

DOCKETED

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RESPONSE TO CEC STAFF DATA REQUEST SET 2 (34-46)

Gilroy Backup Generating Facility (20-SPPE-03)

SUBMITTED TO: CALIFORNIA ENERGY COMMISSION
SUBMITTED BY: **Amazon Data Services, Inc.**

June 22, 2020



INTRODUCTION

Attached are Amazon Data Services, Inc. (ADS) responses to California Energy Commission (CEC) Staff Data Request Set No. 2 (34-45) for the Gilroy Backup Generation Facility (GBGF) Application for Small Power Plant Exemption (SPPE) (20-SPPE-03). Staff issued Data Request Set No. 2 on June 2, 2021.

The Data Responses are grouped by individual discipline or topic area. Within each discipline area, the responses are presented in the same order as Staff presented them and are keyed to the Data Request numbers (34-45). Additional tables, figures, or documents submitted in response to a data request (e.g., supporting data, stand-alone documents such as plans, folding graphics, etc.) are found in Attachments at the end of the document and labeled with the Data Request Number for ease of reference.

For context the text of the Background and Data Request precede each Data Response.

GENERAL OBJECTIONS

ADS objects to all data requests that require analysis beyond which is necessary to comply with the California Environmental Quality Act (CEQA) or which require ADS to provide data that is in the control of third parties and not reasonably available to ADS. Notwithstanding this objection, ADS has worked diligently to provide these responses swiftly to allow the CEC Staff to prepare the Initial Study/Mitigated Negative Declaration (IS/MND).

AIR QUALITY AND PUBLIC HEALTH

BACKGROUND: Emission Calculations

The Revised Air Quality Impact Assessment (AQIA [TN 237353]) and the appendices (TN 237425) are used to document emissions calculations. Staff needs the spreadsheet files of the emission estimates with live, embedded calculations to complete the review.

DATA REQUEST

34. Please provide the spreadsheet versions of the worksheets in the Revised AQIA (TN 237353) and the appendices (TN 237425) with the embedded calculations live and intact.

RESPONSE TO DATA REQUEST 34

The spreadsheet versions of the worksheets used in the Revised AQIA and appendices will be uploaded to a secure SharePoint set up by CEC Staff.

BACKGROUND: NO₂ Impacts for Different Load Conditions

As stated under Table 4-7 in the Revised AQIA (TN 237353), the applicant did not model 1-hour nitrogen dioxide (NO₂) impacts for the 75%, 25%, and 10% load cases as the applicant expects the emissions from these loads will be less than that of the modeled 100% load case (with 0.25 hour of Tier 2 and 0.75 hour of Tier 4F emissions) and 50% load case (with Tier 2 emissions assumed for the whole hour).

However, staff needs to confirm whether the emissions for the 75%, 25%, and 10% load cases would be lower than those estimated for the 100% and 50% load cases. If Tier 4 emission factor is assumed for part of the hour for these load cases, the applicant needs to provide documents/certificates from the vendor of the selective catalytic reduction (SCR) system to verify the warm-up period of the SCR to reach Tier4 emission rates for these load cases.

In addition, lower exhaust temperatures and slower exhaust velocities at lower loads could result in higher ground-level concentrations, even if the emissions would be lower. Without modeling, staff would not be able to confirm whether the ground-level impacts for the 75%, 25%, and 10% load cases would be lower than those for the 100% and 50% load cases.

DATA REQUESTS

35. Please provide nitrogen oxides (NO_x) emission calculations for the 75%, 25%, or 10% load cases. If Tier 4 emission rate is assumed for part of the hour for these load cases, please provide documents/certificates from the vendor to verify the warm-up period of the SCR to reach Tier 4 emission rates for these load cases.

RESPONSE TO DATA REQUEST 35

Emission calculations for the 75%, 25%, and 10% load cases and assumptions of the application of Tier 4 emission rates and appropriate justification of the assumptions will be provided with the files as part of Response to Data Request 36 and Response to Data Request 38 under a separate cover.

36. Please provide modeling analysis for the 1-hour NO₂ impacts for the 75%, 25%, and 10% load cases.

RESPONSE TO DATA REQUEST 36

ADS' consultant team is completing this analysis and anticipates that the modeling results and files will be completed on or before July 7, 2021, and docketed under a separate cover.

BACKGROUND: NO₂ Background

Page 4-3 in the Revised AQIA (TN 237353) states that for the 1-hour NO₂ National Ambient Air Quality Standard (NAAQS) analysis, the 98th percentile background is represented using the 3rd-highest value for each season and hour as consistent with EPA Guidance. For the 1-hour NO₂ California Air Quality Standard (CAAQS) analysis, the maximum seasonal hour of day (SEASHR) data is used as consistent with the format of the standard. However, staff checked the modeling files and noticed that the seasonal hour-of-day NO₂ background data for some of the hours in the fall season used for the CAAQS were lower than those used for the NAAQS analysis (as shown in the following table). In addition, the maximum NO₂ background that the applicant used for the 1-hour NO₂ CAAQS analysis was 61.8 ppb, which is lower than the maximum monitored values shown in Table 3-5 of the Revised AQIA (i.e. 76.9 ppb, 88 ppb, and 65.1 ppb in 2017, 2018, and 2019 respectively).

