Project Information and Estimated Cost

Sandia National Laboratories

Fiscal Year of Estimate	FY15 (OCT 2014- OCT 2015)	Estimate Date:	3/13/2015		
Project Name:	Power Restoration Design -Building 1010 & 1010A			Revision # :	1
Requestor:	Reydelle Shelland	(505) 844-3860		Actual Schedule?	Anticipated Project Start:
Project Classification:	Utility.Electrical			No	Anticipated Project End:
				Normal Hours	Calculated Duration:

Client:	Sandia National Laboratories for DOE/NNSA		
Building:	K1010	Asset Code	K0101010
Area:	KTF		
Location:	Hawaii		

Estimate Number:	15-0076	Draft-Not Approved				
Estimate Standard Type:	ROM, Scoped, SNL	Design level:	2% - 15%	Expected Accuracy:	-30%/+ 50%	Meets FIN100.2.PLAN.2

Estimators Name:	Thomas Garcia	Phone Number:	(505) 414-7527
Estimators Company:	Currie & Brown	Contact Estimator if you have any questions or require a detailed estimate review.	

Executive Summary of Project

Power distribution upgrades that include: A new PMH-5, 12KV/208, DELTA/WYE transformer. 600A Main Switchboard (MSB) with 600A LSI Main CB and push button capability. New feeders from transformer to MSB. New panels with NEMA 1 enclosures, door-in-door, with 4" gutter space on each side. New NEMA 4X CT Cabinet and meter socket. New 300A & 150A LSI circuit breakers. Trenching for grounding and an allowance of $12,000 for grounding system provided by SNL Electrical Operations Engineer.

Scoping Documents Provided for estimate

Design Documents (Sketches and panel schedules)
Email correspondance from SNL Electrical Operations Engineer.

Project Pricing and Productivity

Pricing is as of the date of estimate and contains no Escalation projections unless specifically stated.
Material and equipment pricing is derived from RS Means, Q1 2015, set for Honolulu, Hawaii, unless otherwise noted.

Assumptions, Clarifications, Qualifications*, Allowances and Exclusions

No Escort cost, Hazard Remediation, Disposal fees, Permits or sales tax is included.
No special conditions or work schedules have been evaluated in creating this estimate except as specifically noted.
This is a "First Cost" estimate for construction purposes. If LifeCycle cost are required, the project will need to be refered to an AE for proper evaluation of LC costs.
Allowance of $12,000 for grounding system was given by SNL Electrical Operations Engineer to include in Estimate. This Allowance includes 3-ground plates (each) at Building 1010 & 1010A, Total of 240' of 2/0 copper ground and 9-packages each of 50lb bags of bentonite.
Estimate includes Backhoe trenching, backfill and compaction.
Square D switchgear equipment quoted by Summit Electric (Material Quote only, labor is shown in CSI divisions).
Transformer, Switch, CT Cabinet and Meter are quoted at NEMA 4X.
Estimate includes 2-4" Rigid Conduits with PVC coating (non-concrete encased) from PMH-5 Transformer to MSB.
Estimate only includes conduits for the feeder between the transformer and MSB. All other conduits are stated as existing on the design documents.
Estimate includes demo/replace of conductors shown on the design documents.
Assumed 8 hours for Utility spots.
Estimate includes all construction costs including costs which may be MICO bourne costs. The Estimate Breakout page includes these costs and additional breakouts per Sandia's request.

Labor

Local Prevailing Wage Labor Rates used.
Updated electrician rate per wage Determination # HI150001 dated 3/6/2015

Risk

No project risk factors have been identified or included at this time.

