



**California Air Resources Board  
Refrigerant Management Program (RMP)  
Refrigerant Registration and Reporting System (R3)  
XML Process Updates**

January 24, 2014

# Who uses XML



- Companies with many facilities
- Facilities with many systems
- Facilities with many service records

# Overview of XML Process



- **Powerful and fast**
- **Must be carefully implemented**
- **Information available on R3**
  - **Test Your XML**
  - **Example XML**
  - **Latest XSD**
  - **Mapped Excel spreadsheets (to be added)**

# Use of the XML



- Facility registration
- Refrigeration system registration
- ALD system registration
- Service record uploads

# What has been updated



- No change to process
- Existing Version 1 XML files continue to work
- Added Version 2

The screenshot shows the ARB RMP Home Page. At the top left is the CA.GOV logo. The main header includes the text "California Environmental Protection Agency" and "Air Resources Board". The page title is "ARB RMP Home Page". A navigation menu contains the following items: "R3 Home", "Reports & Forms", "Contact", "FAQ", "Survey", "Test Your XML (V.1)", "Test Your XML (V.2)", and "Help". The "Test Your XML (V.1)" and "Test Your XML (V.2)" links are circled in blue. Above the "Test Your XML (V.1)" link is the text "Version 1" in red, and above the "Test Your XML (V.2)" link is the text "Version 2" in red. Below the navigation menu is a "Welcome to Refrigerant Registration and Reporting System (R3)" section with a paragraph of text. To the right is a "LOGIN" form with fields for "USERNAME" and "PASSWORD" (noted as case-sensitive).

# What has been updated



- **Added fields**
  - **Facility profile**
    - **Operation date**
  - **Refrigeration system detail**
    - **'Has ALD'**



```
- <FacilityListing>  
  - <FacilityProfile>  
    <FacilityName>MY facility test19</FacilityName>  
    <OperationDate>1967-08-13</OperationDate>  
    - <LocationAddress>  
      <Line1>2000 dsfdsfsdf PO Box Number</Line1>  
      <Line2>Street No 200</Line2>  
      <City>Sacramento</City>  
      <State>CA</State>
```



