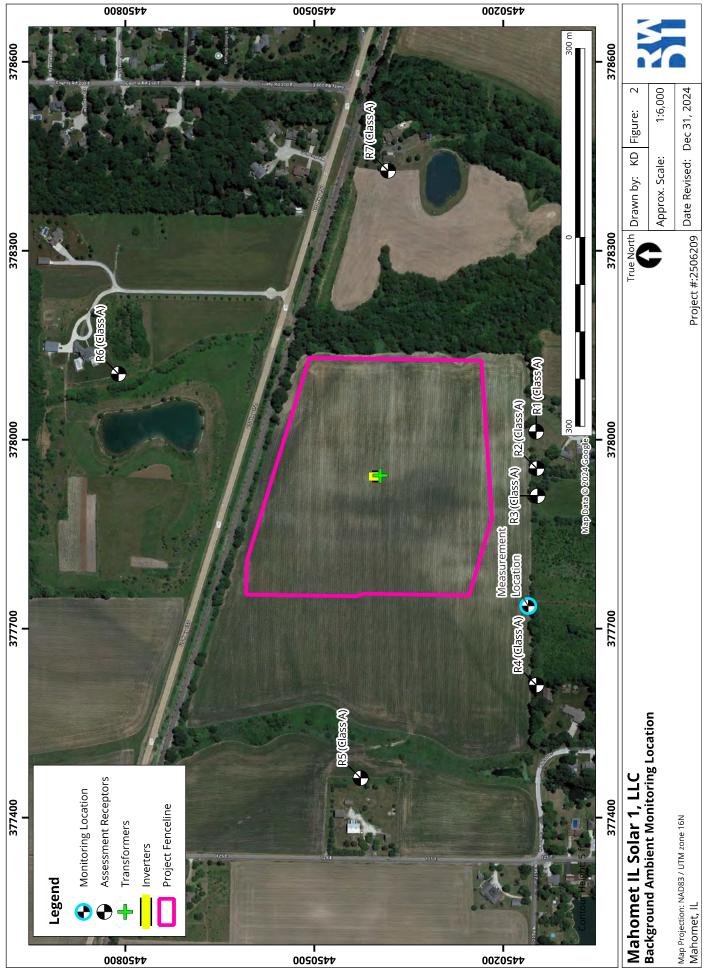


# 3.2 Monitoring Locations

A sound level meter was deployed at a location that represents the dwelling that experiences the least impact from US HWY 150 and would therefore be assumed to be the dwelling with the lowest ambient sound level and would experience the greatest impact, or change relative to ambient, as a result of the Project. Figure 1 shows the photos of the monitor at the time of setup. Figure 2 shows the monitoring location with respect to the receptors considered in the noise impact assessment and the overall Project area. Per the IPCB requirements, the sound level meter was placed 25 ft or greater from the property line.



Figure 1: Photo of the Monitoring Location



Wap Document: J:/2025/2506209/03WorkItems/20EnvironmentalNoise/Analysis/QGI5/20251212 - Nurmi Solar - 240520 KD\_UPDATE.qgz



# 3.3 Monitoring Program

The sound level meter was deployed on October 29<sup>th</sup>, 2024, and set to record for three days and two nights. The location was selected as it is the dwelling furthest from US Highway 150, which was assumed would be the primary source of noise in the area. Further, the sound levels experienced at this location would be considered representative of all the impacted dwellings considered in the noise impact assessment for the Project (RWDI, 2024), as there is a single dominant source which all dwellings receive contributions from, the intervening land is flat with no significant features blocking line of site to the highway, and the monitoring location is set back such that levels will be greater at locations closer to the Highway. It is expected that other dwelling background levels will be greater than or equal to those measured at the monitoring location.

# 4 RESULTS AND DISCUSSION

# 4.1 Summary of Results

The audio review of recording at the monitoring location indicates that the acoustic environment of the area was primarily the traffic noise from US Highway 150. Table 2 shows the measured results for each date period, from October 29 to October 31, 2024. Octave band data and overall sound levels for each period was time weighted for the period. The summary levels are used for comparison to the predicted Project contributions as described in the noise impact assessment. Overall A-weighted sound pressure level time series plots are presented in Appendix B. Any events that were removed from the data set are also identified in the figures in Appendix B and are not included in the summary analysis.

Date	1/1 Octave Band (Hz) Sound Levels (dB)									Overall Sound Levels	
	31.5Hz	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	dBA	
Daytime Hours											
2024-10-29	79	71	62	58	54	48	41	36	35	55	
2024-10-30	79	72	63	58	54	48	40	36	36	56	
2024-10-31	70	62	56	53	46	42	34	24	24	49	
Summary	77	70	61	57	52	47	39	34	33	54	
			Ni	ghttime H	lours						
2024-10-29	74	65	56	50	44	37	33	30	29	47	
2024-10-30	67	58	51	45	40	37	35	32	34	44	
Summary	72	63	54	48	42	37	34	31	32	46	

# Table 2: Measurement Results

December 31, 2024

**K**Y

# 4.2 Comparison to Project Predictions and Potential Audibility

The potential audibility of the Project for daytime and nighttime hours has been assessed using the measured background levels in order to determine whether the Project will be "clearly audible" according to the VMCO ordinance for unwanted noise in Chapter 131.19.

Table 3 shows the comparison of the measured background ambient sound level with the predicted Project sound levels (RWDI, 2024). The greatest change over background sound levels is predicted to be 2 dB in the 200 Hz octave band during daytime hours when the Project will be running at full capacity.

The overall change in sound levels during the daytime and nighttime periods are 0 dB and 1 dB respectively. Changes in overall sound levels less than 3 dB are qualitatively assessed as inaudible (RWDI 2024).

Based on the measured background sound levels, the Project is expected to be inaudible during the daytime and nighttime hours, with US HWY 150 being the dominant noise source at all dwellings.

Scenario		1/1 Octave Band (Hz) Sound Levels (dB)							Overall Sound Levels	
	31.5	63	125	250	500	1000	2000	4000	8000	dBA
Daytime Hours										
Predicted Project Contributions at the Most Impacted Receptor	40	40	35	25	32	30	28	30	0	35.8
Daytime Measured Level	77	70	61	57	52	47	39	34	33	54
Cumulative Sound Level <sup>[1]</sup>		70	61	57	53	47	39	36	33	54
Change in Sound Levels		0	0	0	1	0	0	2	0	0
	Nig	ghttin	ne Hou	irs						
Predicted Project Contributions at the Most Impacted Receptor	40	40	35	25	32	30	28	30	0	35.8
Nighttime Measured Level	72	63	54	48	42	37	34	31	32	46
Cumulative Sound Level <sup>[1]</sup>	72	63	54	48	43	38	35	34	32	47
Change in Sound Levels	0	0	0	0	1	1	1	3	0	1

## Table 3: Comparison of Measured Ambient Sound with the Predicted Worst Case Project Contributions

Note: [1] Cumulative sound level is the logarithmic addition of the Predicted Project contribution and the measured ambient background level.



# 5 CONCLUSIONS AND RECOMMENDATIONS

A three-day, two-night background noise measurement study was conducted at representative locations of dwellings for the Mahomet Solar Project. Measurement data for a single location was analyzed and summarized.

The results support the conclusions from the Project noise study that the Mahomet Solar Project will be inaudible at the receptor locations during the periods when the inverters are operational. Noise contributions from the existing environment, which is Highway 150 will dominate any sounds from the Project. This ambient measurement indicates that the Project location is suitable for the area in terms of compatibility with respect to noise, as no negative impacts (audibility) are expected.



# **6** STATEMENT OF LIMITATIONS

This document entitled MAHOMET SOLAR AMBIENT NOISE STUDY was prepared by RWDI AIR Inc. ("RWDI") for Summit Ridge Energy ("Client"). The results presented in this document have been conducted for the Client and are specific to the project described herein ("Project"). The results represent site conditions at the time the measurements were taken. Since equipment noise and vibration levels may change over time, it is recommended that RWDI be retained by the Client to verify applicability prior to relying on this data for another purpose.

The data contained in this document have also been presented for the specific purpose(s) set out herein. Should the Client or any other third party utilize the document and/or implement the conclusions and recommendations contained therein for any other purpose or project without the involvement of RWDI, the Client or such third party assumes any and all risk of any and all consequences arising from such use and RWDI accepts no responsibility for any liability, loss, or damage of any kind suffered by Client or any other third party arising therefrom.

Finally, it is imperative that the Client and/or any party relying on the conclusions and recommendations in this document carefully review the stated assumptions contained herein to understand the different factors which may impact the conclusions and recommendations provided.

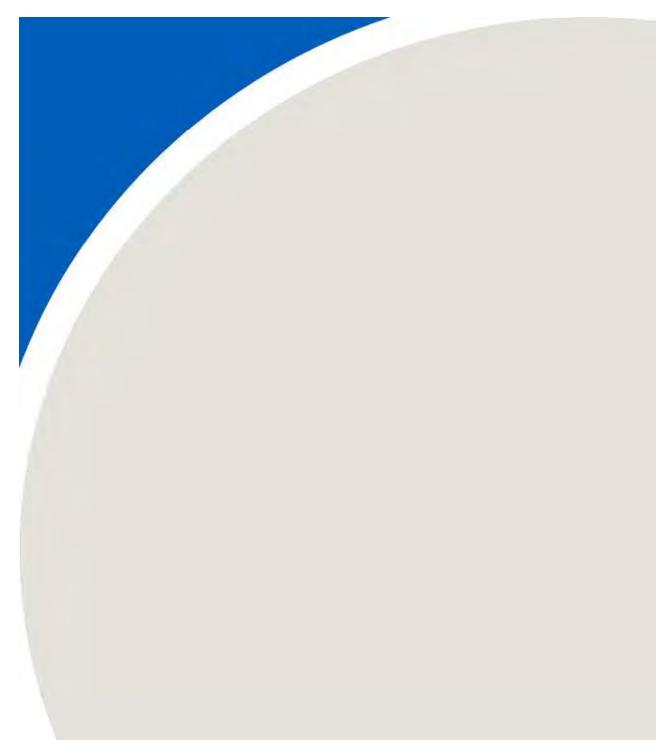


# 7 REFERENCES

- 1. Illinois Pollution Control Board (IPCB), 2018a. Title 35 Procedural and Environmental Rules Subtitle H: Noise: Part 900: Part 900: General Provisions
- 2. Illinois Pollution Control Board (IPCB), 2018b. Title 35 Procedural and Environmental Rules Subtitle H: Noise: Part 901: Sound Emission Standards And Limitations For Property Line Noise Sources
- 3. Illinois Pollution Control Board (IPCB), 2018c. Title 35 Procedural and Environmental Rules Subtitle H: Noise: Part 910: Measurement Procedures For The Enforcement Of 35 Ill. Adm. Code 900 & 901
- 4. Minnesota Pollution Control Agency (MPCA), 2015. A guide to Noise Control in Minnesota, Acoustic Properties, measurement, analysis, and regulation. Saint Paul, MN.
- 5. The Village of Mahomet, Illinois Code of Ordinances (VMCO), 2003. Ordinance Chapter 131.19 (2) Nonvehicular Noise Prohibitions.



# APPENDIX A



# CERTIFICATE OF CALIBRATION # 27868-2 FOR BRÜEL & KJÆR HANDHELD ANALYZER

OCCORCERSE & CONCERSE &

Model 2250 Light

With Microphone **4950** With Preamplifier **ZC0032**  Serial No. **3008859** ID No. **#2** Serial No. **3072979** ID No. **25136** 

Customer: RWDI USA LLC Culver City, CA 90232

P.O. No. Letter/Abigail Davis

was tested and met Brüel & Kjær specifications at the points tested and as outlined in IEC 61672-3:2006 Class 1

on 19 MAY 2023

# BY HAROLD LYNCH Service Manager

As received and left condition: Within Specification. Re-calibration due on: **19 MAY 2024** 

Certifie	ed References*								
<u>Mfg</u> .	Type	Serial No.	Cal Date	Due Date					
B&K	1051	1846829	07 SEP 2022	07 SEP 2023					
B&K	2636	1601487	16 MAY 2023	16 MAY 2024					
B&K	4226	3274134	30 NOV 2022	30 NOV 2023					
B&K	4231	2094472	14 FEB 2023	14 FEB 2024					
HP	34401A	US36071531	25 MAY 2022	25 MAY 2023					
HP	3458A	2823A17713	23 SEP 2022	23 SEP 2023					
	Performed in Compliance with ANSI, NCSL Z-540-1, 1994 and ISO 17025,								
	ISO 9001:2015 Certification NQA No. 11252								
	*References are traceable to NIST (National Institute of Standards and Technology).								
		1 1							

Note: For calibration data see enclosed pages.

The data represent both "as found" and "as left" conditions.

Reference Test Procedure: ACCT Procedure 2250-Light-2270 Version 3.2.1. Rev. 1/29/14

<b>23°</b> C 45 %	<b>990.06</b> hPa

Note: This calibration report shall not be reproduced, except in full, without written consent by Odin Metrology, Inc. Signed:

# **ODIN METROLOGY, INC.**

CALIBRATION OF BRÜEL & KJÆR INSTRUMENTS 3537 OLD CONEJO ROAD, SUITE 108 THOUSAND OAKS CA 91320 PHONE; (805) 375-0830 FAX: (805) 375-0405

Doc. Rev. 16 Feb 2018

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Page 1 of 16

3537 Old Conejo Road, Suite 108 Thousand Oaks, CA 91320 Phone: (805) 375-0830, Fax: (805) 375-0405 www.OdinMetrology.com

# Calibration data for Brüel & Kjær Handheld Analyzer Type 2250 Light # 3008859, ID# 2 With Microphone 4950# 3072979 and Preamplifier ZC0032# 25136 Performed on May 19, 2023

for

# **RDWI USA, LLC**

PO#: Letter Certificate#: 27868-2 Calibration performed by: HL Environmental Conditions Relative humidity: 45% Ambient temperature: 23°C Ambient pressure: 990,06 hPa

Ambient pressure: 990.06 hPa The following calibration was performed per ACCT Procedure 2250-Light-2270 version 3.2.1. The data represent both the "As Found" and the "As Left" conditions.