Revision Notes:

Revision 1	Breakout of the following • 225kVA Transformer and Meter Socket & installation/labor for such • (THIS IS ADDED SCOPE) Trenching 560', two Man Holes/Vaults per Maui Electric spec • PMH-5 Switch, CT Cabinet, transformer pad, install/labor • 600A Main Distribution Panel with LSI main breaker, a 300A LSI breaker feeding Panel PA, a 150A LSI breaker feeding Panel 1D, conductors to Panel PA and Panel 1D, 30' of trenching/conductors/conduit between transformer & Main Distribution Panel, and installation/labor for such. • Panel PA, Panel 1C, Panel Room 104, Panel 1B, Panel 1A, Panel LA, all appropriate breakers for the panels, add grounding to bring up to code, labor/installation • 200' of trenching and duct bank & labor/installation • Grounding System ($12000 for materials), trenching for such (120'), and labor/installation • Added option of 3- #2, CU shielded, EPR-type MV-105, 220 mil, 133% insulation, and 1 #2 THWN, 600V ground. For 200' ductbank. (SEE BREAKOUT SUMMARY TAB for more info)

CSI Div. #	Description	Labor	Materials	Equipment	SFE	[redacted]	Totals
01 00 00	General Conditions	$1,775	$0	$522	$0		$52,563
03 00 00	Concrete	$2,475	$7,259	$25	$0		$12,124
26 00 00	Electrical	$72,552	$25,060	$250	$207,560		$350,840
31 00 00	Earthwork	$35,863	$0	$760	$0		$53,620
33 00 00	Utilities	$33,048	$19,597	$959	$0		$78,482
	DIRECT COST BEFORE BOND	$145,713	$51,917	$2,516	$207,560		$547,629
Bond Rate	2.00%						$10,953
				(Total Sub-Contractor Cost)		DIRECT COST TOTAL (ECC)	$558,582
						Three Point estimate evaluation per *SNL Corporate Procedure: FIN100.2.PLAN.2*	$577,201.06 (ECC)

[redacted]

Estimate Note: "Please note that the estimates provided herein are dependent upon the basis of the quantities, execution approach, pricing techniques and the underlying assumptions, inclusions and exclusions. Actual project costs will differ and can be significantly affected by changes in the scope, sequence and external environment, the manner in which the project is implemented and other factors which impact the basis upon which the initial estimate was prepared. Estimate accuracy ranges are projections of the most likely potential range of variance and are in accordance with typical industry accepted practice. The accuracy range is based on the level of scope definition, level of project execution development and the cost estimating methods and practices utilized in preparing the estimate. The range is not a guarantee of actual project costs."

SNL Corporate Procedure: FIN100.2.PLAN.2 - Rough Order of Magnitude Disclaimer

"Contained herein is a Rough Order of Magnitude (ROM) cost estimate that has been provided to enable initial planning for this proposed project. This ROM cost estimate is submitted to facilitate informal discussions in relation to this project and is NOT intended to commit Sandia National Laboratories (Sandia) or its resources. Furthermore, as a Federally Funded Research and Development Center (FFRDC), Sandia must be compliant with the Anti-Deficiency Act and operate on a full-cost recovery basis. Therefore, while Sandia, in conjunction with the Sponsor, will use best judgment to execute work and to address the highest risks and most important issues in order to effectively manage within cost constraints, this ROM estimate and any subsequent approved cost estimates are on a 'full-cost recovery' basis. Thus, work can neither commence nor continue unless adequate funding has been accepted and certified by DOE."

SNL - Note: Agreements with the customer on cost, schedule, and performance are not to be transmitted to the customer until the estimate has been reviewed and approved in accordance with this procedure and as detailed in the Cost Estimating Guide. You will need a completed checklist for the Estimate level in order to comply with corporate policy.

*Sandia National Laboratory proprietary information has been removed from this document.

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Asbestos Management Services - Project Report

Location:	K1010A	**Maximo Work Order #:**	40057	**AMS Project #:**	2000_K1010A
Status:	SCOPING	**Project/Task:**	186791/2.3		

Project Data

Project Title: Asbestos & Lead Survey: Entire Building

Project Description: Determine the presence or absence of asbestos containing building materials in support of building demolition. Determine the presence or absence of lead in painted surfaces in support of building demolition.

