Newmont Contamination Assessment

Response Definitions	Code	Points
Yes - Always, consistently done, 100%	Y	1
Mostly - Majority of the time, 75% or better	M	0.5
No - Not done, or done infrequently or inconsistently	N	0
NA - Not Applicable	NA	-

Newmont FM Assessment

Completed By: Kevan Slater - KJSlater and Associates

Location

Assessment Date:

#	Best Contamination Control Practices Assessment	Answer Code	Points	Possible Points	COMMENTS Improvement Opportunities
I. Storage					
1	Are lubricant/fuel containers stored in a designated controlled area?			1	
2	Is all piping, tubing and valves clearly marked for condition and direction of flow?			1	
3	Are all containers (bulk, drums, pails, etc.) have proper breathers and sealed from external contamination?			1	
4	Is prefiltration or in-situ filtration being implemented?			1	
5	Are containers (bulk, drums, pails, etc.) clearly marked with the proper product information and color-coded to avoid misapplication of lubricants?			1	
6	Can and are all storage totes and bulk vessels cleaned out per a schedule?			1	
7	Are routine samples taken on new fluids (drums or bulk) to verify type, and check for cleanliness and contamination?			1	
8	Is storage area neat, clean and well maintained – free of spills, no rags on floor, no empty containers, etc. at all times?			1	
9	Are there provisions or FME caps used on fill ports?			1	
10	Have opportunities for cross contamination been eliminated?			1	
11	Is FIFO methods in practice.			1	
	Category Score		0	11	**Storage**
	Percent		0.0%		
II. Handling and Dispensing					
12	Does the existing lubricant/fuel handling or dispensing equipment target the Newmont goals for cleanliness? Filters, breathers, etc.			1	
13	Is the date on lubricant containers consistently checked to ensure the oldest lubricant is used first (First-In...First-Out)			1	
14	If lubricant is more than two years old, is it sampled before use or discarded, whichever option is less costly?			1	
15	Is the equipment marked or is a controlled lubelist used for lubricant top-up?			1	
16	Are top-off containers for dispensing “Oil Safe” brand, and are they color-coded for each brand, grade and type of oil to avoid contamination?			1	
17	Are top-off containers/methods clearly marked with the proper product information?			1	
18	Are top-off containers/methods kept consistently clean?			1	
19	Are dispensing reels equipped with appropriate filtration?			1	
20	If drum pumps/filters are used, does each fluid product have its own pump to avoid contamination with different oils?			1	
21	On clean and/or critical systems, are the fluids filtered before it is introduced to the machines?			1	
22	Is there ability to filter lubricants/fuels to meet Newmont's specifications?			1	
23	Are breathers or desiccant filters used on drums or other bulk containers?			1	
24	Is dispensing equipment visibly clean at all times?			1	
25	Is oil drawn from drums or bulk tanks only when it is ready to be used?			1	
26	Is a FME process being used on all dispensing pipes, valves, etc.?			1	
27	Are all dispensing containers properly sealed from contaminants?			1	
28	Are funnels kept clean and properly stored?			1	
29	Does the person responsible for dispensing following a lube list?			1	
	Category Score		0	18	**Handling and Dispensing**
	Percent		0.0%		

#	Best Contamination Control Practices Assessment	Answer Code	Points	Possible Points	COMMENTS Improvement Opportunities
	III. Contamination Control				
30	Are leaks controlled and documented?			1	
31	Are target cleanliness levels in place for each type of lubricated equipment?			1	
32	Is there effective use of pressure line and return line filters?			1	
33	Is there effective use of off-line filters or filter carts to meet specifications?			1	
34	Do filter specifications target Newmont's cleanliness specifications?			1	
35	Does the equipment have effective breathers to target the environmental conditions?			1	
36	Are tanks drained for water by scheduled WO?			1	
37	Are reservoirs cleaned on a scheduled basis and to a documented process?			1	
38	Are spare parts stored in a controlled environment?			1	
39	Is there a clean room for overhauling critical equipment components?			1	
40	Are assembly lubricants evaluated for compatibility of lubricants used in the system?			1	
41	Is outsourced maintenance work controlled by a documented process to ensure correct lubricant use and appropriate contamination control methods?			1	
42	Is outsourced maintenance work audited for compliance?			1	
	Category Score		0	13	**Contamination Control**
	Percent		0.0%		
	IV. People & Skills				
43	Is there a written job description, outlining lubrication roles/responsibilities?(contamination control)			1	
44	Has the job description been reviewed and updated in the last 2 years?			1	
45	Do lubrication personnel follow tasks and duties as per the job description?			1	
46	Is there one or more individual(s) in the plant whose primary function is to perform lubrication?			1	

#	Best Contamination Control Practices Assessment	Answer Code	Points	Possible Points	COMMENTS Improvement Opportunities
47	Has the designated person(s) received formal lubrication and contamination control training within the last two years?			1	
48	Does at least one employee hold a lubrication 'Certification' from an accredited program?			1	
49	Has a back-up person(s) been designated to perform lubrication tasks?			1	
	Category Score		**0**	**7**	**People & Skills**
	Percent		**0.0%**		

