Overview

The NNSA Japan Response data repository portal is sponsored by the United States Department of Energy. The function of the portal is to provide a location where researchers and other government agencies may obtain scientific data collected during the response to the March 11th, 2011 Tohoko earthquake.

Please note that all data available on the portal is provided as a courtesy by the Department of Energy to the academic community. All data should be officially considered draft and used for research purposes only. No data available through the portal should be used for health and safety, environmental remediation, or other official purposes.

Overview of Available Scientific Data

Available data includes field measurements, field samples, and analysis results. Data was collected by a variety of parties including the US Department of Energy, the US Department of Defense, and private and governmental sources within Japan. Data was collected using both fixed detectors as well as by field teams carrying portable radiological detection and analysis equipment.

Data is available from as early as March 11th, 2011. Initially the portal will include data collected through May 24th, 2011. Additional data will be released through the portal as it becomes available.

Further discussion of the specific types of data collected will be described in more detail later in this document.

Registration, System Access, and Support

Researchers who wish to download data from the portal will need to register. Registration requires a valid email address as well as the researcher name, phone number, and the name of the organization, agency, or university that they represent. All account registration information will remain confidential[1].

After registering, an authorized administrator will review and approve the access request. In the event that a user forgets their password, they may request to have their password reset directly through the portal.

For technical or administrative support, please contact support@Chainbridgetech.com.

Data Formats and Search Utilities

Researchers may either download pre-configured large data sets (e.g. all field measurements) or generate their own data sets using the provided search utilities. The search utilities allow researchers to download data based upon collection date and distance from the reactor.

Data may be downloaded in a variety of formats including Microsoft Excel 2007 (i.e. *.xslx format), Microsoft Excel XML format, a Comma Separated Values (CSV) text file, or a KML (i.e. Keyhole Markup Language) GIS file that can be viewed using Google Earth or a similar desktop mapping applications.

[1] Security Note: All passwords are stored as an encrypted hash in a protected database

Field Measurements Data Dictionary

Field Measurements describe α and β activity and γ exposure rate. They have been collected by a variety of agencies from both fixed detector locations as well as by mobile field teams.

Field Measurements – Available Data Fields		
Field Name	**Type**	**Comments**
Field Measurement Id	Integer	Unique identifier corresponding to the original data record in the US Department of Energy's RAMS system
Measurement Date	DateTime	The date and time the measurement was collected recorded in Pacific Daylight Time (PDT)
Latitude	Decimal(9,6)	*Self-explanatory*
Longitude	Decimal(9,6)	*Self-explanatory*
Fixed	True/False	Indicates whether or not the measurement was collected from stationary detection equipment (e.g. GOJ SPEEDI detector)
Distance	Decimal(8,3)	The distance in miles that the measurement was collected, as measured from the event center latitude/longitude of 37.421389/141.032500
Bearing	Integer	The angle from the event center to the measurement's collection measurement as measured in clockwise degrees from north
Direction	Character	A character representation of bearing; N, NNE, NE, ENE, E, ESE, SE, etc.
Measurement Type	Character	Alpha, Beta, or Gamma
Derived	True/False	Indicates whether or not the reported value was converted from an underlying raw value by the source RAMS system. Applicable values will be converted as: ▪ α and β: $\mu Ci/m^2$ ▪ γ: mR/hr
Value	Float	*Self-explanatory*
Measurement Unit	Character	*Self-explanatory*
Source	Character	The agency or organization who collected the measurement; e.g. DOE or GOJ
Source Comment	Character	Description of how the source was determined if indirectly derived
Description	Character	Any collection, assessment, or monitoring comments recorded by field or analysis staff members
Meter	Character	Description/model of the meter used to collect the measurement: • Health Physics Kit: ADM-300 multi-function survey instrument • AN/PDR-77: multi-function survey instrument • Analyst: Bicron portable count rate meter • L2929: Ludlum 2929 alpha/beta scaler • DT-685/PDQ: external beta attachment for AN/PDQ-1 • E600: Eberline E-600 multi-purpose survey meter • RSS-112: Reuter-Stokes Pressurized Ionization Chamber • uREM Meter: Bicron MicroRem
Probe	Character	Description/model of the probe used to collect the measurement: • ADM-300: internal GM detector for ADM-300 kit • AN/PDR-77: internal GM detector for AN/PDR-77 • BP-100: external probe for beta contamination measurements with the ADM-300 kit • AP-100: external probe for alpha contamination measurements with the ADM-300 kit • 43-10-1: sample counting detector for the Ludlum 2929 • FIDLER: thin-window sodium iodide scintillator for use with a variety of meters • SSPA-3: external gamma probe (scintillator) for E-600 • RSS-112: Reuter-Stokes Pressurized Ionization Chamber • uREM: internal tissue equivalent scintillator • DT-685/PDQ: external beta contamination probe