Requestor: Nicholas A. Durand

Support Team

	Name	***Organization***	***Phone***
Surveyd By:	Justin Tilman Kirby	048781	(505) 284-9778
Survey Project Manager:	Justin Tilman Kirby	048781	(505) 284-9778

Survey Findings

Date: 11/16/16
Time: 15:04
Name: Justin Tilman Kirby

Asbestos Survey

The gray wire putty on the transformer wires and the transite electrical conduit tested positive for asbestos content and must not be impacted or disturbed.

Samples collected of the built-up roofing, exterior caulking, and interior wire insulation, all tested negative for asbestos content.

The interior wood framing, exterior sheet metal and concrete floor are considered non-suspect for asbestos content.

This project report is intended for informational purposes only. Contact the AMS for an Asbestos Work Release Permit when project is closer to construction and an exact scope of work has been determined.

Lead Based Paint

The paint coatings within the project area are assumed lead-based. Contact the Sandia FESH IH for acceptable work practices.

Lead-Based Paint Waste Management

If the assumed lead-based paint is not removed from the substrate and is in overall good condition (i.e., no visible evidence of peeling or flaking paint) the painted material (e.g., wallboard, plaster, etc.,) may be disposed of as construction debris. Obtain waste management guidance from the Facilities Environmental, Health, and Safety (FESH) waste management support personnel if the assumed lead-based paint:

* Shows signs of flaking or peeling;
* Requires removal from the substrate (e.g., prep-work prior to repainting);
* Or is concentrated as a result of a construction operation.

Project Material

Material Code:	PUTTY			**Project Result:**	Positive
Suffix:	1			**Structure Result:**	Positive
Appear/Use:	Gray Wire Putty				
General Location:	Exterior of Building				
Specific Location:	Wires coming from transformers				
Total Quantity:	2SF	**Damaged:**	No	**Damaged Quantity:**	0
Material Code:	CAULK			**Project Result:**	Negative, No Asbestos Detected
Suffix:	1			**Structure Result:**	Negative, No Asbestos Detected
Appear/Use:	White Exterior Caulk				
General Location:	Exterior of Building				

Sandia National Laboratories

Asbestos Management Services - Project Report

Specific Location:	At Roof Level				
Total Quantity:	100LF	**Damaged:**	No	**Damaged Quantity:**	0
Material Code:	BUR			**Project Result:**	Negative, No Asbestos Detected
Suffix:	1			**Structure Result:**	Negative, No Asbestos Detected
Appear/Use:	Tan Rolled Mineral Roofing				
General Location:	Exterior of Building				
Specific Location:	Roof				
Total Quantity:	400SF	**Damaged:**	No	**Damaged Quantity:**	0
Material Code:	WIRE			**Project Result:**	Negative, No Asbestos Detected
Suffix:	1			**Structure Result:**	Negative, No Asbestos Detected
Appear/Use:	Black Wire Insulation				
General Location:	Interior of Building				
Specific Location:	Inside Main Power Panel				
Total Quantity:	100LF	**Damaged:**	No	**Damaged Quantity:**	0
Material Code:	TRANS			**Project Result:**	Positive
Suffix:	1			**Structure Result:**	Positive
Appear/Use:	Gray Cement Electrical Conduit				
General Location:	North of SNL Site				
Specific Location:	At Base of Power Pole into Ground				
Total Quantity:	100LF	**Damaged:**	No	**Damaged Quantity:**	0

Sandia National Laboratories

Asbestos Management Services - Project Report

Location:	K1010A	**Maximo Work Order #:**	40057	**AMS Project #:**	2000_K1010A
Status:	SCOPING	**Project/Task:**	186791/2.3		

Milestones

Request Received Date:

Survey Required?	Yes	**Start Date:**	**End Date:**	**Created Date:**	10/3/2016
Design Required?	No	**Start Date:**	**End Date:**		
Abate Required?	No	**Start Date:**	**End Date:**	**TC Close Date:**	
Disposal Date:			**Final Invoice Date:**		

The individual(s) signing below confirm that field verified information contained in this report is accurate at the time of printing. This form must be signed by the Project manager for the information/conclusions to be considered valid.