Staff needs to understand how the NO₂ background data were processed. Staff needs to understand why the maximum seasonal hour-of-day values would be lower than the 3rd-highest values. Staff needs to understand why the maximum NO₂ background that the applicant used for the 1-hour NO₂ CAAQS analysis is lower than the maximum monitored values in 2017, 2018, and 2019.

Hour	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00
NO₂ background for CAAQS (ppb)	42.2	40.2	32.8	35.4	34.8	35.8	38.3	45.7
NO₂ background for NAAQS (ppb)	44.23	38.93	36.6	37.47	35.07	36.57	37.33	42.93
Difference (ppb)	-2.03	1.27	-3.8	-2.07	-0.27	-0.77	0.97	2.77
Hour	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00
NO₂ background for CAAQS (ppb)	50.5	51.3	48.7	49.6	42.5	40.9	42.7	44
NO₂ background for NAAQS (ppb)	48.77	53.53	48.13	47.7	44.6	45.23	43.43	45.37
Difference (ppb)	1.73	-2.23	0.57	1.9	-2.1	-4.33	-0.73	-1.37
Hour	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24:00
NO₂ background for CAAQS (ppb)	44.2	48.7	58.1	61.8	51.3	47.6	45.2	46.2
NO₂ background for NAAQS (ppb)	45.4	54.83	64.27	61.43	53.23	48.47	48.67	47
Difference (ppb)	-1.2	-6.13	-6.17	0.37	-1.93	-0.87	-3.47	-0.8

DATA REQUESTS

37. Please provide a detailed description showing how the NO₂ background data were processed for the 1-hour NO₂ CAAQS and NAAQS analyses.

RESPONSE TO DATA REQUEST 37

Background 1-hour NO₂ data were obtained from the Environmental Protection Agency's (EPA's) Air Data Air Quality Monitor website from the 1007 Knox Ave., San Jose monitoring station for 2017 through 2019. The data were imported into spreadsheets to reduce and determine the seasonal hourly maximum 1st high for CAAQS and the seasonal hourly 98th percentile (3rd high) for the NAAQS. The spreadsheets used to determine the seasonal hourly background data have been provided as part of Response to Data Request 34.

38. If the NO₂ background data needs to be updated, please update the 1-hour NO₂ CAAQS and/or NAAQS analyses accordingly.

RESPONSE TO DATA REQUEST 38

Using the methods described in Response to Data Request 37, ADS' consultants have revised the background 1-hour NO₂ for CAAQS which are available in the spreadsheets provided as part of Response to Data Request 34. ADS' consultant team is completing the revised 1-hour NO₂ CAAQS analysis and anticipates that the modeling results and files will be completed on or before July 7, 2021, and docketed under a separate cover.

BACKGROUND: Construction Health Risk Assessment

The applicant's AERMOD input file for construction health risk assessment (HRA) shows the exhaust emissions during construction were modeled for 12 hours during weekdays, which means only 3,120 (=12*5*52) hours per year were modeled, instead of 8,760 hours for the whole year. The applicant normalized the emission rates to 1 gram per second (g/s) in the AERMOD run for HRA. And then the normalized concentrations from the AERMOD run were multiplied by the annual diesel particulate matter (DPM) emission rates to get the ground-level concentrations needed in HARP2. Based on staff's independent analysis with a test run, staff verified that HARP2 converts the annual emission rates in pounds per year (lb/yr) to g/s by averaging them among all 8,760 hours of the year (hourly emission rate [g/s] = annual emission rate [lb/yr] x [1 yr/8,760 hours] x [1

hour/3600 s] x [453.6 g/1 lb]). When the normalized concentrations modeled for only 3,120 hours of the year were combined with a lower emission rate averaged over 8,760 hours of the year, the DPM impacts from the exhaust emissions during construction were underestimated by about 64% (=1- [3,120/8,760]). However, the DPM impacts from the emergency standby engines from Phase I were appropriately estimated as part of the HRA for Phase II construction by modeling every hour of the year. Overall, the applicant underestimated the project's cancer risks and chronic HI during construction due to the underestimated DPM impacts from the exhaust emissions from construction.

To verify staff's above findings, staff did an independent HRA by using the PM2.5 impacts directly modeled by AERMOD, rather than using the results from normalized concentrations in AERMOD and applying the emission rates in HARP2. Staff first modified the applicant's AERMOD input file for construction HRA by replacing the 1 g/s emission rates with the emission rates used for the annual PM2.5 impacts analysis for construction (excluding fugitive dust emissions). Staff then re-ran AERMOD with this modified input file and ran HARP2 with the output files from this AERMOD run to calculate the cancer risks and chronic HI. The following table shows staff's modeled results compared with applicant's results at the point of maximum impact (PMI), maximum exposed individual residential receptor (MEIR), maximum exposed individual sensitive receptor (MEISR), and maximum exposed individual worker receptor (MEIW) identified by the applicant. However, it should be noted that staff has not finalized the analysis yet. The applicant needs to verify the methodology. The results in staff's final analysis could be different from those shown in the following table.

Receptor	Receptor ID in Applicant's Analysis	Cancer Risk in Applicant's Analysis	Cancer Risk in Staff's Analysis
MEIR	2134	4.16	9.23
MEISR	1500	2.17	4.51
MEIW	457	2.38	4.78
PMI	577	39.1	96.5 ^a

Note: ^a The PMI in staff's analysis is located at UTM coordinate: (628469.00,4097725.00), with receptor ID 924.

