Calculating Cost Savings from FY14 Pollution Prevention Projects

Purpose: To ensure a standard and credible method is used to compare the cost savings of all pollution prevention proposals, allowing ‘apples to apples’ comparison of project savings.

Background: Pollution prevention product proposals are sought each year by the Pollution Prevention Council. One of the critical factors in ranking proposals is the financial benefit that will result from implementation. Return on investment (ROI) must be calculated using a standard method to ensure projects are compared fairly.

Method: Payback Period will be the method used to measure financial benefit of project implementation. Projects with the fastest payback of invested funds will be ranked high (considering other criteria). Payback Period will be calculated as follows:

Payback Period = Total Project Cost

 Annual Project Savings

Total Project Cost = all costs for implementation, including capital equipment costs, operating costs, training, installation, etc. Don’t forget overhead costs.

Annual Project Savings = all savings that can be documented, including reduced disposal costs\*, labor savings, material savings, reduced administrative costs (e.g., for inspections, compliance, etc.)

\* “Disposal Cost” is determined by adding actual disposal costs, container costs and transportation costs. It does not include handling or other charges related to operation and management of BNL waste management operations. Cost savings calculated using the “Disposal Cost” listed below are therefore actual cost savings to BNL.

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| Waste Type | Waste Description | Disposal Cost |
| Radioactive Liquid | Liquid Low Level Radioactive Waste | $482.00/lb |
| Radioactive Solid | Non-compactable LLW | 442.00/cuft |
| Mixed | Mixed waste | 18,231.00/cuft |
| Hazardous | Drums | 3412.00/drum |
|  | Labpack Hazardous or Industrial | 35.00/pound |
| Industrial Bulk Waste | Drums | 996.00/drum |

EXAMPLE:

 A project is expected to cost $20,000 to implement. Equipment costs make up $12,000, installation is estimated at $6,000, and training costs are estimated at $2,000. The project proposed to eliminate 140 gallons (1190 lbs) of hazardous waste that is traditionally managed in small containers (labpack waste). Since the area no longer needs a satellite accumulation area, approximately $2,000 of savings is estimated from reduced oversight and compliance requirements. Additionally, the employees don’t require hazardous waste training anymore, which is estimated to save about $400 annually.

 Total Project Costs: $20,000

 Annual Project Savings: $44,050

 (1190 lbs hazwaste)($35.00/lbs) = 41,650 +$2,000 + 400 = 44,050

 PAYBACK PERIOD = Total Cost = $20,000 = 0.45 years

 Annual Savings $44,050