Page No.	Test	IEC Section	Result
	Sound Level Meter (IEC 616	72 Class 1)	
3	Internal Clock	Reference Only	See Data
3	Sensitivity Verification with Acoustic Calibrator	3 § 9	See Data
3	Acoustic Frequency Response with Microphone	3 § 11	Pass
3	Self-Generated Noise	3 § 10	See Data
4	Output Impedance with Shorted Output	2 § 9.18	Pass
4	AC Full Scale Output Voltage	Reference Only	N/A
4	DC Full Scale Output Voltage	Reference Only	N/A
4	Reset	2 § 9.17	Pass
4	Overload Indication	3 § 18	Pass
5	DC Linearity	Reference Only	N/A
5	Peak-C Sound Level	3 § 17	Pass
5	Decay Time Constants	2 § 9.11	Pass
6	Difference in Indication	3 § 13	Pass
	Frequency Response	3 § 12	
6	A-Weighted	-	Pass
7	C-Weighted		Pass
8	Z-Weighted		Pass
	Single Toneburst Response (Fast)	3 § 16	
9	A-Weighted	·	Pass
9	C-Weighted		Pass
10	Z-Weighted		Pass
	Single Toneburst Response (Slow)	3 § 16	
10	A-Weighted	Ũ	Pass
10	C-Weighted		Pass
11	Z-Weighted		Pass
11	SEL Response to Repeated Tonebursts	1 § 5.9	Pass
12	Level Linearity	3 § 14, 1 § 5.5.6	Pass
	RTA Octave Filter (IEC 6126		
	Level Verification of Filter+SLM	Reference Only	
14	1/1 Octave	······································	Pass
14	1/3 Octave		N/A
	Filter Check	Reference Only	
15	1/1 Octave	•	Pass
15	1/3 Octave		N/A

The expanded uncertainties stated in this document are the maximum expanded uncertainties permitted by IEC 61672-1. Odin Metrology's actual expanded uncertainties are less than or equal to the values stated herein.

§ 5.3

Relative Attenuation (1/1 Octave)

16

Pass

#### Internal Clock

Date and time are transferred from SLM, then the SLM date and time are set according to Odin Metrology's clock and the date and time are transferred from the SLM a second time. Time zones (with minor simplifications) and DST are obeyed.

Local Date/Time: Date and time according to Odin Metrology's clock (Pacific Daylight Time) at the time of the clock setting

Location: US state or other location for which the SLM clock is set (some time zone simplifications are made)

UTC Offset: UTC offset for the given location

Daylight Saving Time: whether DST is currently observed for the given location

SLM Clock Before Set: readouts of the SLM's system date and time before any changes are made

SLM Clock After Set: readouts of the SLM's system date and time after setting

Local (Pacific I	Daylight Time)	Location	UTC Offset	Daylight	SLM Cloc	k Before Set	SLM Clo	ck After Set
Date	Time	LOCATION	(Hr:Min)	Saving Time	Date	Time	Date	Time
5/19/2023	07:41:32 AM	California	-7:00	No	'5/19/2023	07:43:04 AM	'5/19/2023	07:45:13 AM

Sensitivity Verification with Acoustic Calibrator (IEC 61672-3 § 9)

A sound level calibrator is mounted on the sound level meter and the internal calibration is started. The SLM indication is recorded before and after calibration.

Calibrator Frequency: the frequency of the signal generated by the sound level calibrator

Calibrator SPL: the SPL of the signal generated by the sound level calibrator

SLM SPL Before: SLM indication before internal calibration sequence

SLM SPL After: SLM indication after internal calibration sequence (note: ideal value is 93.85 dB due to free-field correction of 0.15 dB) Uncertainty: maximum expanded uncertainty of measurement with approximately 95% confidence level (coverage factor k=2)

Performed with microphone 4950# 3072979, preamplifier ZC0032# 25136 and calibrator 4231# 2094472.

Calibrator	Calibrator	SLM SPL	SLM SPL	Uncertainty
Frequency (Hz)	SPL (dB)	Before (dB)	After (dB)	(dB)
1,000,0	94.0	93.90	93.89	0.40

#### Acoustic Frequency Response with Microphone (61672-3 § 11)

The acoustical frequency response is tested using a multifunction acoustical calibrator type 4226 in C frequency weighting. If a windscreen is used, these data are to be corrected.

Frequency: the frequency of the signal to the sound level meter (frequency of 4226 multifunction acoustic calibrator)

Data Found: the value the sound level meter actually indicates (this is a pressure measurement)

FF Corr: free-field correction for microphone to be added to displayed SLM (pressure) value

Corrected Response: SLM's reading plus the correction indicated

Nominal Value: what the sound level meter should indicate according to IEC 61672

Tolerance: the acceptable range, including the stated uncertainty, for what the sound level meter should indicate according to IEC 61672 Uncertainty: maximum expanded uncertainty of measurement according to IEC with approximately 95% confidence level (coverage factor Deviation: the difference between the nominal value and the data found

Performed with microphone	4950# 3072979.	preamplifier ZC0032# 25136.	and calibrator 4226# 3274134.

Pass/Fai	Deviation	Uncertainty	nce (dB)	Tolerar	Nominal	Corrected	FF Corr.	Data	Frequency
rassira	(dB)	(dB)	Maximum	Minimum	Value (dB C)	Response (dB)	(dB)	Found (dB C)	(Hz)
Pass	0.10		92.49	89.49	90.99	91.09	0.00	91,46	31.5
Pass	0.07	0.50	94.18	92.18	93.18	93.25	0.00	93.50	63.0
Pass	-0.13		94.83	92.83	93.83	93.70	0.00	93.70	125.0
Pass	-0.04	0.40	95.00	93.00	94.00	93.96	0.00	93.83	250.0
Pass	-0.27	0.40	95.03	93.03	94.03	93.76	0.00	93.76	500.0
				ference	Re			•••••••	1,000.0
Pass	0.35		94.83	92.83	93.83	94.28	0.36	93.65	2,000.0
Pass	0.76	0.60	94,18	92.18	93.18	93.95	1.21	92.31	4,000.0
Pass	1.32		92.49	88.49	90,99	93.33	3,62	87.57	8,000.0
Pass	0.96	1.00	89.76	82.76	87.76	88.77	6.51	81.42	12,500.0
Pass	2.46	1.00	87.97	69.47	85.47	87.93	7.59	77.75	16,000.0

#### Self-Generated Noise (61672-3 § 10)

For A-weighting, the noise is measured with the microphone installed and an acoustic chamber on the microphone which eliminates ambient noise. For C- and Z-weighting, the input is terminated with a shorted dummy microphone of equal capacitance.

Frequency Weighting: the frequency weighting setting on the sound level meter

Typical Noise: the typical self-generated noise level according to the manufacturer

Data Found: the 30-second Leq value the sound level meter indicates

Uncertainty: maximum expanded uncertainty of measurement with approximately 95% confidence level (coverage factor k=2)

Frequency	Typical	Data	Uncertainty
Weighting	Noise (dB)	Found (dB)	(dB)
A	16.60	19.51	
С	12.90	14.12	0.003
Z	25.50	21.36	

#### Output Impedance with Shorted Output (61672-2 § 9.18)

A reference signal is applied to the sound level meter and the outputs are shorted. The indicated level may not be affected by more than the specified tolerance.

Frequency: the frequency of the signal to the sound level meter

Input Level: the level (amplitude) of the signal to the sound level meter

Nominal Value: the value the sound level meter should indicate

Tolerance: the acceptable difference from nominal, including the stated uncertainty, for what the sound level meter should indicate according Data Found: the value the sound level meter actually indicates

Uncertainty: maximum expanded uncertainty of measurement with approximately 95% confidence level (coverage factor k=2) Deviation: the difference between the nominal value and the data found

Frequency	Input	Nominal	Tolerance	Data	Uncertainty	Deviation	Pass/Fail
(kHz)	Level (dB)	Value (dB)	(± dB)	Found (dB)	(dB)	(dB)	F d55/F dii
1.0	94.0	94.0	0.10	93.98	0.10	-0.02	Pass

#### AC Full Scale Output Voltage

The sound level meter is set up to indicate full-scale on the display and the AC output is measured. Input frequency is 1,000 Hz. SPL Reading: the input to the sound level meter is adjusted so that it indicates this full-scale value

Data Found: the value the sound level meter actually indicates

Uncertainty: maximum expanded uncertainty of measurement with approximately 95% confidence level (coverage factor k=2)

SPL	Data	Uncertainty
Reading (dB)	Found (mV)	(mV)
140.00	N/A	0.10

#### DC Full Scale Output Voltage

The sound level meter is set up to indicate full-scale on the display and the DC output is measured. Input frequency is 1,000 Hz. SPL Reading: the input to the sound level meter is adjusted so that it indicates this full-scale value Data Found: the value the sound level meter actually indicates

Uncertainty: maximum expanded uncertainty of measurement with approximately 95% confidence level (coverage factor k=2)

SPL	Data	Uncertainty
Reading (dB)	Found (mV)	(mV)
140.05	N/A	0.10

Reset (IEC 61672-2 § 9.17)

It is verified that the display resets after pressing the reset button on the SLM. The initial input level is FSD.

Before: displayed value before pressing the reset key

After: displayed value after pressing the reset key

Tolerance: the acceptable range, including the stated uncertainty, for what the sound level meter should indicate

Uncertainty: maximum expanded uncertainty of measurement with approximately 95% confidence level (coverage factor k=2)

Before	After	Tolerance	Uncertainty	Pass/Fail
(dB)	(dB)	(< dB)	(dB)	
119.51	13.94	50.0	0.003	Pass

#### Overload Indication (IEC 61672-3 § 18)

The first Leq indication of overload at a level higher than FSD-1 dB is recorded for both positive- and negative-one-half-cycle signals at 4.0 kHz. The difference between the two levels may not exceed the specified tolerance.

Overload Level: input signal level (amplitude) at which the meter was found to overload for the specified input signal type Difference: difference between the overload levels for the positive and negative half-cycle signal inputs

Tolerance: the acceptable difference, including the stated uncertainty, between positive and negative overload levels according to IEC 61672 Uncertainty: maximum expanded uncertainty of measurement with approximately 95% confidence level (coverage factor k=2)

	Overload	Level (dB)	Difference	Tolerance	Uncertainty	Pass/Fail
	Positive	Negative	(dB)	(≤ dB)	(dB)	Fass/Fail
_	139.80	139,94	0.14	1.5	0.3	Pass

# Calibration Data for 2250# 3008859 ID# 2

#### **DC Linearity**

The sound level meter is set up to indicate full-scale on the display and the DC-output voltage is recorded in decreasing 10-dB steps. Rel. Input Level: the level (amplitude) of the signal to the sound level meter relative to the reference of full-scale

Data Found: the measured DC-output from the SLM

Uncertainty: maximum expanded uncertainty of measurement with approximately 95% confidence level (coverage factor k=2)

Sensitivity: the calculated sensitivity based on the DC-outputs at the highest and lowest levels indicated

Rel, Input Level (dB)	Data Found (mV)	Uncertainty	Sensitivity (mV/dB)
0.0	Found (mv)	(mV)	(IIIV/GD)
-10.0			
-20.0		·	
-30.0			
-40.0			
-50.0		0.40	
-60,0			N/A
-70.0			
-80.0			
-90.0			
-100.0			
-110.0		0.05	
-120.0			

### Peak-C Sound Level (IEC 61672-3 §17)

The sound level meter's peak-C response to single one-cycle and positive- and negative-going half-cycle sinusoidal signals is measured. Input Level: the steady-state level (amplitude) of the signal to the sound level meter from which the one- and half-cycle signals are extracted Cycles in Test Signal: the type of burst used (one period, positive half period, or negative half period)

Frequency: the frequency of the signal to the sound level meter

Nominal Value: what the sound level meter should indicate according to IEC 61672

Tolerance: the acceptable difference from nominal, including the stated uncertainty, for what the sound level meter should indicate according L<sub>Cpeak</sub> Found: the peak-C sound level value indicated on the sound level meter

Data Found: the difference between the peak-C sound level and the steady-state C-weighted sound level as indicated by the sound level meter (L<sub>Cpeak</sub>-L<sub>c</sub>)

Uncertainty: maximum expanded uncertainty of measurement with approximately 95% confidence level (coverage factor k=2) Deviation: the difference between the nominal value and the data found

Input Level (dB C)	Cycles in Test Signal	Frequency (Hz)	Nominal Value (dB)	Tolerance (± dB)	L <sub>Cpeak</sub> Found (dB)	Data Found (dB)	Uncertainty (dB)	Deviation (dB)	Pass/Fail
	One	8,000.00	3.40	2.00	135.40	3.40		0.00	Pass
132.00	Positive ½ Negative ½	500.00	2.40	1.00	134.03 134.05	2.03 2.05	0.40	-0.37 -0.35	Pass Pass

### Decay Time Constants for Time Weightings Fast and Slow (IEC 61672-2 § 9.11)

The decay rate of the display value on the sound level meter is measured after a steady 4.0 kHz signal is removed.

Time Weighting: the time weighting setting on the sound level meter

Nominal Rate: the decay rate the sound level meter should exhibit according to IEC 61672

Tolerance: the acceptable range, including the stated tolerance, for what the sound level meter should indicate according to IEC 61672 Measured Rate: the actual decay rate measured on the sound level meter

Uncertainty: maximum expanded uncertainty of measurement with approximately 95% confidence level (coverage factor k=2)

Deviation: the difference between the nominal value and the data found

Time	Nominal	Toleran	ice (dB/s)	Measured	UncertaInty	Deviation	Pass/Fail
Weighting	Rate (dB/s)	Minimum	Maximum	Rate (dB/s)	(dB/s)	(dB/S)	Fass/Fail
Fast	N/A	27.00	N/A	41.11	2.00	N/A	Pass
Slow	4.35	3.80	4.90	4.50	0.40	0.15	Pass

# Calibration Data for 2250# 3008859 ID# 2

### Difference in Indication (IEC 61672-3 § 13)

With reference to fast time weighting and A frequency weighting at the SLM reference level indicated, the measurements of all other frequency weighting parameters and all other time weighting parameters may not differ by more than the specified tolerance.

Time Weighting: time weighting setting on the SLM

Frequency Weighting: frequency weighting setting on the SLM

Input Level: the level (amplitude) of the signal to the sound level meter

Nominal Value: the value the sound level meter should indicate according to IEC 61672

Tolerance: the acceptable difference from nominal, including the stated uncertainty, for what the sound level meter should indicate according Data Found: the value the sound level meter actually indicates

Uncertainty: maximum expanded uncertainty of measurement with approximately 95% confidence level (coverage factor k=2) Deviation: the difference between the nominal value and the data found

Time Weighting	Frequency Weighting	Input Level (dB)	Nominal Value (dB)	Tolerance (± dB)	Data Found (dB)	Uncertainty (dB)	Deviation (dB)	Pass/Fail
	A			-Reference—			Refe	rence
Fast	l c			0.2	94.00	0.1	0.02	Pass
	Z	94.0		0.2	94.02		0.02	Pass
	A		94.0		94.00		0.02	Pass
Slow	C C			0.1	94.02	0.1	0.02	Pass
	Z				94.02		0.02	Pass

### A-Frequency-Weighted Frequency Response (61672-3 § 12)

The sound level meter's frequency response is recorded by varying the frequency as specified. The reference level is 45 dB less than full scale at 1.0 kHz.

Frequency: the frequency of the signal to the sound level meter

Nominal Value: the value the sound level meter should indicate according to IEC 61672 (this is relative to the reference value at 1.0 kHz) Tolerance: the acceptable range, including the stated uncertainty, for what the sound level meter should indicate according to IEC 61672 Data Found: the value the sound level meter actually indicates

Uncertainty: maximum expanded uncertainty of measurement with approximately 95% confidence level (coverage factor k=2)

Deviation: the difference between the nominal value and the data found

Frequency	Nominal		nce (dB)	Data	Uncertainty	Deviation	Dece/5-1
(Hz)	Value (dB)	Minimum	Maximum	Found (dB)	(dB)	(dB)	Pass/Fail
10.0	-70.4	N/A	-67.4	-69.22		1.21	Pass
12.6	-63.4	N/A	-60.9	-62.99		0.39	Pass
15.8	-56.7	-60.7	-54.7	-56.49		0.20	Pass
20.0	-50.5	-52.5	-48.5	-50.45		0.00	Pass
25.1	-44.7	-46.2	-42.7	-44.61		0.09	Pass
31.6	-39.4	-40.9	-37.9	-39.36		0.08	Pass
39.8	-34.6	-35.6	-33.6	-34.66	0.50	-0.03	Pass
50.1	-30.2	-31.2	-29.2	-30.18	0.00	0.05	Pass
63.1	-26.2	-27.2	-25.2	-26.16		0.03	Pass
79.4	-22,5	-23.5	-21.5	-22.42		0.08	Pass
100.0	-19.1	-20.1	-18.1	-19.09		0.05	Pass
125.9	-16.1	-17.1	-15.1	-16.05		0.05	Pass
158.5	-13.4	-14.4	-12.4	-13.26		0.09	Pass
199.5	-10.9	-11.9	-9.9	-10,78		0.09	Pass
251.2	-8.6	-9.6	-7.6	-8.54		0.09	Pass
316.2	-6.6	-7.6	-5.6	-6,52		0.09	Pass
398.1	-4.8	-5.8	-3.8	-4.73	0.40	0.08	Pass
501.2	-3.2	-4.2	-2.2	-3.14	0.40	0.09	Pass
631.0	-1.9	-2.9	-0.9	-1.81		0.09	Pass
794.3	-0.8	-1.8	0.2	-0.73		0.09	Pass
1,000.0	0.0			Refere	nce		
1,258.9	0.6	-0.4	1.6	0.68	0.40	0.09	Pass
1,584.9	1.0	0.0	2.0	1.08		0.10	Pass
1,995.3	1.2	0.2	2.2	1.30		0.10	Pass
2,511.9	1.3	0.3	2.3	1,37		0.10	Pass
3,162.3	1.2	0.2	2.2	1.31		0.11	Pass
3,981.1	1.0	0.0	2.0	1.09	0.60	0.12	Pass
5,011.9	0.5	-1.0	2,0	0.67		0.12	Pass
6,309.6	-0.1	-2.1	1.4	0.00		0.12	Pass
7,943.3	-1.1	-3.6	0.4	-1.01		0.10	Pass
10,000.0	-2.5	-5.5	-0.5	-2.50		-0.01	Pass
12,589.3	-4.3	-9.3	-2.3	-4.67		-0.35	Pass
15,848.9	-6.6	-22.6	-4.1	-7.41	1.00	-0.81	Pass
19,952.6	-9.3	N/A	-6.3	-8.82		0.50	Pass

# **Calibration Data for** 2250# 3008859 1D# 2

### Odin Metrology, Inc.

<u>C-Frequency-Weighted Frequency Response</u> (61672-3 § 12) The sound level meter's frequency response is recorded by varying the frequency as specified. The reference level is 45 dB less than full scale at 1.0 kHz.

Frequency: the frequency of the signal to the sound level meter

Nominal Value: the value the sound level meter should indicate according to IEC 61672 (this is relative to the reference value at 1.0 kHz) Tolerance: the acceptable range, including the stated uncertainty, for what the sound level meter should indicate according to IEC 61672 Data Found: the value the sound level meter actually indicates

Uncertainty: maximum expanded uncertainty of measurement with approximately 95% confidence level (coverage factor k=2) Deviation: the difference between the nominal value and the data found

Frequency	Nominal		nce (dB)	Data Touno	Uncertainty	Deviation	
(Hz)	Value (dB)	Minimum	Maximum	Found (dB)	(dB)	(dB)	Pass/Fail
10.0	-14.3	N/A	-11.3	-14.43	<u> </u>	-0.10	Pass
12.6	-11.2	N/A	-8.7	-11.03		0.22	Pass
15.8	-8.5	-12.5	-6.5	-8.33	··	0.20	Pass
20.0	-6.2	-8,2	-4.2	-6,26		-0.02	Pass
25.1	-4.4	-5.9	- <u>2.</u> 4	-4.45		-0.04	Pass
31.6	-3.0	-4.5	-1.5	-3.03		-0.02	Pass
39.8	-2.0	-3.0	-1.0	-1.97	0.50	0.03	Pass
50.1	-1.3	-2.3	-0.3	-1.20	0.50	0.09	Pass
63.1	-0.8	-1.8	0.2	-0.74		0.08	Pass
79.4	-0.5	-1.5	0.5	-0.43		0.07	Pass
100.0	-0.3	-1.3	0.7	-0.26		0.04	Pass
125.9	-0.2	-1.2	0.8	-0.11		0.06	Pass
158.5	-0.1	-1.1	0.9	-0.03		0.06	Pass
199.5	0.0	-1.0	1.0	0.03		0.06	Pass
251.2	0.0	-1.0	1.0	0.08		0.08	Pass
316.2	0.0	-1.0	1.0	0.09		0.07	Pass
398.1	0.0	-1.0	1.0	0.11	0.40	0.08	Pass
501.2	0.0	-1.0	1.0	0.12	0.40	0.09	Pass
631.0	0.0	-1.0	1.0	0.12		0.09	Pass
794.3	0.0	-1.0	1.0	0.10		0.08	Pass
1,000.0	0.0			Refere	nce		
1,258.9	0.0	-1.0	1.0	0,06	0.40	0.09	Pass
1,584.9	-0.1	-1.1	0.9	0.01		0.10	Pass
1,995.3	-0.2	-1.2	0.8	-0.07		0.10	Pass
2,511.9	-0.3	-1.3	0.7	-0.20		0.10	Pass
3,162.3	-0.5	-1.5	0.5	-0.40		0.10	Pass
3,981.1	-0.8	-1.8	0.2	-0.70	0.60	0.12	Pass
5,011.9	-1,3	-2.8	0.2	-1.17		0.12	Pass
6,309.6	-2.0	-4.0	-0.5	-1,87		0.13	Pass
7,943.3	-3.0	-5.5	-1.5	-2.91		0.10	Pass
10,000.0	-4.4	-7.4	-2.4	-4,42		-0.01	Pass
12,589.3	-6.2	-11.2	-4,2	-6.59		-0.35	Pass
15,848.9	-8.5	-24.5	-6.0	-9.33	1.00	-0.80	Pass
19,952.6	-11.2	N/A	-8.2	-10.75		0.50	Pass

# Calibration Data for 2250# 3008859 ID# 2

### Odin Metrology, Inc.

Z-Frequency-Weighted Frequency Response (61672-3 § 12)

The sound level meter's frequency response is recorded by varying the frequency as specified. The reference level is 45 dB less than full scale at 1.0 kHz.

Frequency: the frequency of the signal to the sound level meter

Nominal Value: the value the sound level meter should indicate according to IEC 61672 (this is relative to the reference value at 1.0 kHz) Tolerance: the acceptable range, including the stated uncertainty, for what the sound level meter should indicate according to IEC 61672 Data Found: the value the sound level meter actually indicates

Uncertainty: maximum expanded uncertainty of measurement with approximately 95% confidence level (coverage factor k=2) Deviation: the difference between the nominal value and the data found

Frequency	Nominal		nce (dB)	Data	Uncertainty	Deviation	Pass/Fail
(Hz)	Value (dB)	Minimum	Maximum	Found (dB)	(dB)	(dB)	
10.0		N/A	3.0	-0.24		-0.24	Pass
12.6		N/A	2.5	0.17		0.17	Pass
15.8		-4.0	2.0	-0.02		-0.02	Pass
20.0		-2.0	2.0	0.17		0.17	Pass
25.1		-1.5	2.0	0.12		0.12	Pass
31.6		-1.5	1.5	0.02		0.02	Pass
39.8		-1.0	1.0	0.11	0.50	0.11	Pass
50.1		-1.0	1.0	0.05	0.00	0.05	Pass
63.1		-1.0	1.0	0.04		0.04	Pass
79.4		-1.0	1.0	0.02		0.02	Pass
100.0		-1.0	1,0	0,08		0.08	Pass
125.9		-1.0	1.0	0.08		0.08	Pass
158,5		-1.0	1.0	0.09		0.09	Pass
199.5		-1.0	1.0	0.06		0.06	Pass
251.2		-1.0	1.0	0.07		0.07	Pass
316.2		-1.0	1.0	0.08		0.08	Pass
398.1	0.0	-1.0	1.0	0.08	0.40	0.08	Pass
501.2	0.0	-1.0	1.0	0.09	0.40	0.09	Pass
631.0		-1.0	1.0	0.08		0.08	Pass
794.3		-1.0	1.0	0.09		0.09	Pass
1,000.0	***	ļ		Refere	nce		
1,258.9		-1.0	1.0	0.09	0.40	0.09	Pass
1,584.9		-1.0	1.0	0.10		0.10	Pass
1,995.3		-1.0	1.0	0.10		0.10	Pass
2,511.9		-1.0	1.0	0.10		0.10	Pass
3,162.3		-1.0	1.0	0.11		0.11	Pass
3,981.1		-1.0	1.0	0.12	0.60	0.12	Pass
5,011.9		-1.5	1.5	0.12		0.12	Pass
6,309.6		-2.0	1,5	0.12		0.12	Pass
7,943.3		-2.5	1.5	0.09		0.09	Pass
10,000.0		-3.0	2.0	-0.03		-0.03	Pass
12,589.3		-5.0	2.0	-0.35		-0.35	Pass
15,848.9		-16.0	2.5	-0.77	1.00	-0.77	Pass
19,952.6		N/A	3.0	0.34		0.34	Pass

#### Single Toneburst Response (Fast Time Weighting, A Frequency Weighting) (61672-3 § 16)

The sound level meter's response to single tonebursts at 4.0 kHz is measured. The baseline input level is 3 dB less than full scale. Toneburst Duration: the length of time each burst lasts

Nominal Value: the value sound level meter should indicate according to IEC 61672

Tolerance: the acceptable range, including the stated tolerance, for what the sound level meter should indicate according to IEC 61672 Data Found: the value the sound level meter actually indicates; equal to L<sub>AFmax(toneburst)</sub>-L<sub>AF(steady-state)</sub>

Uncertainty: maximum expanded uncertainty of measurement with approximately 95% confidence level (coverage factor k=2) Deviation: the difference between the nominal value and the data found

Pass/Fail	Deviation	Uncertainty	Data	nce (dB)	Tolera	Nominal	Toneburst
rass/ran	(dB)	Found (dB) (dB)		Minimum Maximum		Value (dB)	Duration (ms)
Pass	-0.04		-0.04	0.5	-0.5	0.0	1,000.00
Pass	-0.03		-0.13	0.4	-0.6	-0.1	500.00
Pass	-0.05		-1.05	-0.5	-1.5	-1.0	200.00
Pass	-0.07		-2.67	-1.6	-3,6	-2.6	100.00
Pass	-0.10		-4,90	-3.8	-5.8	-4.8	50.00
Pass	-0.09	0.20	-8.39	-7.3	-9.3	-8.3	20.00
Pass	-0.12	0.20	-11.22	-10.1	-12.1	-11.1	10.00
Pass	-0.06		-14.16	-13.1	-15.1	-14.1	5.00
Pass	-0.11		-18.11	-17.0	-19.5	-18.0	2.00
Pass	-0.14		-21.14	-20.0	-23.0	-21.0	1.00
Pass	-0.18		-24.18	-23.0	-26.5	-24.0	0.50
Pass	-0.18		-27.18	-26.0	-30.0	-27.0	0.25

#### Single Toneburst Response (Fast Time Weighting, C Frequency Weighting) (61672-3 § 16)

The sound level meter's response to single tonebursts at 4.0 kHz is measured. The baseline input level is 3 dB less than full scale. Toneburst Duration: the length of time each burst lasts

Nominal Value: the value sound level meter should indicate according to IEC 61672

Tolerance: the acceptable range, including the stated tolerance, for what the sound level meter should indicate according to IEC 61672 Data Found: the value the sound level meter actually indicates; equal to  $L_{AFmax(toneburst)}$ - $L_{AF(steady-state)}$ 

Uncertainty: maximum expanded uncertainty of measurement with approximately 95% confidence level (coverage factor k=2) Deviation: the difference between the nominal value and the data found

Toneburst	Nominal	Tolera	nce (dB)	Data	Uncertainty	Deviation	Pass/Fail
Duration (ms)	Value (dB)	Minimum	Maximum	Found (dB)	(dB)	(dB)	F d55/F dli
1,000.00	0.0	-0,5	0.5	0.17		0.17	Pass
500.00	-0.1	-0.6	0.4	0.08		0.18	Pass
200.00	-1.0	-1.5	-0.5	-0,83		0.17	Pass
100.00	-2.6	-3.6	-1.6	-2.46		0.14	Pass
50.00	-4.8	-5.8	-3.8	-4.69		0.11	Pass
20.00	-8.3	-9.3	-7.3	-8.18	0.20	0.12	Pass
10.00	-11.1	-12.1	-10.1	-11.01	0.20	0.09	Pass
5.00	-14.1	-15.1	-13.1	-13.94		0.16	Pass
2.00	-18.0	-19.5	-17.0	-17.84		0.16	Pass
1.00	-21.0	-23.0	-20.0	-20.85		0.15	Pass
0.50	-24.0	-26.5	-23.0	-23,83	1	0.17	Pass
0.25	-27.0	-30.0	-26.0	-26.76		0.24	Pass

## Single Toneburst Response (Fast Time Weighting, Z Frequency Weighting) (61672-3 § 16)

The sound level meter's response to single tonebursts at 4.0 kHz is measured. The baseline input level is 3 dB less than full scale. Toneburst Duration: the length of time each burst lasts

Nominal Value: the value sound level meter should indicate according to IEC 61672

Tolerance: the acceptable range, including the stated tolerance, for what the sound level meter should indicate according to IEC 61672 Data Found: the value the sound level meter actually indicates; equal to LAFmax(toneburst)\*LAF(steady-state)

Uncertainty: maximum expanded uncertainty of measurement with approximately 95% confidence level (coverage factor k=2) Deviation: the difference between the nominal value and the data found

Toneburst	Nominal	Tolera	nce (dB)	Data	Uncertainty	Deviation	Pass/Fai
Duration (ms)	Duration (ms) Value (dB)		Minimum Maximum		(dB)	(dB)	F 455/1 all
1,000.00	0.0	-0.5	0.5	-0.01		-0.01	Pass
500.00	-0.1	-0.6	0.4	-0.09		0.01	Pass
200.00	-1.0	-1.5	-0.5	-1.00		0.00	Pass
100.00	-2.6	-3.6	-1.6	-2.62		-0.02	Pass
50.00	-4.8	-5.8	-3,8	-4,86		-0.06	Pass
20.00	-8.3	-9.3	-7.3	-8.34	0.20	-0.04	Pass
10.00	-11.1	-12.1	-10.1	-11.19	0.20	-0.09	Pass
5.00	-14,1	-15.1	-13.1	-14.10		0.00	Pass
2.00	-18.0	-19.5	-17.0	-18.05		-0.05	Pass
1.00	-21.0	-23.0	-20.0	-21.03		-0.03	Pass
0.50	-24.0	-26.5	-23.0	-24.03		-0.03	Pass
0.25	-27.0	-30.0	-26.0	-27.05		-0.05	Pass

#### Single Toneburst Response (Slow Time Weighting, A Frequency Weighting) (61672-3 § 16)

The sound level meter's response to single tonebursts at 4.0 kHz is measured. The baseline input level is 3 dB less than full scale. Toneburst Duration: the length of time each burst lasts

Nominal Value: the value sound level meter should indicate according to IEC 61672

Tolerance: the acceptable range, including the stated tolerance, for what the sound level meter should indicate according to IEC 61672 Data Found: the value the sound level meter actually indicates; equal to  $L_{AFmax(loneburst)}$ - $L_{AF(steady-state)}$ 

Uncertainty: maximum expanded uncertainty of measurement with approximately 95% confidence level (coverage factor k=2) Deviation: the difference between the nominal value and the data found

Toneburst	Nominal	Tolera	Tolerance (dB)		Uncertainty	Deviation	Pass/Fail
Duration (ms)	Value (dB)	Minimum	Maximum	Found (dB)	(dB)	(dB)	Fassirali
1,000.0	-2.0	-2.5	-1.5	-2.04		-0.04	Pass
500.0	-4.1	-4.6	-3.6	-4.11		-0.01	Pass
200.0	-7.4	-7,9	-6.9	-7.48		-0.08	Pass
100.0	-10.2	-10.7	-9.7	-10.28		-0.08	Pass
50.0	-13.1	-13,6	-12.6	-13.19	0.20	-0.09	Pass
20.0	-17.0	-17.5	-16.5	-17.10		-0.10	Pass
10.0	-20.0	-20.5	-19.5	-20.09		-0.09	Pass
5.0	-23.0	-23.5	-22.5	-23.10		-0,10	Pass
2.0	-27.0	-27.5	-26.5	-27.09		-0.09	Pass

#### Single Toneburst Response (Slow Time Weighting, C Frequency Weighting) (61672-3 § 16)

The sound level meter's response to single tonebursts at 4.0 kHz is measured. The baseline input level is 3 dB less than full scale.

Toneburst Duration: the length of time each burst lasts

Nominal Value: the value sound level meter should indicate according to IEC 61672

Tolerance: the acceptable range, including the stated tolerance, for what the sound level meter should indicate according to IEC 61672 Data Found: the value the sound level meter actually indicates; equal to L<sub>AFmax((oneburst)</sub>-L<sub>AF(steady-state)</sub>

Uncertainty: maximum expanded uncertainty of measurement with approximately 95% confidence level (coverage factor k=2) Deviation: the difference between the nominal value and the data found

Toneburst	Nominal	Nominal Tolerance (dB)		Data	Uncertainty	Deviation	Pass/Fail
Duration (ms)	Value (dB)	Minimum	Maximum	Found (dB)	(dB)	(dB)	F 855/F 81
1,000.0	-2,0	-2,5	-1.5	-1,83		0,17	Pass
500.0	-4.1	-4.6	-3,6	-3.89		0.21	Pass
200.0	-7.4	-7.9	-6.9	-7.27		0.13	Pass
100,0	-10.2	-10.7	-9.7	-10.07		0.13	Pass
50.0	-13.1	-13.6	-12.6	-12.98	0.20	0.12	Pass
20.0	-17.0	-17.5	-16.5	-16.89		0.11	Pass
10.0	-20.0	-20.5	-19.5	-19.88		0.12	Pass
5.0	-23,0	-23.5	-22.5	-22.88		0.12	Pass
2.0	-27.0	-27.5	-26.5	-26.84		0.16	Pass

#### Single Toneburst Response (Slow Time Weighting, Z Frequency Weighting) (61672-3 § 16)

The sound level meter's response to single tonebursts at 4.0 kHz is measured. The baseline input level is 3 dB less than full scale. Toneburst Duration: the length of time each burst lasts

Nominal Value: the value sound level meter should indicate according to IEC 61672

Tolerance: the acceptable range, including the stated tolerance, for what the sound level meter should indicate according to IEC 61672 Data Found: the value the sound level meter actually indicates; equal to L<sub>AFmax(toneburst)</sub>-L<sub>AF(steady-state)</sub>

Uncertainty: maximum expanded uncertainty of measurement with approximately 95% confidence level (coverage factor k=2) Deviation: the difference between the nominal value and the data found

Pass/Fail	Deviation	Uncertainty	Data	nce (dB)	Tolera	Nominal	Toneburst
r assir an	(dB)	(dB)	Found (dB)	Maximum	Minimum	Value (dB)	Duration (ms)
Pass	0.00		-2.00	-1.5	-2.5	-2.0	1,000.0
Pass	0.04		-4.06	-3.6	-4.6	-4.1	500.0
Pass	-0.04		-7.44	-6.9	-7.9	-7.4	200.0
Pass	-0.04		-10.24	-9.7	-10.7	-10.2	100.0
Pass	-0.05	0.20	-13.15	-12.6	-13.6	-13,1	50.0
Pass	-0.06		-17.06	-16.5	-17.5	-17.0	20.0
Pass	-0.05		-20.05	-19.5	-20.5	-20.0	10.0
Pass	-0.05		-23.05	-22.5	-23.5	-23.0	5.0
Pass	-0.02		-27.02	-26.5	-27.5	-27.0	2.0

#### SEL Response to Repeated Tonebursts (61672-1 § 5.9)

The sound level meter's SEL response to repeated tonebursts at 4.0 kHz is measured. The baseline input level is 3 dB less than full scale and the toneburst repetition rate is three times the toneburst duration.

Toneburst Duration; the length of time each burst lasts

Nominal Value: the value the sound level meter should indicate according to IEC 61672

Tolerance: the acceptable range, including the stated tolerance, for what the sound level meter should indicate according to IEC 61672 Data Found: the value the sound level meter actually indicates; equal to  $L_{AFmax(Ioneburst)}^{-L}L_{AF(steady-state)}$ 

Uncertainty: maximum expanded uncertainty of measurement with approximately 95% confidence level (coverage factor k=2) Deviation: the difference between the nominal value and the data found

Toneburst	Nominal	Tolera	nce (dB)	Data	Uncertainty	Deviation	Pass/Fail
Duration (ms)	Value (dB)	Minimum	Maximum	Found (dB)	(dB)	(dB)	rass/rai
1000.0	0.0	-0.5	0.5	-0.06		-0.06	Pass
500.0	-3.0	-3.5	-2.5	-3.07		-0.07	Pass
200.0	-7.0	-7.5	-6.5	-7.06		-0.06	Pass
100.0	-10.0	-11.0	-9.0	-10.07		-0.07	Pass
50.0	-13.0	-14.0	-12.0	-13.08		-0.08	Pass
20.0	-17.0	-18.0	-16.0	-17.06	0.20	-0.06	Pass
10.0	-20.0	-21.0	-19.0	-20.07	0.20	-0.07	Pass
5.0	-23.0	-24.0	-22.0	-23.09		-0.09	Pass
2.0	-27.0	-28.5	-26.0	-27.09		-0.09	Pass
1.0	-30.0	-32.0	-29.0	-30.12		-0.12	Pass
0.5	-33.0	-35.5	-32.0	-33.17		-0.17	Pass
0.25	-36.0	-39.0	-35.0	-36.20		-0.20	Pass

Level Linearity (IEC 61672-3 § 14, IEC 61672-1 § 5.5.6) Level linearity is tested in A-weighting at 8.0 kHz. Increasing input levels continue up to the first indication of overload. The test is continued with decreasing input levels down to the lower limit or the first indication of underrange. Input Level: the level (amplitude) of the signal to the sound level meter

Nominal Value: the value the sound level meter should indicate according to IEC 61672

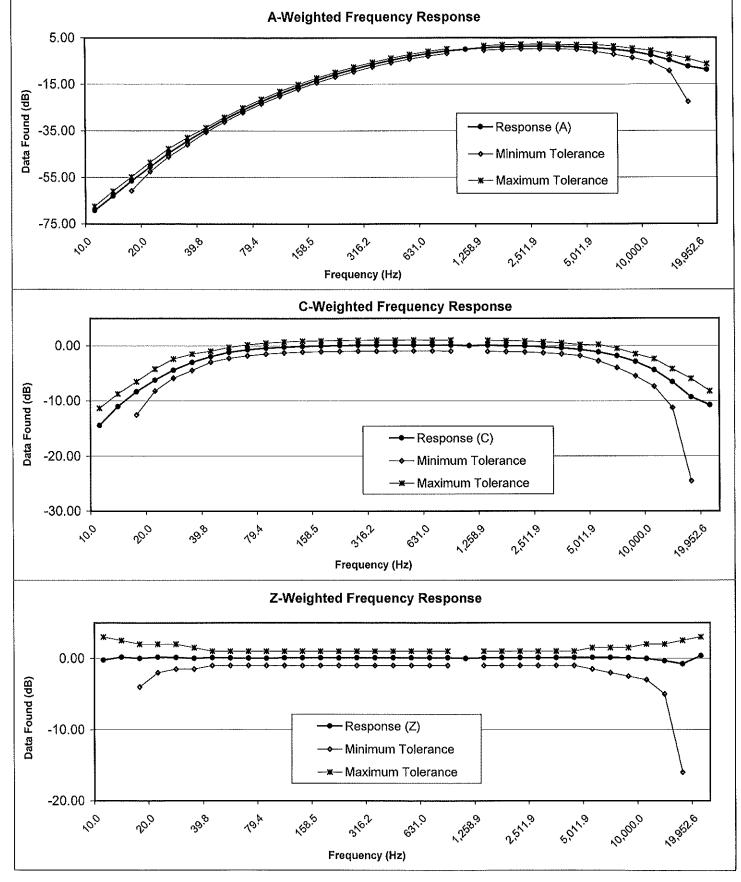
Tolerance: the acceptable difference from nominal, including the stated uncertainty, according to IEC 61672

Part 1: Increasing Input Levels

Data Found: the value the sound level meter actually indicates

Uncertainty: maximum expanded uncertainty of measurement with approximately 95% confidence level (coverage factor k=2) Deviation: the difference between the nominal value and the data found; differential: current and previous measurement is not allowed to exceed 0.5 dB according to IEC 61672-1 § 5.5.6

			ci. increasing i				
Input	Nominal	Tolerance	Data Found	Uncertainty	Deviati	on (dB)	
Level (dB)	Value (dB)	(± dB)	(dB)	(dB)	Measured	Differential	Pass/Fail
	value (ub)	(100)	(UD)		Measureu	Differential	
94.0			Rei	erence 1			· · · · · · · · · · · · · · · · · · ·
99,0	99.0		98.98		-0.02	N/A	Pass
104.0	104.0		103.99		-0.01	0.01	Pass
109.0	109.0		108.99		-0.01	0.00	Pass
114.0	114.0		113.99		-0.01	0.00	Pass
119.0	119.0		118.98		-0.02	-0.01	Pass
124.0	124.0		123.99		-0.01	0.01	Pass
129.0	129.0		128.99		-0.01	0.00	Pass
134.0	134.0		133.99		-0.01	0.00	Pass
139.0	139.0		138. <del>9</del> 8		-0.02	-0,01	Pass
140.0	140.0		Overload		N/A	N/A	N/A
			Oveneda		1 107 1	10/1	
141.0	141.0					•	
142.0	142.0						
143.0	143.0						
		0.8		0.3			
144.0	144.0	0.0		0.5			
145.0	145.0						
146.0	146.0						
147.0	147.0						
148.0	148.0						
149.0	149.0						
150.0	150.0						
151.0	151.0						
152.0	152.0						
153.0	153.0						
		***************************************					
154.0	154.0						
155.0	155.0						
156.0	156.0				1		
157.0	157.0			]			
		Par	t 2: Decreasing	Input Levels			
Input	Nominal				Deviat	ion (dB)	
Input	Nominal Value (dB)	Tolerance	Data Found	Uncertainty		ion (dB) Differential	Pass/Fail
Level (dB)	Nominal Value (dB)		Data Found (dB)	Uncertainty (dB)	Deviat Measured	ion (dB) Differential	Pass/Fail
Level (dB) 139.0	Value (dB)	Tolerance	Data Found (dB) Re	Uncertainty	Measured	Differential	
Level (dB) 139.0 134.0	Value (dB) 134.0	Tolerance	Data Found (dB)	Uncertainty (dB)	Measured 0.00	Differential N/A	Pass/Fail
Level (dB) 139.0 134.0	Value (dB) 134.0	Tolerance	Data Found (dB) 134.00	Uncertainty (dB)	Measured 0.00	Differential N/A	Pass
Level (dB) 139.0 134.0 129.0	Vaiue (dB) 134.0 129.0	Tolerance	Data Found (dB) 134.00 129.00	Uncertainty (dB)	Measured 0.00 0.00	Differential N/A 0.00	Pass Pass
Level (dB) 139.0 134.0 129.0 124.0	Value (dB) 134.0 129.0 124.0	Tolerance	Data Found (dB) 134.00 129.00 124.00	Uncertainty (dB)	Measured 0.00 0.00 0.00	Differential N/A 0.00 0.00	Pass Pass Pass
Level (dB) 139.0 134.0 129.0 124.0 119.0	Value (dB) 134.0 129.0 124.0 119.0	Tolerance	Data Found (dB) 134.00 129.00 124.00 118.99	Uncertainty (dB)	Measured 0.00 0.00 0.00 -0.01	Differential N/A 0.00 0.00 -0.01	Pass Pass Pass Pass Pass
Level (dB) 139.0 134.0 129.0 124.0 119.0	Value (dB) 134.0 129.0 124.0 119.0	Tolerance	Data Found (dB) 134.00 129.00 124.00 118.99	Uncertainty (dB)	Measured 0.00 0.00 0.00 -0.01	Differential N/A 0.00 0.00 -0.01	Pass Pass Pass Pass Pass
Level (dB) 139.0 134.0 129.0 124.0 119.0 114.0	Value (dB) 134.0 129.0 124.0 119.0 114.0	Tolerance	Data Found (dB) 134.00 129.00 124.00 118.99 114.00	Uncertainty (dB)	Measured 0.00 0.00 0.00 -0.01 0.00	Differential N/A 0.00 0.00 -0.01 0.01	Pass Pass Pass Pass Pass Pass
Level (dB) 139.0 134.0 129.0 124.0 119.0 114.0 109.0	Value (dB) 134.0 129.0 124.0 119.0 114.0 109.0	Tolerance	Data Found (dB) 134.00 129.00 124.00 118.99 114.00 109.00	Uncertainty (dB)	Measured 0.00 0.00 -0.01 0.00 0.00 0.00	Differential N/A 0.00 0.00 -0.01 0.01 0.01 0.00	Pass Pass Pass Pass Pass Pass Pass
Level (dB) 139.0 134.0 129.0 124.0 119.0 114.0 109.0 104.0	Value (dB) 134.0 129.0 124.0 119.0 114.0 109.0 104.0	Tolerance	Data Found (dB) 134.00 129.00 124.00 118.99 114.00 109.00 104.00	Uncertainty (dB)	Measured 0.00 0.00 0.00 -0.01 0.00 0.00 0.00	Differential N/A 0.00 0.00 -0.01 0.01 0.00 0.00	Pass Pass Pass Pass Pass Pass Pass
Level (dB) 139.0 134.0 129.0 124.0 119.0 114.0 109.0	Value (dB) 134.0 129.0 124.0 119.0 114.0 109.0	Tolerance	Data Found (dB) 134.00 129.00 124.00 118.99 114.00 109.00	Uncertainty (dB)	Measured 0.00 0.00 -0.01 0.00 0.00 0.00	Differential N/A 0.00 0.00 -0.01 0.01 0.00 0.00	Pass Pass Pass Pass Pass Pass Pass
Level (dB) 139.0 134.0 129.0 124.0 119.0 114.0 109.0 104.0 99.0	Value (dB) 134.0 129.0 124.0 119.0 114.0 109.0 104.0 99.0	Tolerance	Data Found (dB) 134.00 129.00 124.00 118.99 114.00 109.00 104.00 98.99	Uncertainty (dB)	Measured           0.00           0.00           0.00           0.00           0.00           0.00           0.00           0.00           0.00           0.00           0.00           0.00           0.00           -0.01	Differential N/A 0.00 0.00 -0.01 0.01 0.00 0.00 -0.01	Pass Pass Pass Pass Pass Pass Pass Pass
Level (dB) 139.0 134.0 129.0 124.0 119.0 114.0 109.0 104.0 99.0 94.0	Value (dB) 134.0 129.0 124.0 119.0 114.0 109.0 104.0 99.0 94.0	Tolerance	Data Found (dB) 134.00 129.00 124.00 118.99 114.00 109.00 104.00 98.99 94.00	Uncertainty (dB)	Measured           0.00           0.00           0.00           0.00           0.00           0.00           0.00           0.00           0.00           0.00           0.00           0.00           0.00           0.00           0.00           0.00           0.00	Differential N/A 0.00 0.00 -0.01 0.01 0.00 0.00 -0.01 0.01	Pass Pass Pass Pass Pass Pass Pass Pass
Level (dB) 139.0 134.0 129.0 124.0 119.0 114.0 109.0 104.0 99.0 94.0 89.0	Value (dB) 134.0 129.0 124.0 119.0 114.0 109.0 104.0 99.0 94.0 89.0	Tolerance	Data Found (dB) 134.00 129.00 124.00 118.99 114.00 109.00 104.00 98.99 94.00 88.97	Uncertainty (dB)	Measured 0.00 0.00 -0.01 0.00 0.00 0.00 0.00 -0.01 0.00 -0.03	Differential N/A 0.00 0.00 -0.01 0.00 0.00 0.00 -0.01 0.01	Pass Pass Pass Pass Pass Pass Pass Pass
Level (dB) 139.0 134.0 129.0 124.0 119.0 114.0 109.0 104.0 99.0 94.0	Value (dB) 134.0 129.0 124.0 119.0 114.0 109.0 104.0 99.0 94.0	Tolerance	Data Found (dB) 134.00 129.00 124.00 118.99 114.00 109.00 104.00 98.99 94.00 88.97 83.98	Uncertainty (dB)	Measured           0.00           0.00           0.00           0.00           0.00           0.00           0.00           0.00           0.00           0.00           0.00           0.00           0.00           0.00           0.00           0.00           0.00	Differential N/A 0.00 0.00 -0.01 0.01 0.00 0.00 -0.01 0.01	Pass Pass Pass Pass Pass Pass Pass Pass
Level (dB) 139.0 134.0 129.0 124.0 119.0 114.0 109.0 104.0 99.0 94.0 89.0 84.0	Value (dB) 134.0 129.0 124.0 119.0 114.0 109.0 104.0 99.0 94.0 89.0 84.0	Tolerance	Data Found (dB) 134.00 129.00 124.00 118.99 114.00 109.00 104.00 98.99 94.00 88.97 83.98	Uncertainty (dB)	Measured 0.00 0.00 -0.01 0.00 0.00 0.00 0.00 -0.01 0.00 -0.03 -0.02	Differential N/A 0.00 0.00 -0.01 0.01 0.00 0.00 -0.01 0.01	Pass Pass Pass Pass Pass Pass Pass Pass
Level (dB) 139.0 134.0 129.0 124.0 119.0 114.0 109.0 104.0 99.0 94.0 89.0 84.0 79.0	Value (dB) 134.0 129.0 124.0 119.0 114.0 109.0 104.0 99.0 94.0 89.0 84.0 79.0	Tolerance	Data Found (dB) 134.00 129.00 124.00 118.99 114.00 109.00 104.00 98.99 94.00 88.97 83.98 78.97	Uncertainty (dB)	Measured           0.00           0.00           0.00           0.00           0.00           0.00           0.00           0.00           0.00           0.00           0.00           0.00           0.00           -0.01           0.00           -0.01           0.00           -0.03           -0.03           -0.03	Differential N/A 0.00 0.00 -0.01 0.01 0.00 0.00 -0.01 0.01	Pass Pass Pass Pass Pass Pass Pass Pass
Level (dB) 139.0 134.0 129.0 124.0 119.0 114.0 109.0 104.0 99.0 94.0 89.0 84.0 79.0 74.0	Value (dB) 134.0 129.0 124.0 119.0 114.0 109.0 104.0 99.0 94.0 89.0 84.0 79.0 74.0	Tolerance           (± dB)	Data Found (dB) 134.00 129.00 124.00 118.99 114.00 109.00 104.00 98.99 94.00 88.97 83.98 78.97 73.98	Uncertainty (dB) ference 2	Measured 0.00 0.00 0.00 -0.01 0.00 0.00 0.00 -0.01 0.00 -0.03 -0.02 -0.03 -0.02	Differential N/A 0.00 0.00 -0.01 0.01 0.00 -0.01 0.01 -0.03 0.01 -0.01 0.01 0.01	Pass Pass Pass Pass Pass Pass Pass Pass
Level (dB) 139.0 134.0 129.0 124.0 119.0 114.0 109.0 104.0 99.0 94.0 89.0 84.0 79.0 74.0 69.0	Value (dB) 134.0 129.0 124.0 119.0 114.0 109.0 104.0 99.0 94.0 89.0 84.0 79.0 74.0 69.0	Tolerance	Data Found (dB) 134.00 129.00 124.00 118.99 114.00 109.00 104.00 98.99 94.00 88.97 83.98 78.97 73.98 69.00	Uncertainty (dB)	Measured 0.00 0.00 0.00 0.00 0.00 0.00 0.00 -0.01 0.00 -0.01 0.00 -0.03 -0.02 0.00 0.00	Differential N/A 0.00 0.00 -0.01 0.01 0.00 -0.01 0.01 -0.03 0.01 -0.01 0.01 0.01 0.02	Pass Pass Pass Pass Pass Pass Pass Pass
Level (dB) 139.0 134.0 129.0 124.0 119.0 114.0 109.0 104.0 99.0 94.0 89.0 84.0 79.0 74.0 69.0	Value (dB) 134.0 129.0 124.0 119.0 114.0 109.0 104.0 99.0 94.0 89.0 84.0 79.0 74.0 69.0	Tolerance           (± dB)	Data Found (dB) 134.00 129.00 124.00 118.99 114.00 109.00 104.00 98.99 94.00 88.97 83.98 78.97 73.98 69.00	Uncertainty (dB) ference 2	Measured 0.00 0.00 0.00 0.00 0.00 0.00 0.00 -0.01 0.00 -0.01 0.00 -0.03 -0.02 0.00 0.00	Differential N/A 0.00 0.00 -0.01 0.01 0.00 -0.01 0.01 -0.03 0.01 -0.01 0.01 0.01 0.02	Pass Pass Pass Pass Pass Pass Pass Pass
Level (dB) 139.0 134.0 129.0 124.0 119.0 114.0 109.0 104.0 99.0 94.0 89.0 84.0 79.0 74.0 69.0 64.0	Value (dB) 134.0 129.0 124.0 119.0 114.0 109.0 104.0 99.0 94.0 89.0 84.0 79.0 74.0 69.0 64.0	Tolerance           (± dB)	Data Found (dB) 134.00 129.00 124.00 118.99 114.00 109.00 104.00 98.99 94.00 88.97 83.98 78.97 73.98 69.00 63.99	Uncertainty (dB) ference 2	Measured           0.00           0.00           0.00           0.00           0.01           0.00           0.00           0.00           0.00           0.00           0.00           0.00           -0.01           0.00           -0.03           -0.02           0.00           -0.01	Differential N/A 0.00 0.00 -0.01 0.01 0.00 -0.01 0.01 -0.03 0.01 -0.01 0.01 0.01 0.02 -0.01	Pass Pass Pass Pass Pass Pass Pass Pass
Level (dB) 139.0 134.0 129.0 124.0 119.0 114.0 109.0 104.0 99.0 94.0 89.0 84.0 79.0 74.0 69.0 64.0 59.0	Value (dB) 134.0 129.0 124.0 119.0 114.0 109.0 104.0 99.0 94.0 89.0 84.0 79.0 74.0 69.0 64.0 59.0	Tolerance           (± dB)	Data Found (dB) 134.00 129.00 124.00 118.99 114.00 109.00 104.00 98.99 94.00 88.97 83.98 78.97 73.98 69.00 63.99 58.98	Uncertainty (dB) ference 2	Measured 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 -0.01 0.00 -0.03 -0.02 -0.03 -0.02 0.00 0.00 -0.01 0.00 -0.01 0.00 -0.01 0.00 -0.01 0.00 -0.01 0.00	Differential N/A 0.00 0.00 -0.01 0.01 0.00 -0.01 0.01 -0.03 0.01 -0.01 0.01 0.02 -0.01 -0.01	Pass Pass Pass Pass Pass Pass Pass Pass
Level (dB) 139.0 134.0 129.0 124.0 119.0 114.0 109.0 104.0 99.0 94.0 89.0 84.0 79.0 74.0 69.0 64.0 59.0 54.0	Value (dB) 134.0 129.0 124.0 119.0 114.0 109.0 104.0 99.0 94.0 89.0 84.0 79.0 74.0 69.0 64.0 59.0 54.0	Tolerance           (± dB)	Data Found (dB) 134.00 129.00 124.00 118.99 114.00 109.00 104.00 98.99 94.00 88.97 83.98 78.97 73.98 69.00 63.99 58.98 54.00	Uncertainty (dB) ference 2	Measured           0.00           0.00           0.00           0.00           0.00           0.00           0.00           0.00           0.00           0.00           0.00           0.00           -0.01           0.00           -0.03           -0.02           -0.03           -0.02           -0.01           -0.02           -0.01           -0.02           0.00	Differential N/A 0.00 0.00 -0.01 0.01 0.00 -0.01 0.01 -0.03 0.01 -0.01 0.02 -0.01 0.02	Pass Pass Pass Pass Pass Pass Pass Pass
Level (dB) 139.0 134.0 129.0 124.0 119.0 114.0 109.0 104.0 99.0 94.0 89.0 84.0 79.0 74.0 69.0 64.0 59.0	Value (dB) 134.0 129.0 124.0 119.0 114.0 109.0 104.0 99.0 94.0 89.0 84.0 79.0 74.0 69.0 64.0 59.0	Tolerance           (± dB)	Data Found (dB) 134.00 129.00 124.00 118.99 114.00 109.00 104.00 98.99 94.00 88.97 83.98 78.97 73.98 69.00 63.99 58.98	Uncertainty (dB) ference 2	Measured 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 -0.01 0.00 -0.03 -0.02 -0.03 -0.02 0.00 0.00 -0.01 0.00 -0.01 0.00 -0.01 0.00 -0.01 0.00 -0.01 0.00	Differential N/A 0.00 0.00 -0.01 0.01 0.00 -0.01 0.01 -0.03 0.01 -0.01 0.02 -0.01 0.02	Pass Pass Pass Pass Pass Pass Pass Pass
Level (dB) 139.0 134.0 129.0 124.0 119.0 114.0 109.0 104.0 99.0 94.0 89.0 84.0 79.0 74.0 69.0 64.0 59.0 54.0 49.0	Value (dB) 134.0 129.0 124.0 119.0 114.0 109.0 104.0 99.0 94.0 89.0 84.0 79.0 74.0 69.0 64.0 59.0 54.0 49.0	Tolerance           (± dB)	Data Found (dB) 134.00 129.00 124.00 118.99 114.00 109.00 104.00 98.99 94.00 88.97 83.98 78.97 73.98 69.00 63.99 58.98 54.00 48.98	Uncertainty (dB) ference 2	Measured 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 -0.01 0.00 -0.03 -0.02 -0.03 -0.02 0.00 -0.01 0.00 0.00 -0.01 0.00 -0.02 -0.03 -0.02 -0.02 -0.01 -0.02 -0.02 -0.01 -0.02 -0.02 -0.00 -0.02	Differential N/A 0.00 0.00 -0.01 0.01 0.00 -0.01 0.01 -0.03 0.01 -0.01 0.01 0.02 -0.01 0.02 -0.02	Pass Pass Pass Pass Pass Pass Pass Pass
Level (dB) 139.0 134.0 129.0 124.0 119.0 114.0 109.0 104.0 99.0 94.0 89.0 84.0 79.0 74.0 69.0 64.0 59.0 54.0 49.0 44.0	Value (dB) 134.0 129.0 124.0 119.0 114.0 109.0 104.0 99.0 94.0 89.0 84.0 79.0 74.0 69.0 64.0 59.0 54.0 49.0 44.0	Tolerance           (± dB)	Data Found (dB) 134.00 129.00 124.00 118.99 114.00 109.00 104.00 98.99 94.00 88.97 83.98 78.97 73.98 69.00 63.99 58.98 54.00 48.98 43.99	Uncertainty (dB) ference 2	Measured 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 -0.01 0.00 -0.03 -0.02 -0.03 -0.02 0.00 -0.01 0.00 -0.02 -0.03 -0.02 -0.01 -0.02 -0.01 -0.01 -0.02 -0.01 -0.01 -0.02 -0.01	Differential N/A 0.00 0.00 -0.01 0.01 0.00 0.00 -0.01 0.01	Pass Pass Pass Pass Pass Pass Pass Pass
Level (dB) 139.0 134.0 129.0 124.0 119.0 114.0 109.0 104.0 99.0 94.0 89.0 84.0 79.0 74.0 69.0 64.0 59.0 54.0 49.0 44.0 39.0	Value (dB) 134.0 129.0 124.0 119.0 114.0 109.0 104.0 99.0 94.0 89.0 84.0 79.0 74.0 69.0 64.0 59.0 54.0 49.0 44.0 39.0	Tolerance           (± dB)	Data Found (dB) 134.00 129.00 124.00 118.99 114.00 109.00 104.00 98.99 94.00 88.97 83.98 78.97 73.98 69.00 63.99 58.98 54.00 48.98 43.99 38.99	Uncertainty (dB) ference 2	Measured           0.00           0.00           0.00           0.00           0.01           0.00           0.00           0.00           0.00           0.00           0.00           0.00           -0.01           0.00           -0.03           -0.02           0.00           -0.01           -0.02           0.00           -0.02           0.00           -0.02           0.00           -0.02           0.00           -0.02           0.00           -0.02           0.00           -0.02           0.01	Differential N/A 0.00 0.00 -0.01 0.00 0.00 -0.01 0.01 -0.03 0.01 -0.01 0.01 0.02 -0.01 0.02 -0.01 0.02 -0.01 0.02 -0.02 0.01 0.00	Pass Pass Pass Pass Pass Pass Pass Pass
Level (dB) 139.0 134.0 129.0 124.0 119.0 114.0 109.0 104.0 99.0 94.0 89.0 84.0 79.0 74.0 69.0 64.0 59.0 54.0 49.0 44.0	Value (dB) 134.0 129.0 124.0 119.0 114.0 109.0 104.0 99.0 94.0 89.0 84.0 79.0 74.0 69.0 64.0 59.0 54.0 49.0 44.0	Tolerance           (± dB)	Data Found (dB) 134.00 129.00 124.00 118.99 114.00 109.00 104.00 98.99 94.00 88.97 83.98 78.97 73.98 69.00 63.99 58.98 54.00 48.98 43.99	Uncertainty (dB) ference 2	Measured 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 -0.01 0.00 -0.03 -0.02 -0.03 -0.02 0.00 -0.01 0.00 -0.02 -0.03 -0.02 -0.01 -0.02 -0.01 -0.01 -0.02 -0.01 -0.01 -0.02 -0.01	Differential N/A 0.00 0.00 -0.01 0.01 0.00 0.00 -0.01 0.01	Pass Pass Pass Pass Pass Pass Pass Pass
Level (dB) 139.0 134.0 129.0 124.0 119.0 114.0 109.0 104.0 99.0 94.0 89.0 84.0 79.0 74.0 69.0 64.0 59.0 54.0 49.0 44.0 39.0 34.0	Value (dB) 134.0 129.0 124.0 119.0 114.0 109.0 104.0 99.0 94.0 89.0 94.0 89.0 84.0 79.0 74.0 69.0 64.0 59.0 54.0 49.0 44.0 39.0 34.0	Tolerance           (± dB)	Data Found (dB) 134.00 129.00 124.00 118.99 114.00 109.00 104.00 98.99 94.00 88.97 83.98 78.97 73.98 69.00 63.99 58.98 54.00 48.98 43.99 38.99 34.01	Uncertainty (dB) ference 2	Measured 0.00 0.	Differential N/A 0.00 0.00 -0.01 0.01 0.00 -0.01 0.01 -0.03 0.01 -0.01 0.01 0.02 -0.01 -0.01 0.02 -0.01 -0.02 -0.01 0.02 -0.01 0.02 -0.01 0.02 -0.01 0.02 -0.01 0.00 0.02	Pass Pass Pass Pass Pass Pass Pass Pass
Level (dB) 139.0 134.0 129.0 124.0 119.0 114.0 109.0 104.0 99.0 94.0 89.0 84.0 79.0 74.0 69.0 64.0 59.0 54.0 49.0 39.0 34.0 39.0 34.0 29.0	Value (dB) 134.0 129.0 124.0 119.0 114.0 109.0 104.0 99.0 94.0 89.0 94.0 89.0 94.0 79.0 74.0 69.0 64.0 59.0 54.0 49.0 39.0 34.0 29.0	Tolerance           (± dB)	Data Found (dB) 134.00 129.00 124.00 118.99 114.00 109.00 104.00 98.99 94.00 88.97 83.98 78.97 73.98 69.00 63.99 58.98 54.00 48.98 43.99 38.99 38.99 34.01 29.12	Uncertainty (dB) ference 2	Measured 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 -0.01 0.00 -0.03 -0.02 0.00 -0.01 -0.02 0.00 -0.01 -0.02 0.00 -0.01 0.02 0.00 -0.01 0.02 0.00 -0.01 0.02 0.00 -0.01 0.02 0.00 -0.01 0.02 0.00 -0.01 0.02 0.00 -0.01 0.02 0.00 -0.01 0.02 0.00 -0.01 0.02 0.00 -0.01 0.02 0.00 -0.01 0.02 0.00 -0.01 0.02 0.00 -0.01 0.02 0.00 -0.01 0.02 0.00 -0.01 0.02 0.00 -0.01 -0.02 0.00 -0.01 -0.02 0.00 -0.01 -0.02 0.00 -0.01 -0.02 0.00 -0.01 -0.02 0.00 -0.01 -0.02 0.00 -0.01 -0.02 -0.01 -0.02 0.00 -0.01 -0.02 0.00 -0.01 -0.02 0.00 -0.01 -0.02 0.00 -0.01 -0.02 0.00 -0.02 0.00 -0.01 -0.02 0.00 -0.01 -0.02 0.00 -0.02 0.00 -0.02 -0.01 -0.02 0.00 -0.02 -0.02 -0.02 -0.02 -0.02 -0.02 -0.01 -0.02 -0.02 -0.02 -0.01 -0.02 -0.01 -0.02 -0.02 -0.01 -0.02 -0.01 -0.02 -0.01 -0.02 -0.01 -0.02 -0.01 -0.02 -0.01 -0.02 -0.01 -0.02 -0.01 -0.12 -	Differential N/A 0.00 0.00 -0.01 0.01 0.00 -0.01 0.01 -0.03 0.01 -0.03 0.01 -0.01 0.02 -0.01 -0.01 0.02 -0.01 -0.01 0.02 -0.01 -0.02 0.01 0.00 0.00 0.00 -0.01 -0.01 0.02 -0.01 -0.02 -0.01 -0.02 -0.01 -0.02 -0.01 -0.02 -0.01 -0.02 -0.02 -0.02 -0.01 -0.02 -0.0	Pass Pass Pass Pass Pass Pass Pass Pass
Level (dB) 139.0 134.0 129.0 124.0 119.0 114.0 109.0 104.0 99.0 94.0 89.0 84.0 79.0 74.0 69.0 64.0 59.0 54.0 49.0 34.0 39.0 34.0 29.0 28.0	Value (dB) 134.0 129.0 124.0 119.0 114.0 109.0 104.0 99.0 94.0 89.0 84.0 79.0 74.0 69.0 64.0 59.0 54.0 49.0 39.0 34.0 29.0 28.0	Tolerance           (± dB)	Data Found (dB) 134.00 129.00 124.00 118.99 114.00 109.00 104.00 98.99 94.00 88.97 83.98 78.97 73.98 69.00 63.99 58.98 54.00 48.98 43.99 38.99 34.01 29.12 28.17	Uncertainty (dB) ference 2	Measured 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 -0.01 0.00 -0.03 -0.02 0.00 -0.01 -0.02 0.00 -0.01 -0.02 0.00 -0.01 0.02 0.00 -0.01 0.02 0.00 -0.01 0.02 0.00 -0.01 0.02 0.00 -0.01 0.02 0.00 -0.01 0.02 0.00 -0.01 0.02 0.00 -0.01 0.02 0.00 -0.01 0.02 0.00 -0.01 0.02 0.00 -0.01 -0.02 0.00 -0.01 -0.02 0.00 -0.01 -0.02 0.00 -0.01 -0.02 0.00 -0.01 -0.02 0.00 -0.01 -0.02 0.00 -0.01 -0.02 0.00 -0.01 -0.02 -0.01 -0.02 0.00 -0.01 -0.02 -0.01 -0.01 -0.02 -0.01 -0.01 -0.01 -0.01 -0.01 -0.01 -0.01 -0.01 -0.01 -0.01 -0.01 -0.01 -0.01 -0.01 -0.01 -0.01 -0.12 -0.17	Differential N/A 0.00 0.00 -0.01 0.01 0.00 -0.01 0.01 -0.03 0.01 -0.01 0.02 -0.01 0.02 -0.01 0.02 -0.01 0.02 -0.01 0.02 -0.01 0.02 -0.01 0.02 -0.01 0.02 -0.01 0.00 0.00 0.00 -0.01 0.01	Pass Pass Pass Pass Pass Pass Pass Pass
Level (dB) 139.0 134.0 129.0 124.0 119.0 114.0 109.0 104.0 99.0 94.0 89.0 84.0 79.0 74.0 69.0 64.0 59.0 54.0 49.0 39.0 34.0 39.0 34.0 29.0	Value (dB) 134.0 129.0 124.0 119.0 114.0 109.0 104.0 99.0 94.0 89.0 94.0 89.0 94.0 79.0 74.0 69.0 64.0 59.0 54.0 49.0 39.0 34.0 29.0	Tolerance           (± dB)	Data Found (dB) 134.00 129.00 124.00 118.99 114.00 109.00 104.00 98.99 94.00 88.97 83.98 78.97 73.98 69.00 63.99 58.98 54.00 48.98 43.99 38.99 38.99 34.01 29.12	Uncertainty (dB) ference 2	Measured 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 -0.01 0.00 -0.03 -0.02 0.00 -0.01 -0.02 0.00 -0.01 -0.02 0.00 -0.01 0.02 0.00 -0.01 0.02 0.00 -0.01 0.02 0.00 -0.01 0.02 0.00 -0.01 0.02 0.00 -0.01 0.02 0.00 -0.01 0.02 0.00 -0.01 0.02 0.00 -0.01 0.02 0.00 -0.01 0.02 0.00 -0.01 0.02 0.00 -0.01 0.02 0.00 -0.01 0.02 0.00 -0.01 0.02 0.00 -0.01 0.02 0.00 -0.01 -0.02 0.00 -0.01 -0.02 0.00 -0.01 -0.02 0.00 -0.01 -0.02 0.00 -0.01 -0.02 0.00 -0.01 -0.02 0.00 -0.01 -0.02 -0.01 -0.02 0.00 -0.01 -0.02 0.00 -0.01 -0.02 0.00 -0.01 -0.02 0.00 -0.01 -0.02 0.00 -0.02 0.00 -0.01 -0.02 0.00 -0.01 -0.02 0.00 -0.02 0.00 -0.02 -0.01 -0.02 0.00 -0.02 -0.02 -0.02 -0.02 -0.02 -0.02 -0.01 -0.02 -0.02 -0.02 -0.01 -0.02 -0.01 -0.02 -0.02 -0.01 -0.02 -0.01 -0.02 -0.01 -0.02 -0.01 -0.02 -0.01 -0.02 -0.01 -0.02 -0.01 -0.02 -0.01 -0.12 -	Differential N/A 0.00 0.00 -0.01 0.01 0.00 -0.01 0.01 -0.03 0.01 -0.03 0.01 -0.01 0.02 -0.01 -0.01 0.02 -0.01 -0.01 0.02 -0.01 -0.02 0.01 0.00 0.00 0.00 -0.01 -0.01 0.02 -0.01 -0.02 -0.01 -0.02 -0.01 -0.02 -0.01 -0.02 -0.01 -0.02 -0.02 -0.02 -0.01 -0.02 -0.0	Pass Pass Pass Pass Pass Pass Pass Pass
Level (dB) 139.0 134.0 129.0 124.0 119.0 114.0 109.0 104.0 99.0 94.0 89.0 84.0 79.0 74.0 69.0 64.0 59.0 54.0 49.0 39.0 34.0 39.0 34.0 29.0 28.0 27.0	Value (dB) 134.0 129.0 124.0 119.0 114.0 109.0 104.0 99.0 94.0 89.0 84.0 79.0 74.0 69.0 64.0 59.0 54.0 49.0 34.0 39.0 34.0 29.0 28.0 27.0	Tolerance           (± dB)	Data Found (dB) 134.00 129.00 124.00 118.99 114.00 109.00 104.00 98.99 94.00 88.97 83.98 78.97 73.98 69.00 63.99 58.98 54.00 48.98 43.99 38.99 34.01 29.12 28.17 27.16	Uncertainty (dB) ference 2	Measured 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 -0.01 0.00 -0.03 -0.02 0.00 -0.01 -0.02 0.00 -0.01 -0.02 0.00 -0.01 0.00 -0.01 0.02 0.00 -0.01 0.02 0.00 -0.01 0.02 0.00 -0.01 0.02 0.00 -0.01 0.00 -0.01 0.00 -0.01 0.00 -0.01 0.00 -0.01 0.00 -0.01 0.00 -0.01 0.00 -0.01 0.00 -0.02 -0.02 -0.01 -0.02 0.00 -0.01 -0.02 0.00 -0.01 -0.02 -0.01 -0.01 -0.02 -0.01 -0.02 -0.01 -0.01 -0.02 -0.01 -0.01 -0.01 -0.01 -0.01 -0.01 -0.01 -0.01 -0.01 -0.01 -0.01 -0.01 -0.01 -0.01 -0.01 -0.12 -0.17 -0.16	Differential N/A 0.00 0.00 -0.01 0.01 0.00 -0.01 0.01 -0.03 0.01 -0.03 0.01 -0.01 0.02 -0.01 -0.01 0.02 -0.01 0.02 -0.02 0.01 0.00 0.02 -0.01 0.00 0.02 -0.01 0.00 -0.01 0.02 -0.01 0.00 -0.01 0.02 -0.01 0.02 -0.01 0.02 -0.01 0.02 -0.01 0.02 -0.01 0.02 -0.01 0.02 -0.01 0.02 -0.01 0.00 -0.01 0.01	Pass Pass Pass Pass Pass Pass Pass Pass
Level (dB) 139.0 134.0 129.0 124.0 119.0 114.0 109.0 104.0 99.0 94.0 89.0 84.0 79.0 74.0 69.0 64.0 59.0 54.0 49.0 44.0 39.0 34.0 29.0 28.0 27.0 26.0	Value (dB) 134.0 129.0 124.0 119.0 114.0 109.0 104.0 99.0 94.0 89.0 84.0 79.0 74.0 69.0 64.0 59.0 54.0 49.0 34.0 29.0 28.0 27.0 26.0	Tolerance           (± dB)	Data Found (dB) 134.00 129.00 124.00 124.00 118.99 114.00 109.00 104.00 98.99 94.00 88.97 83.98 78.97 73.98 69.00 63.99 58.98 54.00 48.98 43.99 38.99 34.01 29.12 28.17 27.16 26.24	Uncertainty (dB) ference 2	Measured 0.00 0.00 -0.01 0.00 0.00 0.00 0.00 -0.01 0.00 -0.03 -0.02 -0.03 -0.02 -0.03 -0.02 -0.03 -0.02 -0.01 -0.01 -0.02 -0.01 -0.01 -0.01 -0.02 -0.01 -0.01 -0.02 -0.01 -0.02 -0.01 -0.02 -0.01 -0.22 -0.17 -0.22 -0.17 -0.21 -0.22 -0.17 -0.24	Differential N/A 0.00 0.00 -0.01 0.01 0.00 -0.01 0.01 -0.03 0.01 -0.03 0.01 -0.01 0.02 -0.01 0.02 -0.01 0.02 -0.02 0.01 0.02 -0.02 0.01 0.00 0.02 -0.02 0.01 0.00 0.00 0.00 0.00 -0.01 0.01	Pass Pass Pass Pass Pass Pass Pass Pass
Level (dB) 139.0 134.0 129.0 124.0 119.0 114.0 109.0 104.0 99.0 94.0 89.0 84.0 79.0 74.0 69.0 64.0 59.0 54.0 49.0 44.0 39.0 34.0 29.0 28.0 27.0 26.0 25.0	Value (dB) 134.0 129.0 124.0 119.0 114.0 109.0 104.0 99.0 94.0 89.0 84.0 79.0 74.0 69.0 64.0 59.0 54.0 49.0 44.0 39.0 34.0 29.0 28.0 27.0 26.0 25.0	Tolerance           (± dB)	Data Found (dB) 134.00 129.00 124.00 118.99 114.00 109.00 104.00 98.99 94.00 88.97 83.98 78.97 73.98 69.00 63.99 58.98 54.00 48.98 43.99 38.99 34.01 29.12 28.17 27.16 26.24 25.26	Uncertainty (dB) ference 2	Measured 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 -0.01 0.00 -0.03 -0.02 -0.03 -0.02 -0.03 -0.02 0.00 -0.01 -0.01 0.00 -0.01 -0.02 0.00 -0.01 -0.02 0.00 -0.01 0.00 -0.03 -0.02 -0.01 0.00 -0.03 -0.02 -0.01 0.00 -0.01 0.00 -0.01 0.00 -0.01 0.00 -0.01 0.00 -0.01 0.00 -0.01 0.00 -0.01 0.00 -0.01 0.00 -0.02 -0.01 -0.2 -0.01 -0.2 -0.12 -0.2	Differential N/A 0.00 -0.01 0.01 0.01 0.01 -0.01 -0.01 -0.01 -0.01 -0.01 -0.01 0.02 -0.01 -0.01 0.02 -0.01 0.02 -0.02 0.01 0.02 -0.02 0.01 0.02 -0.02 0.01 0.00 0.02 -0.01 0.05 -0.01 0.08 0.02	Pass Pass Pass Pass Pass Pass Pass Pass
Level (dB) 139.0 134.0 129.0 124.0 119.0 114.0 109.0 104.0 99.0 94.0 89.0 84.0 79.0 74.0 69.0 64.0 59.0 54.0 49.0 44.0 39.0 34.0 29.0 28.0 27.0 26.0	Value (dB) 134.0 129.0 124.0 119.0 114.0 109.0 104.0 99.0 94.0 89.0 84.0 79.0 74.0 69.0 64.0 59.0 54.0 49.0 34.0 29.0 28.0 27.0 26.0	Tolerance           (± dB)	Data Found (dB) 134.00 129.00 124.00 124.00 118.99 114.00 109.00 104.00 98.99 94.00 88.97 83.98 78.97 73.98 69.00 63.99 58.98 54.00 48.98 43.99 38.99 34.01 29.12 28.17 27.16 26.24	Uncertainty (dB) ference 2	Measured 0.00 0.00 -0.01 0.00 0.00 0.00 0.00 -0.01 0.00 -0.03 -0.02 -0.03 -0.02 -0.03 -0.02 -0.03 -0.02 -0.01 -0.01 -0.02 -0.01 -0.01 -0.01 -0.02 -0.01 -0.01 -0.02 -0.01 -0.02 -0.01 -0.02 -0.01 -0.22 -0.17 -0.22 -0.17 -0.21 -0.22 -0.17 -0.24	Differential N/A 0.00 0.00 -0.01 0.01 0.00 -0.01 0.01 -0.03 0.01 -0.03 0.01 -0.01 0.02 -0.01 0.02 -0.01 0.02 -0.02 0.01 0.02 -0.02 0.01 0.00 0.02 -0.02 0.01 0.00 0.00 0.00 0.00 -0.01 0.01	Pass Pass Pass Pass Pass Pass Pass Pass