DATA REQUEST

39. Please verify and revise the construction HRA to properly consider the higher hourly emission rates when only 12 hours during weekdays are modeled for construction exhaust emissions.

RESPONSE TO DATA REQUEST 39

Per Bay Area Air Quality Management District (BAAQMD)'s Health Risk Assessment Modeling Protocol (Dated December 2020), Section 3.14, *Modeling Non-Continuously Operating Sources*, the risk assessment for chronic exposure in HARP2 is based on continuous source operation of 8,760 hours per year (hrs/yr); therefore, the operating hours of the exhaust emissions must be adjusted accordingly to ensure that the annual emission rate (lb/yr) accounts for 8,760 hrs/yr.

To accurately determine the impacts from exhaust emissions during construction, the AERMOD emission rate factor in the HROFDY (Hours of Day) option was updated from 1 to 2 for each hour construction may operate to account for 24 hours per day (8,760 hrs/yr). The concentrations from the AERMOD run were then multiplied by the annual diesel particulate matter (DPM) emission rates to derive the ground-level concentrations needed in HARP2. This methodology accurately estimates DPM impacts from the exhaust emissions from construction. As a result, the construction HRA was revised. The updated results are provided below and the revised AERMOD input file and HRA output files will be uploaded to a secure SharePoint set up by CEC Staff.

Table 1. Construction Phase Health Risk Assessment Revised Results

Receptor	Sensitive Receptor ID ^a	HARP Receptor ID	Location (UTM Zone 10)	Location (Latitude/Longitude)	Cancer Risk (in 1 million)		Chronic Hazard Index		Significant Impact?
					Project Risk	Significance Threshold	Project Hazard Index	Significance Threshold	
MEIR	N/A	2134	628869 m E 4097265 m N	37.012727, - 121.551446	7.00	10	2.61E-03	1	No
MEISR	4	1500	627569 m E 4097865 m N	37.018311, - 121.565953	3.48	10	1.30E-03	1	No
MEIW	N/A	457	628049 m E 4097905 m N	37.018606, - 121.560551	3.72	10	9.80E-03	1	No
PMI	N/A	924	628469 m E 4097725 m N	37.016927, - 121.555862	69.72	N/A ^b	2.60E-02	N/A ^b	N/A

HAZARDS AND HAZARDOUS MATERIALS

BACKGROUND: Urea or Diesel Exhaust Fluid (DEF)

On page 213, the project description specifies the use of urea or diesel exhaust fluid(DEF) which will be used by the selective catalytic reduction equipment.

DATA REQUESTS

40 Please provide a safety data sheet for the DEF and confirm the estimated shelf life of the DEF.

RESPONSE TO DATA REQUEST 40

Please see Attachment HAZ DR-40. The estimated shelf life is dependent on ambient temperature. For the Gilroy area the shelf life of the DEF is estimated to be approximately 12-18 months, according to information provided by Peterson Caterpillar.

41. Please provide an estimate of how much DEF would be used in a year per diesel engine.

RESPONSE TO DATA REQUEST 41

Each generator will be served by one DEF tank that can hold approximately 350 gallons of DEF storage. The maximum consumption is 13.8 gallons per hour, resulting in 25 hours of continuous run time. Based on the maximum potential maintenance and testing schedule anticipated (i.e., 50 hours per year per generator), the upper bound of DEF consumption per generator would be 690 gallons per year.

42. Please provide a DEF replenishment strategy and frequency, and how any excessor degraded DEF, if any, would be disposed of properly.

RESPONSE TO DATA REQUEST 42

Based on the testing and maintenance schedule ADS does not anticipate the need for replacement of degraded DEF. The replenishment strategy is to have the supplier to replenish the DEF supply by adding DEF from a bulk tanker to the main tank in the lower genset enclosure. If for some reason DEF needed to be replaced, ADS would contract with the supplier to pump it from the tank and remove and dispose of it in

accordance with the supplier's obligations to comply with all applicable handling, transport and disposal regulations. The tank would then be refilled.

43. Please provide a schematic showing if the DEF is located in a secondary containment.

RESPONSE TO DATA REQUEST 43

See Attachment HAZ DR-43.

UTILITIES AND SERVICE SYSTEMS

BACKGROUND

Sections 10910 et seq. of the California Water Code set forth the circumstances in which CEQA lead agencies must seek preparation of, or prepare themselves, water supply assessments (WSA) for proposed projects that meet certain criteria. One of the criteria is if a project would occupy 40 acres of land or more. Since the Gilroy Data Center project would be built on 56 acres, it meets this criterion and thus a WSA is needed.

A fundamental task of a WSA is to determine whether total projected water supplies available during normal, single-dry, and multiple-dry water years will meet the projected water demand associated with a proposed project, in addition to the water supplier's existing and planned future uses. When making such a determination, the authors of the WSA must address several factors including information regarding existing water supplies, projected water demand, and dry year supply and demand. Suppliers are expressly permitted to rely on information contained in the most recently adopted Urban Water Management Plan (UWMP), so long as the water needed for the proposed project was accounted for therein.

A WSA is required for staff to complete its analysis of the SPPE. The applicant did not submit a WSA along with the SPPE application, nor did it mention any plans to requestone from the water supplier.

DATA REQUESTS

44. Please provide a WSA that includes the components described above, particularly availability of water supplies for the purveyor to meet the project's demand in normal, dry, and multi-dry years.

