



PROCEDURE APR-404-00-P, REV. I

**SCIENCE GROUP INSTRUCTIONS FOR ORDERING GASES AND CRYOGENS USED IN
PALESTINE, TX AND FT. SUMNER, NM**

DOCUMENT OWNER: ADMINISTRATION

OFFICIAL RELEASE DATE: FEBRUARY 10, 2021

APPROVALS

TITLE: ORIGINATOR

DATE

TITLE: SUPERVISOR

DATE

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DATE

Title:	Science Group Instructions For Ordering Gases And Cryogens Used In Palestine, TX and Ft. Sumner, NM Procedure	Page:	2 of 7
Doc. No:	APR-404-00-P		
Revision No:	I	Official Release Date:	02/10/2021

TABLE OF CONTENTS

1	Purpose	3
2	Scope	3
3	Definitions/Acronyms	3
4	Resource Requirements	3
5	Equipment Requirements	3
6	Training Requirements	3
7	Safety Requirements.....	3
8	References	4
9	Quality Assurance.....	4
10	Implementation.....	4
10.1	General Information.....	4
10.2	Documentation Required	4
10.3	Delivery Lead Times.....	4
10.3.1	Gases And Cryogens.....	4
10.3.1.1	Palestine, TX Facility	4
10.3.2.1	Ft. Sumner, NM Facility	4
10.3.2	Liquid Helium.....	6
10.4	Nonstandard Gases and Cryogens.....	5
10.5	How To Place A Gas/Cryogen Order	5
10.5.1	Obtain A Gas/Cryogen Order Form.....	5
10.5.2	Complete The Order form.....	5
10.5.3	Submit The Order Form To CSBF.....	6
10.6	Receiving Gases and Cryogens.....	6
10.7	Return Empty Gas/Cryogen Cylinders	6
11	Metrics.....	7
12	Quality Records	7
	Revision Control.....	7

Title:	Science Group Instructions For Ordering Gases And Cryogenics Used In Palestine, TX and Ft. Sumner, NM Procedure	Page:	3 of 7
Doc. No:	APR-404-00-P		
Revision No:	I	Official Release Date:	02/10/2021

1 PURPOSE

The Purpose of this document is to provide instruction to science groups for placing gas and cryogen orders (*APR-404-00-F CSBF Science Group Gas and Cryogen Order Form*), receiving the orders and returning used cylinders at CSBF launch facilities in Palestine, TX and Ft. Sumner, NM.

2 SCOPE

All science groups planning to use gases and/or cryogenic materials must obtain and submit a completed Gas/Cryogen Order form as instructed in section 10.5, and then follow the Receiving and Returning instructions in sections 10.6 and 10.7, respectively.

3 DEFINITIONS/ACRONYMS

CSBF Columbia Scientific Balloon Facility, NASA
 QTY Quantity

4 RESOURCE REQUIREMENTS

N/A

5 EQUIPMENT REQUIREMENTS

1) Computer with either internet access or ability to print and fax

6 TRAINING REQUIREMENTS

Training will be in accordance with CSBF AS-2015-7.2 Certification and Training Process.

7 SAFETY REQUIREMENTS

This procedure/work instruction is considered Non-Hazardous; however, all personnel involved are required to observe general workshop safety practices. Some of these practices include:

- Safety glasses or face shields shall be used when an ocular hazard exists.
- Safety headwear shall be used when an overhead hazard exists or when personnel are working on multiple levels.
- Safety shoes must be used during lifting operations.
- Hearing protection must be used in the presence of excessive noise (i.e. vibration testing).
- Protective gloves must be used when handling tools or hardware at extreme temperatures or when handling hardware with sharp edges.
- Egress paths must remain clear. Test equipment shall not be positioned such that it impedes an emergency evacuation.

The flight hardware, GSE, and environmental test equipment used in this procedure are extremely sensitive to mishandling. Mishaps involving hardware and test equipment could

Title:	Science Group Instructions For Ordering Gases And Cryogenics Used In Palestine, TX and Ft. Sumner, NM Procedure	Page:	4 of 7
Doc. No:	APR-404-00-P		
Revision No:	I	Official Release Date:	02/10/2021

result in costly equipment repair or replacement. The utmost care should be used to minimize the risk of damaging the flight hardware, GSE, and environmental test equipment.

8 REFERENCES

XX-XXX-XX CSBF Ground Safety Plan
 APR-404-00-F CSBF Science Group Gas and Cryogen Order Form

9 QUALITY ASSURANCE

Quality Assurance requirements are embedded in Section 10 Implementation as required to support process.

10 IMPLEMENTATION

10.1 GENERAL INFORMATION

All CSBF balloon flight candidates submit a Balloon Flight Support Application that details the operational support requirements for their flight, including gases and cryogenics. Because the application is submitted in advance of the actual flight, it is used primarily by Operations for planning and scheduling, not purchasing supplies or equipment.

CSBF orders helium and other commonly used laboratory gases as required by each science group scheduled to launch from Palestine, Texas or Ft. Sumner, New Mexico.

10.2 DOCUMENTATION REQUIRED

All science groups planning to use gases and/or cryogenic materials are required to submit special ground and flight safety plans to address hazards associated with these items. Refer to the *CSBF Ground Safety Plan* for details.

10.3 DELIVERY LEAD TIMES

Ordering gases and cryogenics based on the schedules outlined in this section will help ensure timely delivery for integration and flight.

NOTE:

Please submit your order to CSBF at least 30 WORKING DAYS prior to your required delivery date (Excluding Weekends and U.S. Government Holidays).

10.3.1 GASES AND CRYOGENS

The following schedules apply when ordering gases and cryogenics.

10.3.1.1 PALESTINE, TX FACILITY

Cryogenics and gases are delivered on Wednesdays.

10.3.2.1 FT. SUMNER, NM FACILITY

Cryogenics and gases are delivered on Friday afternoon.

Title:	Science Group Instructions For Ordering Gases And Cryogenes Used In Palestine, TX and Ft. Sumner, NM Procedure	Page:	5 of 7
Doc. No:	APR-404-00-P		
Revision No:	I	Official Release Date:	02/10/2021

10.3.2 LIQUID HELIUM

The following schedule applies in both Palestine, TX and Ft. Sumner, NM for liquid helium orders:

- Orders must be placed at least **30 working days** in advance.
- Liquid helium deliveries are scheduled when CSBF places the order

10.4 NONSTANDARD GASES AND CRYOGENS

Gases and cryogenes not listed on the *Gas/Cryogen Order Form* may be ordered through the Flight Operations Manager or designee.

Place orders a minimum of **30 working days** prior to the required delivery date.

10.5 HOW TO PLACE A GAS/CRYOGEN ORDER

10.5.1 OBTAIN A GAS/CRYOGEN ORDER FORM

Order forms are available through any of the methods listed in Table 1.

Table 1. Obtaining a gas/cryogen order form

REQUEST TYPE	INSTRUCTIONS
Web Download	Log on to http://www.csbf.nasa.gov/bids.html and download the Gas/Cryogen Order Form to your PC.
E-mail	Send an e-mail requesting an order form to WFF-DL-CSBF-Cryogenes@mail.nasa.gov , Subject: Gas/Cryogen Order Form Request.
Fax	Fax your request for an order form to 903-723-8068, Attn: Cryogenes. Please call 903-724-8042 to verify the fax was received.

10.5.2 COMPLETE THE ORDER FORM

Press the **TAB** key to move to each of the fields in the order form document or click directly in a field to place the cursor in it.

1. When the order form is opened, the cursor should be automatically positioned in the first field, *Payload Name*. Type in the name and press **TAB** to move to the *Contact Name* field.
2. Continue in this manner and type in all requested information in the Customer Information section of the form.
3. Click in the *Qty for 1st Delivery* field to the left of the type of gas or cryogen you wish to order. Type the quantity you want in the initial delivery.
4. Press **TAB** to move to the *Date 1st Delivery Required* field. Type the date you want the initial gas/cryogen order delivered to the site.
5. Press **TAB** to move to the *Replenish Rate Qty* field. Type the number of containers wanted for subsequent deliveries.