## Level Verification of Filter+SLM (1/1 Octave)

For each 1/1 octave filter center frequency, it is verified that the meter indicates within the tolerance shown if the input frequency matches the center frequency.

Filter Center Frequency: center frequency setting on the filter

Input Frequency: frequency of the input signal to the filter

Tolerance: the acceptable range for what the filter should indicate according to Odin Metrology, Inc.

Data Found: the level the sound level meter indicates

Filter Center	Input	Tolerance	Data	Result
Freq. (Hz)	Freq. (Hz)	(± dB)	Found (dB)	Nesuit
15.6	15.6		-0.04	Pass
31.3	31.3		0.05	Pass
62.5	62.5		0.03	Pass
125.0	125.0		-0.01	Pass
250.0	250.0		-0.01	Pass
500.0	500.0	0.5	0.00	Pass
1,000.0	1,000.0		-0,01	Pass
2,000.0	2,000.0		-0.01	Pass
4,000.0	4,000.0		0.01	Pass
8,000.0	8,000.0		0.02	Pass
16,000.0	16,000.0		0.02	Pass

### Level Verification of Filter+SLM (1/3 Octave)

For each 1/3 octave filter center frequency, it is verified that the meter indicates within the tolerance shown if the input frequency matches the center frequency.

Filter Center Frequency: center frequency setting on the filter

Input Frequency: frequency of the input signal to the filter

Tolerance; the acceptable range for what the filter should indicate according to Odin Metrology, Inc.

Data Found: the level the sound level meter indicates

Data Found. t				
Filter Center	Input	Tolerance	Data	Result
Freq. (Hz)	Freq (Hz)	(± dB)	Found (dB)	
12.4	12.4		-0.07	N/A
15.6	15.6		0.08	N/A
19.7	19.7		0.12	<u>N/A</u>
24.8	24.8		0.05	N/A
31.3	31.3		-0,08	<u>N/A</u>
39.4	39.4		-0.05	N/A
49.6	49.6		-0.06	N/A
62.5	62.5	-	0.02	N/A
78.7	78.7		-0.04	N/A
99.2	99.2		-0.03	N/A
125.0	125.0		0.01	<u>N/A</u>
157.5	157.5		-0.02	N/A
198.4	198.4		0.00	N/A
250.0	250.0		-0.01	N/A
315.0	315.0		0.00	N/A
396.9	396.9		0.01	N/A
500.0	500.0	0.5	0.00	N/A
630.0	630.0		-0.01	N/A
793.7	793.7		0.00	N/A
1,000.0	1,000.0		-0,01	N/A
1,259.9	1,259.9		0.00	N/A
1,587.4	1,587.4		0.00	N/A
2,000.0	2,000.0		-0.01	N/A
2,519.8	2,519.8		0.00	N/A
3,174.8	3,174.8		0.00	N/A
4,000.0	4,000.0		0.01	N/A
5,039.7	5,039.7		0.01	N/A
6,349.6	6,349.6		0.01	N/A
8,000.0	8,000.0		0.02	N/A
10,079.4	10,079.4		0.03	N/A
12,699.2	12,699.2		0.01	N/A
16,000.0	16,000.0		0.00	N/A
20,158.7	20,158.7		0.00	N/A
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## Filter Check (1/1 Octave)

At each center frequency in 1/1 octave step size mode, frequencies equaling the center frequency plus and minus one half octave shall cause the filter to respond with attenuation within the limits stated below.

Filter Center Frequency: center frequency setting on the filter

Input Frequency: the input frequency to the filter calculated as plus and minus one half octave from the center Tolerance: the acceptable range for what the filter should indicate according to Odin Metrology, Inc. Data Found: the level the sound level meter indicates

Result	und (dB)	put Frequency (Hz) Tolerance (dB) Data Found (dl		Input Freq	Filter Center		
rtosuit	+1/2 Octave	-1/2 Octave	Maximum	Minimum	+1/2 Octave	-1/2 Octave	Freq. (Hz)
Pass	-3.61	-3.73			22.1	11.1	15.6
Pass	-3.57	-3.60	400 m		44.1	22.1	31.3
Pass	-3.59	-3.61			88.3	44.2	62.5
Pass	-3.58	-3.60			176.6	88.5	125.0
Pass	-3.59	-3.59			353.1	177.0	250,0
Pass	-3.59	-3.60	-1.2	-5.7	706.3	354.0	500.0
Pass	-3.58	-3.59	-1.2	-0.7	1,412.5	707.9	1,000.0
Pass	-3.57	-3,60			2,825.1	1,415.9	2,000.0
Pass	-3.57	-3.62			5,650.2	2,831.8	4,000.0
Pass	-3.85	-3.57			11,300.3	5,663.6	8,000.0
N/A	N/A	N/A			22,600.6	11,327.1	16,000.0

### Filter Check (1/3 Octave)

At each center frequency in 1/3 octave bandwidth, frequencies equaling the center frequency plus and minus one sixth octave shall cause the filter to respond with attenuation within the limits stated below.

Filter Center Frequency: center frequency setting on the filter

Input Frequency: the input frequency to the filter calculated as plus and minus one sixth octave from the Tolerance: the acceptable range for what the filter should indicate according to Odin Metrology, Inc. Data Found: the level the sound level meter indicates

		ound level met		(10)	Data F-	und (dD)	
Filter Center	• •	uency (Hz)		ice (dB)		und (dB)	Result
Freq. (Hz)		+1/6 Octave	Minimum	Maximum		+1/6 Octave	
12.4	11.1	13.9			N/A	<u>N/A</u>	N/A
15.6	13.9	17.5			N/A	N/A	N/A
19.7	17.5	22.1			N/A	N/A	<u>N/A</u>
24.8	22.1	27.8			N/A	N/A	N/A
31.3	27.9	35,1			N/A	N/A	<u>N/A</u>
39.4	35.1	44.2			N/A	N/A	N/A
49.6	44.2	55.7			N/A	N/A	<u>N/A</u>
62.5	55.7	70.1			N/A	N/A	N/A
78.7	70.2	88.4			N/A	N/A	N/A
99.2	88,4	111.3			N/A	N/A	N/A
125.0	111.4	140.3			N/A	N/A	N/A
157.5	140.4	176.7			N/A	N/A	N/A
198.4	176.8	222.6			N/A	N/A	<u>N/A</u>
250.0	222.8	280.5			N/A	N/A	N/A
315.0	280.7	353.4			N/A	N/A	N/A
396.9	353.7	445.3			N/A	N/A	N/A
500.0	445.6	561.0	-5.7	-1.2	N/A	N/A	N/A
630.0	561.5	706.8			N/A	N/A	N/A
793.7	707.4	890.5			N/A	N/A	N/A
1,000.0	891.3	1,122.0	2		N/A	N/A	N/A
1,259.9	1,122.9	1,413.7			N/A	N/A	N/A
1,587.4	1,414.8	1,781.1			N/A	N/A	N/A
2,000.0	1,782.5	2,244.0			N/A	N/A	N/A
2,519.8	2,245.8	2,827.3			N/A	N/A	N/A
3,174.8	2,829.5	3,562.2			N/A	N/A	N/A
4,000.0	3,565.0	4,488.1			N/A	N/A	N/A
5,039.7	4,491.6	5,654.6			N/A	N/A	N/A
6,349.6	5,659.1	7,124.4			N/A	N/A	N/A
8,000.0	7,130.0	8,976.1			N/A	N/A	N/A
10,079.4	8,983.2	11,309.2			N/A	N/A	N/A
12,699.2	11,318.2	14,248.7			N/A	N/A	N/A
16,000.0	14,260.0	17,952.3			N/A	N/A	N/A
	14,200.0	111002.0				N/A	N/A

## Relative Attenuation at 1,000 Hz (1/1 Octave) (IEC 61260 § 5.3)

The attenuation of the filter at the given frequencies shall be within the stated tolerance. The frequencies are calculated as octaves from the center frequency. The factors defined by IEC 61260 (Table 1) are:  $\pm 4$ ,  $\pm 3$ ,  $\pm 2$ ,  $\pm 1$ ,  $\pm 1/2$ ,  $\pm 3/8$ ,  $\pm 1/4$ ,  $\pm 1/8$  and 0.