RESPONSE TO DATA REQUEST 44

ADS is currently consulting with the City of Gilroy regarding this request and will update this response when the City has provided; 1) the information necessary to ensure a WSA need not be performed, 2) a commitment to provide recycled water for cooling negating the requirement for a WSA, or 3) that it will perform a WSA responsive to this data request.

45. In case of a shortage in any projected year, provide information on the water purveyor's plans to make up for those shortages.

RESPONSE TO DATA REQUEST 45

See Response to Data Request 44.

ATTACHMENT HAZ DR-40

DEF Safety Data Sheet



Safety Data Sheet

1. Product Identifier and Company Identification

Product name : Urea Solution – High Purity 32.5%
HBCC SDS number : CU02460M0
Synonym : Urea Solution; Urea liquor; Diesel Exhaust Fluid (DEF),
Product use and Restrictions : Refer to label or call
Manufacturer : Corporate Headquarters
Contact Address : Hill Brothers Chemical Company
1675 North Main Street
Orange, California 92867
714-998-8800
800-821-7234
Corporate Safety & Compliance
Hill Brothers Chemical Company
7121 West Bell Road, Suite 250
Glendale, Arizona 85308
623-535-9955 - Office
623-535-9944 - Fax
Emergency telephone Number (Chemtrec) : 800-424-9300
Website : <http://hillbrothers.com>

2. Hazard Identification

Classification : None
Signal Word : None
Pictogram(s) : None
Hazard Statements : None

Precautionary Statements

Response : None
Prevention : None
Storage : None
Disposal : None

3. Composition/Information on Ingredients

CAS Number	Ingredient Name	Weight %
57-13-6	Urea	31-33%
7732-18-5	Water	67-69%
7664-41-7	Ammonia	≤0.15%

4. First Aid Measures

Summary of First Aid Measures

Ingestion : Do not induce vomiting. Get medical attention immediately.
Inhalation : Remove to fresh air and keep at rest in a position comfortable for breathing. Obtain medical attention if breathing difficulty persists.

- Skin** : Remove contaminated clothing. Rinse immediately with plenty of water. Obtain medical attention if irritation develops or persists. Wash contaminated clothing before reuse.
- Eyes** : Immediately flush with large amounts of water, including under the eyelids. If pain or irritation persists seek medical attention. Speed and thoroughness in rinsing eyes are important to avoid permanent injury.

Medical Conditions

Effects of Acute and Delayed Exposure

- Inhalation** : May cause respiratory irritation.
- Skin Contact** : May cause skin irritation.
- Eye Contact** : May cause eye irritation.
- Ingestion** : Do not induce vomiting. Get medical attention immediately.
- Chronic Symptoms** : None expected under normal conditions of use.

Indication of Any Immediate Medical Attention and Special Treatment Needed

- : If exposed and feeling unwell, seek medical advice (show the label where possible).

5. Fire Fighting Measures

- Extinguishing** : Use extinguishing media appropriate for surrounding fire. Unsuitable Extinguishing Media: Do not use heavy water stream. Use of Heavy water stream of water may spread fire.
- Special Exposure Hazards** : Fire Hazard: Not combustible but may decompose at high temperatures. Explosion Hazard: Product is not explosive. Reactivity: Hazardous reactions will not occur under normal conditions.
- Special Protective** : Do not enter fire area without proper protective equipment, including Respiratory protection.
- Fire Fighting Procedures** : Precautionary Measures Fire: Exercise caution when fighting any chemical fire. Under fire conditions, hazardous fumes will be present. Firefighting Instructions: Use water spray or fog for cooling exposed containers.
- NFPA Rating** : Health - 1
Flammability - 0
Instability - 0



0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme

6. Accidental Release Measures

- Personal Precautions** : Equip Cleanup crew with proper protection.
- Emergency Procedures** : Ventilate area.
- Methods of Containment And Clean-Up** : Contain any spills to prevent migration and entry into sewers or streams. Clean up spills immediately and dispose of safely. Transfer spilled material to a suitable container for disposal. Contact competent authorities as appropriate after a spill. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

7. Handling and Storage

- Safe Handling** : Store in compliance with all Federal, State, and local regulations. Store in a well-ventilated area, away from incompatible materials or sources of heat and ignition. Empty containers may contain residue and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind or expose such containers to heat, flames, sparks or other sources of ignition; they may evolve noxious fumes.
- Storage** : Store in compliance with all Federal, State, and local regulations.
- Work/Hygienic Practices** : Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

8. Exposure Controls/Personal Protection

Occupational Exposure Limits :

Chemical Name: Urea Solution – High Purity 32.5%				
Exposure Limits (TWAs) in Air				
CAS Number	Chemical	ACGIH TLV	OSHA PEL	STEL
57-13-6	Urea	N/A	N/A	N/A
7664-41-7	Ammonia	25	50	35

Ensure adequate ventilation, especially in confined areas. Emergency eye wash fountains and safety showers should be available but not required.

Protective Equipment : Safety glasses, gloves and general work clothing are recommended. Where Ventilation is insufficient, wear respiratory protection. Wearing of appropriate protective clothing and gloves is suggested if epidermal sensitivity develops. Wear chemically resistant protectives gloves.

Eye Protection : Safety glasses.

Respiratory : Use a NIOSH-approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.