V. Equipment

50	Are the proper breathers in place on all equipment (i.e. desiccant, particle, etc.)			1	
51	Are fully functional site glasses in place on equipment?			1	
52	Are machine fill ports tagged with the proper lubricant identification?			1	
53	Is proper sealing of hatch, cleanout and piping grommets practiced?			1	
54	Is the amount of top-up fluid recorded?			1	
55	Are leaks identified and reported?			1	
56	Is the filter differential pressure monitored on a controlled basis?			1	
57	Do the in-situ filters meet the Newmont requirements?			1	
58	Is there a specification for filter elements?			1	
59	Are flushing procedures followed during lubricant change-out?			1	
60	Is the operating and environmental conditions recorded and provided to the FM Group? (temperatures, hours, etc.) -sample labels			1	
	Category Score		**0**	**11**	**Equipment**
	Percent		**0.0%**		

VI. Lubrication Analysis

61	Have all oil-using machines been evaluated for inclusion in the oil analysis portion of the lubrication program?			1	
62	Have equipment “tests” (profiles) been set up for each equipment type to ensure critical equipment is tested for the proper parameters/targets?			1	
63	Are PMs in place to take samples on a scheduled basis?			1	
64	Is there a procedure for drawing oil samples?			1	
65	Is the person taking samples trained in the proper procedure for drawing oil samples?			1	
66	Are sample bottles kept in a designated clean area and opened only when ready to take a sample?			1	
67	Are sample ports installed on equipment where applicable?			1	
68	Are samples shipped within 24 hours of extraction?			1	
69	Are lab results and FM recommendations used at the facility to assist present and future maintenance planning?			1	
70	Is oil changed in machines condition based where sampled? Have routine oil changes been eliminated where applicable?			1	
71	Are fluid and oil analysis preventive maintenance results documented in Work Orders?			1	
	Category Score		**0**	**11**	**Lubrication Analysis**
	Percent		**0.0%**		

VII. Lube Routes

72	Have lube routes been set up for all equipment requiring lubrication (motors, couplings, chains, bearings, gearboxes, etc.)			1	
73	Do the routes show the equipment name and number, lube type required per lube point, amount of lube required, and frequency of lubrication?			1	
74	Are routes set up in logical order such that they can be efficiently followed?			1	
75	Have the routes been prioritized based on ranking of critical assets?			1	
76	Are lube routes controlled by the work management system?			1	
77	Are all fittings/ports cleaned before adding fluids?			1	
78	Are the top-up, change-out volumes and batch numbers recorded and report to the FM group?			1	

#	Best Contamination Control Practices Assessment	Answer Code	Points	Possible Points	COMMENTS Improvement Opportunities
79	Are there separate, documented lube routes in place for scheduled plant or equipment shutdowns and startups?			1	
	Category Score		0	8	Lube Routes
	Percent		0.0%		

VIII. Awareness

80	Is it the plant philosophy to create awareness on the direct effect of contamination control to reliability and availability of equipment? ($)			1	
81	Is there a positive attitude towards the efforts of sampling and testing for contamination?			1	
82	Is there a positive message provided by the plant management to the staff for continuous improvement in contamination control?			1	
83	Can improvement methods of contamination control be observed during the assessment?			1	
	Category Score		0	4	Recycling/Disposal
	Percent		0.0%		

IV. Program Management

84	Is there a manual/document in place outlining the plant's lubrication program (i.e. outlining roles, standard work, policies, lube routes, contamination control, etc.)?			1	
85	Are Standard Operating Procedures (SOPs) for lubrication tasks in place and up to date for all equipment and/or lubrication points?			1	
86	Are SOPs used when performing lubrication in the plant (i.e. attached to the work orders)?			1	
87	Is there a formal continuous improvement process in place for contamination reduction practices?			1	
88	In the last 12 months, has your site implemented one or more new contamination reduction practices or concepts?			1	
	Category Score		0	5	Program Management
	Percent		0.0%		

#	Best Contamination Control Practices Assessment	Answer Code	Points	Possible Points	COMMENTS Improvement Opportunities
	Newmont FM Assessment				
	X. Program Goals/Metrics				
89	Is the plants performance indicators aligned with corporate contamination goals?			1	
90	Are lubrication/fluid Key Performance Indicators (KPIs) for contamination control in place at the plant?			1	
91	Are KPIs goals and trends made available, and reviewed with the relevant plant personnel on a regular basis? (e.g.. Monthly)			1	
92	Is % of compliance tracked? (e.g.. % routes completed on time versus total routes due each week)			1	
93	Is the quantity of lubricants used, tracked & formally reviewed semi-annually (with the goal of reducing the number)?			1	
94	Is Root Cause Analysis performed on repetitive failures?			1	
95	Is the number of FM group recommendations monitored and report for the plant?			1	
96	Are there clearly defined actions and remedies when goals are not met?			1	
97	Is downtime due to equipment availability tracked and compared with contamination levels?			1	
	Category Score		**0**	**9**	**Program Goals/Metrics**
	Percent		**0.0%**		

GRAND TOTAL	
Total Assessment Questions	97
Applicable Questions (Total less NA coded responses)	97
Self-Assessment Score	0
Percent	**0.0%**

Notes: