



# Managing SF6 Gas Inventory and Emissions

Implementing Digital SF6 Tracking  
Solutions

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# Digital SF6 Tracking Solutions

## Advantages

- All data accessible through single database
- No end of year data crunching necessary
- Instantaneous access to SF6 inventories, leak rates, Nameplate capacity, Acquisition and Disbursement activity assuming proper data entry
- All SF6 transfers recorded
- Exportable / Printable data for



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# Digital SF6 Tracking Solutions

## Dis-Advantages

- Resistance to digital change within an organization
- No paper trail for all transactions
- Database is only as good as the data that is entered
- Requirement to log two transactions (Maximo, COINS,SAP, Eta And SF6 Tracking Solution)



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# Keys to Successful Implementation

- Plan your Work / Work your Plan
- Consistency through training
- Vendor support
- Efficient End of year data collection
- “If you can’t measure it, you can’t manage it”



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# Plan Your Work / Work Your Plan

Never put the cart in front of the horse!

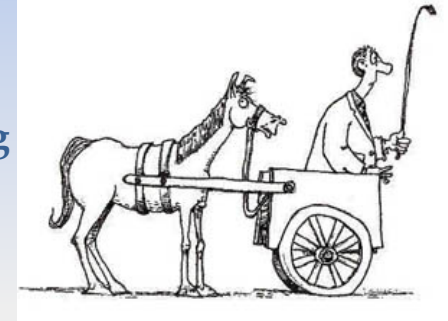
- Collect the proper data to start with!!!!
- Make changes in your procedures to account for software recording
- Create applicable forms needed for good data keeping

Single point of data control

- Use paper reports to record transfers in the field
- Assign a single individual to handle data entry/management

Data review opportunities

- Random field audits (Tanks, gas carts, equipment)
- Random report audits (Location inventory = digital inventory)



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# Consistency Through Training

Data collection is as important as aggregating data

- Proper weighing procedures (NO CAP)
- How to identify cylinder markings (TW, Cylinder ID's)
- Equipment Identification
- Completing and submitting forms

Field Recovery Procedures

- Cart inspections
- Annual filling and recovery techniques



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# Vendor Support

## Virgin Gas Supplier

- Require spreadsheets (excel) for all gas purchases including following data: Cylinder ID, Serial #, TW, GW, Location Shipped To, Date
- Require cylinder tagging for easy tracking
- Have vendor supply scale calibrations
- Spot check vendors tanks



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# Sample Data Sheets

## SF6 DELIVERY CERTIFICATE

Date of shipment:

Gross Weight:

Lab Technician:

Sales Order Number:

Purchase Order:

Serial #	Cylinder ID	Cylinder TW	Cylinder Gross Weight	Gas Weight	Delivery Location	DOT Expiration	SF6 Purity (%)	O2 Content (ppm)	N2 Content (ppm)	H2O (ppm)	DewPoint (degrees celcius)	SF6 Batch Number	Capital Acct	O&M Acct
	0001													
	0002													
	0003													
	0004													
	0005													



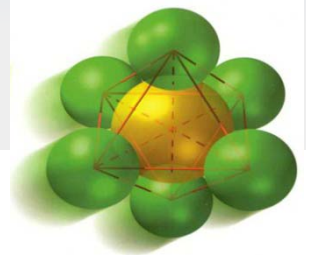
# Vendor Support

## SF6 Re-claimer or “empty” Cylinder Returns

- Require spreadsheets (excel) for all gas returns including following data:  
Cylinder ID, Serial #, TW, GW, Location shipped from
- Heels can account for 3-12 lbs in an “empty cylinder”
- Require third party site visits (re-claimer) to confirm recycling/weighing techniques

## Vendor Data

- Require vendors to report all SF6 activity quarterly via excel
- Implement a single format for required data for easy upload



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# Sample Data Sheets

## SF6 RETURN CERTIFICATE

Date of shipment:							
Gross Weight:							
Lab Technician:							
Return Order Number:							
Purchase Order:							

Serial #	Cylinder TW	Cylinder ID	Cylinder Gross Weight	Gas Weight	Gas Orgin	DOT Expiration	SF6 Purity (%)
254411	114.6	1158	185.2	70.6	Charlotte	4/12	94.2
331235	116.2	1172	166.1	49.9	Charlotte	6/13	88.75
1236310	115.4	2135	220.2	104.8	Charlotte	4/12	92.1
81235	116.3	1257	198.2	81.9	Hartwell	3/10	89.64

# End of Year Data Collection

## Spot audits

- Perform spot audits to confirm location inventory etc

## Automatic e-GGRT integration

- Require software to output e-GGRT required
- Store data digitally on database for 10 years
- Allow for output of excel/other formats for sharing of data



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**e-GGRT**

Electronic Greenhouse Gas  
Reporting Tool



# If you can't measure it, you can't manage it

Let software be your Keystone to efficient / accurate / compliant SF6 management.

If there is weakness in a single support block the whole arch will tumble.



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# Questions?



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Thanks For Your Attention!