9. Physical and Chemical Properties

Appearance: Colorless liquid	Odor: slight ammonia odor
Odor Threshold: Not available	pH: 7.5-10
Melting Point/Freezing Point: 11.5F	Initial Boiling Point/Range: 219°F
Flash Point: Not applicable	Evaporation Rate (BuAc=1): Not available
Flammability: Not applicable	Lower/Upper Explosive Limit: Not applicable
Vapor Pressure (mmHg): Not available	Vapor Density (Air=1): Not available
Specific Gravity @ 20°C: 1.09cc (9.1 lb/gal)	Solubility in Water: 100%
Heat of Solution in H₂O: Not available	Heat Capacity at 25° C (77° F): Not available
Decomposition Temperature: 135°C (275°F) Urea	Density at 25° C (77° F): 9.1 Lbs./Gal
% Volatiles: Not available	Loose Bulk Density: Not available
Molecular Weight: 60.07 (100% Urea)	VOC: Not available

10. Stability and Reactivity

Reactivity	: Hazardous reactions will not occur under normal conditions.
Chemical Stability	: Stable under recommended handling and storage conditions (see section 7).
Possibility of Hazardous Reactions or Polymerizations	: Hazardous polymerization will not occur.
Conditions to Avoid	: Avoid exposing containers to heat or flame. Keep separated from incompatible materials.
Incompatible Materials	: Nitric acid. Gallium. Perchlorates. Strong oxidizers. Caustic products. Alkalis.
Hazardous Decomposition Products	: Ammonia. Nitrogen oxides.

11. Toxicological Information

Acute and Chronic Effects	: Not classified
Routes of Exposure	
Inhalation	: Yes
Ingestion	: Yes
Skin	: Yes
Eyes	: Yes
Symptoms related to Physical, Chemical & Toxicological Characteristics	: Not classified
Numerical Measures of Toxicity (Urea)	: LD50 Oral Rat = 8471 mg/kg

Numerical Measures of Toxicity (Ammonia) : LD50 Inhalation Rat = 5.1 mg/l (exposure time 1 h)
LD50 Inhalation Rat = 2000 ppm/4h (exposure time 4 h)

Chronic Toxicity : None expected under normal conditions of use.

Carcinogenicity :

Product Name: Urea Solution – High Purity 32.5%					
ACGIH	IARC	EPA	NIOSH	NTP	OSHA
-	-	-	-	-	-

TARGET ORGANS : N/A

12. Ecological Information

Ecotoxicity : **Urea**
LC50 Fish 1 = 16200 -18300 mg/l (exposure time 96 h – Species: Poecilia reticulata)
EC50 Daphnia 1 = 3910 mg/l (exposure time 48 h – Species: Daphnia magna [static])
Ammonia
LC50 Fish 1 = 0.44 mg/l (exposure time 96 h – Species: Cyprinus carpio)
EC50 Daphnia 1 = 25.4 mg/l (exposure 48 h – Species: Daphnia magna)
LC50 Fish 2 = 0.26 - 4.6 mg/l (exposure 96 h – Species: Lepomis macrochirus)

Persistence and Degradability : Not available

Bioaccumulative Potential :

Product/Ingredient	Log _{Pow}	BCF	Potential
Urea	-1.59 (at 25°C)	<10	-

Mobility in Soil : Not available

13. Disposal Considerations

Dispose of waste material in accordance with all local, regional, national, and international regulations.
Additional Information: Spilled chemical can be used as fertilizer.

14. Transport Information

This product is not regulated for transport as a hazardous material, substance or dangerous good.

15. Regulatory Information

SARA 302 Extremely Hazardous Substances (EHS) : No chemical in this product is listed as an Extremely Hazardous Substance (EHS) under Section 302 of EPCRA.

SARA 304 Extremely Hazardous Substances (EHS) Release Notification : No chemical in this product is listed as an Extremely Hazardous Substance (EHS) which, if released to the environment in quantities at or above the substance's Reportable Quantity (RQ), would require reporting to the SERC and LEPC under Section 304 of EPCRA.

SARA 311/312 Hazards

:

SARA 311/312 Hazards				
Acute	Chronic	Flammability	Pressure	Reactivity
No	No	No	No	No

SARA 313 Reportable Chemicals

: No chemical in this product is subject to annual emissions, transfers, or waste management reporting under the Community-Right-to-Know provisions of EPCRA Section 313, also known as the Toxic Release Inventory (TRI) Report or Form R.

CERCLA Hazardous Substances

: No chemical in this product is listed as a CERCLA hazardous substance subject to the National Response Center (NRC) release reporting requirements.

Clean Air Act (CAA) Section 112(r) Air Pollutants

: No chemical in this product is listed as an air pollutant under the U.S. Clean Air Act, Section 112(r) (40 CFR 61).

California Prop 65 Chemicals

: This product does not contain any chemicals known to the state of California to cause cancer and birth defects or other reproductive harm.

Hazard Label Warning

: This product does not require hazard label warnings.

TSCA (Toxic Substances Control Act)

: All chemical substances in this product are listed on the U.S. TSCA Inventory List.

ACRONYMS:

- CAS # - Chemical Abstract Services Registry Number
- CFR - Code of Federal Regulations
- CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act
- EPCRA - Emergency Planning and Community Right-to-Know Act
- LEPC - Local Emergency Planning Committee
- SERC - State Emergency Response Commission

16. Other Information

- Revision date** :
- Supersedes** :
- First Issue** : 09/28/2017
- Section(s) changed since last revision** : First Issue SDS

IMPORTANT! Read this SDS before use or disposal of this product. Pass along the information to employees and any other persons who could be exposed to the product to be sure that they are aware of the information before use or other exposure. This SDS has been prepared in accordance with the Globally Harmonized System of Chemical and Labeling of Chemicals (GHS) Fifth Edition and the OSHA Hazard Communication Standard [29 CFR 1910.1200]. The SDS information is based on sources believed to be reliable. Available data, safety standards, and government regulations are subject to change and the conditions of handling and use, or misuse are beyond our control; **Hill Brothers Chemical Company** makes no warranty, either expressed or implied, with respect to the completeness or continuing accuracy

ATTACHMENT HAZ DR-43

DEF Tank Schematic

FITTING LIST		
ITEM	QTY	DESCRIPTION
A	1	2" LEAK DETECT FOR BOTH UL-142 & DEF TANK
B	1	10" SEC. E-VENT @ 332,000 CUBIC FT/HR
C	1	2" NORMAL (W/FLAME ARRESTOR)
D	1	10" PRI. E-VENT @ 211,100 CUBIC FT/HR
ALL		VENT(S) EXT. = 12' ABOVE TANK TOP
E	2	2" EXTRA FITTING PORT
F	1	4"x3" FILL W/LOCKING CAP
H	1	2" CONTINUOUS FUEL GAUGE 95% C-HIGH/90% HIGH/25% LOW/10% C-LOW/PUMP START STOP
J	1	2"x3/4" SUPPLY W/DROP TUBE & CHECK VALVE
K	1	2"x3/4" RETURN W/DROP TUBE
S	1	SENSOR PORT
FUEL CAPACITY		
4925	GAL. AT 100%	
4531	GAL. AT 92% FUEL FULL SHUT OFF	
4433	GAL. AT 90% HIGH ALARM	
4469	USABLE GAL. TO GENERATOR AT 90% HIGH ALARM (DROP TUBE LOSS)	
WEIGHT OF TANK		
35,200	LBS. DRY WEIGHT	

REV	DATE	BY	DESCRIPTION
A	03-03-21	SC	ISSUED FOR APPROVAL
B	04-22-21	DP	UPDATED SUBMITTALS TO INCLUDE TIER 4 SYSTEM
C	06-03-21	CC	UPDATED EPMS PER CUSTOMER REDLINES

ISSUED FOR APPROVAL

THE INFORMATION ON THIS DOCUMENT IS INTENDED TO CONVEY AND DOCUMENT THAT THE CONTRACT SPECIFICATION HAS BEEN ACCURATELY INTERPRETED AND MAY NOT BE ACCURATE FOR CONSTRUCTION PURPOSES.

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UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES

DO NOT SCALE

DRAWN BY:	DATE:
SC	02-19-21
CHECKED BY:	DATE:
SC	02-19-21
APPROVED BY:	DATE:
JT	02-19-21

PROJECT NAME: **SFO 069**

PROJECT LOCATION:
2315 MISSION COLLEGE BLVD
SANTA CLARA, CA. 95054

CLIENT NAME:
PETERSON POWER

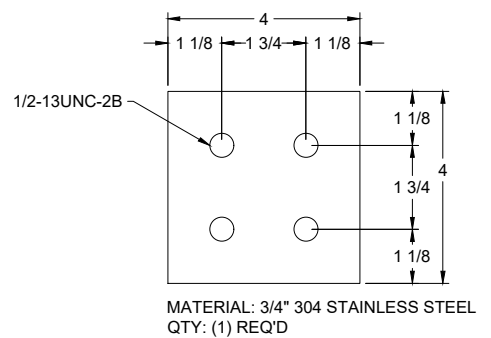
QUOTE NUMBER:
Q-2823-1

CUSTOMER PO NUMBER:
YM201027N002

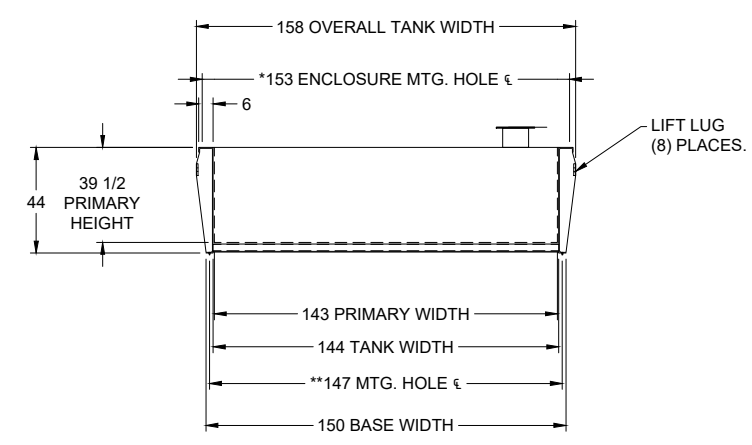
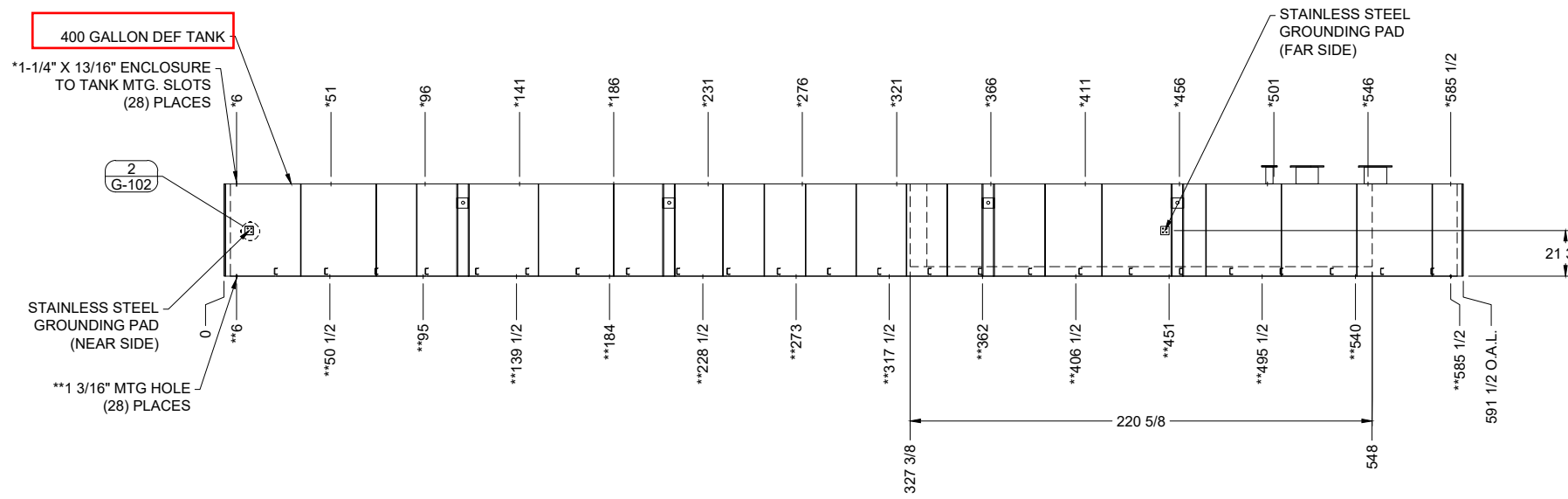
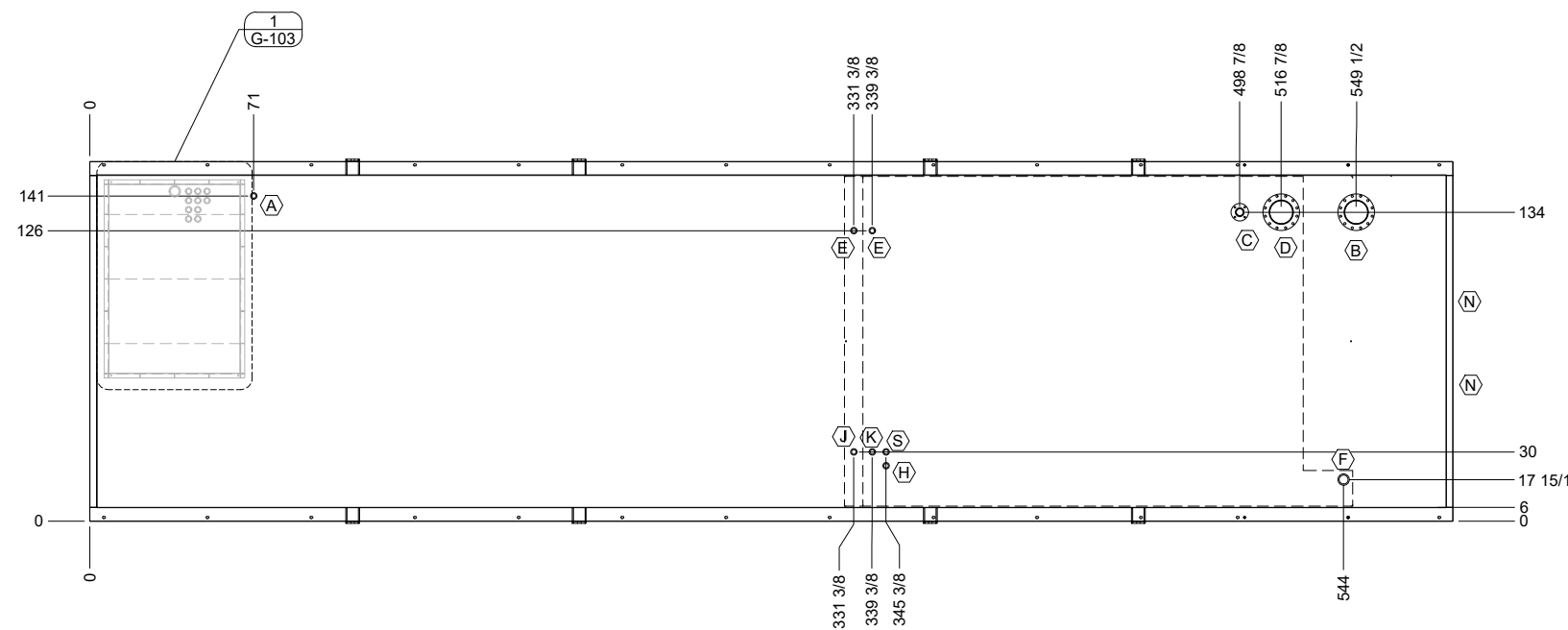
JOB NUMBER:
JP-1934-01/02