- **<RefrigerantSystemDetail>**

**<SystemID>**Refrigeration System #1**</SystemID>**

**<InstallationDate>**1967-08-13**</InstallationDate>**

**<ModelYear>**1952**</ModelYear>**

**<ModelDescription>**ABC LLC**</ModelDescription>**

**<ManufacturerName>**Flakice**</ManufacturerName>**

**<EquipmentType>**Refrigeration**</EquipmentType>**

**<SerialNumber>**A-110011**</SerialNumber>**

**<Location>**Outer Shell**</Location>**

**<TemperatureClass>**Medium**</TemperatureClass>**

**<OperationalStatus>**Shutdown**</OperationalStatus>**

**<FullChargeAmount>**1000.0**</FullChargeAmount>**

**<RefrigerantType>**R-11**</RefrigerantType>**

**<ChargeAmountDeterminedBy>**Manual**</ChargeAmountDeterminedBy>**

**<HasALD>**Yes**</HasALD>**

**</RefrigerantSystemDetail>**

# What has been updated



- **Added fields (continued)**
  - **Refrigeration system service records**
    - Amount of new refrigerant added
    - Amount of refrigerant removed and not returned
    - (Removed net refrigerant amount field)
  - **ALD service records**
    - Added entire section



```
- <ServiceRecordList>
  - <ServiceRecordDetail>
    <ServiceDate>2010-08-13</ServiceDate>
    <ServiceRecord>Seasonal Adjustment</ServiceRecord>
    <LeakDetected>Yes</LeakDetected>
    <ServiceRefrigerant>Added</ServiceRefrigerant>
    <RefrigerantAmountAdded>20.0</RefrigerantAmountAdded>
    <RefrigerantAmountRemoved>10.0</RefrigerantAmountRemoved>
    <LeakDetectionMethod>Bubble Test</LeakDetectionMethod>
    <ChargePurpose>Leak Repair</ChargePurpose>
    <RetrofitTime>0</RetrofitTime>
    <DateLeakDetected>2010-08-10</DateLeakDetected>
    <DateLeakRepaired>2010-08-13</DateLeakRepaired>
    <InitialVerificationTestDate>2010-08-17</InitialVerificationTestDate>
    <FollowUpVerificationTestDate>2010-08-19</FollowUpVerificationTestDate>
    <CauseOfLeakDescription>Refrigerant added as Seasonal Adjustment</CauseOfLeakDescription>
    <TechnicianName>Mr Peter Bense</TechnicianName>
    <TechnicianCertificateNumber>AC324234</TechnicianCertificateNumber>
    <TechnicianCertificateType>Text</TechnicianCertificateType>
    <AdditionalComments>comments</AdditionalComments>
  </ServiceRecordDetail>
</ServiceRecordList>
```



```
</RefrigerantSystems>
</ALDDetail>
- <ALDServiceRecordList>
  - <ALDServiceRecordDetail>
    <ALDServiceDate>2010-08-19</ALDServiceDate>
    <ALDServiceType>Audit</ALDServiceType>
    <DetectionLimit>11</DetectionLimit>
    <AlarmSetPoint>11</AlarmSetPoint>
    <ServiceDescription>testppp</ServiceDescription>
  </ALDServiceRecordDetail>
  - <ALDServiceRecordDetail>
    <ALDServiceDate>2010-08-19</ALDServiceDate>
    <ALDServiceType>Audit</ALDServiceType>
    <DetectionLimit>13</DetectionLimit>
    <AlarmSetPoint>13</AlarmSetPoint>
    <ServiceDescription>testqqq</ServiceDescription>
  </ALDServiceRecordDetail>
</ALDServiceRecordList>
</ALD>
```

# Uploading the XML File



- **Validate File**
  - **R3 login page Red Bar link**
    - **'Test Your XML'**
- **Upload**
  - **After login – Registration or Annual Reporting Red Bar link**
    - **Batch Upload V1 or V2**
    - **Must be Company Admin type user**

# Uploading the XML File



- Browse to file on your computer
- Upload

New Batch Upload - Service Record

Upload Title:

Upload File:  No file selected.

# Creating an XML File



- **Third Party Refrigerant Management Software Vendor**
- **User designed database program**
- **Edit and Update the example XML**
- **Excel to XML**

# Format of the XML File



- Facility 1
  - Facility name, address, contact, etc.
  - Refrigeration system
    - Refrigeration system service records
  - Refrigeration system
    - Refrigeration system service records
  - ALD system
    - ALD system service records
  - ALD system
    - ALD system service records
- Facility 2

```

- <ARBR3 SchemaVersion="1.0" xsi:noNamespaceSchemaLocation="../webroot/f
- <ManageCompany>
- <FacilityListing>
- <FacilityProfile>
  <FacilityName>MY facility test19</FacilityName>
  <OperationDate>1967-08-13</OperationDate>
+ <LocationAddress></LocationAddress>
+ <MailingAddress></MailingAddress>
+ <PrimaryContact></PrimaryContact>
  <NAICSCode>111111</NAICSCode>
  <SICCode>222222</SICCode>
- <RefrigerantSystemList>
- <RefrigerantSystem>
  + <RefrigerantSystemDetail></RefrigerantSystemDetail>
  - <ServiceRecordList>
    + <ServiceRecordDetail></ServiceRecordDetail>
    </ServiceRecordList>
  </RefrigerantSystem>
- <RefrigerantSystem>
  + <RefrigerantSystemDetail></RefrigerantSystemDetail>
  - <ServiceRecordList>
    + <ServiceRecordDetail></ServiceRecordDetail>
    </ServiceRecordList>
  </RefrigerantSystem>
</RefrigerantSystemList>
- <ALDList>
- <ALD>
  + <ALDDetail></ALDDetail>
  - <ALDServiceRecordList>
    + <ALDServiceRecordDetail></ALDServiceRecordDetail>
    + <ALDServiceRecordDetail></ALDServiceRecordDetail>
    </ALDServiceRecordList>
  </ALD>
</ALDList>
</FacilityProfile>
</FacilityListing>
</ManageCompany>
</ARBR3>