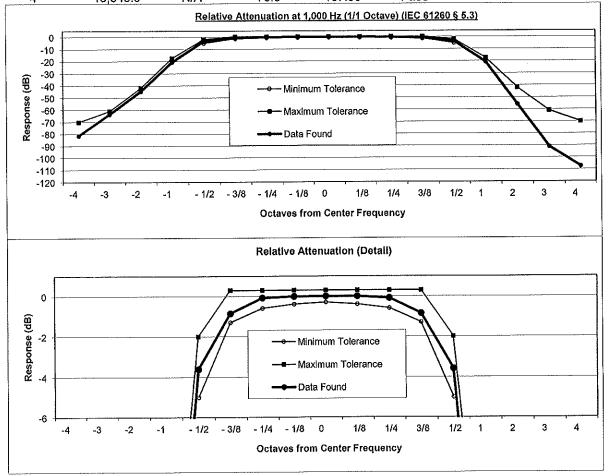
Octaves from Center Frequency: the difference, in octaves, between the selected center frequency (1,000 Hz) and the current input frequency

Input Frequency: the input frequency to the filter

Tolerance: the acceptable range for what the filter should indicate according to IEC 61260

Data Found: the level the sound level meter indicates

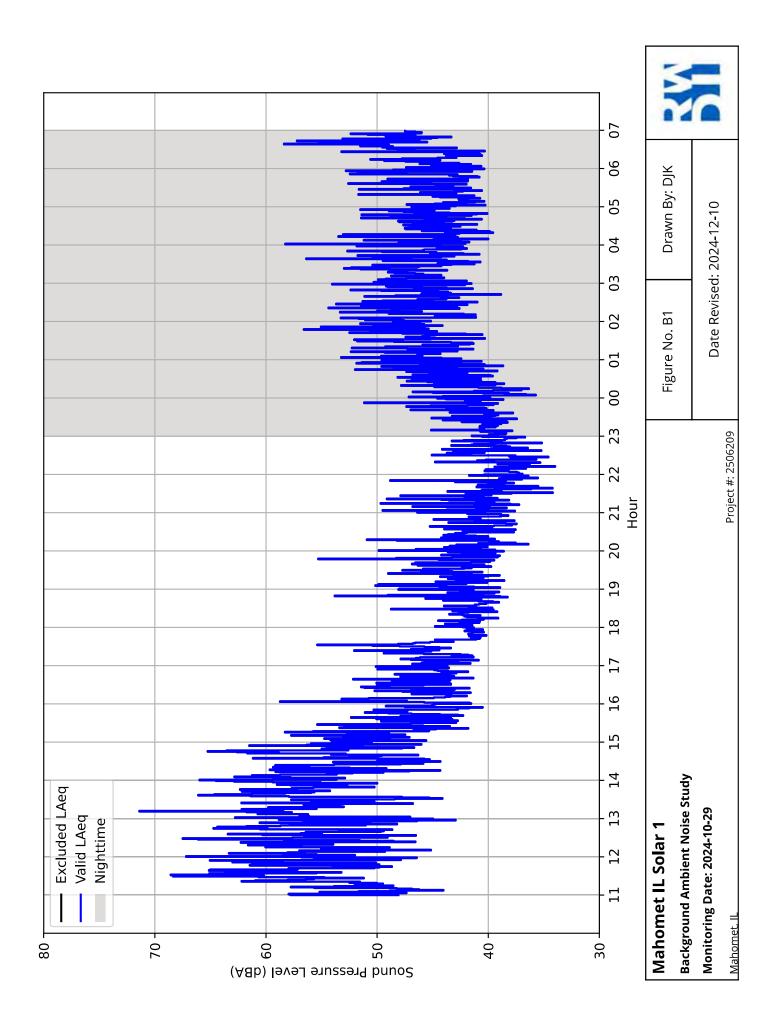
Octaves from	Input	Tolerance (dB)		Data	Result
Center Freq.	Freq. (Hz)	Minimum	Maximum	Found (dB)	Result
-4	63.1	N/A	-70.0	-81.45	Pass
-3	125.9	N/A	-61.0	-63.55	Pass
-2	251.2	N/A	-42.0	-44.69	Pass
-1	501.2	N/A	-17.5	-20.70	Pass
- 1/2	707.9	-5.0	-2.0	-3.61	Pass
- 3/8	771.8	-1.3	0.3	-0.86	Pass
- 1/4	841.4	-0.6	0.3	-0.08	Pass
- 1/8	917.3	-0.4	0.3	-0.01	Pass
0	1,000.0	-0.3	0.3	0.00	Pass
1/8	1,090.2	-0.4	0.3	0.00	Pass
1/4	1,188.5	-0.6	0.3	-0.09	Pass
3/8	1,295.7	-1.3	0.3	-0.86	Pass
1/2	1,412.5	-5.0	-2.0	-3.59	Pass
1	1,995.3	N/A	-17.5	-20.83	Pass
2	3,981.1	N/A	-42.0	-55.78	Pass
3	7,943.3	N/A	-61.0	-91.10	Pass
4	15.848.9	N/A	-70.0	-107.36	Pass

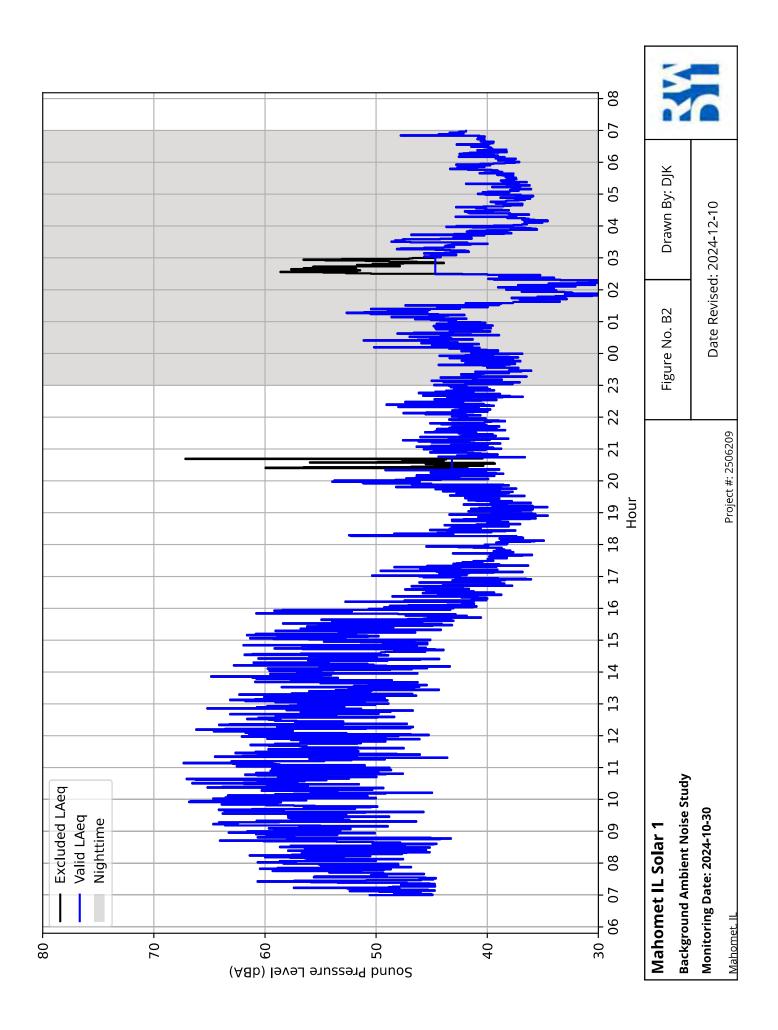


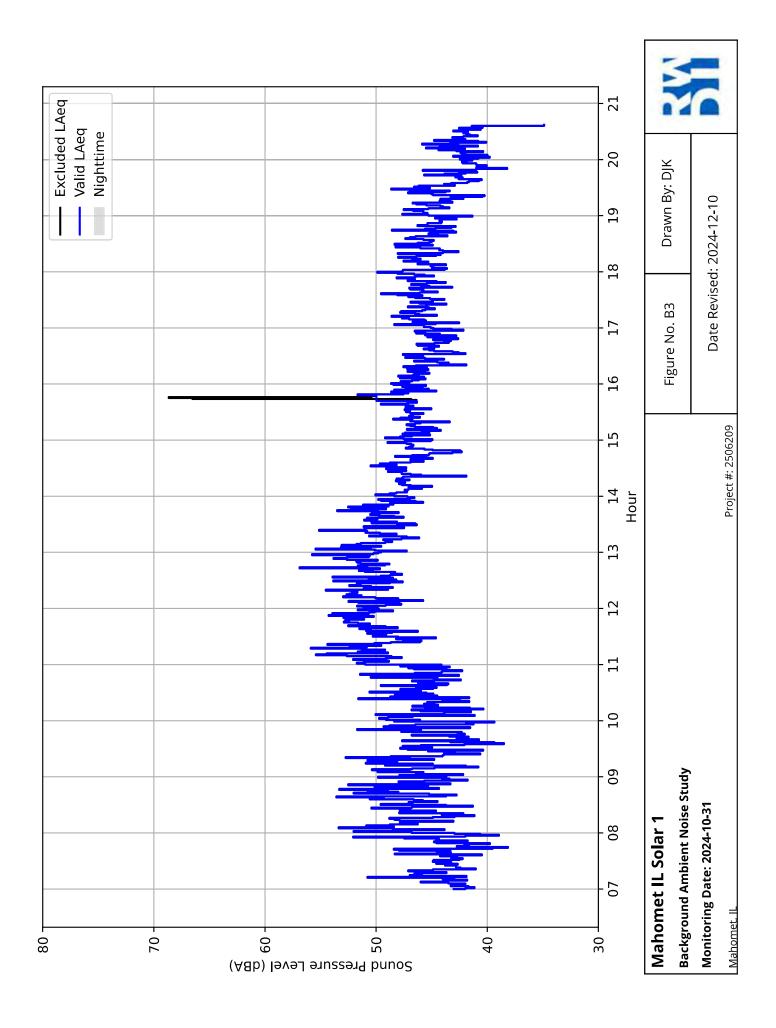


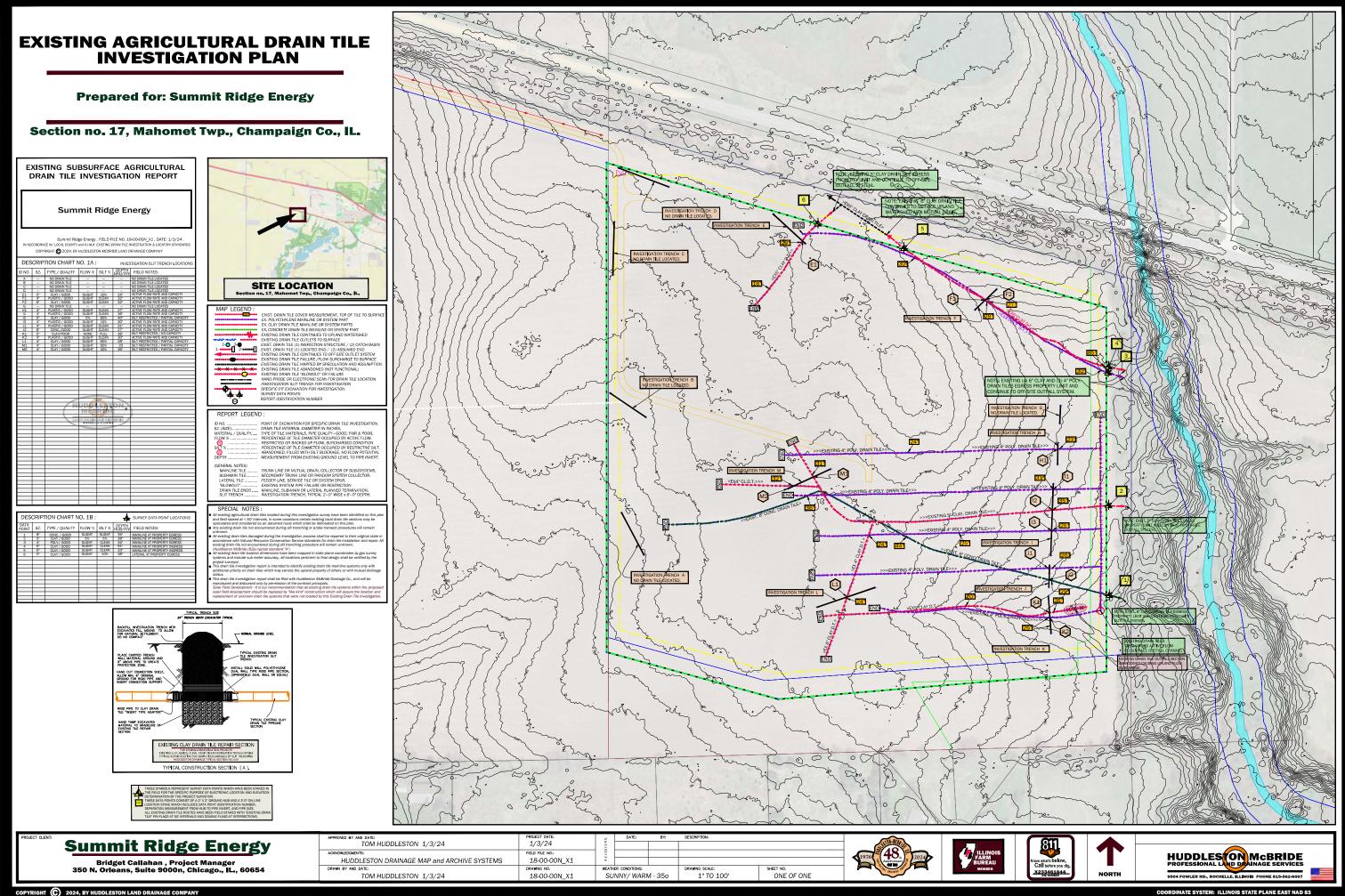
# APPENDIX B











M:\0-12\_25 23@ CAMP PROJECTES\ACTIVE PROJECTS\18-00-00

# Charles W. Campo

From:	John Hall
Sent:	Wednesday, February 19, 2025 9:39 AM
То:	Charles W. Campo
Subject:	Case 162-S-25 Mahomet solar farm

We should report the phone call from Chris Doenitz complaining about the solar farm in Case 162-S-25. He is opposed to the waiver of the requirement for a road use agreement before the Zoning Board of Appeals takes action.

# **Charles W. Campo**

From:	Karen Hansen <karjojo03@gmail.com></karjojo03@gmail.com>
Sent:	Thursday, February 20, 2025 8:35 AM
То:	zoningdept
Subject:	Proposed Solar Farm off 150 near Mahomet

## CAUTION: External email, be careful when opening.

# To whom it may concern,

I am writing you to express my protest of the proposed Solar farm off 150 west of Mahomet. I live less than a mile from the proposed placement and have grave concerns about the environmental impact of such a placement. I of course am luckier than those who will be forced to live right next to it. I am sure others will regal you with facts about the dangers of such places. I am aware of those but also want to state I think it puts an unfair burden on us who will live close. I already live next to a sub station, have a pipeline going across my property and am close to the railroad. Each of these carry an environmental impact and the solar farm proposal asks me to add another potential negative effect to my and my family's health? I think that is too large a burden for a few citizens to bare.

I also believe the placement of the solar farm is not a smart one considering the proximity to the railroad. One derailment and you have a raging out of control fire that is exasperated by the presence of solar panels and lithium batteries. It would be one thing if these trains carried passengers or nerf balls but these trains carry chemicals used in farming. The environmental impact would be awful. No one need look further than some of the train wrecks in the recent past but none of those trains derailed onto a solar farm. How would a community with a small fire department contain and control this fire in a manner that would not lead to significant loss of life? I think the 1.5 mile buffer zone was created for that purpose and that would probably be even in The best of circumstances but I think adding a railroad right next to it that transports farm chemicals is asking for a disaster of epic proportion.

I ask that you obey the 1.5 mile rule and find some place that doesn't lie right by a railroad.

Thank you for your time and consideration,

Karen Hansen