Facility Registry Service APIs
and eEnterprise

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Why APIs? Why REST?

• Services can be built once, and then power many different types of applications and serve many different needs
• You can mix and match different APIs to serve emergent needs
• REST is a great option for building interactive, dynamic applications

*REST = “REpresentational State Transfer”
Why does EPA care?

• We are putting APIs into action, using them to power our own applications

• EPA Enforcement and Compliance History Online (ECHO)

• [http://epa.gov/echo](http://epa.gov/echo)
APIs can be useful in reporting and burden reduction via lookups, prepopulating forms, and validation.

https://github.com/USEPA/FRS-getfacilities-samples/blob/master/FormLookup.html
Why might others care?

- Because you can use some of these services, too!
What we hear...

“Getting information back by state ID - would like to be able to return the following information using the state ID: 1) the active FRS ID, 2) the FRS facility name, 3) the facility location (decimal degree coordinates and physical address), and 4) associated program IDs.”

“A service that returns sub facility points (by state ID) - This could be useful or QC on locations. It would be beneficial if we get information on: 1) sub-facility points with more than one coordinate pair, 2) sub-facility points where the state-supplied coordinates differ from the FRS coordinates by 50 meters or more, and 3) source of the coordinates stored in FRS (state, EPA, etc).”

“The ability to search for data adjacent to the state, returning points from that nearby state - Our Site Investigation maps include potential sources and receptors within 4 miles (ground water/soil contamination) or 15 miles (surface water contamination) of the site center. If this service could be tailored to return results based on a point location or user-defined polygon, this could be useful for us.”

“A service that compares the FRS point to the state point - It would be beneficial if we get information on: 1) facilities with more than one coordinate pair, 2) facilities where the state-supplied coordinates differ from the FRS coordinates by 50 meters or more, and 3) source of the coordinates stored in FRS (state, EPA, etc).”
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REST Call:
http://ofmpub.epa.gov/enviro/frs_rest_services.get_facilities?pgm_sys_acrnm=W1-ESR&pgm_sys_id=162059&program_output=yes&output=JSON

REST Response (JSON)

```
{
  "Results":{
    "FRSFacility":{
      "RegistryId":"110000416158",
      "FacilityName":"BRENNTAG GREAT LAKES LLC",
      "LocationAddress":"W194 N11756 MCCORMICK DRIVE",
      "SupplementalLocation":null,
      "CityName":"GERMANTOWN",
      "CountyName":"WASHINGTON",
      "StateAbbr":"WI",
      "ZipCode":"530222491",
      "FIPSCode":"55131",
      "Latitude83":"43.23138",
      "Longitude83":-88.14909
    },
    "ProgramFacilities":[
      {
        "ProgramSystemAcronym":"ICIS",
        "ProgramSystemId":"8026569",
        "Program FacilityName": "HCl WORUMCHEMICAL COMPANY"
      }
    ]
  }
}
```

Wisconsin ID

RCRA Handler ID

Toxic Release Inventory (TRIFID)

Linked program info follows

FRS Registry ID

FRS Name, Location, Lat/Long
External linkages

FRS Facility Detail Report
http://iaspub.epa.gov/enviro/fii_query_detail.disp_program_facility?p_registry_id=110000416158

ECHO Enforcement and Compliance Report
http://echo.epa.gov/detailed_facility_report?fid=110000416158
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FRS GIS Report
http://iaspub.epa.gov/enviro/gis_viewer.map_page?p_registry_id=110000416158
“A service that returns sub facility points (by state ID) - This could be useful or QC on locations. It would be beneficial if we get information on: 1) sub-facility points with more than one coordinate pair, 2) sub-facility points where the state-supplied coordinates differ from the FRS coordinates by 50 meters or more, and 3) source of the coordinates stored in FRS (state, EPA, etc.).

FRS ArcGIS Server Subfacility Service
http://geodata.epa.gov/arcgis/rest/services/OEI/FRS_Subfacilities/MapServer
“The ability to designate a buffer zone adjacent to the state, returning points from that nearby state - Our Site Investigation maps include potential sources and receptors within 4 miles (ground water/soil contamination) or 15 miles (surface water contamination) of the site center. If this service could be tailored to return results based on a point location or user-defined polygon, this could be useful for us.”

Example: CERCLIS facilities within 4 mile radius of a location on the Missouri River in Kansas City, MO - REST Call:

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https://github.com/USEPA/FRS-getfacilities-samples/blob/master/MapDemo.html
APIs – Easy to use

- The code samples can help jumpstart development, contain a readme doc, references and tips
- Easy-to-use tools, which should be accessible to most developers via jQuery or other JavaScript frameworks
- Took me (a non-developer) just a few hours and a few dozen lines of code
- [https://github.com/USEPA/FRS-getfacilities-samples](https://github.com/USEPA/FRS-getfacilities-samples)
Thank You / Questions?

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