```



# Edit Example XML File



- Download from R3
- Replace example facility information
- Replace example refrigeration system information
- Additional refrigeration systems
  - Copy first system and paste below first
  - Replace system information with next system information

# Edit Example XML File



- **Replace example ALD system information**
- **Additional ALD system**
  - **Copy first ALD system and paste below first**
  - **Replace ALD system information with next system information**
- **Copy first facility and repeat for next facility**
- **Save 'Registration XML' file**

# Excel to XML File



- Download mapped Excel files
- Facility profile
  - 'R3 Facility xml mapped.xlsx'
  - Enter name, address, contact, etc. for each facility within the company
  - Export as xml

# Excel to XML File



- Refrigeration system information
  - 'R3 System xml mapped.xlsx'
  - Enter information for all systems at each facility
    - Separate file for each facility
    - All systems at all facilities in one file
  - Export as xml

# Excel to XML File



- **ALD system information**
  - 'R3 ALD xml mapped.xlsx'
  - Enter information for all ALD systems at each facility
    - Separate file for each facility
    - All ALD systems at all facilities in one file
  - Export as xml

# Excel to XML File



- **Create 'Registration XML' file**
  - **Open facility xml file**
  - **Open system and ALD xml file(s)**
  - **Copy and insert refrigeration system information into facility xml file**
  - **Copy and insert ALD information into facility xml file**
- **Save as 'Registration XML' file**

# Excel to XML File



- Refrigeration system service records
  - 'R3 Service xml mapped.xlsx'
  - Enter refrigeration system service records
    - Separate file for each refrigeration system
    - All service records for all systems in one file
- Export as xml

# Excel to XML File



- **ALD system service records**
  - 'R3 ALD xml mapped.xlsx'
  - **Enter ALD system service records**
    - **Separate file for each ALD system**
    - **All service records for all ALD systems in one file**
- **Export as xml**

# Excel to XML File



- Create 'upload' xml file
  - Open new copy of 'Registration XML' file
  - Open refrigeration system service record and ALD service record xml files
  - Copy and insert refrigeration system service records into xml file
  - Copy and insert ALD service records into xml file
- Save 'upload' xml file, upload to R3

# Uploading the XML File



- **Validate File**
  - **R3 login page Red Bar link**
    - **'Test Your XML'**
- **Upload**
  - **After login – Registration or Annual Reporting Red Bar link**
    - **Batch Upload V1 or V2**
    - **Must be Company Admin type user**

# Uploading the XML File



- Browse to file on your computer
- Upload

New Batch Upload - Service Record

Upload Title:

Upload File:  No file selected.



**QUESTIONS?**

# Resources



- Website

- R3 tool website:

[www.arb.ca.gov/rmp-r3](http://www.arb.ca.gov/rmp-r3)

- RMP Program website:

[www.arb.ca.gov/stoprefrigerantleaks](http://www.arb.ca.gov/stoprefrigerantleaks)

[www.arb.ca.gov/cc/reftrack/reftrack.htm](http://www.arb.ca.gov/cc/reftrack/reftrack.htm)

- Hotline

(916) 324-2517

- Email

[reftrackinfo@arb.ca.gov](mailto:reftrackinfo@arb.ca.gov)

- Listserve

Sign up on website

# ARB Contacts



- Ken Bowers  
916.323.1510  
[kbowers@arb.ca.gov](mailto:kbowers@arb.ca.gov)
- Pamela Gupta  
916.327.0604  
[pgupta@arb.ca.gov](mailto:pgupta@arb.ca.gov)