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SMA-1018

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Attached are the replacement pages to the "Final Status Survey Plan for Section 2 of the Whittaker Corporation Waste and Slag Storage Area."

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NMCC/RCN MATERIALS-002

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SAFE AND SECURE

Document Number 82A9564

Revision 2

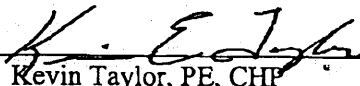
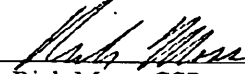
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FINAL STATUS SURVEY PLAN (FSSP)**SECTION 2 OF THE WHITTAKER CORPORATION
WASTE AND SLAG STORAGE AREA
REYNOLDS INDUSTRIAL PARK
TRANSFER, PENNSYLVANIA****U. S. NUCLEAR REGULATORY COMMISSION
RADIOACTIVE MATERIALS LICENSE NO. SMA-1018**

Prepared by:

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January 2006

CONTROLLED COPY No. 743**Project Application**23535**Prepared By**
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REVISION LOG

Revision Number	Affected Pages	CRA Number	Approval
1	All	11768	K. Taylor
2	1, 2, 8	11771	K. Taylor



2.1 SURVEYS AND SAMPLING

Section 2 of the Whittaker site will be divided into 5 Class 1 survey units and 1 Class 2 survey unit. The classification is based on the potential for radioactive materials or contamination to be present in the survey unit following remediation according to MARSSIM protocols.

Survey units designated as Class 1 survey units, those most likely to contain residual contamination above the release criteria, will be no greater than 2,000 m² in area. Each of these survey units will receive, at a minimum, a 100% walkover survey and discrete sampling. Each survey unit will have 11 sample points. The number of samples was determined using the MARSSIM protocols. The sample locations were determined using a random-start grid pattern. The calculations for determining the number of samples is provided in Appendix B.

Survey units designated as Class 2 survey units, those less likely to contain residual contamination above the release criteria, will be no greater than 10,000 m² in area. Each of these survey units will receive a 10% walkover survey and discrete sampling. The Class 2 survey unit will also have 11 sample points as developed in the previous paragraph. The number of samples was determined using the MARSSIM protocols. The sample locations were determined using a random-start grid pattern.

Area exposure rates will be taken at one meter above ground surfaces at the location of each sample point using an exposure rate meter. The purpose of the measurements will be to provide a comparison of the post-decontamination exposure levels to the general site background.

2.2 INSTRUMENTS AND DETECTION LIMITS

The FSS will consist of walkover surveys, *in situ* gamma spectroscopy surveys, and soil sampling with on-site analysis. The instruments proposed for use during the FSS and their applications are provided in Table 2-2. If necessary, Envirocare may substitute comparable instruments should those provided in Table 2-2 not be available.

All instruments will be calibrated using NIST-traceable standards according to Envirocare's "Calibration and Maintenance of Survey Instruments Procedure" (Envirocare 2005b). Instruments will be checked daily to insure they are operating properly and instrument control logs/charts will be maintained. The daily checks will include a background measurement and a source check. Instrument records, including dates of use, efficiencies, calibration due dates and source traceability will be maintained in accordance with established Envirocare procedures.

Actual field measurements indicate that the expected background count rate for a 2x2 NaI detector will be about 8,360 cpm with a standard deviation of 1,174 cpm. Because the gammas from thorium-232 daughters and uranium-238 daughters can not be distinguished while scanning using a 2x2 NaI detector, to calculate the ScanMDC, all activity is assumed to be from thorium-232+D (the most conservative approach since the thorium-232 DCGL is less than the uranium-238+D DCGL).