Project Manager:	Justin Tilman Kirby	Inspector:	Justin Tilman Kirby
Organization:	048781	Organization:	048781
Phone Number:	(505) 284-9778	Phone Number:	(505) 284-9778

Justin Kirby
Print Name

11/16/16
Signature **Date**

Justin Kirby
Print Name

11/16/16
Signature **Date**

Sandia National Laboratories

Asbestos Management Services - Project Report

Location:	K1010	**Maximo Work Order #:**	39963	**AMS Project #:**	2001_K1010
Status:	SCOPING	**Project/Task:**	186791/2.3		

Project Data

Project Title: Asbestos & Lead Survey: Entire Building

Project Description: Determine the presence or absence of asbestos in building materials in support of building demolition. Determine the presence or absence of lead in painted surfaces in support of building demolition.

Requestor: Nicholas A. Durand

Support Team

	Name	*Organization*	*Phone*
Surveyed By:	Justin Tilman Kirby	048781	(505) 284-9778
Survey Project Manager:	Justin Tilman Kirby	048781	(505) 284-9778

Survey Findings

Date: 11/16/16
Time: 10:57
Name: Justin Tilman Kirby

ASBESTOS SURVEY

The gypsum walls and ceiling located throughout the majority of the building tested positive for asbestos content from a previous survey and must not be impacted or disturbed. The tar penetration sealant located throughout the roof of the building tested positive for asbestos content and must not be impacted or disturbed. The exterior wall base caulk tested positive for asbestos content and must not be impacted or disturbed.

Samples collected of the two types of vinyl floor tile and associated mastic tested negative for asbestos content. Samples collected of the exterior penetration caulk, doorway caulk, conduit putty, and concrete expansion joint material, all tested negative for asbestos content.

Samples collected of the gypsum wallboard located behind metal panels throughout room 109 tested negative for asbestos content from a previous survey.

The remaining materials located on the doors, exterior, roof, floor, walls and ceiling are made of metal, wood and concrete, all of which are considered non-suspect for asbestos content

This project report is intended for informational purposes only. Contact the AMS for an Asbestos Work Release Permit when project is closer to construction and an exact scope of work has been determined.

Lead Based Paint

The paint coatings within the project area are assumed lead-based. Contact the Sandia FESH IH for acceptable work practices.

Lead-Based Paint Waste Management

If the assumed lead-based paint is not removed from the substrate and is in overall good condition (i.e., no visible evidence of peeling or flaking paint) the painted material (e.g., wallboard, plaster, etc.,) may be disposed of as construction debris. Obtain waste management guidance from the Facilities Environmental, Health, and Safety (FESH) waste management support personnel if the assumed lead-based paint:

* Shows signs of flaking or peeling;
* Requires removal from the substrate (e.g., prep-work prior to repainting);
* Or is concentrated as a result of a construction operation.

Project Material

November 16, 2016 at 10:59:27 AM MST

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Asbestos Management Services - Project Report

