

HGA Environmental Data Model

Legend:

- Description
- Geologic Description
- Well Construction
- Soil Testing
- Soil Sampling
- Monitoring Event
- Mining / Exploration
- Geophysics
- Well History

vane_shear_test		spt	
PK,FK1 PK	Station depth	PK,FK1 PK PK	Station from_ to_
vane_size initial_torque initial_shear_strength remolded_torque remolded_shear_strength		spt_1st_counter spt_2nd_counter spt_3rd_counter spt_4th_counter n_value recovery	

aquifer_test		filters	
PK,FK1 PK	Station test_id	PK,FK1 PK	Station depth
test_type date_ tester reason analyzed_by analysis_method comment radius		treatment_start treatment_end type_of_treatment pumping_rate_improvement	

Station	
PK	ID
Type Name X Y Zone TAG Elevation TOC Depth Export str_type geo_point	

neutron_porosity		short_normal		lat_shallow_res		x_caliper	
PK,FK1 PK	Station depth	PK,FK1 PK	Station depth	PK,FK1 PK	Station depth	PK,FK1 PK	Station depth
value		value		value		value	

fluid_resistivity	
PK,FK1 PK	Station depth
value	

alteration		mineralization	
PK,FK1 PK PK	Station from_ to_	PK,FK1 PK PK	Station from_ to_
intensity occurrence type_ comment		percentage occurrence type_ comment	

pump		pumping_rate		toc	
PK,FK1 PK PK	Station from_ to_	PK,FK1 PK PK	Station start_date end_date	PK,FK1 PK PK	Station period_start period_end
operation_start operation_end pump_type pump_model powered_by amps		id rate comment		casing_height elevation comment	

rock_coring		soil_vapor		soil_sample	
PK,FK1 PK PK	Station from_ to_	PK,FK1 PK PK	Station from_ to_	PK,FK1 PK	Station sample_id
core_recovery core_run rqd water_return		result_value analysis_method		sample_name start_depth end_depth sample_date sample_time chain_cust collection_quarter comment composite composite_desc laboratory delivery_method parent date_sent date_received samp_matrix samp_reason samp_technique sample_class sample_type sampler_name source	

features		lithology		hydrogeology		modeling	
PK,FK1 PK	Station depth	PK,FK1 PK PK	Station from_ to_	PK,FK1 PK PK	Station from_ to_	PK,FK1 PK PK	Station from_ to_
feature comment description_		soil_type form_desc consistency structure matgsc colour odor formation_name formation_unit moisture comment		description_ formation_name transmissivity specific_storage kx ky kz porosity efficiency saturated_thickness storage_coefficient		layer_name transmissivity specific_storage kx ky kz porosity	

diver_data		parameter_result	
PK,FK1 PK	Station date	PK,FK1,FK2 PK,FK1 PK	Station sample_id chemical_name
screen_id ph conductivity temperature do_ comments water_level		result_value result_unit reporting_detection_limit sampling_precision fraction_code analysis_method qualifier outlier comment analysis_date dilution_factor	

parameter_sample	
PK,FK1 PK	Station sample_id
lab_id quality_code sample_date sample_time chain_cust collection_quarter comment composite composite_desc laboratory delivery_method parent date_sent date_received samp_matrix samp_reason samp_technique sample_class sample_type sampler_name static_wl purge_method purge_volume purge_wl watertype batch_id	

odometer_consolidation		atterberg		moisture_content		grain_size_samples	
PK,FK1 PK PK	Station from_ to_	PK,FK1 PK PK	Station from_ to_	PK,FK1 PK PK	Station from_ to_	PK,FK1 PK PK	Station from_ to_
compression_index recompression_index		liquid_limit plastic_limit organic plasticity_index		value		description_ total_weight aquifer_temperature roughness kinematic_viscosity characteristic_grainsize uniformity_coefficient	

abandonment		drilling_protocol		annular_fill		casing		monitoring		screen	
PK,FK1 PK	Station date	PK,FK1 PK PK	Station from_ to_	PK,FK1 PK PK	Station from_ to_	PK,FK1 PK PK	Station casing_id from_ to_	PK,FK1 PK PK	Station from_ to_	PK,FK1 PK	Station screen_id
reason abandonment_material		diam_ drilling_method inclination azimuth		filling_type filling_volume descr		parent_id diam_ material slot_number construction_type change_explanation		interval_type interval_name geologic_layer comment		from_ to_ diam_ screen_type slot_number	

divers		field_measurements		meteorology	
PK,FK1 PK	Station serial_number	PK,FK1 PK	Station fm_date	PK,FK1 PK	Station date
screen_id diver_name diver_type date_installed date_removed comment		total_organic_carbon dissolved_oxygen ph eh conductivity temperature colour total_dissolved_solids measurement_method fm_comment		air_temperature air_humidity air_pressure wind_direction wind_speed solar_radiation total_precipitation comment	

Note:
ALL tables are related to the Station table, but to simplify this diagram only additional relationships are shown with arrows.