Field Samples Data Dictionary

Field Samples represent either physical media or InSitu samples. Physical media collected during the response includes Soil, Air Filters, Water, and Swipes. InSitu samples are taken by an Instrument such as a High Purity Germanium (HPGe) detector which reports a radioisotope activity spectrum.

Field Samples – Available Data Fields

Field Name	Type	Comments
Field Sample Id	Integer	Unique identifier corresponding to the original data record in the US Department of Energy's RAMS system
Sample Number	Character	Sample control number. Also commonly referred to as the sample barcode
Sample Type	Character	Soil, Water, Air Filter, Swipe, or Instrument
Collection Date	DateTime	The date and time the sample was collected recorded in Pacific Daylight Time (PDT)
Latitude	Decimal(9,6)	*Self-explanatory*
Longitude	Decimal(9,6)	*Self-explanatory*
Fixed	True/False	Indicates whether or not the sample was collected from stationary detection equipment (e.g. GOJ SPEEDI detector)
Distance	Decimal(8,3)	The distance in miles that the measurement was collected, as measured from the event center latitude/longitude of 37.421389/141.032500
Bearing	Integer	The angle from the event center to the measurement's collection measurement as measured in clockwise degrees from north
Direction	Character	A character representation of bearing; N, NNE, NE, ENE, E, ESE, SE, etc.
Source	Character	The agency or organization who collected the measurement; e.g. DOE or GOJ
Description	Character	Any collection, assessment, or monitoring comments recorded by field or analysis staff members
Results	Integer	The number of analysis results that are available for this sample

Field Sample Analysis Results Data Dictionary

Field Samples represent either physical media or InSitu samples. Physical media collected during the response includes Soil, Air Filters, Water, and Swipes. InSitu samples are taken by an Instrument such as a High Purity Germanium (HPGe) detector which reports a radioisotope activity spectrum.

Laboratory or InSitu radiochemical analysis of field samples typically reports a list of nuclides measured in either total activity, activity per unit area, or activity per unit volume depending upon the type of sample. In addition, total alpha and total beta activity is often measured for a sample.

Field Sample Analysis Results – Available Data Fields

Field Name	Type	Comments
Field Sample Result Id	Integer	Unique identifier corresponding to the original data record in the US Department of Energy's RAMS system
Field Sample Id	Integer	Unique identifier corresponding to the original data record in the US Department of Energy's RAMS system for the field sample associated with this analysis result
Sample Number	Character	Sample control number. Also commonly referred to as the sample barcode
Sample Type	Character	Soil, Water, Air Filter, Swipe, or Instrument
Collection Date	DateTime	The date and time the sample was collected recorded in Pacific Daylight Time (PDT)
Latitude	Decimal(9,6)	*Self-explanatory*
Longitude	Decimal(9,6)	*Self-explanatory*
Fixed	True/False	Indicates whether or not the sample was collected from stationary detection equipment (e.g. GOJ SPEEDI detector)
Distance	Decimal(8,3)	The distance in miles that the measurement was collected, as measured from the event center latitude/longitude of 37.421389/141.032500
Bearing	Integer	The angle from the event center to the measurement's collection measurement as measured in clockwise degrees from north
Direction	Character	A character representation of bearing; N, NNE, NE, ENE, E, ESE, SE, etc.
Source	Character	The agency or organization who collected the measurement; e.g. DOE or GOJ
Description	Character	Any collection, assessment, or monitoring comments recorded by field or analysis staff members
Nuclide	Integer	The analysis performed; e.g. Ba-140, Sr-Total, Cs-144, Xe-133, Te-132, Total Alpha, Total Beta etc.
Unit Name	Character	Analysis unit; e.g. uCi/ml, uCi/Sample etc.
Result	Float	*Self-explanatory*