DRAWING DESCRIPTION:
4,925 GALLON FUEL TANK ASSEMBLY

DRAWING NO: **G-102** REV: **C**



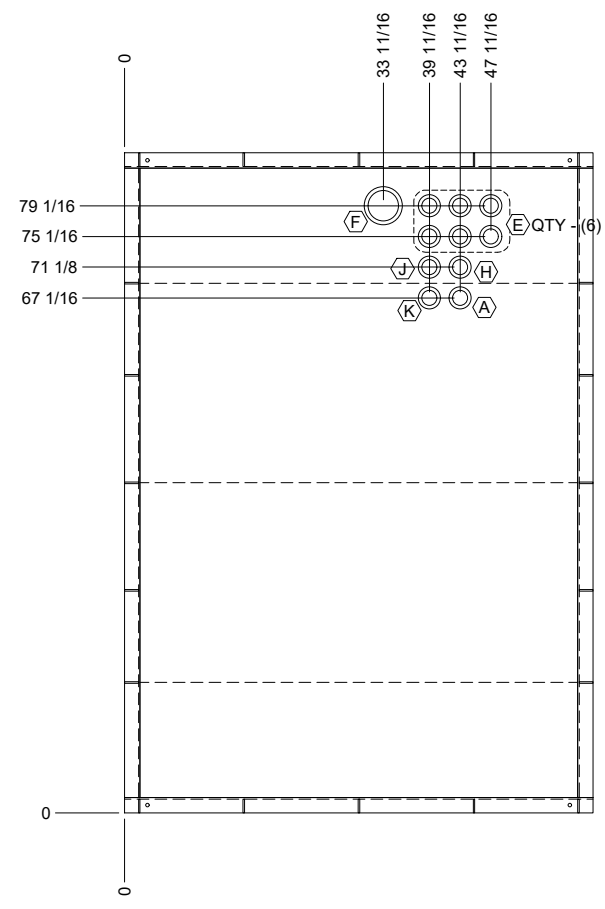
2 GROUNDING PAD
SCALE = 1:4



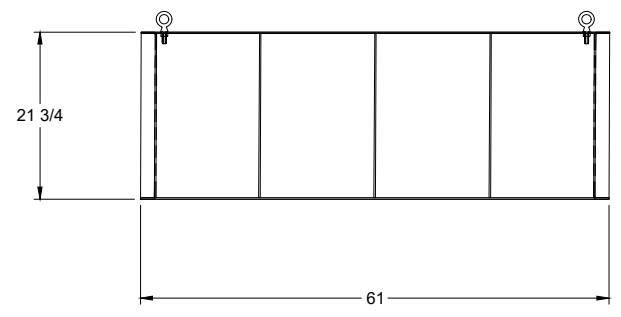
1 FUEL TANK GENERAL ASSEMBLY
SCALE = 1:80

FITTING LIST		
ITEM	QTY	DESCRIPTION
A	1	2" PRESSURE VACUUM VENT FOR DEF
E	6	2" EXTRA FITTING PORT
F	1	4"x2" FILL W/LOCKING CAP AND DROP TUBE AND MORRISON BROS. LIMITER 92%
H	1	2" CONTINUOUS SENSOR FLOAT FOR 90% HIGH & 30% LOW LEVEL MONITORING
J	1	2"x3/4" SUPPLY W/DROP TUBE & CHECK VALVE
K	1	2"x3/4" RETURN W/DROP TUBE
	-	
FUEL CAPACITY		
405		GAL. AT 100%
372		GAL. AT 92% DEF FULL SHUT OFF
364		GAL. AT 90% HIGH ALARM
368		USABLE GAL. TO GENERATOR AT 90% HIGH ALARM (DROP TUBE LOSS)
WEIGHT OF TANK		
~1,250		LBS. DRY WEIGHT

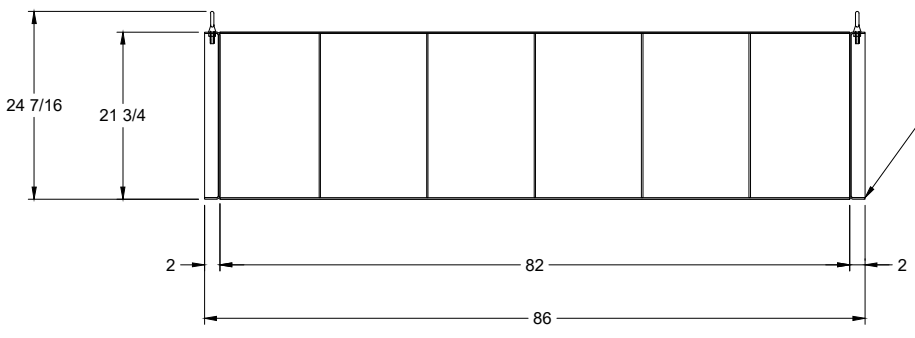
REV	DATE	BY	DESCRIPTION
A	03-03-21	SC	ISSUED FOR APPROVAL
B	04-22-21	DP	UPDATED SUBMITTALS TO INCLUDE TIER 4 SYSTEM
C	06-03-21	CC	UPDATED EPMS PER CUSTOMER REQLINES



TOP VIEW



SIDE VIEW



END VIEW

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PETERSON POWER

QUOTE NUMBER:
Q-2823-1

CUSTOMER PO NUMBER:
YM201027N002

JOB NUMBER:
JP-1934-01/02

DRAWING DESCRIPTION:
DEF TANK ASSEMBLY

DRAWING NO:
G-103

REV:
C