Material Code:	VCT			**Project Result:**	Negative, No Asbestos Detected
Suffix:	1			**Structure Result:**	Negative, No Asbestos Detected
Appear/Use:	Vinyl Composite Tile				
General Location:	Room 104				
Specific Location:	Floor Throughout				
Total Quantity:	132SF	**Damaged:**	No	**Damaged Quantity:**	0
Material Code:	VCT			**Project Result:**	Negative, No Asbestos Detected
Suffix:	2			**Structure Result:**	Negative, No Asbestos Detected
Appear/Use:	Light Tan Vinyl Floor Tile w/ Black Mastic				
General Location:	Room 108				
Specific Location:	Floor Throughout				
Total Quantity:	113SF	**Damaged:**	No	**Damaged Quantity:**	0
Material Code:	GYP			**Project Result:**	Negative, No Asbestos Detected
Suffix:	2			**Structure Result:**	Positive / Trace
Appear/Use:	White Smooth Textured Gypsum				
General Location:	Walls				
Specific Location:	Various Locations Throughout Building				
Total Quantity:	4000SF	**Damaged:**	No	**Damaged Quantity:**	0
Material Code:	GYP			**Project Result:**	Positive
Suffix:	3			**Structure Result:**	Positive
Appear/Use:	White Smooth Textured Gypsum Ceiling				
General Location:	Ceilings				
Specific Location:	Throuoghout Building				
Total Quantity:	2500SF	**Damaged:**	No	**Damaged Quantity:**	0
Material Code:	MASTIC			**Project Result:**	Positive
Suffix:	1			**Structure Result:**	Positive
Appear/Use:	Black Roof Penetration Mastic				
General Location:	Roof				
Specific Location:	Around Roof Penetrations				
Total Quantity:	25SF	**Damaged:**	No	**Damaged Quantity:**	0
Material Code:	CAULK			**Project Result:**	Negative, No Asbestos Detected
Suffix:	1			**Structure Result:**	Negative, No Asbestos Detected
Appear/Use:	White Exterior Wall Penetration Caulk				
General Location:	Exterior of Building				
Specific Location:	Around Wall Penetrations				
Total Quantity:	50LF	**Damaged:**	No	**Damaged Quantity:**	0
Material Code:	CAULK			**Project Result:**	Positive
Suffix:	2			**Structure Result:**	Positive
Appear/Use:	Light Gray Exterior Wall Base Caulk				
General Location:	Exterior of Building				
Specific Location:	At Base of Walls				
Total Quantity:	250LF	**Damaged:**	No	**Damaged Quantity:**	0
Material Code:	CAULK			**Project Result:**	Negative, No Asbestos Detected
Suffix:	3			**Structure Result:**	Negative, No Asbestos Detected
Appear/Use:	White Exterior Door Caulk				
General Location:	Exterior of Building				
Specific Location:	Around Door Frames				
Total Quantity:	160LF	**Damaged:**	No	**Damaged Quantity:**	0
Material Code:	BLANK			**Project Result:**	Negative, No Asbestos Detected
Suffix:	2			**Structure Result:**	Negative, No Asbestos Detected
Appear/Use:	Black Exterior Expansion Joint				
General Location:	Exterior of Building				
Specific Location:	Joint Between Walkway & Building				
Total Quantity:	250	**Damaged:**	No	**Damaged Quantity:**	0
Material Code:	PUTTY			**Project Result:**	Negative, No Asbestos Detected
Suffix:	1			**Structure Result:**	Negative, No Asbestos Detected
Appear/Use:	Gray Interior Conduit Putty				
General Location:	Room 102				
Specific Location:	On Conduit in SE Corner				
Total Quantity:	10LF	**Damaged:**	No	**Damaged Quantity:**	0
Material Code:	PUTTY			**Project Result:**	Negative, No Asbestos Detected
Suffix:	2			**Structure Result:**	Negative, No Asbestos Detected
Appear/Use:	Gray Exterior Conduit Putty				
General Location:	Exterior of Building				
Specific Location:	On Conduit at Roof Stairs				
Total Quantity:	20LF	**Damaged:**	No	**Damaged Quantity:**	0

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Asbestos Management Services - Project Report

Location:	K1010	**Maximo Work Order #:**	39963	**AMS Project #:**	2001_K1010
Status:	SCOPING	**Project/Task:**	186791/2.3		

Milestones

Request Received Date:

Survey Required?	Yes	**Start Date:**	**End Date:**	**Created Date:** 8/16/2016
Design Required?	No	**Start Date:**	**End Date:**	
Abate Required?	No	**Start Date:**	**End Date:**	**TC Close Date:**
Disposal Date:			**Final Invoice Date:**	

The individual(s) signing below confirm that field verified information contained in this report is accurate at the time of printing. This form must be signed by the Project manager for the information/conclusions to be considered valid.

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Organization:	048781	Organization:	048781
Phone Number:	(505) 284-9778	Phone Number:	(505) 284-9778

Justin Kirby
Print Name

11/16/16
Signature **Date**

Justin Kirby
Print Name

11/16/16
Signature **Date**

November 16, 2016 at 10:59:27 AM MST