Title:	Science Group Instructions For Ordering Gases And Cryogenes Used In Palestine, TX and Ft. Sumner, NM Procedure	Page:	6 of 7
Doc. No:	APR-404-00-P		
Revision No:	I	Official Release Date:	02/10/2021

6. Press **TAB** to move to the *Replenish Rate Frequency* field. Click the drop-down arrow (▾) and select how often subsequent deliveries need to occur. If **OTHER** is selected, enter the frequency in the *Notes* column.
7. Press **TAB** to move to the *Notes* field. Type any additional information you feel will be helpful to CSBF Cryogenes Purchasing in placing your order.
8. Repeat steps 3 through 7 until your order is complete.
9. Save the document and e-mail or fax to CSBF (see section 10. **Error! Reference source not found.** for instructions).

10.5.3 SUBMIT THE ORDER FORM TO CSBF

E-mail or fax the order form to CSBF Cryogenes Purchasing (Table 2).

Table 2. Submitting a gas/cryogen order form

REQUEST TYPE	INSTRUCTIONS
<i>E-mail</i>	Send as an e-mail attachment to WFF-DL-CSBF-Cryogenes@mail.nasa.gov , Subject: Gas/Cryogen Order Form Attached.
<i>Fax</i>	Fax your order form to 903-723-8068, Attn: Cryogenes. Please call 903-724-8042 to verify the fax was received.

10.6 RECEIVING GASES AND CRYOGENS

Please plan to have personnel on hand to receive the delivery. Check each container to verify that the quantity of gases and cryogenes received is the same as ordered.

If science group personnel will not be available to receive the delivery, the CSBF Campaign Manager and/or Crew Chief will be happy to work with you to arrange for receipt of the order.

NOTE:

It is the responsibility of each science group to check all containers for correct volume and weight upon receipt.

10.7 RETURN EMPTY GAS/CRYOGEN CYLINDERS

Notify the CSBF Campaign Manager and/or Crew Chief when cylinder(s) are empty or before you leave the site.

You may also e-mail WFF-DL-CSBF-Cryogenes@mail.nasa.gov, Subject: Gas/Cryogen Returns. Please include the following return information for each cylinder:

- Science group name
- Product/cylinder type
- Product/cylinder quantity
- Serial number

Title:	Science Group Instructions For Ordering Gases And Cryogenes Used In Palestine, TX and Ft. Sumner, NM Procedure	Page:	7 of 7
Doc. No:	APR-404-00-P		
Revision No:	I	Official Release Date:	02/10/2021

11 METRICS

Effectiveness of this procedure will be monitored for continuous improvement. Metrics will be used to identify, trend and track process escapes or non-conformances for improvement. Effectiveness of this procedure will be monitored for continuous improvement. Metrics will be used to identify, trend and track process escapes or non-conformances for improvement.

12 QUALITY RECORDS

Quality records are controlled in accordance with AS-2015-7.5-P, *Control of Configuration, Documents, and Records*. The specific file location for this completed document is shown below. Unless otherwise noted, the retention time will be 3 years after delivery of all items and/or completion of all services called for by the contract.

RECORD		
DOCUMENT NUMBER	DOCUMENT TITLE	FILE LOCATION
APR-404-00-F	CSBF Science Group Gas and Cryogen Order Form	Individual Purchase Order file retained by Purchasing Department

REVISION CONTROL

REVISION	EFFECTIVE DATE	DESCRIPTION OF CHANGE
A	04/18/2005	Initial release of qualification information
B	08/08/2006	Updated form
C	04/16/2007	Updated form
D	10/02/2009	Updated form
E	05/27/2010	Updated form
F	08/09/2015	Updated form
G	02/17/2015	Updated form
H	05/03/2017	Updated form
I	02/10/2021	Updated form to current formatting standards, changed delivery date for Palestine cryogenes, revised Cryogen group email address